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TIIE

## EARTH AND ITS INHABITANTS.

## A S I A

BY
ÉLISÉE RECLUS.

EDITED BY
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mend. of Council, anthropological institcte.

VOL. II.
EAST ASIA:
CHINESE EMPIRE, COREA, AND JAPAN.

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THE EARTH AND ITS INHABI'TAN'IS.
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\section*{EAST ASIA.}

CIIINESE EMPIRE. COREA, JAPAN.

\section*{CHAPTER I.}

GENERAL SURVET.


HE natural divisions of the \(\Lambda\) siatic continent are drawn in bold lines. We have seen that the vast Russian domain comprises the AraloCaspian depressions and the northern slopes of the mountain systems, which stretch from the Alaï and Tian-shan to the Manchurian coust ranges. Southwards und westwards, the two Indian peninsulas, the Iranian platenu, \(\Lambda\) sia Minor, and Arabia are no less elearly defined by snowy burriers, great inlets and seas. In the cast, also, Chinn, with Corea and the neighbouring archipelagos, forms, so to say, a world apurt, enclosed by an amphitheatre of plateaux und highlands with a total frontier-line of 6,000 miles. From Manchuria to Indo-China, the Shanyan-alin, the Dîs-alin, the Khingan, the Kentei, the Tannu-ola and Ektug Altaï, the Tian-shan, the Tsungling, the IIimalaya, the rugged hills piereed by the rivers of Transgangetic India, form together a continuous semicirele round about that portion of the Asiatic continent which now constitutes the Chinese Empire. Japan has taken the nume of the " Land of the Rising Sun;" but relatively to the rest of the Old World China also faces eastwards. Its generul slope, as indicated by the course of its rivers, is towards the Pacific Ocean. From the peoples of the West, Chinu und Jupan have rightly received the name of the extreme East, an expression also extended to Iudo-China, the Philippines, and Malaysia.

\section*{East and West contrasted.}

Compared with Western Asia, and especiully with Europe, which may in certain respects be regarded as a group of peninsulas belonging to \(\Lambda\) sia, the eastern regions of the continent enjoy certnin privileges, but have ulso some great disadvantuges as lands of human culture. The most striking contrast between East and West is presented by their respective seaboards. In Asia Minor and Europe the coast lands ure cut up into numerous peninsulas, forming secondary groups in the Mediterranem and Atlantic waters. The peninsulas are moreover prolonged by archipelagos, or the coasts fringed with islunds; so that Europe has by Curl Ritter and others been compared to an organized body well furnished with limbs. 'This continent scems, so to say, endowed with life und motion beyond the dead mass of the Old World. But China canıot boast of such a surprising diversity of outlines. From the shores of Manchuria to those of Cochin China one important peninsula alene, that of Corea, is detached from the continental mass, while the land is penetrated only by one gulf deserving the name of sea-the Hoang-haï. The Pacific waters ure here doubtless animated by two lurge islands, Formosa and Hainan, and by the magnificent Archipelago of Japan. But how insignificant are these peninsulas and islands of Eastern Asia compared with the Cyclades and Sporades, Greece and Italy, the British Isles, Scandinavia, and the whole of Europe, itself a vast peninsula everywhere exposed to the moist and warm sea breezes!

The high degree of culture attained by the Chinese people cannot therefore be explained by any exceptional advantages in peninsular or island formations. But here the abseace of marine inlets has been partly supplied by the great rivers. If the Chinese seaboard proper presents but fow deep indentations, the great streams of navigable water by which the land is irrigated, and by whoso ramifications and canals it is divided into inland islands and peninsulas, give it some of the advantages in water communication enjoyed by Eurepe. Hero the Yang-tze-kiang and Hoang-ho replace the Agean and Tyrrhenian Scas, and like them have served to develop and diffuse a conmen civilisation. Formerly China had another advantage in the possession of the largest extent of productive land held under one social system in a temperate climate. North Ancrica and Europe, which at present possess an equal extent of such territory, were till recently still covered by forests which had to be laboriously cleared. In China is found that vast stretch of "Yellow Lands" which forms pre-eminently an agricultural region, and where wero naturally developed those peaceful habits which are acquired by the pursuits of husbandry. To this region are attached other arable lands possessing a different soil and climate, with corresponding an:mal and vegetable forms, and thus it came about that civilised life encroached step by step on the vast domain stretching from the Mongolian wastes to the shores of the Gulf of Tonkin. These conditions admitted of much variety in cultivating the land, and thus was trade developed between the different provinces. All partial improvements reacted beneficiully on the whole land, and the gencral civilisation was easily promoted amongst the Chinese themselves and in the neighbouring countries. Comparing East Asia with the Western world,
vhich may in in , the eastern me great disbetween East or and Europe lary groups in ver prolonged e has by Carl ed with limbs. the dead mass versity of outportant peninile the land is i. The Pacifio 1 Hainan, and e these peninorades, Greece , itself a vast
therefore be nations. But cat rivers. If great streams ifications and of the advan-tze-kiang and ave served to her advantage ler ono social oh at present red by forests sst streteh of ad where were e pursuits of gg a different thus it eame retching from tions admitted \(d\) between the re whole land, se themselves estern world,

we see how greatly China proper differs from Europe in its geogruphical unity. From the yellow lands of the north to the plains traversed by the Yung-tze on the Indo-Chinese frontier the people had a common centre of gravity, and their civilisation was consequently developed more rapidly in that " Flowery Lamd," whenee it was carricd later on to Japan and Formosa. But how much more distinet and individual has been the growth of eulture in the various regions of the West, from Asia Minor to Great Britain and Ireland! Greece cut off from the rest of Europe by mountain ranges still imperfectly explored; Italy so sharply limited by its Alpine barrier; the Iberian peninsula even more completely shut out ly the almost impassablo Pyrenees; France with its twofold drainage to the Atlantic and Mediterranean ; the British Isles washed by warm seas and wrupped in fogs, all form so muny geographical units, eneh of which had to develop its special civilisation before a higher culture could be formed, in the production of which all the European nations took part. Without being insurmountable, the matural obstaeles between the various countries of Europe are greater than between tho different provinces of East China, and it was these very obstacles which, by preventing political centralization while permitting mutual intereourse, have fostered tho individual energies of the Western races and made them the teachers of the rest of mankind.

\section*{Isolation of China.}

But if the communications were casy between the north and south of China, and if the inhabitants of the mainland could without much difficulty cross the narrow seas separating them from Formosa and Jupan, the Last Asiatic world seemed, on the other hand, almost entirely shut in from the West. In prehistoric times the forefathers of the Chinese, Hindus, Chaldeans, and Arabs must no doubt have been elose neighbours, maintaining frequent relations with each other; for these various peoples have inherited the same astronomic eonceptions, while the eoincidenees of observation and views may be traced even in their details. But these mutual relations, explaining a common civilisation, ean only have taken place at a period of greater humidity in the Old World, when the now dried-up desert regions of Central Asia enabled the populations to communicate more freely together. At that time the Tarim basin, now hemmed in by the sands, still belonged to the Aryan world, and the eivilisation of its inhabitants was allied to that of India. Since the nations grouped on either slope of the Pamir were compelled to advanee farther down to the plains, leaving a broader zone of deserts and steppes between them, the ecntres of eivilisation have been removed to greater distances from each other. That of China has gradually approached the Pacific, while an analogous movement has been going on in un inverse direction west of Babylonia towards Asia Minor and Greece. After these centres thus became isolated, no commercial intercourse or exchange of ideas could take place for long ages between the eastern and western extremities of the eontinent. Distant rumours alone kept up the common traditions of other nations dwelling beyond the rivers and lukes, the plateaux, highlands, forests, and deserts, and the inhabitants of those remote
regions were in the popular imagination transformed to strange and terrible monsters. The two civilisations were independently developed at either extremity of the continent without exercising any mutual influence one on the other, following parallel lines, yet as distinct one from the othor us if they had been born on two different planets. There was undoubtedly a timo when South China had even more frequent relations with the scattered islands of the South Sea than with the western regions with which it is connected ly an unbroken continental mass. Common physical traits prove that towards the south the Chinese race has been intermingled with the tribes peopling the oceanic regions.

Nevertheless, the barrier of plateaux and highlunds shutting in the Chinese world offers here and there some wide gaps, some opening towards the south, others in the direction of the north. Nor are the snowy ranges themsel ves inaccessible. Altaï, Tiau-shan, Tsûng-ling, Kuen-lun, Nan-ling, are all crossed by tracks, over which the trader makes his way regardless of fatigue and cold. The slopes of these uplands, and oven the plateaux, are inhabited to an elevation of from 10,000 to 15,000 feet, and traces of the permanent or pussing presence of mau are everywhere met along the route. But owing to their barbarous lives and rude political state these highland populations added a fresh obstacle to that presented by the physical conditions to free intermational intereourse. The unity of the Old World was finally established when the Europeans of the West, by means of the sea route, established direct relations with the peoples of the eastern seaboard. But before that time direct communications even between the Yang-tze and Amur basins across the barbarous populations of the intervening plateaux took place only at rare intervals, and were duo as much to the great convulsions of the Asiatic peoples as to the growing expansive power of the Chinese political system. But such rare and irregular international movements had but little influence on the life of the Chinese nation. For thousands of years this race, being almost completely isolated from the rest of mankind, was thrown back on its own resources in working out its natural development.

\section*{Intercourse witil India and Europe.}

The first great internal revolution of China took place at the time of the introduction of the Indian religious ideas. However difficult it may be to interpret the ancient doctrine of Lao-tze, there can be scarcely any doubt that it was affected by Hindu influence. Some of his precepts are identical in form with those of the sacred writings of the Buddhists, and all are imbued with the same sentiment of hummity and universal philanthropy. Nor does Lao-tze ever cite the leading characters of Chinese history as models of virtue or as examples to be followed, so that the body of his doctrines is associated by no traditional ties with the past annuls of his country. According to the unanimons tradition he travelled in the regions lying to the west of China, and the popular legend points to the Khotam highlumds as the place whence he was horne heavenwards.

The harrier raised by the mountains, plateaux, and their barbarous inhabitunts between China and India was so difficult to be crossed that the communications
betwecn the two countries were effeeted by a détour through the Oxus basin. The Buddhist religion itself was not propagated directly, and penetrated into the empire not from the south, but from the west. During the periods of its peaceful expansion China ineluded the Tarim busin, und maintained free intercourse with the Oxus basin over the lumir passes. At that \(t^{\prime}\) ne truders followed the fumous "Silk Highway," which was also known to the Greeks, and it was by this or other routes across the plateaux that were introduced the rich products of Southern \(\Lambda\) sia, as well as the more or less legendary reports of the marvellous region of the Gunges. The same rond was also followed by the Buddhist pilgrims. After three centuries of religions propaganda the new fuith was finally established in the country of Confucius, and received official recognition in the sixty-fifth year of the new eru. Buddhism found favour with the Chinese people from its pompous rites, the rich ornaments of its temples, the poetry of the symbolic lotus blooming in the midst of the waters. It also pleased them, because it opened up vistas of those magnificent Southern lands hitherto concealed from their gaze by the intervening snowy runges and plateaux. But after all the Fo-Kino, or worship of Buddha, changed little in the social life of China. The ceremonial was modified, but the substance remained much the same. Whatever be the sacred emblems, the religion that hus survived is still that which is associated with the rites in honour of ancestry, with the conjuring of evil spirits, and especially with the strict observance of the old truditional formulas.

But at any rate the relations established between China and Hindustan during the period of Buddhist propagandism were never again completely interrupted, and from that time China has no longer remained, even for Europeans, excluded from the limits of the known world. Communication by sea was kept up between India and South China, especially through the Gulf of Tonkin. Even two hundred years before the vulgar era an emperor had sent a whole fleet to the Sundu Islands to cull the "flower of inmortality." Later on, other vessels were sent to Ceylon in seurch of relies, sucred writings, statues of Buddha, and besides these things brought back rich textiles, gems, precious stones, taking them in exchange for their silks, porcelains, and enamelled vases. This route was also followed by the embassies, amongst others by that which, according to the Chinese annals, came from the great Tsin; that is to say, from Rome, sent by the Emperor An-tun (Aurelius Antoninus) in the year 166 of the Christian era.

In the seventh century, when the Chinese Empire, after a series of disasters and internal convulsions, resumed its expansive force and shone with renewed splendour, at the very time when Europe had again lapsed into barbarism, exploring expeditions became still more numerous. China now took the lead, and the pilgrim, H'wen-Tsang, whose itinerary in Central Asia has since been rivalled only by Marco Polo, was a true explorer in the modern sense of the tern. His writings, embodied in the annals of the Tang dynasty, have a special value for the geography of Central Asia and India in medieval times, and their importance is fully appreciated by European savants. Thanks to the Chinese documents, it has been found possible to determine with some certainty the whole of his itinerary, even in those
"Snowy Mountaius," where travellers are exposed to the attacks of the " dragons," those mystic animals which may possibly symbolize nothing more than the sufferings entailed by suow and ice. Jike the other Buddhist pilgrims of this epoeh, 1I'wen'Isang skirted the 'libetan plateaux, where the liuddhist religion had only just been introduced, und reached India through the Oxus valley and Afghanistan. But some twenty years after his return, in 667 or 668 , Chinese armies had already traversed Tihet mad Nrpal, thus penetrating directly into India, where they captured over six hundred towns. At this time the Chinese limpure comprised, with the tributary states, not only the whole depression of Eastern Asia, but also all the

Fig. 1. -Itinemaly of II'wen-Tbana. Scale 1 : 30,000,000.

outer slopes of the highlands and plateaux surrounding it as far as the Caspian. It was also during this period that the Nestorian missionaries introduced Christianity into the empire.

The progress of Islam in the west of \(\Lambda\) sia and along the shores of the Mediterramemn necessarily isolated China, and long rendered all communication with Europe impossible. But in the northern regions of the Mongolian steppes warlike tribes were already preparing for conquest, and thanks to their triumphant mareh westwards to the Dnicper, they opened up fresh routes for explorers across the whole of the Old World. In order to protect themselves from these northern children of
"dragons," e sufferings och, I'wenly just been nistan. But had ulready re they cupprised, with also all the duced Chrisicution with ppes warlike phant march oss the whole a children of
the steppe, the Chinese emperors had ulrendy ruised, rebuilt, and doubled with paraltel lines that prodigions rampurt of the "Great Wull" which stretches for thousunds of miles between the steppe and the cultivated lunds of the sonth. Curbed by this barrier erected between two physically different regions and two hostile societies, the nounads had passed westwards, where the land lay open before them, and the onward movenent way gradually propagated across the continent. In the fourth and fifth eenturies a general convulsion had hurled on the West those conquering hordes collectively known ns Huns; in tho twelfth century un anulogous movement urged the Mongols forward under a new Attila. IJolding the Zungurian passes, which gave easy access from the castern to the western regions of \(\Lambda\) sia, Jenghiz Khun might have at once advanced westward. But being reluctant to leave any obstacle in his rear, he first crossed the Great Wall and seized Pekin, and then turned his arms against the Western states. At the preriod of its greatest extent tho Mongoliun Empire, probably the largest that ever existed, stretehed from the Pacific seabourd to the Russian steppes.

The existence of the Chinese world was revealed to Europe by these fresh arrivals from the East, with whom the Western powers, after the first conflicts, entered into friendly relations ly means of embassies, treaties, and alliances against the common enemy, Islam. The Eastern Asiatic Einpire was even long known to them by the Tatar name of Cathay, which under the form of Kitai is still current amongst the Russians. Envoys from the Pope and the King of France set out to visit the Great Khan in his court at Karakorum, in Mongolia; and Plan de Carpin, Rubruk, and others brought back marvellous accounts of what they had seen in those distant regions. European traders and artisans followed in the steps of these envoys, and Marco Polo, ono of these merchants, was the first who really reveuled China to Europe. Henceforth this country enters definitely into the known world, and begins to participate in the general onward movement of mankind.

Marco Polo had penetrated into China from the west by first following the beaten tracks which start from the Mediterranean seaboard. Columbus, still more during, hoped to reach the shores of Cathay and the gold mines of Zipango by sailing round the globe in the opposite dircetion from that taken by the great Venetiun. But arrested on his route by the New World, ho reached neither China nor Japan, although he long believed in the success of his voyage to Eastern Asia. But others continued the work of circumnavigation begun by him. Del Cano, companion of Magellan, returned to Portugal, whence he had set out, thus completing the circumnavigation of the globe. All tho seas had now been explored, and it was possible to reach China by Cape Horn as well as by the Cape of Good Hope. Notwithstanding the determined opposition of the Pekin Govermment to the entrance of foreigners, the empire was virtually open, and within two hundred and fifty years of this event China and Japan, which had never ceased to be regularly visited by European traders, were obliged to open their seuports, and even to grant certain strips of land on their coast, where the Western nations have already raised cities in the European taste. The conquest may be said to have already begun.

\section*{Foreggn Influence-Ressian Encroachments.}

The power of the Western states has even made itself felt hy the temporary oecupation of the Chinese capital and the sack of the imperial palaces. It has been revealed still more by the support given by the Einglish and French allies to the Chinese Govemument aguinst internul revolt. Whist the European troops were storming the Peï-ho forts, oceupying Tientsin, and driving the Emperor from Pekin, other Burobems were arresting the Taïping rebels at the gates of Shanghai and harring their appronch to the sea. At the same time the Rassians kept a garrison

Fig. 2.-Enchoachments of Abiatic Rubbia on Cilina.
scale 1 : 80,000,000.

in Urga to eurb the Dungâns, and it was probably this intervention of the Western powers that saved the Tsing dynasty. The integrity of the empire was upheld, but only because the Europeans were interested in its maintenance. By merely folding their arms China would probably have been split into two, if not three or four, fragments. No doubt its unity seems at present unexposed to danger from the west, but on its northern frontier Russia is continually gathering strength, and is already cohterminous with it for a distance of nearly 5,000 miles, more than half of this line running through eountrics formerly subjeet to the " Children of Heaven." The temporary and permanent annexations of Russia in Kulja belonged till recently to China, and the same is truc of Transbaikalia and the whole Amur
villey as fur as the reindeer pustures of the Northern Tunguses. At present ull the revion along the left bunk, larger than the whole of France, forms mintegral part of Siberia. Lastly, the Munchurian seaboard an far us the Corean fromtier las become Rassim, and its sonthern ports, distant two days by stemen from dapun, stuad on waters now known as the Gulf of Peter the Greut, as if to remind the world that the empire of tho Caurs is us uggressive in the east as in the west. At the slightest diplomatic imbroglio, or whenever the dignity of Russin may repuire her to make a military promenade in the Chinese watern, nhe may easily seizo the most convenient port on tho Corean const, und here fomed a naval ursenal still more formidable than that of Vladivostok, commanding at once the entry to the Sea of Jupan, the month of the Yaur-tze, and the inland Jupanese waters. Notwithstanding the financial embarrassment of the Guvermment, the periodicul fauine and droughts, and the ubject misery of the masses, the resources of the State are still disposed in such a way as to give her great power for aggressive purposes. Her military strength, even 5,000 miles from the eapitul, is superior to thut of China and Japan in their own domain. In spite of its stockades and forts armed with steel guns, Pekin is probubly as much at the mercy of Russia as it recently was of the Eaglish and French allies. Its position is extromely exposed. So long as it had nothing to fear except from Mongolian inroads or locil revolts it held un excellent strategical position near the fortified ranges protecting it from the north, not far from the Great Canul whence it drew its supplies, and at no greut distance from the Manchu tribes, ever ready at the first signal to hasten to the succour of their threatened fellow-countrymen. But the security of the empire may now be menaced by far more formidable enemies thum Mongolian nomads or Tuiping fanaties, and in ease of a Russo-Chinese war the troops of the Czar would no doubt land near the capital. Notwithstanding the recent military equipments and improved discipline, the army of the "brave and ever victorious" could scarcely hope for success se Cong as the State refuses to place a railwny system at its service. But this innovation may soon be introduced, while a change of system and wellchosen ulliances might also bring about a shifting of equilibrium in the \(r\) espective forces of the two empires.

\section*{Rivaliry of the Eastern and Western Races.}

But whatever be the political and military destinies of China and Japan, the concert of the Eastern and Western nations is henceforth an accomplished fact. Through the interchange of produce, the travels of Europeuns in the Mongolian world, of Chinese and Japanese in Europe and America, and permanent migrations, the various eivilisations have been brought into mutaal contact. What arms have failed to do is being far more efficaciously accomplished by free commercial intercourse; nor can further advances be any longer prevented by political fronticrs, diversity of speech, traditions, laws, und customs. While European quarters are springing up in the cities of China and Japan, Chinese villages are appearing in the United States, Peru, and Australia; and Chinese counting-houses have 34
niready lwen openeed in Lomdon und New York. To these outward signs correspond profomad intermal moditiontions. There is an interchugge of idens us well as of commondities, and the penples of the bant mad West begrin to maderstand each other, mad conserpuatly to pererive how mueh they have in common. The worth has become \(f(x)\) narrow to allow of any further isolated evolutions of culture in sepurate geographieal aroas without blending in a general civilisution of a higher order. The European mad Asiatic ruces formerly dwelt altugether apart ; now the United States of America have been peopled by emigronts who have made this region another Lurope ; und thus it is that the Chinese mution now finds itself hemmed in between two Europes-those of the Old and New Continents. From eust and west come the same types med ideas, and a continuous current sets from people to people around the globe, across seas and continents.

The historie perion on which mankind is now entering, through the definite union of the Eantern and Wextern worlds, is pregnunt with great events. As the ruftled surface of the water seeks its level by the foree of gravity, so the comditions tend to balanee themselves in the labour markets. Considered merely as the owner of a \({ }^{\text {pair }}\) of hames, mun is himself as much a commodity as is the produce of his labour. The industries of all nutions, drawn more and more into the struggle for existence, seek to produce cheaply by purchasing at the lowest price the raw material and the "hands" to work it up. But where will manufucturing states like those of New England find more skilful and frugul-that is, less expensivehands than those of the extreme East? Where will the great agriculturul farms, like those of Minnesota and Wisconsin, find more truetable gangs of labourers, more painstaking and less exacting, than those from the banks of the Si-kiang or Yang-tze? Europems are umazed at the industry, skill, intelligence, spirit of order, and thrift displayed by the working element in China and Japan. In the workshops and arsemuls of the seaports the most delicate operations may be safely intrusted to Chinese hands; while eye-witnesses bear unanimous testimony to the superior intelligence and instruction of the peasantry over the corresponding elasses in Europe. If the Chinese gardeners have not modified their system in the neighbourhood of the coast factories, it is only because they have had nothing to learn from the stranger.

The struggle between white and yellow labour-a struggle which threatens to set the two hemispheres by the ears-has even already begun in certain new districts where European and Asiatic immigrants meet on common ground. In California, New South Wales, Queensland, and Vietoria the white labourers have had to compete in most of their trades with the Chinese, and the streets, workshops, farms, and mines have been the seenes of irequent bloodshed, occasioned less by national hatred than by international rivalry in the labour market. Continued over a whole generation, this social warfare has already cost more lives than a pitched battle: it even increases in virulence as the competition grows more fierce. Hithertn the white element has had the best of it in California and Australia. With large majorities in the legislatures, they have triumphed over the manufacturers, farmers, and contractors, whose interest it is to secure cheap labour; and they
lave passed luws throwing difficulties in the way of Chinese coolie immigration, constituting this element a distinct und opprensel class, withom rights of citizenship. But sueh warfare ents both ways. Vanquinhed in oue quarter, the Chinese workmen may prevail in mother with the aid of the capitaliste and legishative bonlies; and the free adhussion of Chinese hauds into the workshop would ultimutely involve the extinction of their white rivals. The Chinese inamigrants need not even gain aecens to the Buropem and Americm pactories in order to lower tho rute of wages generully. It will suffice to estublish cotton, woollen, and similar industries throughout the Bast, the products of which might soon compete successfully with the loenl manufuctures in the West. Hence, from the ecomomic point of view, the definite concert of the Mongolian und white races in volves conserpuenees of supreme importance. The bulance will doubthess be ultimately estuhlished, und humanity will learn to udupt itself to the new destinies seeured to it by a common possession of the whole world. But during the tramsition period great disasters must be anticipated in a strugglo in which upwards of a hillion of human beings will be direetly engaged. In point of numbers the civilised element in larope and America is about equal to that of East \(A\) sia. On either mide hundreds of millions stund arrayed nguinst cach other, impelled by opposing interests, and incapable as yet of understanding the higher advantages of a common human concert.

For the antugonsm of East and West flows as much from the contrust of ideas and morals as from the opposition of immediate interests. Between the mornl standards of Europeans and Chinese, both of whom have a certain personal selfrespect, the ideal is not the same, and their conception of duty, if not contradictory, is at lenst different. This moral contrast reuppears, in a more or less conscious form, in the nations themselves. It will, however, donbtless be partly neutralised by intercourse, instruction, and, here und there, by intermixture. The civilisations will be mutually influenced, not only in their outer aspects, but also in their tendencies, and the very ideas which are their truc controlling force. It has often been remarkel that Luropenns look forward, while the Chinese look backwurd; but the statement is too general, for society is everywhere decomposed into two groupsone continually renewed by ceaselessly striving to improve its destinies; the other, through fear of the future, falling back on tradition. The frequent civil wars in China, and notably the recent insurrection of the Taïpings, or "Great Pueifiers," show that beneath the official world, wedled to the old ways and sceking its golden age in the past, there seethes a fiery element which does not fear the risk of facing the unknown. If the Chinese Government has for ages succeeded in holding fast by the traditional forms, if the disasters of Tatar conquest and intestine convulsions have but slightly affected the outward framework of society, it is none the less true that the Eastern world will now have to learn from European civilisation not only new industrial methods, but especially a new conecption of human culture. Its very existence depends upon the necessity of shifting its moral stand-point.

\section*{Fitine Phonperes.}
lint it may be asked, Will not the idenl of the cultured white races be ulao shifted! When two clements come together, both are simultameonsly moslitied; when two rivers mingle their stremms, the limpid waters of the one are troubled by the turbidelements of the other, and neither ever agmin recovers its primitive condition. Will the contact of these two civilisutions in the same way result in raising the one und lowering the other? Witl the progress of the Bast be attemded by a corresponding retrograde movement in the West ? Are coming generations destined to pass throrgh a period like that of mediaval times, in which lomum civilisation was eelipsed, while the Barburians were born to a new light: P'rophets of evil have already raised a ery of alarm. After spending years in the interior of Chimu, travellers like Richthofen, Armund David, Vusilyev, huve returned full of terror at those formidable multitudes swarming in the vast empire. 'They nsk themselves what these hostes may not do when diseiplined and hurbed by vietorions leaders ngainst the Europeun word. Muy they not, under other conditions, renew the Mongolian invasions when, armed with the sume wenpons, but more united thm the Western peoples, they will be marshulled ly a seeond Jenghiz Khant Pouring lest in the "struggle for existence" the Chinese may easily become our musters, certain writers have even serionsly urged that the biaropenn pow ers should retruce their steps, close the ports alreudy opened to commeree, und cadeavour to confine the Chinese to their former sedusion and ignormee. Others are rejoieing that the Chinese mation are becoming sluggish under the influence of opium, which prevents it from recognising its own strength. "But for opium," suys Vasilyev, "China would sooner or later overrun the whole world-would stifle Liurope and America in its embnuce."

But it is now too late to attempt to separate the lanst mad West. With the exception of Tibet, Coren, und a few remote highlands, East Asin heneeforth forms purt of the open world. What will be the consequences for humanity of this accession of half a billion of human beings to the general movement of history? No more serious question ean be asked. Hence too much importanee eannot be attached to the study of the Far East mad of the "yellow" races, which must one day phy so great a part in the future development of human culture.
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\section*{CIIAPTER II.}

\section*{THE CHINESE GMDHE.}

\section*{I.-TTHE:IT.}


FYOND the "Middle Kingelem" the Chinese Empire cmhraces vast regions, with a joint urea more extensive than that of China proper. It ineludes 'libet, the Tarim, and Kukn-nom lasias, the upland valleys draining to Lake Balkhash, Zmiguria, Mongolia, Munchuriu, und the islands of Formosa and Inainan. It also cluines as tributaries the Corem peninsula, and even, on the somthern Nope of the Himulayus, Nepul und Bhutan, lands which helong, ut least geographically, to India. All these comentries, while recognising the common supremacy of China, are severnlly distinguished hy their physieal fentures, the institutions and hahits of their inhabitunts. But none of them huve, in recent times, so effectually repelled foreign influences us Tiket, which is still what Chinu formerly was-an ulmont inuecessible land. In this respect it may be said to represent trudition, henceforth lost by most of the other East \(\Lambda\) siutic states.

\section*{Nomenclature.}

The name of Tibet is applied not only to the south-west portion of the Chinese Empire, but also to more than half of Kashmir oceupied hy peoples of Tibetan origin. These regions of "Little Tibet" and of " \(A\) pricot Tibet"-so called from the orehards surrounding its villages-consist of deep valleys opening like troughs between the snowy Himalayan and Karakorum ranges. Draining towards Indin, these uphunds have gradually been brought under Hindu influenees, wherens Tibet proper has pursued a totally different career. It is variously known as "Great," the "Third," or "East Tibet;" but sueh is the confusion of nomenclature that the expression "Grent Tibet" is also applied to Ladak, whiel forms part of Kashmirr. At the same time, the term Tibet itself, employed by Europeans to designute two comntries widely differing in their physical and political conditions, is unknown to the preople themselves. Hermann Schlagintweit regards it as an old Tibetan word
meaning "strength," or "empire" in a pre-eminent sense, and this is the interpretation supplied by the missionaries of tho seventeenth century, who give the country the Italiun name of Putente, or "Powerful." But however this be, the present inhabitunts use the term Bot-ynl/ alone ; that is, " land of the Bod," itself probably identical with Bhutran, n IIindu name restricted by Europens to a single state on the southern slope of the Ilimalayas.

The Chinese call Tibet either Si-Tsang - that is, West Tsang, from its prineipal province-or Wei-Tsang, a word applied to the two provinces of Wei and Tsang, which jointly constitute Tibet proper. To the inhabitants they give the name of Tu-Fun, or "Aboriginal Funs," in opposition to the Si-Fun, or "Western Fuas," of Scehuen and Kansu. The Mongoliuns, in this imitated by the Russians of the last eentury, often called Tibet the Tangut country, from the tribes inhubiting its northern parts. But they more commonly gave it the name of Baran-tola, or "Right Side," in contrast to Zegun-tola, or "Left Side;" that is, the present Zungaria.

\section*{Physical Outhines.}

Tibet forms almost exaetly one-hulf of the vast semieirele of highlands which stretch with a ralius of 480 miles west of China from the first Mongolian spurs of the Tian-shan to the gaps in the Eastern Himalayas, through which the Tsangbo, the Salwen, and Mekhong escape to the Indian Ocean. The lofty border range of the Kuen-lun divides this semicircle into two parts presenting striking contrasts with each other. In the north stretehes the elosed basin of the Tarim and several other streams which are lost in the sands. In the south rises the elevated tableland of Tibet. Thus the most massive plateau on the earth's surface rises close to one of the decpest depressions in the interior of the dry land.

Overlooking the irregularities of outline caused by its political frontiers, Tibet is, on the whole, one of the most elearly defined natural regions in the Old World. Resting towards the north-west on the broken masses interseeted by the Ladak and Kashmîr valleys, it spreads out gradually towards the east and south-east between the main continental chains of the Kuen-lun and Himalayas. Like the Pamir, these two mighty ranges are regarded by the peoples dwelling at their base as "roofs of • the world," and the "Abode of the Gods." They seem to form the limits of another world, to which its snowy diadem sparkling in the sun gives the appearance of an enchanted land, but which its few explorers learn to recognise as the region of cold, snow-storms, and hunger. Suspended like a vast terrace some 14,000 or 16,000 feet above the surrounding plains, the Tibetan plateau is more than half filled with closed basins dotted with a few lakes or marshes, the probable remuins of inland seas whose overflow discharged through the breaks in the frontier ranges. But at a distance of about \(\mathbf{7 0 0}\) miles from the highlands on its western frontier the Tibetan plateau is limited eastwards by a broken ridge running south-west and north-east. West of these mountains the platean slopes east and south-eastwards, here branching into numerous chains with intervening river valleys. Yet on this side the plateau is even less accessible than elsewhere round its periphery. On the
; the interprewhio give the be, the present tself probably singlo state on m its principal ei and Tsang, e the name of restern Fans," lussiams of the inhabiting its Baran-tolu, or is, the present
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eastern frontiers of Tibet travellers are arrested by the rugged gorges, the extensivo forests, the absence of population, and consequently of supplies of ull kiuds, and to these obstacles is now added the ill-will of the Chinese authorities. During the present century the Tibetan Government has suceceded better than any other Asiatic state in preserving the political isolation of the people, thanks chiefly to the relief and physical conditions of the land. Tibet rises like a citadel in the heart of Asia; hence its defenders have guarded its approaches more casily than those of India, China, and Japan.

\section*{Exploration-Extent-Divisions.}

The greater part of Tibet remains still unexplored, or at least geographers have failed to trace with certainty the routes of the Roman Cutholie missionnrics who traversed the land before their entry was interdieted. In the first half of the fourteenth eentury the Friuli monk, Odorico di Pordenone, made his way from China to Tibet, and resided some time in Lassa. Three centuries later on, in 1625 and 1626, the Portuguese missionary Andrada twice penetrated into Tibet, where he was well received by the Buddhist priests. In 1661 the Jesuits Grüber and D'Orville travelled from China through Lassa to India. In the following century the Tuscan Desideri, the Portuguese Manoel lireyre, and others visited the 'libetan capital from India. But the Capuchins had already founded a Catholie mission in Lassa muder the direction of Orazio della Penna, who spent no less than twenty-two years in the comutry. At this time the Tibetan Government allowed strangers to penetrate freely over the IIimalayan passes, which are now so jealonsly guarded. A layman also lived several years in Lassa, whence ho went to China by the Kuku-nor, again returning riá Lassa to India. This was the Dutch traveller Vin de Putte, who is known to have been a learned man and a great observer, but who menfortunately destroyed his papers and charts, fearing lest these ill-arranged and misunderstood documents might be the means of propagating error. He left nothing behind him except a few notes and a manuscript map, carefully preserved in the Middelburg Muscum in Zealand.

Itincraries traced either astronomically or by the compass and chronometer are still very rare. The English explorers and the Hindu surveyors employed by the Indian Government have only visited the south-western districts, and the upland basin of the Tsangbo north of Nepal and Sikkim. South-east Tibet has been traversed by French missionaries; but all the recent attempts made to penetrate from the north and north-east have failed. In imitation of Paskievich the "Transbaikalian," and Muraviov the "Amûrian," the brothers Sehlagintweit have assumed the whimsical title of "Transkuenlunian" (in Russian, Zakuenlunskiy), to perpetuate the memory of their passage over the Tibetan mountains; but they only visited the western extremity of the country. The Russian explorer Prjevalsky was compelled twice to retire without being able to penetrate into the heart of the country, and the Hungarian Bela Szechenyi ulso found himself obliged to retrace his steps. For all the regions not yet visited by the English and Hindu
surveyors the present maps of Tibet are merely reproductions of the chart drawn up ly the illustrions D'Anville, and based on the surveys made under the Emperor Kang-hi by the Tibetan lamas trained by the astronomers of the Sueiety of Jesus. Nevertheless a solid beginning for future researeh has already been made, thamks to the geodetic works undertaken in the Himalayas. In 1877 the engineer liyall even obtained permission to penetrate ints the Upper Sathaj valley in order to survey the peaks from their northern base, and all the summits visible from this valley have been comprised in his triangulation. Within the approximate limits indicated on the present mups, which will have doubtless to be modified in all their details, the area of Tibet, including the Kuku-nor basin, is provisionally estimated

Fig. 3.-Itinerahies of thr Tibetan Explonfins.
Scale 1: 22,000,000.

at 680,000 square miles, or somewhat more than thre times that of France. But if we include several independent neighbouring districts, often regarded ns belonging to Tibet, and ull the tracts peopled by men of Bod stock in Kashmir and the Chinese province of Sechuen, the total area will exceed 800,000 square miles.

Exeluding the western highlands belonging politically to Kushmir, Tibet proper comprises three natural divisions-the northern lacustrine plateanx ; the southern upland valleys, where the Satlaj and Tsanglo flow in opposite directions along the northern base of the Himalayas; and South-east Tibet, cut up into divergent basins by its flowing waters.
chart drawn the Emperor iety of Jesus. male, thanks ngineer liyall y in order to ible from this ximate limits ed in ull their ally estimated
 x in Kashmír 10,000 square
slimîr, Tibet slatenux ; the site directions cut up into

\section*{The Kimedac Range.}

The northern region, the largest in extent, but by far the most thinly peopled, consists of all the closed basins limited southwards by the enstern prolongution of the Kirakormm, and resting northwarls on the mighty Kuen-lun rugre. 'This border chain of the plateau, separating Tibet from the Thrim busin, should be regarded, far more than the Ilimulnyas, as forming part of the continental backbonc. It continues tho IIindu-Kush cast of the lumir, while connecting itself directly with the "diaphragm" of Western Asia. It thus constitutes the castern hulf of the main continentul water-parting, which runs west and east irregularly, now skirting the plateaux in the form of border chains, now breaking into purnllel or slightly divergent ridges, occusionally even developing into distinct mountuin systems. The Kuen-lun and its eastern continuation into China do not apparently present greater uniformity as the Central Asiutic axis than do the ranges of the western "diaphragin." But the orography of Tibet and China is still too imperfectly known to allow us to spenk with certainty on this point.

Regarding the Kuen-lun with its eastern prolongations as forming one vast system, its total lengh, from its roots in the lumir to its extreme spurs between the INoang-ho und Yang-tze-kiang, may be estimated at ubout 2,400 miles. But this orographic system is broken into a great number of chains by frequent gups, changes of direction, intersections, and displucements of all sorts. The highlunds to which the term Kuen-lun was applied in the eurly periods of Chinese history form a group of magnificent mountains rising near the sources of the Hoang-ho; but this mass can scarcely be regurded as the central nueleus of the system to which geogruphers have subsequently extended the name. With the progress of geogruphical knowledge westwards, the term Kuen-lun (Kul-kun, Kur-kun) also advanced in the same direction. It is now applied to the range by the old llindu immigrants from Kashmir called Aneatn, from the Sunskrit Anaratapta; that is, the "Unillumined," the mountain of cold and gloom, synonymous with the Tutar name, Karangui-tagh, or the " Dark Mountain."

The Kuen-lun has apparently no peaks as high as the lighest in the Iimaluyas, or even in the Karakorum range. Johnson, Prjevalsky, Montgomerie, und Richtlofen are of opinion that none of them attain an elevation of 23,000 feet, although beyond Tibet a few summits between Kashmîr and Yarkand exceed 24,000 feet. Towards the sources of the Cherchen-daria stands the Tuguz-davan, where the Kuen-lun proper throws off various spurs and terraces, which fall gradually towards the depression formerly filled by the Central Asintic Mediterrunean Sea. The northernmost ridge is the so-called Altin-tagh, or " Gold Mountains," whose spurs advance to the neighbourhood of the Lob-nor. South of this ridge, which is about 13,000 feet high, there streteh two other parallel chains, besides the main range which continues its normal casterly direction to the Gurbu-naiji, near the sources of the Yung-tze-kiang. The Mongolians of the Chaidam plains suy that this system is continuous, and that many of its penks rise uiove the snow-line.

Although inferior to the Himalayas in the elevation of its chief summits, the

Kuen-lum surpasses them in menn altitude, and is also of a much older date. Belonging to a geological epoch anterior to the existence of the limalayas, its crests have maturally been gradually weathered, and the detritus spread by the aetion of wind and water over the surromeling platemux and lowlands. In his jomrney across all the crests separating the Indus and Tarim busins, Stolicaka found that the oldest rocks of this region belong to the Kuen-lun. They consist mainly of syenitic gneiss, and the most recent deposits are trinssie, whereas the Itimalayan and Karakorum systems comprise the whole series between the paheozoic and cocene formations. It is generally admitted that the Kuen-lun is the original folding of the platean, and that the southern ranges are of more modern date.

Recent observation, as well as the climatic conditions, show that on the whole the Kuen-lan lacks the variety and sublimity of forms characteristic of the Himalayas. With less jagged erests and fewer fissures, it rises above the narrow oases at its base and the Gobi sands like a long rampart, here and there speckled with snow. Notwithstanding its greater mean elevation, it camnot be compared with the Ilimalayas for the abundance of its ice and snow fields. Still, aecording to the Chinese documents, there are some real glaciers in its eastern seetion, as well as immediately east of the uphand hara-kash valley. The hollows of the phateau are also filled with motionless iee, and thermal springs give rise to frozen masses which spread over a vast surface. The northern winds, to which the range is exposect, have already been deprived of most of their moisture on their way across North Asia, while those from the Indian Ocean discharge nearly all their rains and snows on the ILimalayas, and the other chains of Bhutan and South Tibet. Thus the atmospheric currents reaching the Kuen-lun are very dry, and the streams rising in the upper valleys are mostly of small volume, losing themselves in the sauds and marshes on either side of the range.

The western extremity of the ehain north of Kashmir abounds far more in rmming waters than the Kuen-lim proper. Here the crests and the platean above which they rise are much narrower than in Tibet, and the ice and snows are extensive enough to form, on the northern slope of the Karakorum, considerable streams, which escape through the fissures in the Kuen-lun down to the Khotan and Kashgarian plains. Thus the Yarkand, already a large river, erosses the south-eastern Pamir at the point where the projecting spurs of the HinduKush and Kuen-lun almost meet. Farther east, a defile 1,000 feet deep in the latter chain affords an outlet to the Kara-kash, the chief aftluent of the Khotan. This river itself rises well to the south of the Kuen-lim, through an opening in which it forees a passage after a long winding course in a side valley. But east of the Khotan the Cherehen-daria is the only river north of the Tibetan plateanx which hats sufficient volume to form with its affluents a stream large enough to flow to any distance across the plains. However insignificant they may now be, these rivers have in the course of ages accomplished vast works of erosion, by hollowing out the approaches from the Tibetan tablelands down to the Tarin depression. In some places the fall is so gradual along these streams that the incline does not
eh older date. Himalayas, its spread by the launds. In his sius, Stolička They cousist c, wherens the between the c Kuen-lun is \(s\) are of more
on the whole of the Itimae narrow oases speckled with compared with eording to the tion, as well as he plateau aro frozen masses the range is cir way across their ruins and Tibet. Thus d the streans nselves in the

3 far more in plateau above and snows are l, considerable to the Khotan river, crosses ff the Hindu\(t\) deep in the f the Khotan. all opening in . But east of etan plateaux nough to flow now be, these by hollowing pression. In cline does not
exceed that of ordinary routes in highland regions. Aceording to the natives of Khotan, it would even be possible to eross the Kuen-hnin a carriage. One of Montgomerie's IIindu surveyors easily reached the western Tibetan platean by following the Kiria valley to an altitude of over 16,000 feet. The platean is approached by other passes from the cast, for the Zungarians havo frepuently

Fig. 4.-Upper Kaba-Kasi Valeey.

invaded Tibet by crossing the steppes and deserts stretching south of the Lob-nor. The Mongolian pilgrims follow this route on their way to Lassa.

\section*{Tue Province of Khachi-Lacustrine Sistem.}

The North Tibetan tableland, mostly inhabited or visited only by nomad tribes, still remains the least-known upland region in the Chinese Empire. The Tibetans themselves are acquainted only with the southern districts of this bleak and stornswept land, roamed over by Mongolian and Tatar nomads, who choose for their camping grounds the sang, or sheltered pastures resembling the pamirs of the
flatem betwen the Oxus and Tarim basins. The 'latar tribes, collectively known as \(I\) Ior or \(t\) Lhor, dwell in the westom and somthern districts. Bisewhere live the Sok, or Mongrolim numads, who have mamed nemly ull the lakes mud momenains in
 collective nome of all these trihes is Khash-len, or "Mohammedans," whence, probably, the term Khachi upplied to the whole regiom. From the two prineipal groups of tribes setted in it, the comentry is also known by the name of Hor-Sok.

Fig. is.- Lake Dangin-yim and Taheot Moentainn. Scale 1: 2,000,000.


Of the numerous lakes scattered over the Khachi phateau, those of Namurr, Ike Namûr, und Baklai Numûr are the largest traced on the Chinese maps. The waters or partly flooded tracts in this vast lacustrine basin would seem to streteh south-west and north-east for over 120 miles, und we now know that the \(f_{i} \quad\) an is largoly ocempied by a hain of lacustrine basins rumming north-west and souih-enst, parallel with the depressim waterel by the Tsangro. In 1874 the pundit Nuin Singh visited muny of these lukes, several of which are merely the remans of formerly far more extensive basins. Some have even been reduced to muldy meres, covered with a crystalline incrustation, which is broken up by the salt
traders. Some of the lakes ure saline, others brackish, while most of those with free outlets ure perfectly fresh. This lacustrine region has a mean clevation of from 15,000 to 16,000 feet, with almost everywhere extremely gentle slopes, over which cimriage and even military roads might easily be comstructed.

One of the largest lakes is the Damgra-yum, or "Mother Damgra," which is contracted towards the centre, thas foming nearly two separate hasias. Although no less than 180 miles in cirementerence, the devout Budhists of the distriet, and even of Lassu, often undertake to walk in procession round this luke, tuking from eight to twelve days to perform the task, necording to the seasom. A harge monntain rising south of the lake has received the nume of 'Targot-yap, or "Father 'Iargot," and the natives regard this mountain and Mother Dangria as the first parents of

mankind. The groups of hills dotted round about are their daughters. The kora, or complete pilgrimage round the mountuin and lake, takes about one month, and is a most meritorious act, effacing all ordinary sins. Two koras satisfy for one murder, and the parricide himself is pardoned if he performs the act three times.

East of the Dangra-yum the lakes become more numerous than elsewhere on the plateau, and most of them drain northwards, where oceurs the Chargut-tso, said to be the largest basin in tho south of the tableland, and discharging its waters to one of the great affluents of the Indian Ocean. The Tengri-nor, which is smaller than the Chargut-tso, and sitaated in tho south-east angle of the Khachi country, lies already within the limits of modern exploration. It is about 60 miles from Lassa, and runs 48 miles south-cast and north-west, with a breadth of from

15 to 94 miles. The pundit who visitent it in 1872 took fourteen days to traverse its northern shore. It is of mannown depth, und un ahowt pereminally cloudless sky is mirrored in its elear waters, whene its Thtar name, Tengri-nor, and Tiletun Nam-twn, luth meming the "Heavenly lake." Thousands of pilgrims yenrly fare the difficulties of the route und the marnuders of the distriet in order to visit the convent of Dorkia, and the other monasteries on the headlands commanding extensive vistas of its blue waters, mind of the snowy peaks in the south and sonthcast. In this "holy land" everything purtakes of the marvellons. Here n roeky gorge has been the work of a gol; elsewhere an carthen mound raised by the hund of man has been suddenly rent asunder to afford an exit heavenwards to a luma who died in a stute of eestasy. The very fossils of the rocks are sacred oljeets, und are carried away as relics of one of the "three hundred and sixty mountuins," or divinities in the suite of the principal deity, the snow-clad Ninjin-tang-ln.

It was till recently supposed that the evaporation of the Tengri-nor about balimed the amount discharged through its influents. But this is a mistake. The traveller who explored it in 1872 did not perceive its outlet, which, like the lake itself, was at the time covered with ice. This outlet escapes from the northwest corner, and flows to the river which drains the Chargut-tso. In its neighbourhood ure some hot springs, and further north the Bul-tso, or "Borax Lake," covers a space of some 24 square miles. The pilgrims, who here combine trade with devotion, carry away loads of borax, whicin they sell in Lower Tibet, or forward over the llimalayas. From the Bul-tso formerly came the borax known as Venetian, because refined in that city.

\section*{The Easterv Migilands and Riveis.}

These chemical efflorescences bear witness to the slight snow and rain fall on the Khachi plateau. Yet immediately east of it begins that remarkable region where the brooks and rivulets are collected from all quarters into mighty rivers. This contrast is caused by the mountains skirting the plateau, which receive moisture only on their slopes facing the south and south-casit sea breezes. These highlands are evidently divided into several groups, for the Chinese mups show various streams flowing to the tributaries of the Indian Ocean, and to the Yang-tze-kiang, and rising on the Khachi plateau. The highlands are divided by crosive action into several distinct chains; but the tableland itself is nearly everywhere sufficiently elevated to eause a great difference of climute between the two slopes. But we do not yet know whether the highlands belong to in single border chain, separated at intervals by the upland river valleys, or form part of distinct ranges at the eastern extremity of the plateau. Richthofen aceepts the first hypothesis, according to which a transverse orographie system comnects the momtains of South Tibet with the Kuen-lun. To this ussumed chain he even gives the name of Tang-la," from a group of peaks rising south of the Tengri-nor. Yet from what is known of the upper river eourses, the intermediate chains would
*The term la usually means " mountain pass," but in East Tibet it is frequently upplied to mountains, aud even to whele ranges.
all seom to form parallel cresta maning south-west and north-cost, with hroad and deep intervening depressions. These crests are saceessively crossed by the caravans proceeding from Tiket to Mongolia.

Of these parallel rhains the sonthermonst is the 'Tamt-ha, whose western extremity abuts upon Richthofen's Tang-la. 'The two wov' wem to be mercly dialeetic varieties of the same mame. Huc sponks of the Tha-la as perhapes "the highest peint on the ghole," but during hix third expedition Prjevalsky senkel these formidable heights and tixed their elevation at 16,600 leet, or about 3,000 feet lower than some other frepuentel passes. At their somathern base are numerous thermal springs, which unite in a considerable rivatet dowing over a bed of yellow or gold-coloured pebliles. Dense vapours rise comtinually nlove the springs, and are condensed in fleecy clouds, while in some reservoirs the pent-up sapur is ejected, forring upwards a vast colum of water like the geysers of Iceland or the Yellow Stone National Park in the United States.

\section*{Somtil Thet-Tue Trans-Itmahayan Ranges.}

South Tibet, comprising that portion of the phatean where towns have been built, and where the nation has been grodually constituted und its culture developed, consists of the relatively sheltered depression stretehing south of the Khachi tableland. In ordinary language the term 'libet is applied to this section alone of the Trans-1Himalayan uplames. Although draining in opposite directions to the Arabian Sea and Bay of Bengal, it is nevertheless a longitudinal valley, ut once the largest, and, thanks to the surromang highlands, the grandest on the surface of the globe. But this long depression, forming a semicircle parallel with the Itimalayas, is not a regular phain or a mere trough limiting the Khachi phatean on the south and south-west. It is a highland region whose ranges run mostly in the same direction as the Ilimalayas.

The ehain skirting the north side of the Tibetan depression properly so called, and at the same time forming the southern escarpment of the Khachi platemu, may be regarded as a continuation of the Karakorum. East of Kashmir und of Laduk this range trends southwards parallel with the Himalayas, and projects to the left several ridges which gradually merge with the platenu; while the main chain, eut into ravines and even intersected by tributaries of the Tsangbo, by some closed basins, and eastwards ly the affluents of the great castern rivers, unites with the Tang-la south of the Tengri-nor. Back of this ehain rise several lofty groups, including the Targot-leh, which overlooks the Dangra-yun, and whieh Xian Singh regurds as the highest in the whole region of plateaux north of the Himalayas. Farther east the Gyakharma rises above the great lake Nyaring-tso, and is separated from the southern border chain by the valley of the. Dumphu, an aftluent of the Nyaring. Peaks from 23,000 to 24,000 feet high have been sighted on the range skirting the course of the Tsungbo, und which have not yet been definitely named. For this Tibetan chain the Schlagintweits have retained the Tatar term Karakorum, which belongs, strictly speaking, to the crest separating Kushmir from
the Upper Yarkand valley. But Itodgson would prefer to eall it Ninjin-tung-la (Nyonshhon-hug-la), ufter the mugniticent pak of the Tengri-nor-a suggestion which would introlnce needless confusion into the nomencluture of this region. Fior the same reason we shomld perhaps reject the 'Tibetan term Gangri, or "Snowy Momutain," abrealy applied to several summits in Went Tibet. Klaproth has propesed Gamprolis-rit, alopted by Markham, while Petermann and others cull the chains and grompesmeth of the phatenu simply the "Twang Mombains," ufter the Tibetan province of that nme, which they shelter from the northern blusts.

Another line of crests nud summits, which might be ealled the Truns-ILimalayas, stretches between the Tsang or Gang-dis-ri highlands mod the glittering peaks of the Himahays, and sends down glaciers on either side. The South Tibetun depression is thus divided cast and west into two secondary and parullel depressions. The middle chain, forming a continuation of one of the Jadak ranges, lifts its snowy peaks above the southern edge of the Satlaj valley, and farther on above that of the Tsinglo. Although less elevated than the Itimulayus, it forms a more important water-parting, and is pierced by fewer river beds. For about 480 miles the Trans-Itimalayas completely enclose the Tsungbo basin, while the deeper gorges of the LImalnyas allow several streams to eseape towards the phaine of the Gauges. But not all the ruming waters of these upland regions find thei way to the oreon, mad some vast cavities in the intervening plateaux are filled with lakes without uny outflow, such as the Chomto-dong and Pulgu-tso. The water of the Chonto-dongr is perfectly sweet and limpid, which would seem to imply that an outlet existed till comparatively recent times. All these highlands are crossed by passes exceeding Mont Blane by 1,500 and even 3,000 feet in altitude.*

\section*{Mocnt Kaïhs: Solrece of the Forr Sacmed Rivers--Tie Upper Sathas and Indes.}

The Tiketan region, where rise the Satlaj and the Tsangbo, is a holy laad both for Brahmins and Buddhists-a fact undoubtedly due to its gcographical importance. The transverse ridge comnecting the IImalayas with the Gang-dis-ri, and through it with the whole Tibetan plateau, not only forms the necessary route between the two great valleys which stretch far into regions of different aspeet, but

 west of it rises the Tise of the Tibetans, the Kuilus of the | indus, who- pramidul musw is iselated from the other monntuins in the Gung-dis-ri chain. Whent Hindus pereeive in the distunce its lofty erest presenting the form of a run pmgola, they full prostrate seven times, and seven times ruise their humds towa is the leavens. In their eges it is the abxele of Muhaleo, or the Girent Gonl, the at and grumdest of all those Olympuses on whowe summite the peoplew at auch successive stage of their westwarl migrations have ween in funcy the duzaling light of their deities. It is the Monnt Meru of the ancient IImdus-the pistil of the symbolic lotus flower which represents the world. Nor do the Tibetan lumas yield to the IIindu yoghis in their veneration for the saered momatnin. The most during amongst them undertuke a pilgrimage of neverul duys romed the Kuillun across the snows and ruggel ground. In the second century of the Chistimu era the first

Fig. 7.-Molnt Kaílah anis the Foell Sachei Rivein. Scale \(1: 3,000,000\).


Buddhist monastery on the plateau was built at the foot of this mountuin, with its four faces, "one of gold, the second of silver, the third of rubies, the last of lapislazuli." Tho Hindu legends also here seek the mysterious grotoes whenee emerge the four divine animuls-the elephant, lion, cow, and horso-symbols of the four great rivers-the Satlaj, Indus, Ganges, and Tsangbo. These mighty streams, which flow in four different directions, rise on the flanks of the sume mountuin within a space of not more than 60 miles in extent. The Alaknuada, Kurnuli, and other head-stremms of the Ganges rise on the Indiun side of the IImaluyus, and the Indus receives its first waters from the northern snows of the Gang-dis-ri. But between these two extreme points occurs that deep depression where rise the Satluj and Tsangbo.

At a former geological epoch tho erescent-shaped depression skirting the northorn slope of the IIimalayas was probably flooded by a vast alpine lake, of
which tho prowent laken acottered over the lasin aro the remains. By a romark-
 of hakes in the sonthern phatenn of Khurhi, from the Jnugru-yum the the 'longri-nor. In this depression two rivern also tuke their rise, und, like the Sathej nud Twangbo,

Fig. 8. - Tifr Mansahaér Bahin.
Ronle 1 , \(720,000\).

- 16 sillen.
flow in opposite directions-the Indus on the one hand, and on the other the mysterious stream which probubly forms the upper course of the Salwen.

The least-inclined section of the South Tibetan depression is that which is traversed by the Satlaj. Its first terrace is occupied by Lake Kong-kio, which has no outlet, and which, like nemly ull closed busins, has become salt. Round about are scattered some other saline tarns; but the Mansuraîr and Rakus-tal, the two great basins of the valley, are fresh-water lakes connected together by a permanent

By it remarkI ur the chuin te 'l'cugri-mor. and Tranglo,

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Round ubout kus-tal, the two by a permanent

Fivulet carrying to the Satluj a suered stremm, for the Munsumir-he Munasa Sarovara of lliadu logend-is the " lake forment hy the beveth of brahma." * Its
 'The surpomaliug blutfs are dotted with the little homene of pilgrims, many of whom do not feur to reside for monthe in these frightful molitudes. 'Those who die on the way know that their ashes will be cust into this water, "the most hallowed in the world," und this is in their cyew an suprene reward. The Ganges was formerly suid tor rise in Lake Munsarant, hat Monreroft has shown that its source is on the sonthern slope of the Himuluyus. Even at these elevations buttles luve inen fought, und in Decomber, 18:1, the Chinese here defeuted the Dogrous of Kushuir, pursuing them as fur as Leh in Little Tibet.

On emerging from Lake Rakus-tut, the Lamgn-lankn of the Titutatus, the Suthij (Sutradu, or Sutudru) occasionally runs dry towards the eut of summer; but lower down it is a permment stremm in the valley, 14,600 feet ubre; the sen, which is moted for its thermal waters. Here sulphurons vupours a re cmittel from the ground; and the sume phenomenon is observed in muny other purts of Tibet, although there is nowhere uny truee of volemic roeks.

The general incline of the Upper Sutluj vulley is senredy perecptible within Tibetan tervitory. Near the njot where the river is nlout to escupe through the Himalnyan gorges towards the plains of India, the terrnces on either bank muintuin an elevation of 14,600 feet ubove the sen, as at Lake Mansuruitr, Is0 miles firther up. These terraces, which are of lacustrine origin, have been furrowed by the stream to a depth of 1,300 and even 1,600 feet, without, however, reaching the live rock forming the ohd bed of the lake. All the tributary torrents have, like the Sathaj, to force a passage through the rocks and clays; und the whole dintrict has thus been eut up into vast gorges. In these gorges the few inhubitunts of the country have formed their temporary or permunent abodes. Thus Dubna, the chicf "eity" of the Sathin valley in Tibet, oceupies the sides of a ravine over 300 feet deep, which has been eut through the roek by an utfluent of the muin streum. \(\boldsymbol{\Lambda}\) few two-storied stone houses, with their white façades, contrast here und there with the red esearpments; and towards the top of the town the quarter occupied ly the lamas forms a sort of citadel, itself overlooked by inaccessible rocky heights. \(\boldsymbol{\Lambda}\) solitary gate in the lower quarter gives ingress to the inhabitunts. In winter Daba is completely abandoned; the gorge is filled with snow, which eovers all the houses, and which in spring-time has to be eleared awny, with the mud, rocks, and other remains of avalanches that have aceumulated during the cold seuson. The débris which now fills up the old lake belongs to the tertiary und quaternury epochs, and contains muny fossils as well as the bones of some large vertebrutes. Thus a speeinl fama had time to be developed and disappear during the ages occupied by the detritus in filling up the inlmad sen, which has escuped through the gap in the Himmlayas now affording an outlet to the Suthj.

Several of the rivers rising north of the Gung-dis-ri were formerly said to be
- According \(t\), Moorcroft, Manasse Saraur meins simply the Sacred Litko. It is tho Tro- Mapang of the Tibetans.
the main head-strean of the Sind or Indus, and to all of them was applied the mythical name of the Sengo Khabad, or river "flowing from the lion's throat." But the Anglo-Indian explorations have established the fact that of these rivers tho true Indus is that which rises farthest east, near the northern slope of the Mariam-la. This is the longest and most copions of all the streams uniting in the common bed of the Indus above its entry iuto Kashmir. Within Tibetan

Fig. 9.-Lahe Pang-kong: Decampment of tie English Expeimiton of 1871.

territory the Indus is also joined, and nearly doubled in volume, by the Gartung, or river of Gartok.

\section*{Lake Pang-kong.}

The continuous diminution of moisture which has reduced so many Tibetan lakes to mere salt marshes has also dried up muny rivers, converting into elosed basins numerous valleys which formerly drained to the Indus. \(\boldsymbol{A}\) striking example occurs in the Radokh valley, north of this river. In this district, at a
m was applied e lion's throat." these rivers tho 1 slope of the aus miting in Within Tibetan
or 1871.
 by the Gartung, o many Tibetan ting into closed 1s. A striking his district, at a
mean elevation of 13,500 feet, a vulley, ruming parallel with the Indus, follows the same general windings, turning first north-west, then heading westwards through a momntain gorge, beyond which it resumes its normul north-westerly course. A large portion of this valley is flooled, but the lake thus formed, which resembles many inland Scandinavian fiords, alternately broadens and contracts with the breadth of the bed and the projecting headlands. It has even been divided into three basins at different levels by the detritus, or perhmps by the alluvia washed down with the side streams. The upper lake takes the name of Noh, from a neighbouring caravan station; the central, 40 or 45 feet higher thun the lower, is the Tso-Mognalari, or "Fresh-water highland lake;" and the sume name is applied to the lower lake itself, although the lack of supplies has gradually

Fig. 10.-Lake Pang-kong.
Scale 1: 1,600,000.

\(\longrightarrow 90\) Miles.
changed it to a saline basin with 13 per 1,000 of salt, or about the same as in the Black Sca ; but it also contains nearly as much sulphate of soda and magnesia as of sea salt, so that the absolute proportion differs. The Auglo-Indian explorers have called this lake the Pang-kong, from the Kashmir province of that name into which its northern extremity penetrates. Water marks and banks of fresh-water shells show that it formerly rose \(\mathbf{2 4 0}\) feet above its present mean level, which is 13,460 feet above the sea. Hence it was twice as deep as at present, its extreme depth being now 140 feet according to Trotter and Biddulph, or 165 feet according to H. Schlagintweit. The total area of both lakes, estimated at 216 square miles, was also more than double when the emissary deseended to the Shayok through a valley some 8 miles long, and through the Tankseh River. While gradually falling
with the level of the lake, this ontlet furrowed the roek to within 104 feet of its present level, after which the outflow ceased, and the lake gradually diminished by excess of evuporation over the inflow.

\section*{The Twingimo, or Brimmapitha (?).}

The pre-eminently Tiketan river-the river which traverses the two central provinces of Tsang and Wei-is the Tsungbo (Tsanpa, Tsambo, Zangbo, Sampo, or Sumbo); that is, "the IIoly Stream," whose upper course is often called the YuruTsauglo, or "IIigh Tsunglo." Like the Indus und Ganges, it has been eompared to a mystic animal, several of its names mcaning the "Peacock" or the "Horse" River, for accorling to one legend it flows from the month of a war-horse. It rises in the same low ridge as the
 Sutlaj, and its chief headstreams are the glacial rivulets descending from the cirques of the ILimalayas. It receives but slight contribution from the Karakorum, from which it is separated by the parallel Khomorang range. After assuming the proportions of a river, it flows through a gently inclined plain, in which its sluggish waters becomo navigable for barges near the convent of Tadum, where the pass over the Mariam-la descends to the valley. No other river in the world is navigated at this elevation of nearly 14,000 feet above the sea. Lower down it is also navigable at several points by means of rafts covered with leather, but elsewhere it is entirely obstructed by rapids and sand-banks. Its high terraces and projecting bluffs have offered facilities for the construction of suspension bridges, though these frail contrivances are little used by travellers, who prefer to cross the stream in bouts.

During its course through Tibet the Tsangbo reecives numerous tributaries on its right bank from the IImalayas und Trans-Ilimalayas, on its left from the Gung-dis-ri, und through some gups in the border chain even from the upland regions beyond that runge. The Namling, one of these torrents from the north, rising in the Khalamba-la near Lake Tengri-nor, traverses one of the most remarkable thermal districts in Tibet. Here are two geysers, which eject at intervals columns of sulphurous water to a height of 58 feet, and in winter the returning fluid forms

104 feet of its diminished by
te two central gbo, Sampo, or lled the Yarubeen comnared the " Horse" horse. It rises \(v\) ridge us the : chief headglacial rivulets n the cirques s. It receives ribution from , from which by the parallel ange. After proportions of os through a plain, in which raters become arges near the am, where the Mariam-la delley. No other d is navigated on of nearly pove the sea. covered with iks. Its high of suspension , who prefer to tributaries on rom the Gangpland regions orth, rising in st remarkable ervals columns ng fluid forms
round their orifices erystal margins bristling with long stahgmites. Most of the lakes in this district have either been filled with alluwia or exhansted through their emissaries. Amongst the largest that still survive is the Yandok, or Palti, which is figured on D'Auville's and subsequent maps as almost ring-shaped, or like a moat surrounding a citadel. The island, which is sometimes represented rather as a peninsulu, rises \(2,2.50\) feet above the surface of the lake, which is itself 13,350 feet above sea-level. According to Mumning it is slightly brackisl, although the pundit who visited its northern shore fomed its water perfeetly pure and sweet. It is said to be very deep, but it is uneertain whether it forms a completely elosed basin or drains through a western outlet to the Tsangbo, from which it is sepurated on the nerth by the lofty Khambia-la group.

North-east of Lake P'alti the Tsangbo is joined by the Kichu, another "holy stream" which waters the Lassa valley. Nain Singh, who visited the distriet in 1875, saw this valley stretching eastwards some 30 miles, und then disappearing towards the south-east between the hills. But in \(187 \%\) another Hindu explorer, instructed by ILarman, was able to follow the course of the river for over 180 miles. This explorer first followed the Tsanglo to the extremity of the valley seen by Naiu Singh from a distance, but was afterwards olliged to make a great détour in order to avoid a deep gorge into which the river pluaged. Nevertheless he cume upon it again some 20 miles from the point where he had left it, and then ascertained that it made a bend northwards before resuming its normai sourse towards the east and south-east. At the farthest point reached by him he saw a fissure opening in the mountains in the same south-easterly direction, and was told by the natives that the Tsangbo eseaped through this fissure to traverse a tract inhabited by wild tribes and a country beyond it belonging to the British Govermment.

At Chetang the Tsangbo valley is about 11,250 feet above sea-level. Yet at this elevation the river, which already drains an area of 80,000 square miles, has a volume equal to that of the Rhine or Rhone: When seen by Nain Singh its waters were comparatively low, yet the breadth of from 1,000 to 1,500 feet assigned to it by him, combined with its great depth and veloeity, implies a volume at that season of rather more than 28,000 eubie feet per second. But during the floods of June and July the stream overflows its banks for several miles, and the diseharge cannot then be less, perhaps, than 700,000 eubie feet, assuming the rise to be no more than 16 feet, as the mutives assert. Below Chetang, in East Tibet, the Tsangbo still reeeives a large number of copious streams, and flows through one of the wettest regions on the globe, so that it must carry an enormous quantity of water to the Indian Ocean. Yet, to judge from the maps, it seems to lose itself, for its lower course remains still uncertain, oscillating between the Brahmaputra and Irawady. Francis Gurnier even suggested that limestone rocks full of eaverns, like those seen by him in muny parts of China and Further India, oceupy the south-east portion of Tibet, and that the Tsangbo here flows partly underground and ramifies into several basins. But what little is known of the geology of East Tibet seems opposed to this theory. Limestones oceur only on the Yunnan frontier, the rest of the country being composed of erystalline roeks covered with glaeial clays.

But however this be, no explorer having yet followed the lower course of the Tsanglo bevond the point reached by IIurman's emissury, this important question remuins still undetermined. What becomes of the river after escaping from its Tibetan valley? In \(12: 2\) the missionary Regis, who drew up a chart of the comntry by order of the Emperor Kang-hi, stated that "nothing is known for certain us to the place where the river dischurges." He had merely learnt that it flows into the Bay of Bengal "towarls Aracan, or the mouth of the Gunges in Mogul." D'Anville, availing limself of the lamas' map and the documents furnished

Fig. 12.-Course of tine Tsangro.
According to the Chinese Documente.

by missionaries, traces the course of the Tsangbo as if it were continued in the kingdom of Ava by the river Irawady. Rennell, on the contrary, identifics it with the lirahmaputra, and his view is now most commonly accepted. Yule even asks whether the question may not be regarded as already settled, and advances an urgument which he thinks conclusive. In 1854 two Roman Catholic missionaries, while attempting to reach Tibet from Cuper Assam, were killed by one of the Mishmi tribes. A bishop at that time residing in a Tibetan province amnexed to Chiua writes that some Tibetans spoke to him of this tragedy as having taken
place on the banks of the Gakpo, or Kanpu, "a tributary of the Irawady," which flows to the north of the Tangbo. Now it is certain that the murler oceurred on the Lohit, or East Brahmaputra; for a detachment of British troops went thither to avenge their death. Yule argues from this that the Lohit is certainly the continuation of the Gakpo, and that this river, deseribing a great bend east of the


Tsangbo, prevents it from reaching the Irawady. But it may be asked whether a vague report, turning on the doubtful name of a river, is sufficient to dispose of such a geographical question.

The partisans of Rennell's view have long discussed the rival claims of the Dihong, Dibong, Subansiri, and other streams in Assam, to be regarded as the upper course of the Brahmaputra. Most English geographers have pronounced in
favour of the Dihong, sinee Wileox and Burlton ascertained in 1805-6 that it is evidently the main branch of the Bruhnuputra. But when they went on to assert that the Brahmaputra itself is the lower course of the Tsangbo, the still mexplored gap between the 1 wo rivers was no less than 300 miles long as the bird flies, and the intervening highlands were entirely unknown. The information broaght back by Wilcox regarding the river uscended by him was ulso far from sufficient to justify his opinion on the identity of the two streams. Ho should have first of all proved that the Dihong has a larger volume than the Tsangbo.

Fig. 14.-Counse of the Tan cau.
According to Markham. Soale \(1: 10,000,000\).


But he merely observed that at the point reached by him the Dihong was 100 yards broad, with a slow current, and, as he surposed, an immense depth.

The problem is now confined to the narrowest limits. According to Walker's explorations, the entirely unexplored space separating the extreme point reached by the already mentioned IIindu pundit on the Tsangbo, and the farthest point to which the Dihong has been ascended, is exactly 93 miles, and the difference of level would appear to be about 7,500 feet. Were the two streams connected, the total fall in an approximate course of 180 miles would consequently be rather over 1 in 100 yards-a fall unapproached by any other river in its middle course, and equalled only by the valleys of torrents in the heart of the mountains. Vague
reports, no doubt, spenk of rupids und cuturucts through which the Tibetan waters rench the lowhunds; but it is murertain what strems these reports refer to. Besides, the exaet measurments recently taken of the diselarge of the Brahmaputra and its afthents do not seem finvourable to Remell's hypothesis. The flow of the Subausiri, Dibong, and Ulper Brahmaputra shows that these rivers are all far

Fig. 15.-Culrase of the Tinanomo.
According to Gordon. Scale \(1: 11,000,000\).

inferior in volume to the Tsunglo at Chetang, and consequently still smaller than the same stream 180 miles lower down. The volume of the Dihong, as measured by Woodthorpe, is 54,000 cubic feet per second in the snowy season, when the water begins to rise; and judging from the extent of land covered during the floods, the discharge would then seem to vary from 350,000 to 420,000 cubic feet. But this is precisely the amount we might expect to be sent down by the river
busin limited by the Trons-Himulayan range; for here the average rainfall is at least 1:3 feet, and the nataral diselarge may be taken at from 400 to 500 gallons per sparre mile. A basin from 8,000 to 12,000 square miles in extent would suffice to supply such " quantity, and the unexplored tract separuting the Tsangho und Lowor bihong valleys is large mough to contain a basin of this size by including in it that of the Lopra-ko-chu, which Hows to the west leetween the Hinumay and Trans-Ilimalaya, and whose lower course is still unesplored.

On the other hand, the comparative fluvial discharge, as approximately indiented for the T'sanglo und aceurately for the Irawaly, would seem to justify the Chineso map reproduced by D'Anville, which represents the Burmun river as the continuation of the Tsanglo. At Bhamo the Irawaly diseharges during the flockls over \(1,000,000\) cubie feet, and its average volume at this place is ubout two-thirds of the river in the delta ; that is, scarcely less than 315,000 spuare feet. No donbt, luring the dry season from November to June, the diselarge of the Lower Irawady may fall to 70,000 and even 47,000 eubic fect per second; but during that periosl the river receives no rain-water, und diminishes by evaporation as it appromehes the sea. The excessive discharge at Bhamo, where the annual rainfall is far less than in the Brahmuputra basin, can be explained only by assuming a large aren of drainage. Yet on most maps the Irawady busin is strietly limited by an amphithentre of hills on the northern frontier of Burmah. Wilcox and Barlton may doubtless have seen a torrent near its souree in Burmese territory; but it does not, foltow that this was the true Irawady, although so named by them. These explurers themselves heard reports of a great eastern stream belonging to the same basin, but they made no attempt to reneh it.

In any ease, before coming to a definite conclusion, it will be wise at least first to see whether the blocks of wood or stens of trees numbered by order of the Indian Topographic Department and thrown into the Tsangbo in Tibet will rench the plains of Bengal or of Burmah. Meanwhile it is to be hoped that the route from Assam to Tibet may soon be reopened, and that explorers may have free access from the phains to the uplands through the intervening forests, swamps, and hills.

\section*{Head-waters of the Great Indo-Chinese Rivers.}

North of the Tsangbo depression the Tibetan tableland has been cut into innumerable side valleys ly the ruming waters. The southern trade winds from the Bay of Bengal easily reach the Khachi plateaux through wide openings in the Himalayas. Hence the eastern slopes of these uplands receive a copions rainfall from the Indim Ocem. Whilst the arid soil, the rarefied atmosphere, sultry heats in summer, and intense winter cold render the plateaux almost inaccessible, the ravine lands ure equally difficult to traverse, owing to their rugged character, their steep escarpmeuts, fieree torrents, dense forests, and the wild tribes inhabiting the elearings. Most of this region depends offieially on Tibet, and administrative centres are here established as in the other provinces. Nevertheless several groups of tribes are practically independent. No organized army has hitherto been able

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THE LANTZAN-KIANG-HOGG'S GORGE.
to oceupy the country, and its savage or half-civilised inhahitants have oceosionally recognised the supremacy of Tibet or Chima only for the purpose of finding a ready market for their prodnce.

Their lands have been traversed by travellors, and especially by missionaries, but few of then have been ablo to trace a continuous itincrary of their routes, so that these highland regions, fifteen times more extensive than the \(\mathrm{Alpm}_{\text {s }}\) must long remain unknown. Hitherto little has been done beyond determining the general run of the muin ranges. Parallel with the Tant-la other ridges streteh to the Kuku-nor, and all of them run mainly north and south far into the Trans-Gungetic peninsula. These highl. nds form the Indo-Chinese system spoken of by Richthofen. 'I'he two systems intersect each other, leaving several breaks in the converging lines, through which the rivers escape from their upper basins. As far as cun te judgel from the roughly sketched charts of explorers, supplemented by the Chinese documents, the streams of the province of Kham indiente ly the direetion of their valleys the general run of the mountain ranges. All these streams flow first northeast parallel with the Tant-la, then finding an issue westwards, they gradumly trend towards the sonth through the nurrow and deep valleys of the Inde-Chinese system. Thus the Tsungbo itself is deflected to the north-east before bending round to the southern plains either through the Dihong or the Irawady. Similar curves, but on a much larger scale, are described by the Mekhong and Salwen, and the Yang-tze-kiang itself runs parallel with the Mckhong several hundred miles southwards to an opening in the hills, through which it pusses suddenly eastwards into China proper. Nowhere else do wo meet with so many indepeudent streatas flowing so near each other in parallel valleys, yet ultimately disclurging into different sens.

The emissary which eseapes from Lake Churgut, and whieh also druins the Tengri-nor as well us most of the lacustrine district in the south-east corner of the Khachi plateau, is a considerable stream named the Nap-chu, or Nuk-chu, by ILue and Nuin Singh. But after leaving the plateau it frequently clauges its name aceording to the districts and languages of the populations through which it passes. As remaked by Francis Garnier, the river nomenclature is purely local throughout China, and especially in this part of Tibet, the same name for the same strcam being nowhere current for more than 60 miles of its course. Thus the Nap-chu becomes successively the Khara-ussu, On-chu, Ngen-kio, Nu-kiang, Lu-kiang, and Lutze-kiang. This divereity of names, combined with the difficulties of exploration, has enabled geographers to send this river somewhat wildly up and down the country. While Peternann with the Sehlagintweits has identified it with the Dibong, which joins the Dihong a little above the Brahmaputra junction, Desgodius, who has followed the middle course of the "river of the Lutze people" for about 240 miles, has ascertained that it flows far to the east of the Brahmaputra, and accordingly identifies it with the Salwen. He also feels confident that the Lantzankiang, or Kinlong-kiang-that is, the "Great Dragon River"-is the Mekhong of Camboja, and this opinion has been confirmed by the French expedition up the Mekhong. Yet Schlagintweit, Kiepert, and Pctermann make the Lantzan also a
tributary of the Brahmapurm, recognising in it the Lohit, or Red Irohmapmern, whose unw explorend basiu lies ulanst cmirely on the sombla side of the custerin comtimation of the Mimalagas. Yale ngain regards it as identicen with the Gakpe, the small 'Tihetmen river flowing north of, und purallel with, the 'Tamgho.

Of ull these rivers flowing from the 'Tilstan platemux through profomid fissures to tho phains, the Jantzan probably pases through the most sarage gorges. At Yerkalo, where it is still \(\mathbf{7 , 5 0 0}\) feet alowe the sen, its rocky bunks rise several humdred gurds, in many places nhonest perpendicularly, ubove the river bed. South of Aten-t\%e it is not always possible to follow its course, und the traveller is here mad there obliged to monat 1,500 und even 2,000 feet alove the strem, which from these elovations seems like a mere rivalet. The gorge which Cooper hus mumed Ihagg's Wefile, from one of his friends, is a fissure seareely more than 60 feet wide, which seems completely shot in wherever the view is interrupted by
 springing obliguely from the rock has luad to be comstructed in its verticul side. Being kept in a bad state of repuir, this worm-enten stage uffords vistas through the planks of the seething waters below. In severul other phaces the bluffs have ufforted fueilitien for the construction of rope bridges resembling the furabitan of Columbia and the Duero. A simple bamboo rope is stretelied from side to side with a slope sufficient to ullow an olject attached by a movible ring to be carried ucross by its own grusity. Solid copper frames receive travellors and animuls, who are shot over the guwning ahyss in a Hash. The return journey is mude at some point where the rope is inclined in the opposite direction. But the system varies considerably in different places.

Whatever be the origin of these deep fissures, there are several indientions of grent chunges in the climate of this region. Beels of reddish chay, like the glaciul marls of Europe, luge boulders strewn over the vulleys, and similur uppenrances seem to show that the gheciers formerly descended much farther than at present down the watercourses of East Tibet.

\section*{Cimate.}

But although the glaciers have retreated from the lower valleys, the present elimate of the country is sufficiently indicated by the title of "Suowy Kingdom," commonly given to it by all its neighbours. According to Turner the people of Bhutun simply eall it the "North Snow," while the people of the plains, continumlly contemplating the snowy crests of the Himulayus, naturnlly suppose that the land beyond them is covered by peremial snow-fields. But the effects of altitude are largely balaneed by the extreme dryness of the air on the platenux, where at times not a single flake will fall for months together. The little that does full is ulso soon swept by the winds into the ravines, or in summer rapilly melted by the sun. In the south-cust corner of Tibet the zone of perpetual snow begins at ubout 18,500 feet-that is to say, nome 3,000 feet ulove the summit of Mont Blane; and even on the Cayley Pass, 19,900 feet high, Forsyth found the ground free of
d Brahmapmotra, the custern conwith the Gakpo, mingo. mofoumb fiswures uge gorges. At nks riwe neverul ver beyl. South traveller is here we strenm, which ich Coroper hus ly more than 60 interrupted by ported by props its vertical side. is vistas through - the bulfs luave the turralitax of rom side to side ing to le carried nid animuls, who is made at sume he system varies
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leys, the present owy Kingdom," er the people of the plains, conally suppose that e effects of altiplateaux, where le that does fall pidly melted by snow begins at of Mont Blane; ground free of
snow. On the sonthern alopes of the llimalayas the nnows drifting before the winds deserend mach lower than on the 'libetan side, and the prases over these monatains are closed eurlier in the semson than the more clevated routes acrose tho varions platenu rauges farther morth. Biven in the depth of winter the roud is pramticable between Kashuir and Yarkaud, thanks to the slight suowfall. So great is the dryness of the uir in some purts of tibet that the doors mal woomben pillares of the homses have to be wrappel in cloths to prevent them from warping, and to keep the skin from chapping many travellers are ure onstomed to smear their faces with a black grease. The amimals dying on the rontes nerons the phatemex seon sherivel ng, and some of the more diffient ronds are lined with the mumuified yaks, horses, and sheep. When a benst of burden falls the caravan people generally cut away the choice parts, and spit them on the thomy nerrub for the benefit of puswing wayfurers.

But if the snow is relatively slight, the climate of Tilet is none the less severe. Here P'rjevalsky, Drew, und others npenk of the terrible cold, combined with a deficiency of oxygen, which they had to endure. On the higher passes and urests tho rarefaction of the air renders all exertion very distressing, and men and animals ulike suffer from the so-culled " monntain sickness," often enusing the camels to full as if struck with lightning, or, as the Chinese writers say, "poisoned by the dendly exhulations from the grounl." In 1870 a caravan of three hundred human beings, which left Lassa in February, lost ull its thousand camels and fifty men before reaching the end of its journey. In winter all the streams and lakes ure everywhere frozen down to within 8,000 or even 7,000 feet of sea-level. Eiven in July and August the caravans often find the water iee-bound on the pisses. The long-haired yaks are at times burdened with a heavy coating of icicles, and Huc tells us that when crossing the frozen surface of the Lower Muru-ussu he pereeived sone fifty durk and shapeless objects, which, on a nearer view, proved to be a long line of these animals suddenly frozen to death while attempting to cross tho stream. The attitude of the bodies in the act of swimming was perfectly visible through the clear ice, above which protruded their fine horned heads, from which the engles and ravens had plucked the eyes.

The radiation of heat into the clear, cloudless upper regions contributes greatly to reduce the temperature of the plateaux, and here travellers suffer all the more that thero is almost a complete dearth of fuel. Little can bo found beyond some scanty brushwood, except on the more favoured camping grounds. Fortunately the nights are nearly always calm; but during the day, when the tablelands aro exposed to the solar rays, while the depressions remain buried in a chilly gloom, the surface is swept by fierce sand-storms, the terror of all travellers. In some of the low-lying truets the tillers of the land usually flood their fields at the beginning of winter in order to protect the vegetable soil from the erosive action of the winds, and this method appears also to increase its fertility.

Altogether the Tibetan plateau, enelosed as it is by lofty border ranges, is characterized by great dryness and the extremes of heat and cold. But little moisture reaches it from the Indian Ocean; the force of the southern monsoons is
spent in the Ilimalayan valleys, and the upper counter-currents alone are revealed :. the avalanches of snow that are preeipitated from the Kinchinjinga and other giants of the great range. Nevertheless, the castern region of Tibet, towards which the Bay of Bengal projects inland, ulready partakes of the Indian climate. The marine winds penetrate into these lands through tho breaks in the momatains, here much lower than in the west, and diseharge abundant rains, especially during the \(y i r r h\), or rainy season, from August to October inclusive. All the rivers rising in this part of Tibet are fed far more by theso rains than by the melting snows.

\section*{Facna and Flora.}

The clevation of the tablelands west of the province of Kham is too great for the development of arborescent vegetation, except in the sheltered depressions, and even here nothing is met beyond the willow, poplar, und some fruit trees. Elsewhere little is seen except stunted or rampant shrubs scarcely excceding 6 feet in height. Yet the lamas have succeeded in growing some fine poplars about the monastery of Manguang, in the province of Nari, 13,970 feet above the sea. On most of the exposed plateaux over 13,000 feet the vegetation is limited to thin and hard grasses sharp as needles, which pieree the eamel's hoof and cover its feet with blood. Nevertheless, the yabugere, a hardy and woody plant, ereeps up to an altitule of 15,000 feet, and in some places is met even where the dry atmosphero and siline properties of the soil are fatal to the grasses. Godwin Austen found it growing abundantly on the Chang-chegmu plateau, 18,300 feet above sea-level. Nain Singh met with fields of barley at an elevation of over 15,450 feet, or about tho altitule of Monte Rosa. All the Ombo basin, watered by Lake Dangra-yum, is like a green sward; but in the colder uplands still inhabited by the Tibetans ecreals seldom ripen, and the people here live entirely on the milk and flesh of their herds. On the other hand, the less elevated and well-watered south-castern valleys are covered with vast forests. Amongst the larger trees is the prickly holm, whieh, though not so high, is comparable in the size of its stem to the pine, wiile far exceeding it in its rich and abundant foliage.

Although poor in vegetation, the Tibetan uplands have a much more varied faum than the southern slopes of the Himalayas. Tibet, whieh is regarded by zoologists as a principal centre of evolution as regards animal life, possesses a special fauna, exceptionally rich in varicties of the ass, yak, sheep, antelope, gazelle, and wild goat. Nain Singh met with herds of as many as two thousand antelopes, which in the distance look like regiments of soldiers, with their sharp homs glittering like bayonets in the sun. The Sehlagintweits found yaks at an clevation of 19,800 feet, and the tarbagan marmots (Aretomys bobre) are still found burrowing in the argillaceous soil up to 17,900 feet. The game is preyed on by foxes, jackals, wild dogs, and the woolly-haired white wolf; while in the neighbourhood of the Tengri-nor, white bears, resembling those of the polar regions, commit great ravages on the floeks. In Eust Tibet the fumu is still more varied, including the panther, buffalo, monkoy, squirrel, bear, and a small species of wild boar. But
alone are revealed injinga nud other of Tibet, towards ae Indian climate. in the mountains, especially during I the rivers rising nelting snows.
m is too great for 1 depressions, and fruit trees. Elsexceeding 6 feet in poplars about the bove the sea. On mited to thin and cover its feet with creeps up to an dry atmosphero n Austen found it t above sea-level. feet, or about tho Dangra-yum, is by the Tibetans nilk and flesh of red south-castern es is the prickly stem to the pine,
nuch more varied ch is regarded by 1 life, possesses a antelope, gazelle, ousand intelopes, heir sharp horns yaks at an eleva) are still found e is preyed on by he neighbourhood ns, commit great ed, including the wild boar. But

ovis ammon-Ibex miberica-ovis nahura-marehov ram.
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birds are comparatively rare, though some of them rise to astonishing heights, one species of lark being met at 15,000 , and others at over 18,000 feet. In Tibet proper no songsters are heard except birds of passage ; but the eagle, vulture, and raven abound, while the pheasant frequents the woodlands. A few lizards and suakes reach an ultitude of 15,400 feet, and some of the lakes on the plateau are stocked with fish. The extreme limit of fish in the \(\Lambda 1 p s\) is 7,100 feet, whereas Schlagintweit met in Lake Mognalari ( 14,000 feet) varieties of salmon, which, like those of the sea, ascend every year to the higher fresh-water lake in the spawning season. In the basins that have become saline the species have adapted themselves to the altered conditions.

Several of the indigenous animals have been domesticated. The yak has been crossed with the Indian Zebu cow, the result being the dzo, whose varictics have hair of different colours, while the wild yak is always black. But in the fourth generation these unimals revert to the primitive type. Although always somewhat obstinate, the yak is the most general beast of burden in Tibet; lint sheep, being more hardy, are employed on the higher passes. Lach sheep carries a load of from 20 to 30 lbs., and thrives on the seanty pasture along the route. The horses and mules make excellent mounts; but the most valuable domestic animal is the goat, whose pashim, or short, soft, downy hair under the outer coat, communds such high prices for the manufacture of the Cashmere shawls. The dogs, a powerfnl und fon idable breed, are not employed in the chase, but only as house-dogs and They degenerate in India, though some specimens have been perfectly a: "...utized in England.

\section*{Inhamitants-The Tinetans.}

The great bulk of the inhabitants, apart from the Mongolo-Tatar IIorsoks of Khachi and the various independent tribes of the province of Kham, belong to a distinct branch of the Mongolian family. They are of low size, with broad shoulders and chests, and present a striking contrast to the Hindus in the size of their arms and calves, while resembling them in their small and delicate hands and feet. The choek bones are gencrally prominent, the eyes black and slightly oblique, the mouth large, with thin lips, the hair brown and bushy. The complexion varies, as in Europe, from the most delicate whito amongst the rich to the copper yellow of the shepherds exposed to the inclemency of the weather. Cretinism is general in the uplund valleys, leprosy and hydrophobia on the plateaux.

The Tibetans are one of the most highly endowed people in the world. Nearly all travellers are unanimous in praise of their gentleness, frank and kindly bearing, unaffeeted dignity. Strong, courageous, naturally cheerful, fond of music, the dance and song, they would be a model race but for their lack of enterprise. They are as easily governed as a flock of sheep, and for them the word of a lama has force of law. Even the mandates of the Chinese authorities are scrupulously obeyed, and thus it happens that against their own friendly feelings they jealously guard the frontiers against all strangers.

The more or less mixel races of East Tibet on the Chinese irrontier, on the ronte of the troops that plunder them and of the mamarias who oppress them, seen to be less favourably constituted, and are described as thievish and treacherous. Amonget the perples of the platem the Khampas and Khambas are to be carefully distinguished. The Khampas of the Upper Indus valley resemble the Tibetans of Lalak. They are always cheerful, even under what to others would seem to be unspeakable misery. But the religions sentiment is littlo develojed amongst them, and none of their children ever ente: the monastic orders. The Khambas are immigrants from the province of Kham, cast of Lassa, who visit all the camping gromals as far as Kashmir as professional beggars. But a few groups have here and there abmandoned the nomad life and taken to agriculture.

The Tibetans have long been a civilised people. Stone implements have no doubt been retained for ecrtain religions cercmonies, and the stone age itself still partly continues on the upland platenux, where many shepherd communities use stone cooking vessels. But even these are acpuainted with copper and iron, while the rest of the nation is one of the most highly culturel in Asia. In some respects they are even more civilised tham those of many European countries, for reading and writing are general aecomplishments in many places, and books are here so cheap that they are found in the humblest dwellings, though several of these works are kept simply on account of their magical properties. In the free evolution of their specech, which has been studied chiefly by Foucaux, Csoma de Körös, Schiefner, and Jiaschke, the Tibetans have outlived the period in which the Chinese are still fomm. The monosyllabic character of the language, which differs from all other Asiatic tongues, has nearly been effacel. The official style, fixed hy the priests twelve hundred years ago, is still maintained in lit, rature, but the current speech has gradnally lecome polysyllabic, and the practice of distinguishing the sense of monosyllables by their varied intemation is begimning to disappear. Old words, whose moming has been lost, have been agglutimated to the roots to form nominal and verbal inflections, and the artiele is employed to distinguish homophones. The various alphabetical systems are derived from the Devanagari introduced from India by the first Buddhist missionaries. The present pronunciation of few other languages differs more from the written form than does the Tibetan, whose ancient orthography has been scrupulously maintained for centuries. Many of the written letters are either silent or sounded differently, just as \(g /\) in the Jinglish words cnonyh, ronyh, is pronouncel \(f\), while it is mute in plongh, bough. So in Tibetan dljus becomes simply í ; bira shis lhum pe Tashilunpo, de.

The Tibetan dialeets are both numerous and highly differentiated from each other. Although the peoples of Bod stock stretch beyond the present frontiers into Kashmir, Bhutan, and Scehuen, west, south, and east, nevertheless several of the wild or barbarons tribes in the east and north belong to different races more or less mixed together. In the south the Mishmis, Aloors, and others are allied to the hillmen of Assam; while the Arru, Pa-i or Ghion, Telu, and Remepang all speak varieties of the Melam, an arehaic and polysyllabic Tibetan language mixed with many foreign elements. The Amdoans of the north-cast, near the Kansu frontier, are
ier, on the route them, seem to ad trencherous. to be carofully the Tibetans of nld scem to be monongst them, e Khambas are all the camping roups have here
ements have no e age itself still mities use stone liron, while the In some respeets ries, for reading oks are here so ll of these works free evolution of omn de Körös, hich the Chinese \(h\) differs from all ed by the priests rrent speech has e sense of monoId words, whose minal and verbal s. The various rom India by the other languages e ancient orthowritten letters h words enouyh, n Tibetan clbjus iated from each present frontiers heless several of nt races more or are allied to the nepang all speak uage mixed with insu frontier, are
nearly ull bilingual, speaking both their mother tongue and Tibetan. A nomadie and migrating people, they are distinguished by their quick wit and aptitude for all kinds of work. Nearly all the lamas and tenchers of the high sehools as well as the higher oflicials throughout Tibet are of Amdoan stock. West of the provinee of Khan the half-savage Lolo, Mantz', Lissu, und others, whertively known the the Chinese as Si-tan, or "Western Strangers," and to the Tibetans us Gi, armillo, from the chief tribe Gyarnig, dwell on both sides of the Sechmen frontier, where they form distinet ethnical groups, some speaking Tibetan dialects, others hanguges of different origin. Most of the names applied by the Chinese and Tibetmes to the peoples of this region can only be necepted provisionally. They are either vague designations, or injurious epithets indignantly rejected by the tribes themselves. Chinese influence is making itself felt more and more in the neighbourhood of

Fig, 16.-'Ihetan Einnography. Renle 1 : 22.000,000.


Sechuen and in the large Tibetan towns. Access to the country being completely interlicted to the Chinese women, all the mandarins, soldiers, officials, and traders take Tibetun wives temporarily, and the frontier population already consists largely of cross-breeds, who are grouped according to circumstances as 'Tibetums or Chinese.

The Chinese immigrants are not the only strungers in the Tibetan fowns. The Nepalese and Bhutanese from beyond the Himalayus are very mumerous in Lassa, where they are ehiefly oceupied with metal work and jewellery. They oecupy a separate quarter, and are distinguished by their superstitions practices. Here are also some Mohammedans originally from Kashmir, the so-called Khachi, a fine race with long beard and grave demeanour, who keep entirely aloof from the rest of the population, and live under a special governor recognised by the Tibetan authorities.

EAST ASIA.

\section*{Bromines.}

Tilnet is the eentre of Budhism, a religion rivalling Christianity in the number of its: followers. But although the most zealous of Buddhists, the Tibetams have modified their cult muler the influence of previons rites, clinate, social hathits, and relations with the sumpomang mations to such an extent that it only bears montward resemblane to the primitive religion of shak ya-mumi. After three centuries of preliminary cflorts the Hindn missionaries began the serions work of conversion in the fifth century. Previons to that time the Tiletan rites, analogons to those of the Chinese Taoism, consistel in making offerings aceompanied with prayers to the lakes, momutains, and trees, mpesenting the forces of nature. Two humdred years passed befure this bon- or l'ön-bo religion yidded to the new worship, the first temple of which was erected in 698 . Within the next century the comutry was covered with momasteries, and the religion of Buddha was diffused " like the light of the sm" " throughout Tihet. This was the golden age of theocracy, for aceording to the Mongolian historian Samang Setzen "the boundless venerution for their priests gave to the people a bliss like that of the huppy spirits." Still the older rites do not seem to have entirely vanished, as, aceording to the same writer, "tho love of growl thoughts and of meritorious deeds was afterwards forgotten like a dream." The doetrine was not fully cuforeed till the close of the tenth century, when it soom began to split into varions seets. Fome centuries afterwards came the great revival. The monk Twonkhapa mulertook the revision of the saered writings, formulated new precepts, and molified the ritul. His diseiples are the "Yollow Caps," of Geluk-pa, who prevail in Tibet, while the older seet of the "Red ('aps" (Duk-pa, on Shammur) has hed its gromed in Nepal and Bhutan. But for both, as well as for the other seven seets of Tibet, red has remained one of the saered eolours of the cloister and temples. Accorling to the ordinances, the religions edifices, usually of pramidal form, should have the north front painted green, the east red, the sonth ycllow, the west remaining white.

By his followers Tsonkhapa was regarded as the inearnation of the deity, as a living Buddha, who had put on the appearance of human nature. He never dies, but passes from body to bexly under the form of a Khubilym, or "New-horn Buldha," and is in this way perpetuated as the Tashi-lama in the holy monastery of Tashi-hmum, near Shigatzé. Another living Budha has sprung up by his side, and arguired even greater politieal power, thamks to his revidence in the enpital and to his direct relations with the Chinese officials. This is the Datai-lama, or "Ocem lama," whose instalment on the throne of Buddha is variously related. But whether due to a Mongolian invasion, or to the action of the Chinese emperor in the sixteenth or seventeenth century, the eeclesiastical prinee of Lassa has taken rank amongst the immortol gods, who by a new lirth ever renew themselves from generation to genemation. A third living Buddha in this hierarely is the ehief lama of Urga in Mongolia. But there are severul others, and even in Tibet itself the head of a numery on the south side of Lake Palti is also regarded as a divine femaile Buddha.

\section*{MUDDIIISM.}

Amomerst the Tiketun lBuldhists some few mystics, matracted by the sulblime

 purfertion, by the destruction of all that is still material in them, and by a new hirth in the hesom of the immatalle Divinity: Even the dereors of Buddhism clase the faithful in there groups-the enlightened, those of moxlerate intelligence, and the valgar. But for the mass both of lamas and people religion is reduced to a sy:stem of magic, in which worship, has no object exerpt to conjure the evil spirits.

The life of most Tibetuns is pussed in ejaculations and udjurations under the form of prayers. The six magic syllables, Om mani pudme him, usually translated,

Fig. 17.-l'mayet inschamed on a liock.

"O gem of the lotus, amen!" but which some commentaters declare to be untranslatable, are the form of prayer most frequently repeated. These sacred words, each of which has a special virtue, are the first taught to the Momgolian and Tibetan child. They will form his only prayer, lut this he will go on repeating incessantly, ignorant alike of its origin or sense. The importance attached to it may be judged from the fact that for 150 million copies printed in St. l'etersburg Schilling of ('amstadt received from the Buriat lamas of Siberia a complete copy of their inestimulle saered book. The invocation is met everywhere-on the walls of the houses und temples, by the wayside, moler colossal statues rudely carved in the live rock. Certain manrh, or retaining walls, along the roads are built of stones, each of which bears tho magic formula. Brotherhoods have been formed for the
sole purpose of havinge it inseribed in large charucters on the hillside, so that the traveller galloping by on homednark muy read the words of sulvation.

Liverybuly wears in his chothen, arms, or acek grolld, silver, or other metal umalets, contuining, besides the ull-powerful prayer, little idols or relies, the teeth, hair, or nails of canomisel lamas. The korlo, khorten, or pruyer-mills, employed in all Budhist humels exerpt dapme we most universal in 'tibec. The very forces of nature, wind mul water, ure utilised to turn these eylinders, mech revolution of which shows to the all-secing heavens the magic words regulating human destinies. Like the Kirghio, the Buriats, Tunguses, und other Central Asiatic peopher, the Tibetuns aro nceustomed to set up on the hill-tops poles with lamers containing the sume formuln, which is thus, so to say,

Fig. 18.-Timetan Amulet.
 repented with every puif of nir. One of these laprchax, as they are culled, hus been plunted on Mount Gunshukur, over 20,000 foet high. The Buddhist pilgrims nlso take ammonites to the highest peaks of the runges, und, to conjure the evil spirits, near these fossils they pluco as offerings the bones and skulls of the great wild sheep, or Oris ammon.

Most of the gilded images in tho temples are simplo reproductions, copied for some thonsand years, of the idols seen in Iudia; hence in their expression they bear no resemblance to the Tibetan type. Every trait or special form having a symbolic meaning, nothing can be changed. The other images of native type represent the gods only of an inferior order, and are reproduced especially in the coloured butter statuettes, in making which the lamas excel. But while the greater deities aro Hindus, one might almost faney that the general ritual is of Roman Catholic origin. The extreme analogy has long been remarked between the Buddhist and Catholie rites, and most of the missionaries have explained this identity of outward worship as an artifice of the devil trying to upe the God of the Christians. Others have endeavoured to show that the Buddhist priests, after abamdoning their old practices, simply adopted the ceremonial of the Christians in India, with whom they had established relations. Wo now know what a large share both of these relatively modern religions have had in the inheritance of the primitive Asiatic cults, and how the same ceremonies have been transmitted from
dile, so that the or other metal elies, the teeth, ls, employeel in c very furces of dution of which lestinies. Like (es, the Tibetuns rining the sime hus, so to say, , puif of nir. s, us they ure itel on Mount ,000 feet high. ims also take ighest peaks of onjure the evil ssils they place es and skulls of reep, or Ocis d images in the reproductions, usand years, of ndia ; hence in y bear no reTibetan type. al form having nothing can be her images of sent the gods order, and are in the coloured ile the greater al is of Roman d between the explained this the God of the st priests, after ec Christians in w what a large eritanec of the ansmitted from
age to age in homonr of new divinties. Nome the less surprising is it that, in virtue of a paralled evolution in two distinet centres, the ontward forms of
 their main features, but even in their details. The Budhist priestes are tomsured like those of Rome; like them, they war flowing rohes covered with gold broemb: they fast, hold spirituml retrents, mortify the flesh, comfess the laithful, ink for the intercession of the suints, and make long pilgrimages to the laly shines. Colibacy also, wriginally a meritorions aet, has become the rule for the lamas, mad by the side of the temples there have sprong up commmities of men and women whoso only aim in life is to work out their spiritual welfare. Everything is alike even in the internal arrangement of the satered edifices-the same altars, cundelabra, bells, reliquaries, holy-water fonts. The lames officiate with mitre mul drosier, and robed in dahmatica and eope. They bow to the ultur and kneel betore the relies, intone the service, recite the litanies, utter words in a language unknown to the congregation, solicit offrings for the repose of the fuithful departed, lend the processions, pronomee blessings und exorcisms. Aroumd them the youths of the ehoir sway the censers suspended with five chains, while the congrogntion tell their beads and rosaries.

In other respects also the Tibetan clergy, recruited pineipully from the firstborn of every family, resemble the priests of medieval times. From them flows all knowledge ; the printing establishmente are in their cloisters; and besides the suerrol writings, the "Kanjûr and Tanjurr," printed for the first time alout 1750 in 337 volumes, they take care that nothing is published except works in harmony with the faith, dictionaries, encyclopedias, or scientifie seriuls, besides numerous books of magic. It is also the lamas-that is, the " unsurpassed "-who administer justice, and who through the tithes and traffic. have got possession of the national wealth. Although Buddhism was at first the religion of equality, and attracted the poor by tho abolition of caste, it reinstated caste by the supremacy of the priesthood. They command, and all obey; the unity of faith is absolute around eneh mouastic centre. The conversion of the Tibetan prelates would involve that of the whole nation, and of millions of Buddhists beyond the frontiers. In striking at Lassa, the Roman missionary strikes at"" the idol on its throne," and " to triumph here means to grasp the sceptre of IIigh Asia." Everything would be prepared beforehand for the acceptance of the religion of the West. To form a native clergy the church would have at hand legions of lamas already accustomed to the laws of celibacy and the hierarchy. To receive her monastic orders she would have mumerous Buddhist convents already devoted to abstinence, to prayer and study. To display the ponp of her magnificent ritual she would have temples where have long been celebrated imposing rites. Nowhere has Catholicism taken such a hold on the people as on the South American uplands inhabited by the Quichuns. But, as Markham remarks, the Ecuador and Peruvian Andes are the Tibet of the New World in all that regards their in i stries, food, manmers, and customs. Quichuas and Tibetans cross the mountain passes in the same spirit of awe, and brfore the cairns of sacred stones recite their prayers with the same devotion.

During the present century the repented coflorts of the missionaries to get a fuoting in 'tibet have all failed. Hue and Gabet could only remmin for two montha at lasea in Istif, and later on others perished in the attempt to peretrate into the comotry. In the seath-cunt a few priests were more fortunate. In lsint they contrival to found a small agricultural colony amid the Bongu forests, neme the left bank of the lipper Salwen. With the aid of Chinese immigrants und of numerous slaves, they eleared the gromed and established a thourishing villuge. A lama comvent bevme a preshytery, a pagodn was trmasformed to a church, in which conserted lamas performed the functions of sacristams. But this prowperity did not last long. After many vicissitudes the missionaries were obliged to quit 'libetan soil, and then the buildings were given to the thames. The mission was rr-established in Sechuen, close to Tibet, but the fathers no longer dure to cross the frontier.

Nearly all the lamas, at lemst in the central region, belong to the seet of the "Yollow Caps," by whom the few rmaining "Red Caps" are despised, hecmse they have not taken the vow of celibacy. But the primitive lion-loo or Bon-pa roligion has not yet quite disapuened. Its priests have several momasterios, esperially in the sonth-east, and in the petty state of lomi, west of the Salwen. They believe in two great gols, a male and a female, parents of all the ofter grols, spirits, and mortals. But in other respects they have gradually conformed to Buddhism, of which they are now merely a distinct seet. The highlanders of Ombo and the Dangrit-yum, who practise dillerent rites from the other Buldhists, ulso seem to belong to the old religion. Their mystic formula is not the \(0 m\) mani pmedme himin, and they count their rosary beads and walk in procession backwards; that is, in the opposite direction to the orthodox practice.

Lastly, some of the half-savage tribes on the Yunnan, Assam, and Burmese frontiers still observe fetish rites. Amongst them wre the La-tz', who have given their name to the Lu-tze-kiang, or Upper Sulwen, and who worship the trees aud rocks inhabited by the evil spirits. They also employ the \(m\) mumos (murmis), or sorecrers, to conjure the bad genii by beating drums, wielding swords, and burning incense.

\section*{Diet-Soclal, Customs-Population.}

Milk, butter, and barley-menl form the chief diet of the people of the plateau. But in spite of the first commandment of Buddha forbidding the slaughter of animals, most Tiketans, and even the lamas, add the flesh of their domestic animals to their modest fare. However, they make amends by despising the hereditary easte of butchers, whom they confine to remote suburbs of the towns. The mutton of Tibet, "the best in the world" (Turner), is universally consumed, and in winter whole bodies of these animals are preserved in a frozen state. Game is taken with the dart, arrow, and gun, while the musk deer is usually trapped. The only animal spared in East Tibet is the stag, "Buddha's horse." On the plateaux skirting the north benk of the Tsangbo liquid blood forms a part of the diet, and Nuin Singh often saw the shepherds falling prostrate on the ground to lap up the
bloxk fowing from the slanghtered mimals. Thin tume is acepuired by the children
 on the uphands, their mothers make them a mess of cherese, butter, and bionel. Prjecalaky tells bes that in these regions the homes are also fed on Hesh mul eurilled milk.

The 'liketans are distinguished from their co-religionists of other comutrion by their mutional habits, which have been seareety motified ly Buddhism. 'Thus these of the sonth, like their meighboring kinsmen of Bhatan, practise prilyundrin, in order to avoid dividing the fumily inheritunce, und to reside all muder one rowf. The chlest son presents himself before the bride's garents on hiv own and all his brothers' hehulf, and as sum as a bit of hutter has heen phaced on the forsheme of the comple the ceremony is valid for the whole family. The pricsts, thomed by their vows to keep aloof from women, do not assist at this purely civil eremons, which is witnessed by ull present on the occusion. The issue of these collective unions give the nume of father to the dident brother, and regard the others us uneles, unless the mother, when consulted, determines the puternity. Travellers tell us that mutrimoninl squabbles are maknown in these pelymulrons fumiles, in which the men vie with ench other in their engerness to proenere the coral, aumber, and other ormanents affected by the eommom wife. Respertend by ull, she is generally a thrifty housekeeper, besides lending a hand in the fied and tomeding the herds. But her work, like thut of the brothers, belongs to the whole fumily.

By the side of these polyandrous households sme wealthy Tibetuns, in intiation of the Chinese mad Mussuhnans, keep severul wives, who reside cither under the same roof or in sepurate dwellings. But loolh polymulria mad polygamy alike have the sume result of kecping down the population. Marriage is regulated ly no rules in a country where celimacy is so rigorously enforced on a large section of the people, and where the polyandrous wife has still the right, recognised by custom, to choose mother husbund beyond the fumily circle.

As in China, courtesy is held in high honour in Tibet. When two persons meet they salute each other several times by showing the tongue and seratching the right ear, or even by exchanging white or piuk embroidered silk senfs, sometimes accompanied with letters or other missives. In Lassu and other towns ladies of runk wear coroncts of true or false pearls or turquoise, shells, or silver. But Huc's statement that they are obliged to disfigure themselves by daubing the face with a sort of black varnish is denied by the English travellers.

All ceremonies are regulated beforehand, and the form and colour of the clothes suitable for the various social oceasions are preseribed ly rigid custom. During the year of mourning the men lay aside their silk garments, the women their jewellery. Immediately after death the hair is torn from the crown of the head, in order to insure a happy transmigration, and the body is preserved for some days, und in wealthy families even weeks, when the prieste decide whether it is to be buried, burned, enst to the running waters, or exprosed to the benstr of prey. In the latter case the bones are first broken and the boly cut in pieces, in order to hasten the return to the first elements, and what is left by the animals is collected
bist AsIA.
and thrown into the stremm. The finger jointe are nlao often preserved and strung in chaplots, while the bomes of arme and loge are conserted into mannets for summoning the hamas to prayer. The hamas themedves are always buriod in a sitting uttitude, und the practiere of delivering the luxdies to wild benses seems to
 provine of Kham, where a butchere cus up the benly, and the voltures alight in the milat of the crowe to gerge on the flesh, aneompanying the monotomens tomes of the lamas with the flipping of their wings and the smpping of their hills. Yet there are few emmories where the dead are hell in greater respeet than in Tibet. Graml feaste are coldebrated in their menury, and all paseres-by are invited to the funeral banmets. At night the houses are illmined and bontires blaze on the hilltops, while the temples, aglow with light, echo to the sound of cymbuls and hymus in homour of the departel.

Aceording to the miswionary Grazio della Pomm, an official cemsus made by the "royal ministers " in the hast century gave the pepmation of 'Tibet an \(33,000,000\), of whom s:90,000 were under arms. But while quoting this statement Klaproth molds that \(5,000,000\) would be, perhups, nemrer the truth. Behan and Wuguer stop with the oflicers of the Rassium stall at \(0,0000,000\), hat only becuase this forms the mean bet ween the two extremes, \(3,500,000\) and \(11,000,000\), recently proposed by various geouraphers. The population would thas moment to about 8 persons to the spure mile, hut it is known to be very unergually distributed. The Khachi platem is almost minhabited, umi in the somth-west province of Humdes, or Nuri (Ngari, Ghar: Khorsim), there are mily a few sentered groups. Owing to its forests, momatains, and inarceswible ravines, the enstern province of Khan is very uncpually inhabitect, so that the population is concentrutel chictly in the two sombern provinces of 'Tsing und Wei (U, Wi) along the Middle Tsangbo, und in its lateral river vulleys.

\section*{Topograpiy.}

Daba and most of the so-called towns and villages in the Upper Satlaj valley are abondmed during the winter season. Paling, the highest permanently inhabitel village in this part of Tibet, stands at an elevation of 13,800 feet above the sen. Tsaproug, like Daba eapital of "Idistriet, and situnted to the north-west of this place at a height of 15,400 feet, and far alove the head-waters of the Satlaj, is also unoceupiod for a purt of the year, and in summer contains no more than some fifteen dwellings. The fortress of Taklu-kihar, another district capital, lies on the southom slope of the Mimalianas, on the right bonk of the Map-cha, or " (ireat liver," the main brameh of the Karnali of the Nepalese. The fort consists of excavations aml galleries hollowed out of a rock \(8: 30\) feet high. It contuins large stores of supplies, and the corn deposited here for half a century is suid to be in perfect condition, thanks to the dryness of the air. West of Tukli-khur stands Sitling-gmpa, the largest monastery in Hundes, and noted throughout Tibet and Nepal for its inmense wealth.

The Upper Indus basin, like that of the Sitlaj, is nlmost uninhabited. Yet cunts secmes to anyka, in the wres alight in otomoms tomes ir hills. Yet than in 'Tibet. invited to the \%on the hill. cymbuls and a made by the as \(3: 3,000,000\), Klaproth adds rner stop with mons the mem sel by various to the square aehi platemu is Nari (Ngari, to its forests, Llam is very y in the two sangbo, and in
r Satlaj valley permanently 800 feet above the north-west ; of the Satlinj, no more than iet cupitul, lies e Map-chu, or he fort consists 1. It contains ry is suid to be dia-khar stunds nout Tibet und ahabited. Yet

monastehy at shgatze.
here is the temporary capital of the south-western provinee of Tibet, Gartok, on the Gartung. The name means " Itigh Market," and the place probably contains the most elevated hay murket in the world. In August and September the little clay or adole houses become the centre of a town consisting of tents, each ly its shape betraying the origin of the trader occupying it. The dwellings of the Tibetans, covered with long black-haired yak hides, contrast with the white pavilions of the Hindus, while the Yûrts of the Kashgarian and other Tatars are distinguished by the bright colours of their felt awnings. But in winter Gartok is left to the winds and snow-sleighs, tho traders returning to their distant homes, and the few residents retiring to Gargunza, a more sheltered village on the Gartung, above the junction of this river with the Indus. Radokil, near Lake Mognalari, is a mere heap of hovels grouped round a fort and monastery.

The plateau lying east of the Upper Indus valley has from the remotest times been known by the nume of Sarthol, or "Land of Gold," and here are still grouped a few commmities of gold-seekers. The workings had long been abandoned, owing to the severity of the climate, but were reopened at the begiming of this century by the Tibetan Government. Ifere Tok-yalung is probably the highest place on the globe inhabited throughout the year, standing as it does some 16,900 feet above the sea, or nearly 650 fect above Mont Blanc, in an atmosphere scarecly half as dense as that on the surface of the ocean. Yet it is chiefly frequented in winter, when as many as six hundred tents of miners are hidden away in deep hollows, above which nothing is visible except their cones of black hair. In summer their number is reduced by one-half, because the neighbouring springs then become so saline that the water is unpotable until purified by the freezing process. In this part of the plateau salt and borax are everywhere found by merely digging up the surface. The other gold-workings are less productive than those of Tok-yalung, and according to Nain Singh none of them, except Tok-daûrakpa, lying much farther east, possess any economic importance. The annual yield of all the mines in West Tibet is only about \(£ 8,000\), which is forwarded to India through Gartok.

In the Tsangbo valley the highest inhabited points are either the convents or the postal stations. Here the cold is too intense to allow any permanently occupied villages to be formed. Yet real towns hegin to appear in the valley at more than double the elevation of the Simplon and Gothard. Tadum, capital of the Dogthol district, is 14,000 , and Janglacheh, at the junetion of the two Nepal routes from Kirong and Nilam, 13,850 feet above the sea. Shigatzé, or Digarchi, capital of the province of Tsang, lies at a relatively lower altitude in tho side valley of the Penang-chu, 11,730 feet high. Above it are the houses and temples of Tushi-lumpo, or " Exalted Glory," residence of the Tashi-lama, Teshu-lama, or Panchen-rimbocheh; that is, the "Jewel of Intelligence." The walls of the holy city have a circuit of nearly a mile and a quarter, and enelose over three hundred edifices grouped round the palace and sacred monuments. From 3,000 to 4,000 lamas occupy the monastery, whose gilded belfries and red walls tower above the mean houses of the lower town.

Most of the other towns in this region also consist of low dwellings commanded
by magniificent buildings, which wre palaces, fortresses, temples, und monasteries all in one. Such are, on the north side of the Tang valley, the towns of Namling, or " It eavenly Garden," and Shukiu-jony, south-west of Shigutzí, near the Sikkim fronticr. Gymuz"h, south-cust of Shigatzé, is an important town, as the centre of trade with Nepal and a manfacturing place, producing cloth gools, very warm, pliant, und soft to the touch. Like Tingri, it is held by a strong Chinese garrison. Shigatze is the future terminus of the carriage road which is being constructed by the Indian Govermment, and which starts from Darjiling, in Sikkim.

Lasse* is at once the capitul of the province of Wei und of Tibet, us well as the religious metropolis of the Buddhist world in the Chinese Empire. The name means "Throne of God," and for the Mongolims it is the Morke-jot, or " Eternal Sanctuary." The number of pricsts, estimated at some 20,000 in Lassa and ueigh-

Fig. 19.-Labsa.
scale 1 : 1,425,000.

bourhood, probably exceeds that of the civil population, which, however, is constantly swollen by crowds of pilgrims from all parts of Tibet, and even from beyond the frontiers. Along the two great avmues lined with trees, which lead from the eity to the palace of the Dalai-lama, the courtly prelates, elothed in sumptuons robes and mounted on richly caparisoned horses, are met haughtily riding through the multitude of devotees. The palace of Potala, residenec of the sovereign, forms a group of fortificutions, temples, and monasterics, surmounted by a dome entirely covered with gilded plates and surrounded by a peristyle of gilded columns. The present edifice, reconstructed by Kimg-hi mid filled with treasures from every part of Tibet, Mongolia, and China, has replaced the palace destroyed by the Zangarians in the beginning of the eighteenth century. This " Mountain of

\footnotetext{
* The current forms Illassa, Ill'ussa, L'hassa, lhassa, do not reproduce the local pronunciation of this word, which is simply Lassa (Jaschke).
}
il monisteries nis of Namling, ar the Sikkim s the centre of ls, very wamm, inese garrison. ng eonstructed im.
, as well as the e. The name t, or " Viternal tssa and neigh-

1, however, is and even from ees, which lead tes, elothed in met haughtily esidence of the surmounted by style of gilded with treasures lace destroyed " Mountain of 1 pronunciation of

lassa-lamassery of potala in the seventeenth centcry.
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Buddha' " has for the hast twelve humdred years been the most hallowed spot in East Asia. When its shadow is projected by the setting sun on the azure sky all work ceases in the city. The inhubitunts gatlere in gromps on the termeres, in the strents and public places, easting themselses proxtrate on the ground, and mising a muflled evening song of praise towards the sacred shrine.

The eity stretches somth of the holy mount along the right bunk of the Kichu, a large altluent of the Tsanglo. Although 11 ,580 fect high, or 480 fect alowe the highest peak in the l'yronees, the surromang district is covered with vegetation, thanks to its more southern latitude and sheltered josition. The streets are brond and regular, and flamked by whitewashed homses of stone, brick, and carth. One of the quarters is entirely built of the intertaced homs of sheep and cattle in ulternating layers of various forms and colours. These horns, the interstices of which are filled in with mortar, lend themselves to an endless varioty of design, imparting to the honses the most fantastic appearmee.

The towns and villages of the neighbourhood derive, like Lassa itself, more importance from their gonpe, or monasteries, than from their trade and industries. During the feasts of the new year, when the monks enter the town on foot or mounted on horses, asses, or oxen loaded with proyer-looks and cooking utensils, the streets, squares, avenues, and courts are covered with tents. The whole civil population seems now to have disappeared, or to have given place to the lamas. The Govermment officials themselves have no longer any authority, and the religious element takes possession of the city for six days. After visiting the convent of Murn, where they purchuse their supplies of devotional works in the printing establishments, the priests withdraw to their respective monasteries, and the city resumes its normal aspect.

Most of the goupa are simply groups of little houses with narrow, crooked streets radiating from a eentral edifice containing the shrines and library. But some of the thirty convents around Lassa have becone veritable palaces, enriched by the offerings of generations of pilgrims. That of Delang, some 4 miles west of the eity, is said to have from seven thousand to eight thousand lamas. The monastery of Prebunig, or the "Ten Thousand Fruits," receives the Mongolian priests yearly visiting the Dalai-lama. No less celchrated are Sere with its five thousand five hundred inmates, and Gillden, 30 miles north-enst of Lassa, rendered illustrious as the residence of Tsonkhapa, reformer of Tibetan luaddhism. But the most famous is Sumujeh, said to have been built by Shakya-muni, and one of the largest and wealthiest in Tibet. It is enclosed by a lofty circular wall nearly 2 miles in extent, and its temple, whose walls are covered with beautiful Sanskrit inseriptions, contains numerous statues of pure gold covered with precious stones and costly robes. The head of this convent is popularly supposed to streteh his power beyond the grave, rewarding and punishing the souls of the dead. In his charge is the Government treasury.

Samayeh lies some 24 miles to the west of the important town of Chetang, on the right bank of the Tsangbo, and the starting-point for traders proceeding to Bhutan and Assam. The frontier entrepôt in this direction is Chona-jong, where
sult, wool, and borax are exphangel for course woven goods, rice, fruits, spiees, and dyes. Nain Siugh regurls this town as the chiof trading-place in Tibet.

In the eastern districts, where the population is semtered about the narrow momutain gorges, there are but few towns. The most important, ats administrative eapitul of the province of Kham, is Chamlo, Twimmbo, or Chamialo; thut is, "Two Routes," a mame indicating its position at the junction of the two head-streams of the Lantzan-kiang, or Cpper Mekhong. It is a large place, with a momstery of over me thonsmul lumas in the vicinity. Firther south is Rïunk, or Merkmm. on "tributary of the Kinshar-kiang, south of which are some rich saline springs on the banks of the Lantzan-kiang.

\section*{Trade and Trade Roctes.}

Cultivating little land, and possessing nothing beyond its flocks and a few. mimportant industries, Tibet could searcely enjoy much intercourse with foreign

Fig. 20.-Tuade Rovtes of Tinet.
Scale 1 : \(22,000,000\).

lands, even were it not enclosed by a barrier of political and commercial obstacles. Much of the abundiant raw material is required for the local looms, which produce eloth of every kind from the coarsest to the very softest quality. The red chru, or pulu, intended for prelates, is a fine, stout fabric, which commands high prices in China and Mongolia. Most of the natives of both sexes are skilful knitters, and in this way prepare all the clothing they require. Next to these domestic industries they occupy themselves ehiefly with those connected with the service of the temples and monasteries. Their artists display great skill in modelling the statuettes, arti-
, fruits, spices, in Tibet. nut the narrow udministrative that is, "Two aead-stremus of a monastery of or Merkam. on springs on the
cks and a few. se with foreign The red cliru, or 3 high prices in knitters, and in restic industries 3 of the temples statuettes, arti-
ficial flowers, ornaments in butter placed before the idols, while mumerous hunds are employed in preparing the ineense sticks burnt in honour of the grods and genii.

Notwithstanding their simple tastes and frugal lives, the Tibetans still nerd some forcign wares, of which the most indispensable is tea, the trade in which was till recently monopolized by China. Tea, even nore than arms, has been the instrument by which the Chinese lave conquered the country, and "to invite the lamas to a cup of ten" has become a proverbial expression, indicating the means employed by the Mandarins to bribe the Tibetan rulers. Hence the care taken by the Imperial Government to prevent the introduction of the Assam tea, which, in any case, is less estemed tham that of China. Still the natives of the independent state of Pomi have preservel their right to free trate with India, whence they import the prohibited artiele in yearly increasing quantities. The ummal importation from China is estimutel by Baber at about \(10,000,000 \mathrm{lbs}\)., representing from \(£ 300,000\) to \(£ 350,000\).

The exchanges with India are at present quite insignificant, and the little received from that country comes mainly through Nepal and kishmir. The exports to India are ten times in exeess of the imports, the chicf item being the eostly wools, which ultimately reach the manufacturing towns of Yorkshire. There is thus a constant flow of rupees into Tibet, where this coin is gradually replacing the "bricks of tea" hitherto usel as currency. Needles also are much used in petty dealings, and ingots of silver in wholesale transactions.

The Tibetans are born traders, dealing imbliferently in anything that may offer a chance of turning "an honest pemny." Every house is a shop, every lamassary a warehouse. The monasteries have all their garpön, or chief agent, under whom are a host of employés and pack amimals. Curavans of yaks and sheep heavily laden cross the country in all directions, although the great highway is the ronte leading from Lassa through Tatsienhu and Sechuen to the heart of China. Another route to China runs from Lassa north-eastwards across Mongolia, while several roads lead southwards to Assum and Bhutan, sonth-westwards to Nepal, westwards to Leh aul Kashmir. This last, probably the most important for the European trade, is traversed by caravans of silks, shawls, saffron, and other wares, leaving Leh in April and reaching Lassa the following January. At Gartok, Lake Mansaraûr, Shigatzé, and other stations along the route, fairs are held, often lasting several weeks. After an absence of about eighteen months the caravan re-enters Leh with tea, wool, turquoises from the Kuen-lun, borax, \&e. The districts through which it passes are bound to supply it gratuitously with two hundred yaks as beasts of burden, besides provisions for the travellers. Along the southern frontier the Himalayan passes are every year formally opened for traffic by proclamation of the nearest local Tibetan dizongpon, or governor. In ease of war, disturbances, or cholera in India, they are kept closed pending instructions from the central Government at Lassa. Nearly all the profit of this foreign trade goes to the monasteries, which, by monopolies and usury, swallow up all the savings of the country. Thus, notwithstanding its natural poverty, Tibet supports in wealth and luxury a whole nation of monks.

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The Tibetan Government is in theory a pute theoreracy. The Dalai-lama, called ulso the (iyallat-rmboche, "Jewel of Majesty," or "Sovereign Treasure," is at one gool and king, master of the life and fortmess of his subjects, with no limit to his power exeppthis own pheasure. Nevertheless he consents to be guided in ordinary matters by the old usages, while his very greatmess prevents him from directly oppressing his people. Itis sphere of action being restricted to spiritual maters, he is represented in the administration by a viceroy, chosen by the Bimperor in a supreme comed of three high priests. This is the Nomakhan, or Gyallu, who acts either directly, or through four ministers (Kastaks or Kalons), and sisteren inferior mandarins, The other functionaries are selected by the ministers almost exclusisely from the hamas.

But bohind this machinery are one or more Kirichai, or Amban, Chinese agents, whe control the high officials, and on weighty occasions convey to them the pleasure of his Imperial Majesty. Aceording to the practice of Kang-hi, followed by all his succesorse, everything comected with general polities and war must be referred to Doking, while local matters aro left to the Tibetan authorities. All the civil functiomarios are natives of Tibet. The most serious crises oceur at the death, or, we shoulh say, the reinearmation of the Dahai-lama in a new-bom infant. Then the Khutuktu, or chicf prolates, assemble in conclave, passing a week in prayer and fasting, after which the future lope is chosen by lot. But the election is still controlled by the Chinese cmbassy, which in 1792 presented to the conclave the magnificent gold vase, whence is drawn the name of the new master of the land, who is invested by a diploma bearing the Emperor's signature. l'ope, viceroy, ministers, all receive a yearly subvention from Peking, and all the Tibetan mandarins wear on their hats the button, or distinctive sign of the dignities conferred by the empire. Every third or fifth year a solemn embassy is sent to Deking with rich presents, receiving others in exchange from the "Son of Heaven." The Gramd Lama's treasury is yemrly increased by a sum of \(£ 10,000\), which can be touched only in case of war.

The rate of taxation depends rather on custom and the mandarins than on any fixed laws. The whole lam belongs to the Dulai-lama, the people being merely temporary oceupants, tolerated by the real owner. The very houses and furniture and all movable property are held in thust for the supreme master, whose subjects must be grateful if he takes a portion only for the requirements of the administration. One of the most ordinary sentences, in fuct, is wholesale confiscution, when the condenmed must leave house and lands, betaking themselves to a camp life, and living by becrging in the districts assigned to them. So numerous are these chonglong, or official mendicants, that they form a distinct class in the State. In the courts even the inferior mandarins may have recourse to torture, and sentence to the rod, fines, or imprisomment. The higher authorities condemn to exile, amputation of hands and feet, gouging out of the eyes, and death. But, as faithful disciples of Buddha, the lamas refrain from "killing" their subjects, only leaving

\section*{I Ialai-hana,} pa 'Treasure," jecets, with no to be gruided mits him from ed to spirituml hosen by the Nomukhan, or ks or Kalons), lected by the hinese agents, n the plensure wed by all his be referred to All the civil the denth, or, infunt. Then ook in pruyer lection is still e conclave the or of the lind, lope, viceroy, the Tibetan the dignities lssy is sent to n of Iteaven." which can bo s than on any being merely and furniture whose subjects he administraiscation, when camp life, and ce these chongtate. In the Id sentence to exile, amputait, as faithful , only leaving
them to perish of hunger. With every new yenr the office of judge is nold to the highest bidder in the monnstery of Debang ut lassa. When the lamu, wenlthy enongh to purehase the dignity, presents himself with his silver rod to the public, there is u genernl stampede mongst the well-todo urtismes, who keep ont of the way for the twenty-three days during which he is authorised to indemnify himself by the inposition of urbitrury fines.

Since the cession of Ladak to Kinshmir, und the nnmexation of lButung, Litmg, Aten-tze, und other districts to Sechuen mad Yunnm, Si-isung, or Tibet proper, comprises only the four provinces of Nari, 'Tsang, Wei, or U, and Kham. C'rtuin principulities enclosed in these provinces are completely indejendent of Lassu, und either enjoy self-goverumest or uro directly administered from l'eking. Such expecially is the "kingdom" of lomi, whose inhabitunts, with all their devotion for the Jalai-lama, jealonsly guard their local liberties and right of free trade. Even in the four provinces the Chinese authorities interfere in many ways, and their power is especially felt in that of Nari, where, owing to its dangerous proximity to Kashmir und Indin, the old spirit of independence might be awakened. Nor is any money allowed to be coined in Tibet, which in the eyes of the Imperial Government is merely a dependeney of Sechuen, whence all orders are received in Lassa.

All the able-bodied mule population is supposed to constitute a sort of national guarl for the defence of the country. But the only regular troops are Manchus, Mongols, or Taturs, whom the Chinese authorities prefer for this service, ostensibly on accomt of their hurdy and frugal habits-in reality, becanso they would never hesitate to butcher the natives when called upon by their officers. About four thousand are found sufficient to hold the country, of whom half ure stationed in Lassa, the rest distributed in small bodies over the garrison towns of Tingri, Shigntzé, Gyantze, and the frontier stations.

The postal service is conducted with remarkable speed and regularity. The carriers traverse in twenty to thirty days, according to the season, the route between Lassa and Gartok, a distanco of 780 miles. They keep the saddle night and day, never stopping exeept to change horses or for refreshment. To provide for accidents, two riders, each leading two horses by the bridle, accompuny them along the route, which is thus traversed at full speed nearly the whole way. To prevent the messenger from undressing at night, his clothes are sealed by a mandarin at starting, and the seal can be broken only by the recipient of the dispateh. In the desert tracts the villages are replaced by the tarsun, or postal tents, erected at certain points along the route.


CIIAPTER III.
CHINESE TURKESTINS.
The 'l'amm banin.

\section*{Nomenclateme.}


IIE central Asintic depression, representing the aneient inland sea thot flowed between the Tian-shan and Kum-lim, bears a great variety of mames. The surromding Turki, Galcha, Mongol, and Tibetim proples have all their special appellations, which, with the vicissitudes of comquest and migration, have enjoged eneh in its turn a passing celebrity. The natives themselves recently spoke of their country as the Alti-shuh", or "Six Cities," mn expression now replaced by Jiti-shahr, or "Seven Cities;" but even this is restricted to the inhubited portion sweeping in a vast semicircle round the foot of the mountains. The Chinese term Tian-shan Nin-lu, or Sonthern Tian-sham route, in opposition to Tian-shan Pe-lu, or the Northern Tian-shan ronte of Kungaria, has at least the udvantage of precision, whereas "Kashgaria," the name lately current in Europe, has no ruison d'etre since the collape of the independent state founded by Yuknb of Kashgar. In the same way the expression "Kingdom of Khotun" fell into disuse ufter the city of Khotan had ceased to be the capital. The term "Little Bokhara," still in use some thinty yeurs ago, pointed at the former religious aseendancy of Bokhara, but is now all the less appropriate that Bokhara itself has yielded the supremacy to Tashkent. Lastly, the expressions Eastern Turkestan and Chinese Turkestan are still applieable, beeause the inhabitants are of Turki speech, while the Chinese have aguin brought the country under subjection.

\section*{Progiress of Discovery.}

Although till about the middle of this eentury it had fallen into almost total oblivion, Chinese Turkestan at all times possessed great importanee as a highway of migration or trade between Eastern Asia and the Aralo-Caspium basin. Greek and Chinese traders met on the great "Silk Route," which passed this way,
ent inlund sea bears a great , Mongol, and rhich, with the ed each in its \(f\) their country , Jiti-slumhr, or sweeping in a erm Tian-shan han Pe-lu, or advantage of , has no ruison b) of Kisligar. lisuse after tho kharn," still in cy of Bokhara, the supremacy nese Turkestan ile the Chinese
sto almost total nee as a highCaspian basin. assed this way,


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while Buddhist missionaries, Arab dealers, the great Venetian, Marco Polo, followed by other European travellers in medixval times, had all to tarry in the oases of Chinese Turkestan on their long journeys across the continent. But so forgotten were the old accounts, that the depression watered by the Tarim was supposed, eighty years ago, to form part of the vast " plateau of Tatary," which was thought to occupy all the interior of the continent. The general form of this great eavity remained unknown till again revealed to Europe by the study of the Chinese documents relating to the Tian-shan Nan-lu.

Adolph Schlagintweit was the first European that reached the Tarim basin from India in the present century. In 1857 he crossed the Karakorum, thence descending to the plains and pushing on to Kashgar, only to be assassinated by

Fig. 21.-Itinehahes of the Tian-shan Nan-lu.
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\text { Scale } 1: 15,350,000
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order of the ruling prince, Vali Khan. Thus were lost to science all his labours, notes, and collections. Eight years afterwards Johnson visited Khotan and the surrounding deserts, and this was the first of the English expeditions inspired by the commercial and political rivalries of England and Russia. In 1868 Shaw undertook the exploration of the trade routes down to the plains, while Hayward received from the London Geographical Society the mission to survey the plateau regions. Hayward shared the fate of Schlagintweit, but Shaw succeeded in collecting much information on the trade of the country, and soon after accompanied the famous embassy to Yakub, sovereign of Kashgaria. Forsyth, the head of the mission, got no farther than Yarkand, but he returned three years afterwards with a more numerous staff of explorers, amongst whom were Gordon, Biddulph, Trotter,

Chapman, Bellew, Stoliczka. Tho fertile region of the plains was now visited in every direction, while farther west the "Roof of the World" was reached from the Upper Oxus valleys.

Nor were the Russians on their part idle. Valikhanov in 1858, and Osten Sacken in 1867, had crossed the Tiam-shan, thence descending from the north down to the Kashgarian plains. In 1876 Kuropatkin penetruted by the Terekdavan route into the Turim basin, skirting the southern foot of the Tian-shan as far as Lake Karushar. Following in his footsteps, Regel has recently pushed further eastwards along the "imperial highway" ulways taken by the Chinese on their military and commercial expeditions towards the Tim-shan. The itineraries of Mushketov and others have now connected this route with those of Kulja on the opposite side, while Prjevalsky, plunging into the desert, has surveyed all the eastern section of the Tarim basin between the Tian-shan and the Altin-tagh. But the regions stretching along the foot of the Kuen-lum, formerly traversed by Mareo Polo and Benediet de Goës, still remain unexplored.

\section*{Extent-Population-Water System—The Kara-kasif.}

From the results of the English and Russian surveys Chinese Turkestan would appear to have an area of 480,000 square miles, with a populution estimated by Forsyth at no more than 580,000 , and which cannot in any cuse exceed a million. But here water is scarce, and desert begins wherever the flowing stream runs dry. The lofty crests of the encireling ranges often tower far above the snow-line, but the streams discharged by them do not always reach the open plains. They are nevertheless gathered together in sufficient number to develop a large river basin.

East of Khotan none of the Kuen-lun and Altin-tagh torrents reach the central reservoir of this basin except the Cherchen-daria, one of the most copious of all the streams joining the Tarim above Lake Lob. The afflueni- of the Khotan-daria, one of the main branches of the Tarim, were \(f\) aerly renowned throughout Asia as the "rivers of Jade." All the Chinese reccids describe the Khotan as formed of three head-streams, each of which sends down jade pubbles of a special colour. To the east flows the "river of green Jade," to the west that of "black Jade," between the two that of "white Jade." Two at least of these rivers have preserved their name under the Turki forms of Urung-kash ("White Jade") and Karakash (" Black Jade"). The latter, by far the largest, rises in Kashmîr, far to the south of the Kuen-lun, at an altitude of over 16,000 feet, and flows from the Karakorum through a succession of gorges down to the northern base of the Kuen-lun, finally escaping through the Shah-i-dulah ravine to the plain of Khotan.

East of the Upper Kara-kash valley the plain crossed by travellers proceeding from the Indus to the Tarim basin is largely covered with saline and other efforeseences. The lake by which it was formerly flooded has disappear d, and even the streams which succeeded it have been swallowed up in the shifting sands. Deep erevasses are here and there filled with sulphate of magnesia as white and fine as the driven snow. The deeper cavities are occupied by muddy salt marshes,
ow visited in eached from 8 , and Osten m the north y the Terek-Tian-shan as ently pushed e Chinese on he itineraries Kulja on the eyed all the o Altin-tagh. traversed by

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kestan would estimated by ced a million. sam runs dry. nnow-line, but 2s. They are river basin. ch the central copious of all Khotan-daria, oughout Asia an as formed special colour. ‘black Jade," ave preserved ") and Karanir, far to the om the Karathe Kuen-lun, an. rs proceeding ad other effior.d, and even hifting sands. as white and - salt marshes,


congealed on the surface, mad to a height of 17,000 feet hot springs are found encircled by deposits of lime und in outer rim of frozen water. For spuces severnl spuare miles in extent the ground is pierced by little fumel-shuped fissures 4 feet deep and 8 in dimeter, and nearly all quite regular. After the rains some of these funnels throw up masses of mud and even boiling water. Lower down the bunks of the Kara-kash are broken by similar fissures, but with a suline crust round the upper edge. These conmunicate with the river, which falls during tho frosty uights and rises during the dey from the melting of the snows und ice. The funnels aro thus alternately filled and emptied every twenty-four hours, the salt water of the Kara-kash leaving a saline deposit each time on the surface.

West of the Lower Kara-kash follow several streams whieh are lost in tho sands or in the Yashil-kul swamps, separated by a ridgo of dunes from the Kara-

Fig. 22.-The Tian-bian Nan-lu, fhom a Chinese Map.

kash. These streams rise on the outer spurs of the Kuen-lun, which are covered to a height of 11,000 feet with an argillaceous soil, probably of glacial origin. The main route from India to Chinese Turkestan leads through the Sanju Pass (16,800 feet) over these mountains, thereby avoiding the great bend deseribed by the Karakash towards the north-east after emerging on the plains.

\section*{The Yarkand and Kashgar.}

In the south-west corner of Chineso Turkestun rises the Yurkaud-daria, also often called the Zarafshan, or "Auriferous," the longest, and probably the most copious, of all the Tarim affluents. Over one-fourth of the whole population are concen-
trated along the banks of this fertilising stream, whose alluvial deposits are far more precious than its golden sands. Its farthest source is on the Karakorum Pass ( 17,500 feet), where a ridge a few yarls wido separates the Tarim and Indus basins. Flowing first north-west, parullel with all the ranges of this orogrouphic system, it is soon swollen by the numerous feeders sent down from the snows und glaciers of tho Dapsung and other peaks, rivulling those of the Himalayas themselves in height and grandeur. Henee the Yarkand is already a large stream when it reaches the plains; but here its volume is rapidly diminished by evaporation and the extensive irrigation works developed along its banks. Nevertheless, during the floods, the main branch is still 400 or 500 feet broad, and nowhere fordable at the eity of Yarkamd.

None of the streams flowing to the Tarim from the Pamir are of any size. The mountains where they have their source rise immediately west of the plain, leaving little space for the development of large rivers. These mountains, the Tsung-ling, or "Onion Mountains" of the Chinese, are the alvinced projections of the Central Asiatic nueleus, here dominated by the imposing penk of Tagharma. They skirt the eastern edge of the Pamir, which is far more abrupt than the opposite side facing the Oxus basin. Of all the streams flowing from these highlands eastwards the Kashgar-daria alone reaches the Yarkand-daria. Its chief head-stream is one of the two Kizil-su ("Red Waters"), flowing one to the Aral, the other to the Tarim basin. The mountains of the Eastern Pamir are themselves often ealled Kizil-urt, Kizil-tagh, or "Red Mountains."

\section*{The Tarim.}

The Khotan and Yarkand, swollen by the Kashgar, unite with the Ak-sn, which is itself joined by the Taushkan-daria from the Tian-shan, and by the junetion of all these streams is formed the Tarim (Tarim-gol), the Occhardes of the Greek geographers. But the term Tarim is little usel by the natives, who, according to Prjevalsky, still call the united stream the Yarkand-daria. Rivalling the Danube in length, the Tarim, unlike that river, diminishes in size as it approaches its mouth, although still fed by other tributaries from the north. East of the Kok-su, which flows to Lake Baba, the Khaidu-gol,* deseending from the Yulduz steppes, has sufficient volume to reach the Tarim, traversing on the way the large and deep lacustrine basin variously known as the Bogla-nor, Bostan-nor, Bagarashkul, Karashar-kul, or simply the Denghiz, or "Sea." The Khailinn-kua, or Konchedaria, as the outlet of this lake is called, flows through a narrow gorge in the Kuruk-tagh range, which was formerly defended by strong fortifications, and is still guarded by mud forts.

\section*{Lob-vor.}

After receiving the Konehe-daria, the velocity of the Tarim is gradually diminished as it approaches the deepest portion of the Tian-shan Nan-lu depression. Near
* On most maps gol and giol are wrongly used synonymonsly. Gol is tho Mongolian word for "river," whereas \(g\) il is a Turki word meaning lake; hence equivalent to kiul.
the village of Ablalli, close to its mouth in Loh-nor, it is littlo more than 2 feet per second, and the disehurge may here be estimuted at about \(:, 700\) cubic feet. At Ablalit the Tarim emerges from the reedy swamps of Lake Kiara-buran, or "Bhack Storm," which belongs to the Lob-nor system. But here it is again divided into a number of natural and artificial conuls, beyond which it disappears in a forest of reeds even more dense and taller than those of the Kara-buran, rising to a height of over 20 feet above the surface, and purtly concealing from view the Chök-kul (Great Lake), or Kura-kurchin, which jointly with the Kara-hurun forms the great reservoir commonly known as the Lob-nor. Tho eastern section covers men aren of perhaps 800 square miles; but it is mostly littlo moro thin a lagoon or flooded moruss, with a mean depth of scarcely more thun 7 feet along its southern or moro elevated bank. Even in the centre a few fishing villages lic hidden amid the

dense reeds overgrowing a strip of land which here rises above the surface. These villages are thus protected from the fierce gales from the east and north-cast, which sweep the lake and open plains, especially in spring, and which cause the water to flood the flat shores of the Kara-buran for a space of 10 or 12 miles; hence its expressive name, the " Black Storm."

Lake Lob is evidently a mere remnant of the ancient "Mediterranean" mentioned in legend and historic records, and traces of which are clearly detected throughout the whole Tarim depression eastwards to the Mongolian plateaux. The researches of Richthofen enable us accurately to define the contours of what was once the Si-hai, or "Western Sca," and what is now the "Han-hai," or "Dried-up Sea," of the Chinese. This ancient sca, running parallel with the Tian-shan and Kuen-lun, is now known to have covered an area of over 800,000 square miles, with a depth of at least 3,000 feet in its lowest depression; that is, where the

Lob-nor is now fonnd. Eiven ut the dawn of history real inland se:s still survived in this region, and the Tian-shan Nan-la and Tian-shan l'e-lu on either side of the eastern extremity of the Tian-shan runge had both of them their vast lueustrine basin, now represented by the saall lakes senttered over the plains. The umanimous tradition of the natives, both in Eastern Turkestan and West Chima, speaks of the gradual exhanstion of these lakes, and the disappearmence of the waters may have possibly suggested the iden of an underground chamel, popularly supposed to convey the outflow of Lob-nor to the sources of the Hoang-ho, 10,000 fect higher up.

It is very remarkable that the gradual desicention of Lob-nor has not rendered it completely saline, like most of the othor lakes scattered over the old marino basin. Its water is at present fresh and sweet, und according to the local accounts

Fig. 24.-Loh-nor.
Amording to Prjevalpky. Sonie \(1: 2,650,000\).

it gradually diminished in volume towards the middle of the present century, again increasing about the year 1870. Like the Tarim, it abounds in fish of two species, which the aatives take by means of artificial canals and reservoirs. During the floods the fish penetrate into these reservoirs, where they are easily captured after the subsidence of the waters.

\section*{The Takla-makay Desert.}

Although the extent of the desert and waste tracts in Chinese Turkestan has not yet been accurately determined, there can be no doubt that they are vastly in excess of the cultivated and inhabited lands. These are nearly everywhere limited to a narrow strip of a few thousand yards at most along the river banks, beyond which the still unexplored wilderness stretches uninterruptedly beyond the horizon. Here we already enter the Gobi, although it is unknown by this name in Eastern

Turkestan, being, in fact, still sepurated by the low-lying valley of the Turim from the true Mongolian deserts. North of Khotan and enst of the Khotun-duria the sundy region tukes the Tharki nume of Thklu-mukan. Ifere the dunes mivuncing like the ocean waves are exposed to the full fury of the northem blasts, by which they are ruised to heights of from 200 to 400 feet. West of the Khotmin-laria, however, they are merely shifting hillocks or mounds, mostly from 10 to 20 feet high, all drifting south-eastwariss. But even here some rise to 100 feet und upwards, forming regular ereseents, with the horns projecting on either side beyond the central mass. The proximity of the desert is announced in the oasis, and up to the very foot of the Kuen-lun und Pamir runges by the fine purtieles of dust whirling in the uir, und often clouding the azure sky. The sun is not distinetly visible for some hours after duwn, and when the east winds prevail it remains at times overcast throughout the day. Then the lamps are lit in tho houses at uoon, as in London during the winter fogs. When driven in dense masses before the storm, the sands are as disustrous to the enltivated lunds as they are benefieinl when they fall imperecptibly in the form of inn impalpablo dust. To theso sands of tho desert the natives thus, not without an, attribute at once the gradual ruin of their country and the temporury ubua ance of their crops.

Not all the Turkestan wastes are covered with dunes, which are chiefly concentrated in the south and south-west under the action of the northern winds. Some of the desert tracts are true steppes, like those of the Aral basin, yellow or reddish rolling lands following each other with tho uniformity of waves under a steudy breeze. In the distance white roeks worn by the sands stand out like ruined buildings, while saline inerustations cover the beds of ancient lakes.

At the foot of the Kuen-lun stretch vast stony wastes, and the old Chinese records speak with horror of all these "rivers of sand" and rocky plains. Tho wilderness stretching east of Lob-nor is haunted by winged dragons and evil genii. Hero the path is traced only by bleached bones; the voico of the sands mocks the wayfarer or fills him with vague fears, now singing, now moaning, or muttering like distant thunder, or uttering shrill, hissing sounds, as if the air were alive with invisible demons. Much of this may be due to the fevered fancy of travellers; but the Eastern Turkestan dunes may also re-echo with that " music of the sands" spoken of by explorers in Sinai, Afghanistan, Peru, and by many naturalists on the seashore. The same voice of the burning sands is mentioned by the traveller Lenz during his recent visit to Timbuktu.

During the prosperous days of the kingdom of Khotan the sandy wastes were far less extensive than at present, although even then the cultivated tracts were hemmed in by the surrounding desert. A great river is mentioned as flowing towards the north-west, to the west of Khotan, but which has now completely disappeared. In the north-east also the inhabitants of a city called Ho-lao-lo-kia, rejecting a message from heaven, were condemned, according to the legend, to perish under a rain of sand. Elsewhero another tradition speaks of 360 eitics swallowed up in a single day by the sands of the Takla-makan. Certain shepherds, we are told, know the sites of these cities, but keep the secret in order to enrich
themselves with the gold coins and other preeions objemets burime in the ruins. Johnsen, who reffers to this tradition, visitent one mined rity lose to khotan, where "briek ten," (irevk and byantine coins, bexides grold orn mente like those still worn ly the llimeln women, are frempurtly picked ap. The ruins of mother city near kiria yidded imuges of Bublha mul a clay stathette of the ape Hamman. Thanks to its almont rainless climate mad iry air, the mins of Chinese 'lurkestan hast fur long agres, ume walls of mbobe are still serm just us they stonal
 the binildings, and when a shilting dume reveals some old elitice, it is generully found in the same state as when originally engulfed.

\section*{Floma and Fadea.}

In suilh a climate vegetation is maturally represented by but fow npecies. The plains nowhire dixplay gronsy tracts or flowery steppes. Recels and tull ugutic phants, a few shrubs, such as the jidlu (Elutyinus), a sort of wild olive, some tamarinds and poplars at most 30 or 40 feet high, form the chief elements in the spontanemen growth of the Tarim basin. The pophar, which is tho salient fenture along the waterourses, is of the l'opulux dirersifolin specries, presenting, us indieated by its botmicul mame, a great variety in the form and ite of its lenves. The very sulp of these plants is saline, and in their shate the ground is quite bare, covered aither with grey sumd or a white efllonescence.

Thanks to their irrigation works, the matives have developed a cultivated flora relatively far richer than the wild growths. The hambets are shaded with clusters of walnuts, and all the gardens in the Khotam and Yarkand districts have their mulberry plots. The pear, upple weh, anvicot, olive, and truiling vine intertwine their branches in the orchary "d aid yied excellent fruits, while abmandant crops of maize, millet, burley, wh at, rice, cottom, hemp, and melons are raised round about the villages, which ate often buried in a denso vegetation of almost tropical luxuriance.

On the banks of the Tarim and its affluents tho species of wild fauna are even less numerous than those of the wild flora. Bexiles the witd boar and hare quadrupels are rare, ulthough the tiger, panther, lynx, wolf, fox, and otter are met in the thickets along the river banks, while the maral deer and antelope keep to the open plains. None of the mammals and two species only of birds are peeuliar to this region. Prjevalsky enumerntes forty-eight species of avifauna altogether, but in spring and nutum Lake Lob is visited by millions of birds of passage, which here find \(n\) convenient resting-phee on their weary flights between Southern Asia and Siberia. They arrive in a thoroughly exhausted state, and it is noteworthy that they come, not from the south, but from the south-west, thus avoiding the bleak plateaux of Tibet.

It was in the neighbourhood of Lake Loh that l'rjevalsky saw a wilus camel, an animal whose existence had been doubted by most maturalists, although constantly mentioned in the Chinese records and spoken of by the natives of Turkestan
\(\qquad\) , at to Khotan, tis like those is of another of the upe us of Chiuese us they stowel po to preserve is generally
species. The wh tull nquatic 1 olive, some ements in the whient feature y, us indicuted es. The very bure, covered ultivuted flora with clusters cts lanve their g vine interhile abundant ons are raised ion of almost
auna are even 1 hare quadrucr are met in e keep to the re peeuliar to Itogether, but massage, which Southern Asia is notewortly avoiding the a wilus camel, athough conof Turkestan




Photographic
Sciences


\section*{CIHM/ICMH Microfiche Series.}

> CIHM/ICMH Collection de microfiches.
and Mongolia to all reeent travellers. It is at present met chicfly east of Lob-nor, in the sandy Kumtag deserts, and less frequently about the Lower Tarim and Cherchen-daria, and on the Altin-tagh uplands, in company with the yak and wild ass. Very numerous twenty years ago, they have becone somewhat rare since the Lob hunters have begun to pursue them into the desert. They are extrenely wary, and scent the enemy several miles off under the wind. They are distinguished by some unatomical features from the domestic animal, and the two varieties differ also in size and the colour of their coats. All the wild camels are small compared with the giants of the caravans, and it is on the whole more probable that they represent the original stock than that they descend from individuals of the tame species which have escaped to the desert.

Most of the traffic is carried on by means of horses of large size imported from Ferghana, while the small, hardy, and vigorous breed used as mounts come chiefly from the Southern Tian-shan valleys, and especially the \(A k\)-su district. Owing to the great heat the yak could seareely live on the plains, and this animal is imported only for the shambles of the Turkestan cities. The sheep and goats tended by the Kirghiz nomads on the slopes of the Tian-shan and Pamir are of the same species as those of Tibet, and are equally noted for their delicate ficece. According to Shaw the best wool in the world comes not from Tibet, but from Turfan.

\section*{Inhabitants-The Kashgarians.}

The peoples of the Tarim basin are evidently a very mixed race. Old geographical names and many facts mentioned in the Chinese records show that at least a portion of the inhabitants are of Aryan stock. The legendary heroes of the country are the same Iranian heroes, "Rustan and Afrasiab," whose exploits are associated with the gorges, precipices, and other natural wonders of the land. They are the Charlemagnes, the Rolands, and Arthurs of Central Asia, and even in the legends of Chinese Turkestan their names recur more frequently than that of Alexander himself, the " Hazret Sikander," supposed to have conquered China in order to propagate Islam in that region. At present the only tribes of urdoubted Iranian stock are the Galchas, akin to those of the Upper Oxus valleys. Like them, they are a fine race, of symmetrical build, frank and upright in their dealings, still worshippers of fire and the sun. Although seattered in small groups amongst the Kirghiz of Turki speech, many still preserve the old language, and Persian is still current in the Upper Sarikol valley, over 700 miles from the frontier of Irania. But the little Aryan community of this upland region recently threatened to disappear, Yakub Khan having forcibly removed them to the Kashgar district. Even amongst the Turki people of the plains many traits recall the regular Aryan type. Europeans who have visited Yarkand were struck by the resemblance of many natives to the English in their regular features and florid complexion. They had well-furnished beards, although men of pure Turki stock are mostly beardless.

But such is the mixture of races in this region that Persians, Tibetans, Arabs,

Kirghiz, Kulmuks, every variety of Mongols and Tatars as well as Ifindus and Chinese, are represented in their crossings with the Sartes, or Taranchi, of Eastern Turkestan. Even in the wholesule massucres, such as those of 1863, 1877, and 1878, when the iulabitants of whole cities were exterminated, the hatred of oppressor and oppressed corresponds in appeurunce only with that of hostile races. However the Kashgarians may have detested the very name of Chinese some ycars ago, many people were none the less met in the streets bearing an unmistakable resemblance to the natives of the "Middle Kinglom." The only real contrasts here observed ure such as are causel, not by ruce, but by social habits, pursuits, or climate. The two really distinct elements are the agricultural elasses of the lowlands, whatever may be their origin, and the Kirghiz or Kalmuk nomads of the upland pastures.

In the cultivated tracts the people designate each other not by ethnical names, but by their native places, calling themselves Khokandi, Yarkandi, Kashgari,

Fig. 25.-Races of Chinese Turkestan. Scale 1: 15,000,000.


Turfani, as the case may be. They have, nevertheless, a sort of collective patriotic sentiment based on a community of political conditions and social habits.

Proceeding from the foot of the Karakorum north-eastwards, one observes a gradual transition in the aspect of the people, Aryan features insensibly yielding to the Mongol type. But all this intermingling has by no means resulted in a fine race. In the Yarkand district every third person you meet suffers from goitre, and this affection is quite as common in the plains as on the uplands. Ophthalmia is also very prevalent, thanks to the dazaling glare of the sun, the dust, and fierce sandstorms.

The current speech differs little from the Turki dialect of Tashkent, the chief differences arising from the use of Chinese words and of some Kirghiz expressions,

IIindus and i, of Eastern i3, 1877, and te hatred of hostile races. me years ago, e resemblance aere observed limate. The uds, whatever d pastures. hnical names, di, Kaslgari,
one observes a ply yielding to in a fine race. oitre, and this thalmia is also ud fierce sandkent, the chief iz expressions,
which seem to have found their way from Orenburg without leaving any trace of their passage in the Sir and Oxus basins. The East Turkestan dialect, which is spoken with great uniformity throughout the Tarim basin, possesses no literary importance. It boasts of neither poets nor prose writers, and even books are extremely rare in the country.

The strangers here settled come mostly from Ferghama, and are collectively known as Andijani, from the name of the old capital of Kokhand. Hindus are met only in the bazaars of the chief towns, but Kushmiri people are numerous, and some Tibetan settlers from Baltistan raiso tobacco and melons in the Yarkand district. The Jews were till recently almost unknown in the country, Yakub, like the Emir of Bokhara, having excluded them from his kingdom. But sinee the return of the Chinese numerous Jewish families huve crossed the enstern slope of the Pamir from Russian Turkestan. Under Yakub the law for strangers was, "Islam or death," the Kalmuks alone being allowed to retain their Buddhist fetishes. The Kashgarians entertain a great aversion for Christians of the Catholic and Greek rites, who place images or statues in their churches. But they regard the iconoelastic Protestants as Mohammedans of an inferior order, neglecting the observances, but none the less forming part of the great family of Islam. But with all their zeal the people are extrencly immoral, and thousands have been brutalised by the use of opium, or of \(\quad n+1 / h\), a mixture of an extract of hemp and tobuceo, which is highly intoxicating. Apart, however, from the tricks of trade, robbery and theft are rare. When a paek animal strays from the caravin the load is left on the spot while they go in seareh of it. In Yakub's time the methot of dealing with thieves was at once simple and summary : for the first offence a warning, for the second the bastinado, for the third loss of both hands, for the fourth decapitation.

Chinese Turkestan is on the whole a poor country, although Shaw found it superior to India as regards the well-being of the people. Yet the mud houses are not even whitewashed, and the dust penetrates everywhere through the fissures. Even in the large towns the remains of edifices are rarely seen embellished with enamelled poreeluin and arabesques, like those of Samarkand and Bokhara. Industry seems to have declined, judging at least from the deseriptions of the Chinese records and the valuable treasures often brought to light from the débris of old buildings buried under the sands. The ehief local industries are cotton, silk, and woollen fabries, carpets, boots, and saddlery. Notwithstanding the rieh mineral deposits, most of the copper and iron wares are imported, as are also all the woven goods of finer quality. At present most of these articles come from Russia, the imports from India being of little value.

\section*{Routes and Passes.}

Between Lake Karashar and the sources of the Kashgar-daria, Kuropatkin enumerates thirteen passes used by the caravans crossing the Tian-shan and its western prolongation, the Alaï. All these passes are practicable in summer for
saddle-horses and paek animals, and at least one, that leading from Kashgar over the Turug-art ( 11,750 feet) and the Terekti ( 12,800 ), might easily be converted into a carriage road. On the other hand, one alone is utilised throughout the whole year. This is the famous Terek-davan, or "Poplar l'ass" ( 10,450 feet), used throughout the historic period by most of the Central Asintic conquerors. When the winter snows are unusually heavy, the Sartlar, a neighbouring Karakirghiz tribe, are employed to transport the goods across the pass. The future milway from Russian Turkestan to the Tarim basin will probably follow this route, which offers the most direet line from the Volga to the Hoang-ho basin. But for the present there is no question of railways in a region where even the

Fig 26.-Routes from Kasigar to Firohana. Scale 1: 2,500,000.

main highway round the base of the mountains from Khotan to Hami assumes the aspect of a mere desert track.

\section*{Topography-Administrative Divisions.}

The chain of oases eneireling the Tarim depression begins at the foot of the Central Kuen-lun with the eity of Cherehen (Charchan, Charchand, Chaehan), which has probably been visited by no European since the days of Marco Polo and Benedict de Goës, and whose position can only be approximately determined. Too inaecessible to be subjugated either by the Chinese or the Khotani, it lies about 6,000 feet above sea-level on a torrent flowing to Lake Lob in a corn-growing district. It is a small place, of some five hundred houses, according to Johnson, reduced by Prjevalsky to thirty.

West of Cherchen follow Nay, Kivia, Chira, and numerous villages along the foot of the Kuen-lim, but no inuportunt town till we come to I'hotau (Ilchi), formerly a royal residence, and still capital of a province. Standing on a considerable stream in a highly procluctive district, it is often mentioned by Arub und Persian writers in connection with the famous perfumo procured from the musk deer of the neighbouring hills. It was no less renowned in China under the name of Yuthian, owing to the \(y\) II, or jade, collected in its stremms, and to which were attri-

Fig. 27.-Khotan anid the Southern Plateacx.
According lo Montgomerie. Scale \(1: 2,450,000\).

ne foot of the d, Chachan), areo Polo and rmined. Too , it lies about corn-growing ; to Johnson,
Kashgar over be converted roughout the 10,450 feet), o conquerors. ouring KaraThe future y follow this ang-ho busin. aere even the


During the prosperous period of the kingdom of Khotan the jade hurvest began after overy riso of the waters with a religious coremony conducted by the King, and the finest specimens were reserved for his treasury.

At the begiuning of the Christian era Khotun was a large city, und capital of a powerful empirc. The Chinese records speak of a garrison of 30,000 troops, and a population of 85,000 , all Buddhists, besides numorous lamassaries in the district, and a largo monastery of 3,000 monks, 50 li further south. During the processions from the city to the surrounding temples the King walked barefooted beforo the imago of Buldha, and presented himself to the high priest bareheaded and laden with perfumes and flowers.

The Chinese conquest and subsequent Mongolian invasions ruined the trade of Khotan, although it was saved from the fate of so many other cities engulfed in. the sands. In 1863 it was the first place to revolt from the Chinese, and notwithstunding the massacres which then took place, Johnson describes it two years afterwards as a large munufacturing town. Here are produced copper-ware, silks, felts, silk and woollen carpets, coarso cotton goods, and paper made of the mulberry fibre. The district yields cotton and silk, while the neighbouring mountains abound in gold, iron, antimony, coal, salt, sulphur, and saltpetre. But the gold mines alone ure worked, yielding a yearly averago of about \(2,100 \mathrm{lbs}\)., valued at £110,000.

In the sonth-east corner of the Tarim basin lies Sanju, on a torrent which is lost in the desert. Farther west and north-cast follow Kilian, Pialma, Guma, Kargalii, and to the north-west Posgam, all crowded together in the richest part of the whole country. Here also is the famous city of Yarkand, the largest in Eastern Turkestan, with a population estimated at from 60,000 to 100,000 , including some 8,000 foreigners of every nationality. The bazaar lies in the centre of un intricate labyrinth of streets and canals encircled by a broad wall, which is flanked by towers and defended on the west by the fortress of Yangi-shahr, or "New Town," erected by the Chinese to overawe the unruly Yarkandi. Nearly all tho towns of Eastern Turkestan have their Yangi-shahr, consisting mainly of administrative buildings and barracks.

The route from Yarkand to the second capital, Kashgar, approaches the foot of the mountains in order to connect the city of Yangi-hissar, or "Neweastle," near which are some metal works visited by Shaw. Kashgar, which lies 5 miles west of its "Yangi-shahr," is surrounded by a thick mud wall, beyond which are the remains of a city said to have been destroyed by Timur. Although lying in a less productive district than Yarkand, Kashgar occupies a better position for trading purposes, for it commands the route leading over the Terek-davan to Ferghana, besides several others here converging from the Tian-shan. It is thus at once a commercial entrepôt and strategical point of vital importance, a warlike city in legendary history, the birthplace of the hero Rustan. In the surrounding villages coarsa cloths are woven and exported to the yearly value of over \(£ 100,000\). Nortl. of Artush, one of these villages, the defiles leading to Russian Turkestan were fortified in Yakub's time by the stronghold of Tash-kurgan.
harvest began 1 by the King, und capital of 000 troops, and in the district, ing the procesrefooted before sarcheaded and
ed the trade of ies engulfed in e, and notwithit two years per-ware, silks, de of the mulring mountains But the gold J lbs., valued at
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ches the foot of eweastle," near 5 miles west of which are the lying in a less tion for trading n to Ferghana, thus at once a warlike city in e surrounding over \(£ 100,000\). sian Turkestan


Another important fortress is Maralluthhi, lying enst of Kashgar, near the junction of the Krohgar-duria und Yurkund-duria, und at the junction of the routes connecting the ehief cities in the Thrim lusin. North-west of it the amull town of \(U_{s} h\)-furfitu, with " gurrison of 2,000 men, guurds the route leuding over the Bulal Pass ( 15,000 feet) to the Issik-kul valley. But the most importunt place ut the southern buse of the Tiun-shan is \(A k-s u\) ("White Water"), a fortified tewn at the foot of \(\mathfrak{a}\) bluff, formerly overlooking the \(\Lambda \boldsymbol{k}\)-su River, which now flows neurly 10 miles farther west. Beyond Ak-su, Baii, Kinchu, Korla, Karushar, and all the other towns of Chinese Turkestan lie at some distance from the Tarim, which here flows through the heart of the desert over 60 miles south of the

Fig. 28.-Yakkand anji Yangi-bhahr.
Soale 1 : \(65,000\).

1. College. 2. Old Residence of the Khan. 3. Magazines. 4. Old Citadel.
advanced spurs of the Tian-shan. They are all small places, with little trade or industry.

Nor are there any towns on the Lower Tarim, or near Lake Lob, although the ruins of ancient cities are here both numerous and extensive. The remains of a place called Kok-nor lie concealed amid the reeds of a river three days' journey south-west of Lake Lob, and contain a temple with an image, apparently, of Buddha, still visited by the natives. They report that the statue and temple walls are adorned with precious stoncs and ingots of gold and silver, which no one dares to touch for fear of being struck dead by an invisible hand. The present " Tarimtzi," or inhabitants of the lake, reduced to a few hundred fanilics, have nothing but wretched reed hovels, with a few fishing boats and nets. The dead are laid on a skiff, with another reversed above it to form a coffin, and with them is placed half a net to fish with in the other world, the second half being kept by the relatives in memory of the departed.

A repurt had long been current that certuin kuswiun secturies had tuken refuge on the bunks of the 'larim. But l'rjevalaky hus shown that the rejort was gromullens, uad that the 'lurimazi, with their "Aymu" feutures, differ in no respect from the other surtes of the 'lurim lusin. It is nowe the less certuin that sume lansiun lhakolniks fonnd their way to this drenry region in semel of the namvellons " White Wiater," which clemses of their sins all who bathe in it, hesidenseroming for them ull enthly happiness. A fow young men first urived to oreet huts mul prepare the fielles for the colong. Next yeur came the rest of the immigrouts with their families; but denpuiring of tinding the songht-for Eden on the shores of the Lab-nor, they soon retrued their nteps northwards to Urumesi, and since then nothing further has been heard of thene mystic pilgrimes.

Chinese Turkestun comprises ten lurge divisions, which, proceeding from the south-west, ure: Khotan, Yurkumd, Yungi-hissur, Kashgur, Ush-turfun, Ak-su, Baï, Kullu, Korla, Kurushar. Three military commandants reside nt Kurashar, Khotun, und Yurkand, the lust mumed being also the seat of the general administration. Amongst all the cities, seven are considered as enjoying a specinl dignity, upart ultogether from their size and udministrative rank. Khotun, Yarkand, Yangi-hissur, Kashgur, Ush-turfan, Kucha, and Kirashar are the members of this Jiti-shahr, or " heptupolis."

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rling from the turfun, \(\lambda k\)-su, e nt Kurushar, nervil ndminisspecial dignity, tun, Yarkand, rembers of this


CILAPTER IV.
moncolda.

\section*{I.--TILE KUKU-NOR.}

IIE mountuineus region stretching for some 120,000 square miles to the north-enst of, und often ineluded in, Tibet, is renlly quite distinet from that comutry. It depends politicully rather on the Emperor of China than on the Dului-lama, while its commereial relutions are fur more importunt with the Chinese provinee of Kunsu than with the valley of the Tanugho. A triple momitain barrier sepurates the Kukunor und Chaidhum busins from the inhubited regions of Tibet, while the nutural slope of the land is towards the north-west; that is, towards the Gobi und the Mongolian domain. Nevertheless, this land of lofty plateunx, of elosed busins and difficult mountain ranges, cun hardly be regarded as belonging to the samo nutural division as the Gobi wastes, or the cultivated phains of Kansu. Hence it must be studied apart, as far as the scunty geographical materials may enable us to do só.

\section*{Relief of tie Land.}

East of Lake Lob the Altin-tagh and Chamen-tagh ranges are interrupted by a broad gap, through which the Chaidam depression merges in the plains of the Lower Tarim and Lob basin. Still farther east rise other ranges also belonging to the Kuen-lun system, and forming the advanced scarps of the Tibetan plateaux. These are the parallel chains between which the great rivers of East Tibet have their source. Such are the Muriu-ussu, which farther down becomes tho Kinshakiang and Yang-tze-kiang; the Lantzan-kiang, or Upper Mekhong; and the mysterious Nap-chu, forming the boundary of Tibet proper, and supposed to be identicul with the Lu-tze-kiang, or Upper Salwen. The ranges themselves, with the intervening valleys, run beyond the plateau north-west and south-east, parallel with the Chaidam valley, which is continued on the one hand by that of the Lower Tarim, on the other by the lacustrine district where the Hoang-ho takes its rise. It is thus easy to understand why the old Chinese geographers unanimously assert

EAST ASIA.
that the sources of tho Yellow River are the springs from the underground waters flowing from Lako Lob. The carly travellers were unable to determine the general inclination of tho slopes between the Lob and the Hoang-ho. Yet the Chinese maps, projected in a reverso sense from ours, figure a rampart of mountains between the "Stars," or lakelets, forming the source of the Hoang-ho, and the plains whose central depression is occupied by Lake Lob.

Still the transverse depression of the Tarim and Hoang-ho is consistent with the presence of northern mountain masses and ranges, which are connected with the Tibetan plateau by an extrenely irregular region, across which the Yellow River forces its way through a series of formidable gorges. This highland system,

Fig. 29.-Sources of the Ioang-ho, fhom a Chinere Map.

which may be called that of the Kuku-nor from its central lake, is also intersected by various affluents of the Hoang-ho. In the north the Nan-shan range (Siwenshan, or Kilien-shan), running nearly west and east, forms the outer limit of the Kuku-nor region above the plains of the Mongolian Kansu, thus apparently prolonging the Altin-tagh east of the Chaidam gap. Towards the sources of the Az-sind some of its crests rise above the snow-line, here fixed at about 14,000 feet. South of the Nan-shan, which is dominated by the Konkir, one of the "amne," or sacred mountains, of the Tanguts, there rises another range, the Chetri-shan, separating the valley of the Tatung-gol from the southern basin of the Kuku-nor. Beyond this lake succeed other mountains, the Southern Kuku-nor system of
rground waters ine the general Cet the Chinese intains between te plains whose
consistent with connected with ich the Yellow ghland system,
also interseeted range (Siwenor limit of the us apparently sources of the ut 14,000 feet. the "amne," he Chetri-shan, the Kuku-nor. nor system of

Prjevalkky, which break into numerous ridges, all abounding in minerals. Hero much gold was formerly colleeted ; but since the Dungam insurrection the washings have been abandoned.

The opposite slopes of all these runges present the sume contrasts as do those of tho Tiam-shan in Kulju, and those of the Altaï in Siberia. Thus the Nun-shan is well wooded on its northern flank, whereas timber is very searee on the opposite side. Still the flora of this region is extremely varied compared with that of the northern steppes and southern plateaux. Forests of conifers, willows, and red birch, besides other trees elsewhere unknown, rise to an altitude of 10,000 feet. Peculiar species of the rhododendron and honeysuckle are found in the undergrowth and on the alpine prairies. The Kuku-nor highlands are also the special

Fig. 30.-Kunv-vok.
Acourding to Prjevalsky. Scale \(1: 2,780,000\).

home of the medicinal rhubarb, for which the Chinese merchants of Sining pay ligh prices. The fauna of these regions is also surprisingly rich, and Prjevalsky here discovered no less than forty-three new species.

\section*{Lake Kuku.}

The Kuku-nor, which gives its name to the province, is the Tso-gumbum of the Tibetans, or the Tsing-hai, or "Blue Lake," of the Chinese. It is so named from its beautiful azure colour, contrasting with the delicate white of tho snows mirrored in its waters, which Prjevulsky deseribes us " soft as silk." It has the form of an elongated ellipse, with a circuit of from 220 to 240 miles, and an area of from 2,000 to 2,500 square miles. It was formerly far moro extensive, as

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shown by the water-marks on the cliffs at a great distance from its present shores. Its numerous feeders from the west, of which the Bukhain-gol is the largest, do not suffice to compensate for the evaporation, and, as there is no outlet, its waters have becomo suline. Towards the east is an island 6 miles in circumference, which, aceording to the legend, closes up the abyss whence sprang the waters of the lake. It was dropped by a gigantic bird from the skies on the spot, in order to stop the flow, which was threatening to submerge the world. A convent with about a dozen lamas stands on this solitary islund, completely cut off from the mainland during the summer, when no cruft dares to venture on the stormy lake. But during the four winter months the monks cross the ice and renew their stock of flour and butter. The lake, which is said to ubound in many species of fish, stands 10,600 feet above the sea, and is fringed by dense thickets of shrubs.

\section*{The Chamam Basin.}

Several other smaller lakes are seattered over the plateau west of the Upper Hoang-ho, but the largest of all the inland seas in this region has long disappeared. The valley of the Chaidam (Tsaidam) was formerly the bed of this vast reservoir, which filled the triangular space bounded on the north by the Nan-shan, east by the Kuku-nor highlands, south by the Burkhan-Buddha range. It is traversed south-east and north-west by the large river Bayan-gol, or Chaidam, which is perhaps 250 to 300 miles long, and 480 yards wide at the point crossed by Prjevalsky. But as it approaches the desert its volume gradually diminishes, until it disappears at last in the Dinsun-nor swamps, near the gap through which the Chaidam Lake was formerly united with the Lob-nor. Throughout its eastern section the Chaidan plain is covered with saline marshes, while in the north-west nothing is seen except argillaceons or stony tracts. The vegetation is limited to the reeds of the swamps, a scanty herbage and thickets of the Nitraria Scholeri growing to a height of 7 feet, with berries at once sweet and bitter, eagerly devoured both by man and beast. They are gathered in the autumn, and mixed by the natives with their barley-menl.

The fauna of Chaidam is as poor as its flora, which is probably due to the swarms of mosquitoes infesting the marshy tracts, and driving the flocks and wild beasts to the surrounding uplands. The animals most frequently met on the plain are a species of antelope, the wolf, fox, hare, and, according to the Mongolians, the wild camel in the western solitudes. Although visited only by the hunter and nomad pastor, the country is not unsuitable for a settled population, being well watered by the Bayan-gol, and enjoying a comparatively mild climate, especially towards its western extremity, where it falls to little over 3,000 feet above sea-level. The ruins of an ancient city at the confluence of the Bayan-gol with another stream in the centre of the plain are still silent witnesses of the great changes that have taken place in a region once perhaps thickly peopled, now occupied only by a few nomad tents.

The upland steppe of Oduntala, north of which runs the water-parting between
present shores the largest, do tlet, its waters circumference, the waters of spot, in order convent with off from the e stormy lake. ew their stock species of fish, shrubs.

\section*{of the Upper} g disappeared. vast reservoir, -shan, cast by It is traversed lam, which is nt crossed by ly diminishes, hrough which out its eastern the north-west n is limited to traria Scholeri gerly devoured mixed by the
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the Bayan-gol and Hoang-ho, is a holy land for the Mongols and Chinese. Here are the Lakes Jaring and Oring, which drain to the Yellow River. But no European has at least recently visited this region of Sinsu-hai, or the "Starry Sea," although its pastures are frequented in summer by the Mongols, who come to worship their god near the sacred springs. Seven spotless animals-a yak, a horse, and five sheep-are consecrated by the priests, who tic a red riblon round their necks and drive them to the mountains, charged with the sins of the tribe.

West of the Oduntala steppe begins the Burkhan-Buddha ("Lord Buddlaa") range, which here forms the angular escarpment of the Tibetan plateau. It is an arid chain of nearly uniform height and regular slopes, consisting mainly of elay, conglomerates, and porphyry. It is separated rather by a narrow gully than a valley from the Shuga, another barren range of grey, yellow, and red roeks, some of whose peaks rise above the snow-line. Farther south stretches the bleak plateau, strewn with hillocks and low ridges, torn here and there by erevasses, covered in one place with stones, in another with sands or a white saline efflorescence. For travellers this elevated rolling plain, from 14,500 to 15,000 feet ligh, is a region of horror and of death, from whieh they gladly escape over the Bayankhara border range down to the pasture lands fringing the Muru-ussu, or Upper Yang-tze-kiang.

\section*{Inhabitants-The Tangutans.}

The Kuku-nor country is officially bounded by the Shuga range, but it is often extended to the Bayan-khara, or even to the valley of the Blue River, and beyond it to the Khara-ussu. But in such a vast and mostly uninhabited region the frontier-line must necessarily be somewhat fictitions: Its population may be estimated at about 150,000 , and in the region west of the lake there can scureely be more than 20,000 inhabitants altogether. Towards Donkir, near the Chinese frontier, the population is tolerably dense, and here the distriets spured by the Dungan rebels are admirably cultivated. Chinese settlers have already penetrated into these valleys, where the aboriginal element consists of Tanguts and of Dalds, an agricultural tribe unlike the Chinese in appearance, although assimilated to them in religion, manners, and customs. Their dialect is a mixture of Chincse, Mongol, and unknown words.

The most sedentary tribes are Mongoliaus, degenerate representatives of their race. Oppressed by the Tanguts, and lacking the spirit to resist, they obey in silence, scarcely remembering that their forefathers were once masters of the land. The dominant Tanguts themselves are mostly a proud and daring race, fully conscious of their strength. Of Tibetan stoek and speech, they differ greatly from the Mongolians in appearance and habits. With large black eyes, oval face, moderately high cheek bones, full black beard, straight or aquiline nosc, they present a startling likeness to the South Russian gipsies. The Mongol is peaceful, the Tangut combative; the Mongol loves the arid waste, the boundless space, while the Tangut prefers the valleys and moist pastures of the uplands. The former is
hospitable und friendly to strangers, the latter drives then from his tent, or makes them pay dearly for their entertaiment. For the Tungut is greedy and speculative, fond of pillage and plunder, but at the same time religious, never forgetting to obtain absolution for the deeds of violence and bloolshed committed in his marauding expeditions against the caravans and Mongol encampments. On the sacred shores of the Blue Lake they purchase or seize the captured fish and restore it to its native clement, their good actions thus soon outnumbering their misdeeds.

The Tangutans are not polyandrous like the Southern Tibetans, but polygamy is permitted, and the wealthy proprietors readily exchunge their yaks and sheep for new wives. The women, however, are not treated as slaves, moving about freely and spending much of their time at the toilet. The tents are usually made of black yak hair, with an opening at the top for the smoke to escape. The family sleeps in a circle round the hearth on heaps of grass and branches, or even on the bare ground, amid the kitehen dirt and refuse.

In the Kuku-nor country there is a living incarnation of Buddha, although his glory is much obscured by that of his Tibetun rival. IIere a great many lamas live under the tent, while those residing in community often wander about from tribe to tribe. At their death they receive funeral honours, whereas the simple faithful ure thrown to the beasts and birds of prey. The only oecupation of the nutives is stock-breeding, and some rich proprietors possess hundreds of yaks and thousands of sheep. Everything is paid for by so many head of cattle, and thanks to the trade thus carried on in flour, tobacco, woven goods, tea, and rhubarb, the Chinese Government has gradually succeeded in re-establishing its supremaey over the natives. By means of this local traffic, and the caravans constantly passing through their country between China, Mongolia, and Lassa, the Tanguts are able to maintain frequent relations both with the Dalai-lama and the Emperor of China, their spiritual and temporal sovereigns. The monastery of Cheibsen, about 45 miles north of Sining-fu, on an affluent of the Yellow River, may be regarded as the eapital of the country. According to Prjevalsky the province is divided into twenty-nine khoshun, or "banners," five in Chaidam, nineteen in the Kuku-nor district and its northern valleys, five south of the Hoang-ho. Sining is the residence of the Chinese officials, through whom the Tangutans communicate with the Imperial Government.

\section*{II.-MONGOLIAN KANSU.}

The desert zone stretching from the Takla-makan sumds north-eastwards to the elevated platenux bounded by the Great Khingan range, although often represented as a region of great uniformity, is really characterized by considerable diversity in its relief, soil, and climate. Thus the tract, some 300 miles broad, lying between Humi and the Nan-shan Mountains, is not, strietly speaking, in desert at all. It merges no doubt in one direction with the wastes of the Lower Tarim, in another with the dreuded plateaux of the Eastern Gobi, while some of its plains form smaller inter-
ent, or makes and speculaer forgetting nitted in his ents. On the h and restore ir misdeeds. ut polygamy ks and sheep roving about usually made The family even on the
although his many lamas \(r\) about from ts the simple ation of the of yaks and , and thanks rhubarb, the remaey over ntly passing \(s\) are able to or of China, n, about 45 regarded as divided into e Kuku-nor aing is the micate with
ards to the represented liversity in ween Hami It merges er with the aller inter-


MONGOLIAN DESERT-TOMB OF A LAMA AND ENCAMPMENT.
mediate solitudes, waterless and destitute of vegetation. But elsewhere the streams from the Nan-shan and neighbouring highlands are eopious enough to flow between verdant banks northwards to the foot of the advanced spurs of the Tian-shan. The "deserts" traversed by these rivers are not dismal solitudes like the Takla-mukan of tho Tarim basin, or the "Black Sands" and " Red Sands" of the Aralo-Caspian depression. Water is found almost everywhere near the surface, und springs bubble up in tho hollows, often encircled by extensive oases. Everywhere the ground is hard and easily traversed by horses and carts. Wayside imns, villages, and even towns with bazaars and industries have sprung up here and there along the banks of the running waters in the midst of cultivated lands and plantations.

\section*{Climate and Rainfall.}

The cause of this break in the great central desert must be sought in the contours and relicf of the continent itself. South of this comparatively fertile belt the coast-line is deeply indented by the Bay of Bengal, forming' a semicircular curve with a radius of not less than 900 miles. Thanks to this vast marine basin penetrating far inland between the two peninsulas of India and Indo-China, the space separating Kansu from the ocean is reduced by one-half. The vapour-charged clouds are thus borne inland beyond the Kuku-nor district. The atmospheric currents crossing East Tibet from the Brahmaputra delta to the Mongolian wastes find no obstacles comparable to those presented farther west by the vast plateau of Central Tibet, with its plains from 15,000 to 16,000 feet above sea-level, and its mighty escarpments towering to an altitude of 23,000 or 24,000 fcet. The ranges in the province of Kham are not only less elevated than those of West Tibet, but also present many breaks of continuity, while often running in parallel lines with the meridian, thus enabling the southern winds to sweep up the valleys as fur as the Kuku-nor highlands.

The south-west monsoons, which bring such a prodigious quantity of water to the Brahmaputra basin, are far from being exhausted after crossing the Bayankhara range. From April to the end of autumn they bring both snow and rain, and the atmosphere is really clear and dry only during the winter season. Prjevalsky found snow falling daily during the whole month of April. Hence it is not surprising that sufficient moisture is still discharged beyond the Nan-shan range to give rise to true rivers, which flow thence far into the plains. Still none of them are uble to reach streams with a seaward outlet, so that all ultimately disappear in saline lakes and marshes overgrown with reeds. The river Ngansi, flowing westwards in the direction of Lob-nor, runs dry in the depression of Kharanor, or the "Black Lake." The Az-sind (Etzina, or Edsincï) receives the waters of the "Snowy Mountains," after which it is joined north of the Great Wall by the Tolaï from Suchew. Farther on it gradually diminishes in volume until it disappears at last in the Sogok-nor and the Sobo-nor on the verge of the desert.

\section*{Routes-Extent-Poprlation.}

Thanks to the fertile tract thus catting the Gohi into two great sections, the Chinese have been able casily to maintain their communcations from the Nanshan to the Tian-shan with the western provinces of the empire. The natural ronte always followed by the caravans and invaling hosts starts from Lantehew-fu, at the great western bend of the ILomer-ho, and, after crossing the monntnins skirting the Kuku-nor basin, descends through the Kiaya defile and the Great Wall into the northern phains, and so on north-west wards to the Hami oasis. Here the historic highway branches off on either side of the Eastern Tian-shan, one

Fig. 31.-Webt End of tifk Great Wall.
Scale 1: \(5,000,000\).

track penetrating into the Tarim basin, the other passing through Zungaria into the Aralo-Caspian basin ; that is, into the Russian world and Europe.

It is thus evident how important to China must be this relatively fertile region conquered two thousand years ago, which divides the desert zone into two parts, and which is traversed by the great tramsverse route from the IIoang-ho to the Tian-shan. The whole country, although lying beyond the Great Wall and separated by lofty ranges from the Hoang-ho basin, has accordingly been attached to the province of Kansu. Even in the last century the districts of Hami and Pijan, on the southern slope of the Tian-shan, were included in this jrovince as integral parts of the inner empire. North-west of a parting ridge crossed by the Usu-ling Pass (about 10,000 feet) a belt of inhabited lands, in somo places scarcely 30 miles
broad, connects Chinese Kansu with this North-western Kansu, which, from the nomads frequenting it, may be called Mongolian Kausu. Its area may be estimated at 160,000 square miles, with a population of probably less than one million, centred chiefly in the southern towns and in the oases at the foot of the Tian-shan.

\section*{Inhamitants.}

In a region of such strategic importance, and so often disputed by rival hosts, the inhubitants are naturully of very mixed origin. Tribes of Turki stock, the Uigurs and Usuns, Mongrols of diverse bumners, the Tanguts of Tibetun blood, and the Chinese have frequently contended for the possession of the puss connecting the Gobi with the snowy range. The work of the nomad warriors was soon done; after destroying everything in their sudden inroads they would retreat rapidly to the steppes of the plain or to the upland valleys. But the Chinese, while slower in their movements, were more tenacious and persevering. They founded garrison towns at convenient intervuls, which soon became centres of culture, and the land was thus slowly peopled, while the wilderness was crossed by military and trade routes. The barbarian might return and burn the crops, level the fortresses, waste the cities. But after the storm was over a few years always sufficed for the Chinese to restore the network of their strategic routes and strongholds. Thus the cities of Northern Kansu, reduced to masses of ruins during the reeent wars between Dungan Mohammedans and the Imperial Government, are again gradually recovering, while others are being founded by the Chinese agricultural settlers.

The Mongols ranging over those steppes belong mostly to the great family of the Eliuts, kinsmen of the Kalmuks. Some fifteen hundred years ago the country was occupied mainly by the Usun, supposed by some to have been of Teutonic stock, and who were distinguished from all their neighbours by their deep-set eyes and straight nose. These "men of horse-like features," as the Chinese described them, were gradually driven westwards to the Tian-shan and Tarim basin. Here Prjevalsky met many of the peasantry who seemed remarkably like his fellow-countrymen of Central Russia.

\section*{Topography.}

The ehief towns going westwurds in the district connecting the inuer and outer Kansu are the walled cities of Liang-chent, Kancherc, and Sucherr, founded at the time of the first settlement two thousand years ago. From the combined names of the last two, capitals of the Kan and Su districts, the province of Kansu has been named. Kanchew has rapidly recovered from the disastrous civil war, and liangchew, a large and busy place, is one of the cleanest and most orderly cities in China. This is true, however, only of the portion comprised in the inner enclosure, the quarter stretching between the first and second wall being a mere mass of ruins. From the ramparts are visible a number of small forts dotted over the landscape, all of recent origin, having been erected since the Dungan insurrection
by the peasantry as a precaution against fresh troubles. Suchew, on the Tolaï, was formerly the bulwark of the empire. But when retaken by the Chinese in 1872 not \(u\) single house was stunding.

Immediately west of Suchew stunds the funous Kiuyu-kum, or "Jade Gate," so callel because it led to the Khotan country, whenco the Chinese traders brought back the precious mineral. But the gate does not, as is usually supposed, mark the verge of the desert, for shrubs and patches of herbage still line both sides of

Fig. 32.-Fohtified Villageg nkall Lantchaw, Phovince of Kanau.

the routes beyond it. Nor is there any lack of running waters fringed by the poplar and weeping willow. Two centurics after Mareo Polo, the Portugueso missionary, Benediet de Goës, was the first European to follow this route from Khotan; but he only reached Suchew, where he died in 1607. IIs companion, Isauc, the Armenian, was unable to save his manuseripts, although he continued the journey to Peking. Suchew is a great mart. for the surrounding Mongols, as are also N!fansi (Ansi), Kwachew, and Shachew, or "Sandy Town," a place already
invaded by the sands of the western desert. Some fifteen humdred yeurs ugo, during the flourishing pericel of the kingdom of Khotan, Shachew was a chicf centre of the caravin trade between Chinu and the Tarim busin.

Iniminsian, lying on the route to Hami, completely esenped the ravages of the Dunguns, while \(N_{!}\)fusi, on the sumo route, was entirely destroyed. Nothing is now to be seen on its sito except heups of rubbish, ruined temples, the seatered frugments of ilols. The negleeted gardens no longer check the advancing sands, which in some places are surging over the rampurts. C'iless the place be soon resettlen, it will disuppeur altogether. North of it the desert, properly so culled, stretehes away beyond the horizon in the direction of the Tian-shan. But this is not the region most dreaded by the traveller, ulthough as far as the Hami onsis he meets little beyond a few camping-grounds on the banks of the streams, und the débris of ruined cities.

Hami (Khumi, Khamil), deseribed by Marco Polo under the name of Camul, is one of those cities which muy be regarded as indispensable. It occupies a position clearly murked out for a centre of population. Hence, although frepuently wasted or destroyed, it has always risen from its ruins, either on the same spot or in the inmediate vicinity. The Hami oasis in a necessary resting-place for armies und caravans, whether arriving from or plunging into the desert. No conqueror advancing east or west would venture to push forward without first securing a firm footing in Hami, and commanding all the resources of the district. As a strategical point it is almost unrivalled in Central \(\Lambda\) sia. The zones of vegetation which fringe both sides of the neighbouring Tian-shan have necessarily become the "Nun-lu" and "Pe-ln"—that is, the southern and northern routes to the western world-and here, accordingly, converge the great historic highways. Yet Hami nover seems to have been a large place, the strip of arable land surrounding it being too limited for the development of a great eapital. During the recent rebellion it suffered much, its rice-fields, vineyards, and gardens, noted for their excellent melons, having been frequently wasted.

West of Mami, the two towns of Pijan (Pishan) and Turfan, now much reduced, occupy neighbouring oases extremely fertile, and yielding excellent cotton, sesame, whent, besides all sorts of fruits, especially magnificent grapes. Although frequently traversed by Chinese travellers, Regel is the only European naturalist who has visited this region in recent times. Yet there are few districts of Central Asia more deserving of careful exploration. Between Pijan and Turfan rises an isolated cone, which is said to have vomited lava and ashes some ten centuries ago. The old geographers also speak of a mountain west of Turfan, rising in a series of terraces, all composed of blocks of agate. On this saered mountain not a single plant is to be seen, and its dazzling brightness is caused by the sparkling agates, "the remains of the hundred thousand lohau," who huve earned immortality by their virtues. Turfan was the last eity recaptured by the Chinese in 1877 from the Dungans. It lies about 30 miles west of Old Turfan, which was destroyed four hundred years ago, and of which the walls, 50 feet high, are still standing. Their peculiar structure is referred by Regel to the Uigurs,

Whom he regarls us the ancestorn of the present Dungans. Chinese porcelains and Budihist atatmettes are pieked up umonget the ruins, mal here are also a magnificent minaret and buildings resembling those of Samarkand. In the neighbourhook is the mosfue of Mazar, "holier even than Mecen," with a chapel traditionally of Nestorian origin.

The towns on the northern alope of the Tinu-nhan us fur an the Urumtai valley are included in the province of Kıusu. Imukw/, so called from Lake Bar, which occupies a depression in the platenu, nupplements the strategical position of Hami.

Fig. 33.-Oagk or Barkel and Haml.
According to Rafaliov. Seate \(1: 1,500,000\).


It is the first military and trading station on the route leading from Hami to the Zungarian plains, and as the southern highways converge on Hami, so those of the north unite at Barkul, the Chinsi-fu of the Chinese. It is a largo place, commanded by two fortresses, and surrounded by gardens and orehards. The Kosheti-davan, one of the three passes connecting the two eities, has an elevation of 9,100 feet above the sea, or about 5,300 above the surrounding oases. But this is a very slight altitude compared with that of the passes opening farther west, in the snowy range of Kongor-adzigan, while the Tian-shan cannot be turned towards
its enstern extromity without phanging into the desert. Hence the puramount importance of the Itami-13arkul route.

To l'ijun and 'Turfun correspoud Gurhinn and Kinsa. But here the 'Tian-shan has already branched off inte two purallel chains, while the general elevation is such as to prevent casy communication from slope to slope. In the amphithentro of hills developeal still farther wese lies the fumms city of Uromesi (Umritsi), the 'Tihon-chew of the Chinese, or the Itur-mian; that is, the "Revl Temple," fomaded in the llan dynusty. This was the Bishbulik of the Mongols and Thars, which enjoyed great improtance ut different eqoelis, and which, thanks to its happy situation, has always rapidly recovered ufter every fresh disuster. As capital of

Fig. 34.-Ukumthe, 'Tuhpan, and henhounding Mountainh. From a sketeh by Venyukur. Seale \(1: 2,500, u c 0\).

(to Milen
the Uigurs, it was the residence of princes who ruled on both sides of the Tianshan over a vast domain designated, like the chief town, by the name of Bishbalik, or "Pentapolis." Here may have reigned one of the sovereigns known in Europe as "Prester John." In the last century the place was very populous, and took the foremost rank amongst the Chinese colonies of Northern Kansu. It was said to have had 200,000 inhabitants ; but all were butchered by the Dungans, whe were afterwards butchered in their turn. Urumtsi consists of two distinct quarters, the old town occupied by the traders, and the new or Manchu town. Notwithstanding its disasters, it does a considerablo trade at present with Russia through the town of Chuguchak, and with Turkestun and China through the basin of an old lake, the centre of which is occupied by the town of Daban-shan. Like Turfan, Urumtsi
has its hot sulphur springs, and in the neighbourhood is a coal seam, which has long been in a state of combustion. One of tho eminences commanding the city is yearly visited by the inhabitants, who here offer sacrifices to the "Holy Mount."

\section*{III.-ZUNGARIA AND KULJA, OR ILI.}

Zungaria is the broad gateway leading from the Chinese to the Western world. The old gulf of the dried-up sea, which sweeps round to the north of Mongolian Kansu, penetrates firr westwards between the southern offshoots of the Altaï and the Tian-shan. Here it ramifies into two branches, which in remote geological epochs formed two marine straits, and which have now become two historical routes for trude and migration. The eastern depression forming the common entrance of these routes is mostly strewn with marshes, remnants of the ancient sea, and is continued by two troughs, one of which runs north-west along the valley of the Ulungur River, which is itself continued beyond the lake of like namo by the Black Irtish. The other skirts westwards the Katun and Iren-khabirgan ranges belonging to the Tian-shan system. The northern opening, where are collected the farthest head-streams of the Irtish, presents nearly everywhere an easy route over the hard clayey soil of the steppe, at an extreme elevation of scarcely 2,050 feet above the sea. The southern opening, which is much deeper, is occupied by sluggish steppe streams and closed basins, such as the Ayar-nor and Ebi-nor, continued westwards by the Ala-kul and the other lakes, all formerly united with Balkhash. Here also the route between Lepsinsk and Urumtsi presents little difficulty. The two plains have a mean elevation of from 650 to 850 feet, and the road, which lies between the Barlik and Zungarian Ala-tau, is formidable only from the fierce gales which here prevail. The space separating the northern, or Irtish, from the southern, or Tian-shan l'e-lu opening is partly occupied by the Jair and Barlik ridges and the eastern projections of the Tarbagatai and Sauru ranges. Yet it offers a third passage, which, although narrower, is more frequented than the other two, and which runs by the eity of Chuguchak.

\section*{Historical. Routes.}

The expressions Tian-shan Pe-lu, or Northern Tian-shan route, in opposition to the Tian-shan Nau-lu, or Southern Tian-shan route, shows that the Chinese had fully appreciated the importance of this historic highway, which continues the road rumning from the Jade Gate obliquely aeross Mongolian Kansu through Hami and Barkul to Urumtsi. An imperial route, commanded at intervals by forts and military settlements, crosses the country from east to west as far as the triangular plateau bounded north by the Zungarian Ala-tau, south of the Boro-khoro range. From this point the Talki Pass ( 6,350 feet) and other neighbouring openings lead down to the rich Kulja valley, which already lies on the western slope of the
eontinent, and which is connected with all the routes of the Aralo-Caspian depression. Thus from the Black Irtish to the Ili River, a distunce of about 300 miles, the semicircle of plateaux and mountain ranges surrounding the Chinese Empire is interrapted at various points by valleys and depressions of eusy access. Through these natural highways the devastating hosts of the Huns, Uigurs, and Mongols advanced westwards, and the same tracks were followed by the Chinese when they overran the only distriets which they still possess on the western slope of the con-

Fig. 35.-Firenor.

tinent. These are, on the one hand, the Upper Irtish valley, on the other that of the Ili.

The Russians, on their part, were fully aware, from the time of the first invasion of Siberia, that the roud to China lay between the Altaï and the Tian-shan. For it was in this depression that they sought for the great lake of Kitui, a name sinee extended by them to the whole Chinese Empirc. Nevertheless this was not the way they first took. Peking lying far from the centre of China, they were obliged to go round by the bleak and elevated castern plateaux of Mongolia in order to reach that city from Kiakhta. But they now perceive how much better for their trade it would be to go directly from West Siberia through Zungaria and Kansu to China. From Zaisan to Hankow, which may be regarded as the true centre of the empire, there are no serious obstacles, and, except a break of about 39

160 miles practicable for pack animuls, the wholo distance of 2,600 miles may be traversed by waggons in about one handred and forty days, whereas the roundabout journey cial Kiakhta to l'eking takes two hundred and two duys. The future continental railway from Calais to Shanghai may be said to be alreany traced by the hand of nature through Zangaria, Mongolian Kansu, and Liangehew-fu to the Itoang-ho busin. Hence the importance attached by the Russians to the approaches of this ronte, which they secured before consenting to restore the Kulja district, occupied by them daring the Dungan insurrection. On the other hand, Kulja itsoif, projecting between \%ungaria and the Tarim basin, is of vital importance to the Chinese, emabling them as it does to reach the Kashgar and Yarkund onses directly from Zungarin, without going a long way round to the cast of the T'ian-shan.

\section*{Zungaria-Lake Saibam-Tife Ili, or Kula District.}

The two regions of Zungaria and Kulja, separated by the Boro-khoro ramgr, differ greatly in size, population, and physical aspect. Like most of the Mongolian plains, Zungaria consists of monotonous expmeses of yellow or redlish clays, with little vegetation except stunted slirubs, and along the streams the poplar and aspen. The usually barren southern slopes of the Chinese Altaï are, however, here and there relieved by patches of herbage, meadow lands, and even forests. The Southern Katun, Boro-khoro, and Talki chains are still better wooded, some of their slopes being entirely coverel with conifers. But the most picturespue distriet of /Imggaria lies in the sonth-west corner, where the depression is filled by the waters of the Sairum-nor. Although less extensive, this lake is deeper than the Ebi-nor, the Ayar-nor, or the Ulungur. It presents the appearance of a vast crater eneircled by wooded hills, and rising only a few hundred yards above the Talki ridge, which is crossed by the imperial route leading down to the lli valley. It is said to discharge its superfluous waters by a subterranean channel under the Talki Pass to the copious streams which water the plains of Kulja.

The territory of Kulja, one of the finest regions in Central Asia, comprises the central section of the Tian-shan, here rising to heights of from 16,000 to 24,000 feet, with its vast glaciers, grassy plateaux, forests of pines and apples, fertile, wellwaterel, and highly productive plains. Owing to their great elevation the valleys of the Tekes, Kunges, and Kash Rivers are thinly peopled, and nearly all the population is centred in the plains traversed by the middle course of the 1 li , which farther on enters Russian territory, and finally loses itself in Lake Balkhash.

\section*{Inimittants-Tife Zungarians-Dungans and Taranchi Wars and Massaches.}

The Zungarians-that is, the "Tribes of the Left Wing"-have ceased to exist as a nation, and their name has survived only as a geographieal expression, indicating the region which was formerly the centre of their power. They belonged to the Eleut seetion of the Mongol stock, and were the last of their race who suceeeded
) miles may be the roundabout The future miny traced by rchew-fu to the the approaches Kulja district, er hand, Kulja importance to Yurkand oases fe cast of the

\section*{ict.}
o-khoro range, the Mongolim lish clays, with phar and uspen. here and there The Southern of their slopes iet of Zungaria 3 waters of the (e Ebi-nor, the rater encireled ki ridge, which \(t\) is said to dislki Pass to the
, comprises the to 24,000 feet, , fertile, wellion the valleys \(y\) oll the poputhe Ili, which alkhash.
nd Massacies. ceased to exist pression, indiey belonged to who succeeded

in founding an empire independent of China. The Zungarian state, established towards the close of the seventeenth century, became in a few years one of the most extensive in Asia. Their sovereign is suid to have commanded a million armed warriors; from the mountains of Hami to Lake Bulkhash all the land was subject te his rule, while Yarkand, Kashgar, and even some places in Western Turkestan paid hin tribute. After three suceessive uttacks his armies captured Lassa and the sacred stronghold of Potala in 1717. But dissension and intestine wars prevented the state from maintaining its independence, und although two imperial armies were amihilated, a third overthrew the Zungarian power in 1757. The whole country was subdued, and those of the rebels who failed to reach Siberia or Western Turkestan were all mereilessly put to the sword. A million of all ages and sexes perished in this overwhelming national disaster. The ruined eities were replaced by military stations and colonies of convicts from ull parts of Chima and Mongolia, and these were soon followed by free migration to the depopulated regions. In 1751 the Kulmuks of the Turgut branch, then oceupying the Lower Volga steppes, resolved to escape from the oppressive surveillance of the Russian Government, and return to the Zangarian plains, which still lived in the national traditions. Of the 300,000 who started from the western shores of the Caspian many thousunds perished on the way. But according to the Chinese accounts the great majority succeeded in reaching their ancient homes, where they were joined by multitudes of other Mongelians from beyond the limits of the empire. Altogether about 500,000 migrated to the wasted lands stretehing from Lake Balkhash to the Gebi, and the Emperor Kicn-long conld boast that he had become master of the whole Mongolian nation.

But fresh massacres were brought about by the differences of race and religion, and still more by the oppressive Chinese rule. A century after the overthrow of the Zungarian power the agricultural populations of the Ili basin rose against the mandarins and imperial troops. The Dungans-that is, the native Mohammedansand the Taranchi-that is, the colonists from the Tarim basin-alone took part in the struggle, the Kazaks and Kara-kirghiz holding aloof, owing to the advantages enjoyed by their nomad life. The war, at first conducted with hesitation, gradually increased in violence, culminating in 1865 with the wholesule massacre of the Chinese, Manchus, and other military colonists from the east. The arrival of the Russians, to whom the Kulja territory was temporarily intrusted, put a stop to the flow of blood, but not before the \(2,000,000\) inhabitants of the country had been reduced to 139,000 , maiuly Dungans and Taranchi. By the new treaty, which restores Kulja to China, Russia has reserved a distriet in the north-west, where these rebels may find a refuge from the imperial vengeance. But such are the natural advantages of the Ili valley, that notwithstanding the frightful butcheries of 1865 this country is still moro thickly peopled than Zungaria, which, with an area five times greater, has scarcely more than double the population.

\section*{Topography.}

In North Zungaria there are no towns properly so called, although two military stations have acquired some importance as resting-places for the caravans crossing
the phains. These are Bullur-tokoi, on the south side of Lake Ulungur, and Tultu on a tribatary of the Black Irtish, where the Russian dealers have an entrepot for their exchanges with Mongolia. But the busiest mart in the country is Chuyuchatl, lying at the southern foot of the Tarbagatui range in the valley of the Emil, an athuent of the Ala-kul. Situnted on the Siberian slope within 11 miles of the frontier post of bakti, this town oflers great advantages to the Russian traders, who aro here as exempt from the exactions of the mundarins as in their own territory. In 18.5 4 it exportel to laussia tea to the value of \(1,600,000\) roubles, and hul at that time a population of 30,000 . Ruined during the Dungum insurrection, it is gradually reviving, and already comprises numerous Chinese, Manchu, Mongol, Kirghiz, and Taranchi settlers. It is surrounded by well-watered gardens, and some

Fig. 30.-Chlotchak and tile Tabbagatal Range.
Soale 1 : \(1,300,000\).

_3n miles.
coal mines have been opened in the neighbourhood. The Khabarassu Pass (9,580 feet) is practicable for carts, and a curavanserai stands on its summit.

West of Urumtsi ull the tawns of Southern Zungaria-Manas (Kuïtum), Kurkarau8su, Shikho, Jiuho-are militury stations peopled by exiles, like most of the other settlements beyond the Great Wall. In this region colonisation is being rapidly developed, especially in a tract east of Manas, which is the most fertile part of Zungaria north of the Tian-shan. Near Shikho are some gold-washings, coal-fields, salt beds, and a lake of naphtha mentioned by Regel.
 place, containing 12,000 inhabitants within its square walls, beyond which streteh extensive suburbs concenled from the traveller by a belt of poplars. Although built by the Chinese, who eall it Nin-yuan, Kulja has rather the aspeet of a town of Russian Turkestan, its houses of beaten earth, with their clay roofs, strongly resem-
, and Tultu on repot for their is Chuyuchath, the Einil, un 1 miles of the in traders, who own territory. ad had at that rection, it is chu, Mongol, lens, und some t of the other being rapidly fertile part of ss , coul-ficlds,

It is alarge which stretch lthough built of a town of ongly resem-
bling those of the Czrlegs and Tajiks in the Arul lasin. The inhuluitants are ulso mostly Mohammelluns, nud there is here a smanll lomum Catholic community foumded after the overthrow of the Zungarim Eiupire. Old Kulja is an industrious place, with paper-mills, well-cultivated gardens, mud extensive urable lauls, on which during the Russian occupation the poppy was murh cultivated.

West of Old Kulja the traces of the late civil war ure everywhere comspicuous. The little Dangun town of Suiden still exists. But of the neighbouring Buymudai, said to luve had a population of 150,000 , nothing remains except some crumbling walls overgrown with elus. Net Kulja also, foundell by the Chinese in 1764 as the cupital of tho country, is now a nero fort surromiled by henps of bones and rubbish. Farther on follow other ruined cities, such as Chituchur-horlzi, Almi-tu, Khorgos, Jarkent, and Akikent, and here the very land is being converted into a swamp by the former irrigating canals now choked with refuse. But so grent are its natural resources that the country cumnot fail soon to recover from its disasters.

Fig. 37.-Valley of the Tekes.
Eale 1:2,500,000.


The province of Ili contains gold, silver, copper, lead, and graphite, besides extensive coal-fields, some of which have alrcady been worked. Hot springs abound in its valleys, and no region of Central Asia prosents such magnificent prospects as the banks of the Kash and the basin of the Tekes River at the foot of the glaciers and highlands above which towers the mighty Khan-tengri, or " King of the Heavens.'

\section*{IV.-NORTH MONGOLIA AND THE GOBI.}

This vast domain of the Mongol nomads is of itself alone neurly as large as China proper, and, with Zungaria, Onter Kansu, and the Tarim basin, it occupies about one-half of the empire. But between it and the basins of the loang-ho and Yang-tze-kiang the contrast in climate, soil, and social life is complete. China is one of the best cultivated and industrious, as well as one of the wealthiest and
most densely peopled regions on the globe, whereas Mongolia is one of the most thinly imbinited, mod even in many phees sepurated from China proper by complete deserts. Yet here und there, and esperiully towneds the south-const, colonisation has converterl the comutry into a sort of Outer China, much more thickly peopled than Momgolia proper, and by the Chinese ealled Tsooti, or "Cirnsy Lamds." Thus hus been formed un intermorlinte anme, which wo longer belongs to Mongolin ethicully, ulthough consisting of the sume geological formations. The natural limit of the steppe is clearly murked by u ledge of grmite rocks, over which has been diffused a vast stream of undulating lavas. Hut these lavas havo been furrowed by the netion of rmming waters, producing decep valleys, through Which the Chinse anricultural nettlers have penetrated into the platemu

Tho Grent Wall erceted hy the Imperinl Govermment between Mongolia and the Middle Kingriom is merely \(n\) visible lamdmurk between two regions already separated by the hand of muture. This curlimal fact in the history of the Chinese world las not been without its influences on burone itself. The elash between the

two rival races hus more than once re-echoed in hostile invasions or peaceful migrations to the farthest extremities of the West.

Mongolia and the Gobi differ from China less in the configuration of the land than in their climutic conditions. On both sides of the Great Wall the surface is varied by plains and valleys, plateaux and highlands, lakes and ruming waters. The Hoang-ho itself belongs at once to both regions. In its middle course it sweeps in a great curve northwards, thus separating the Ordos country from the rest of Mongolia. Nevertheless Mongolia and the Gobi may be described, in a general why, as a vast plateau slightly hollowed in the centre, and rising grarlually from the sonth-west towards the north-enst. The mean clevution, which is about 2,600 feet in the west, thus exceeds 4,000 in the east. Most of the land is bounded by runges and mountain masses-the Altaï and Sayan on the north-west, the Munkusarlik, Kentei, and Baikal highlunds on the north, the Khingan on the east, the uplands overlooking the pluins of l'eking on the south-enst; lastly, the custern extensions of the Kuen-lun and Nan-shan on the south. Towards the west alone Mongolin lies open in the direction of the Zungarian defiles and the closed basin of the Tarim.
(1) of the most roper by commast, colonisunore thickly , or " (irassy ger belongs to mations. The te rocks, over ese lavas have lliys, through yu
Mongolia and gions already of the Chinese A between tho the surface is ming waters. dle course it atry from the scribed, in a ng gradually hich is about is bounded by the Munkuthe cast, the ustern extenone Mongelin of the 'larim.

\section*{The Eftag Aletaï and Tanse-ma Ravies,}

Owing to the greater elevation of the Mongolime phans, the somthern slopen of the Altaï have a lower relative elevation than those fiucing nerthwards. Here, alon, the sumw-line is higher, rising to about 8,700 or 9,000 fied, ultitudes rathed by few of the northern erests, except in the west on the Ke phatean. In this region of Central Asia the most humid atmospheric currents are those which come from the nemrest marine basin; that is, from the Polar Sea. Hence the rain-bearing and fertilising winds blow from the north-enst. But these winds diselurge their moisture on the northern slopes of the Altaï, so that those facing Mongolia are mostly destitute of vegetation. In several phees the contrust is complete between the two sides-dense forests on the north, mere scrub and lorushwoed on the south.

The two chief ranges branching from the Altail into Mongolian territory are the Ektag Altaï and the Tumnu-ola. The former, sometimes nlso called the "Great Altuï,' runs north-west and south-enst purallel with the course of the Black Irtish and Ulungur. Some of its crests rise above the snow-line, whenee the term Ektug, a dinlectic form of the Turki Ak-tagh, or "White Mountains." But the range is piereed by deep depressions, through which the Russian earavans easily rench the Kolxdo phateau from the Irtish valley. The range itself, as shown by the recent explorutions of Potanin, is continued south-custwarls far beyond the meriditn of Kobdo, nfter which it trends enstwarls under the nume of the Altiönuru. In this recently discovered section some of the peuks attain an altitude of 10,000 feet, and the Olön-daba Poss, crossed by the Kolklo-Barkul route, is no less than 9,400 feet high.

Farther east other ranges run parallel with the Ektag and Tamu-ola-hat is, north-west and south-east; but these are everywhere eut up, into irregular masses by erosion. Here is apparently the culminating point of the Altaï system, crossed by Ney Elias at the Baynn-ingir Pass (over 9,000 feet) on the route from Koblo to Biisk. A snowy penk rising immediately north of the pass seemed to this traveller to have an elevation of 12,000 feet, or 830 more than the 1Bielukha, highest summit of the Russian Altaï.

The Tannu-ola, or enstern chain of the Kobdo plateau, stretches far east of the Altail to the head-streams of the Selenga. Although some of its peaks pass the snow-line, the Tannu-ola is in many places but slightly elevated above the surrounding plains. From its base the plateau stretches for 120 miles southwards to the Khangai range, above whose wooded slopes several snowy crests are said to have an elevation of 10,000 feet. Between the Kinghai and the Altaï-nuru the steppe has a mean altitude of from 5,000 to \(\mathbf{6 , 0 0 0}\) feet.

\section*{Water System-Lakfs Uusa and Kosio.}

All the depressions of the plateau comprised in the vast quadrilateral of the Mongolian Altaï are oceupied by lacustrine basins. One of these is the saline Ubsa-nor, one of the largest lakes in the Chinese Empire, with an area of at least

1,200 square miles, but with no outflow, ulthough receiving the waters of a vast umphithentre of hills. The other lakes, also, suline beemse without emissaries, if less extensive than the Lisa-nor, sometimes beloug to larger hydrographie systems. The river Dsubgn, rising on the southern slope of the 'lumu-ola, sweeps round the north-west comer of the hilly Cliasutai platenu, and after receiving its torrents disulpeurs in the suline murshess somith of the C bsa-nor. To the sume basin helongs the Koblo or Kara-su Lake, which receives the waters of the Ektug Altai through the rivers Kobulo and Buyantu. The lower lakes are fringed by poplars and aspens; but elsewhere trees are rure, and the vegetution of these hilly regions on the whole resembles that of the steppe.

East of the Thmm-ola the Mongolian territory penetrutes fine into the region draning to the Aretie Oeeme; for the Upper Yenisei und Sclenga basins, which How to the grent Silneriun riveres, still belong to Mongolin. The nomud pastors of the "(irussy lamds" naturully sought to cxteni their domain to the whole region of pusturare. Southwards their matural limit is the desert, northwards the forest. All the intermediate \%one, in whetever direetion the rivers may flow, is frequented by their flows. Hence they have occupied ull the "Kem," or head-stremus of the Yenisei, lesides the extensive busin of the Selouga. Here is the romantic Kosogol, whose blue watere, sacred in the eyes of the Mongolian Buddlites, refleet the lofty crest of the Munku-surdik, with its lareh groves, red esenpments, and diaden of glaciers. The Koso-gol is not a closed basin, like the lakes of the Kobdo platenu; for it discharges its sweet waters through the Eke-gol to the fielenga.

North-enst Mongolia, lying enst of the Selenga, may be regarded as belonging to the Amur basin; for the Kemlen, which Hows parallel with the Onon to the Dulai, or "Sen," formerly united to the Khaillar, is one of the chief affluents of the Argun, or Upper Amur.

\section*{I'he Gobi Desert.}

South of this region stretches the Gobi desert, which, although crossed by some caravan routes, is nowhere permanently inhabited. The Gobi-that is, "Sandy Descrt," or "Shamo" of the Chinese-forms the eastern extremity of the vast zone of urid lands obliquely traversing the enstern hemisphere from Senegal to the Khing:m range. Like the Takla-makm, the Western Turkestan sunds, the Persian and Arahiun wastes, and the Suhara, the Gobi lies on the track of the dry winds. In winter the prevailing atmospheric current is from the north-west, which, after traversing the siberiun plains for a distance of 1,800 miles, dischurges its little remaining moisture on the Sayan slopes, so that nothing is left for the Mongoliun platenux. In summer the south-east monsoons prevail ; but nearly all the humidity brought by them from the Pacific fulls on the slopes of the parallel ranges and terraces separating China proper from the desert plateaux. Nevertheless the Gobi is sometimes visited by heavy summer rains, forming hero and there temporary meres and lakes, which are soon evaporated, leaving nothing behind except a saline efflorescence. Elsewhere the ground is furrowed by sudden torrents, und here the nomads sink their wells, hoping thus to husband a little moisture when the plateau
has again become an arid waste. But no permanent treun has lo \(n\) developed in the whole region, sume 480,000 square miles in extent stretchag om the Kemlen southwards to the Hoang-ho, between the Khingan b, nge and D ugolian Rimsu east and west. The rapid evaporution on the Gobi plateanx is due for the race of the winter gales and the high temperature in summer. For the (iohi) 1 otwe Siberian and Indian in its extremes of temperature, und these extremes times Altaï through - puphars mud lly regions on
th the region basins, which pastors of the ole region of Is the forest. is frequented treams of the mantic Kosots, reflect the , and dindem f the Kobilo Selenga. as belonging Onon to the Huents of the
ssed by some is, "Sandy the vast zone negal to the , the Persian e dry winds. which, after ges its little e Mongolinn ho humidity 1 ranges and ess the Gobi e temporary cept a saline and here the the plateau
suceed each other within the spnee of \(a\) few hours. In the South-enstern Mongolian highlands Prjevalsky recorded on March 16th, 1872, a temperature of \(68^{\circ}\) Fahr. in the shade, followed during the night by \(18^{\circ}\) below freezing point.

The intense cold of tho Mongolian winters, aggravated by the terrible northwest winds, explains the errors of the old geographers, who gave the Goli plateau an altitude of more than 8,000 feet above the sea. This has been reduced by Ney Elias and other recent explorers to a mean elevation of about 4,000 feet, rising in
some places to 4,500 and even 5,000 , sinking in the lowest depressions, formerly filled lye salt laken, to 3,000 mad even 2,600 feet. Notwithatanding thene diserepaucies there is little to relieve the monotony of the vist rolling pluins except in few rocky eminences rising here aud there ulnove the boundless waste of yellow sands. For days und days the Gohi desert everywhere presents to the weary traveller the same intermimble pieture of these vast umbluting phans, seareely relieved ly a few putches of serub mud lines of hilloeks succeoding ench other like waves on the surfuce of the shoreless deep.

The soil of the Gobi propher is ulmost everywhere composed of reddish sunds interspersed with quart\% pebbles, ugutes, cornelimens, or chulcelony. The depressions ure fillet with saline waters, or efllorescences of saltpetre, which the Mongols call guchir, and which the cumels engerly lick as they puss. Grass is very rare, and the yellow, grey, or reddinh soil is nowhere entirely concealed by the sconty tufts of vegetution. In the urgillaceous hollows grows the dirisn (Lasiagrostis aplemedrens), a shrub with twigs hard as wire, which is ulso a characteristic feature of Western Turkestan. But true trees ure nowhere found except perhups in a fow

Fig. 40.-Section of the Gom netwere Uhoa ano Kaloan,
1 linerary of Frilache.

well-sheltererl cavitics. From Kalgan to Urga, a distance of over 420 miles, Pumpelly met two, and Russell-Killough five stunted trees only. Elsewhere grow a few wretehed clms, which the Mongols contemplate with a sort of awe, not daring even to touch for fear of desecrating them. The wind, even more than the natural barrenness of the soil, prevents the growth of any vegetation except low, pliant herbuge. Withered plants are uprooted and scattered by the gale over the steppe like putches of foam on the stormy sea. In these regions, as on the Tibetan plateaux, the only fuel is the droppings of the animals, which are curefully collected, and which are always the first thing supplied on his arrival in the camp to a friend or strunger for his evening fire. Such are the laws of nomad hospitality.

The faunu of the Gobi is no more varied than its flora. As in Siberia, the steppe is often honeycombed with the burrowings of the lagomys, a species of marmot no bigger than " rat, always inquisitive, always on the alert, incessantly popping out of their underground dwellings to see the passing wayfurer, and suddenly disuppenting at his approach. Threatened by the wolf, fox, and hirds of prey, they live in a state of constant trepidation, starting at every shadow, trem-
vions, formerly a these diserelains except a aste of yellow to the wenry dains, seareely ach other like
reddish samels The depresh the Mongols 4 is very rare, by the semity (Lasiagrostis eristic feuturo haps in a fow 420 miles, swhere grow e, not daring n the natural t low, pliant er the steppe the Tibetan carefully colthe camp to hospitality. Siberia, the cies of marincessantly er, and sudand birds of uadow, trem-
bling at avery smmul. The largest mammal in the Gobi is the derren, or Antilope
 or with a broken leg, he will ontstrip the fleetest horse, and such is his tenacity of life that miness the bullet pieree his heal, heart, or spine, he nlways essupes capture. The hord consists usmally of thirty or forty hema, nlthough they are oweavionally met in flocks of several humbreds, and even in thousaml. Of birds the most eommon are the vulture, which follows in the wake of the caravan, and the raven, which will bollly pereh on the camel's hamp, mad draw its life-bloosl. Abowe the grasy stepluc hovers the lurk, cudowed with as sweet a somg as the European species, und also posseessing the fuenlty of imituting the notes of other somgeters. 'The reedy marshes and lakes harbour multitules of duck, which migrate in winter to South China.

\section*{The Kimonan and liv-shan Higmingos,}

Fast warls the Gobi is limited by uplands, which have now yot been thoroughly explored, but which are known to form along frontier range rising above the

Fig. 4l.-Suuth.Eart Conner of the Monoolian l'lateau.
According to Fritache. Seale \(1: 3,000,000\).


Manchurian plains, and the lower steppe lands commonly called the East, or Little Gobi. This is the Khingan chain, which stretches northwards to the Argun (Amur), and which deflects this river towards the parallel Stunovoi ranges. According to Fritsche none of the crests exceed 8,300 feet, thus falling short of the snowline. In the last century the missionaries Gerbillon and Verbiest had spoken of
corc
the I'echa, it mountain mass some 15,000 feet ligh, forming the southern limit of the Khingan system. But Fritsehe and l'rjevalsky have shown that in this section there are nothing but low eminences, while the highest peak is only 6,960 feet above the sea, or scarcely more than 1,500 or 1,600 feet above the Gobi steppes. On its western slopes the Khingan consists of rounded treeless crests, but on the opposite side there are many green upland valleys, especially towards the southeast extromity of the plateau.

The gneiss and lava ranges bounding the Gobi north of Peking are continued under various Mongol aud Chinese names south-westwards, skirting the valley of the Hoang-ho along the northernmost section of its course. Collectively known as the In-shan, this system terminates in the suline Ala-shan wastes to the northwest of the great bend of the Yellow River. Iiere the granite, gneiss, and porphyry crests rise to heights of from 6,600 to 9,000 fect, and the polished surface of many betrays the former presence of glaciers. These highlands are distinguished from most of the Mongolian ranges by their copious streams and rich vegetation. The Yellow Sea, which penetrates through the Gulf of Pechili far inland, sends to the In-shan Mountains sufficient moisture to elothe them in a green mantle of herbage, shrubs, and even forest trees. Here flomrish the hazel, the eglantine, wild peach, aspen, birch, maple, elder, elm, sorb, and wild plum. But the Chinese have in some places completely disafforested the slopes, and in many valleys nothing is now to be seen exeept a few seattered and withered trunks.

\section*{The Ordos Plateau and Ala-shin Uplands.}

Large herds of antelopes frequent the In-shan pastures, especially in the vieinity of the Buddhist monasteries; for the Mongol lumas, like those of Tibet, forbid the killing of these amimals. Amongst them is also found a species of the argali, or mountain sheep, and the tiger and panther are said still to haunt the In -shan valleys. South of this range the great bend of the Hoango-ho eneloses what must be regarded as a detached fragment of Mongolia; for the Ordos plateau still belongs physically and ethnically to the same natural region as the Gobi, although separated from it ly the broad valley of the Yellow River, with its fertile plains and Chinese towns. This tableland, which has a mean elevation of about 3,500 miles, forms a quadrilateral of over 40,000 square miles, bounded on three sides by the Hoang-ho, and on the south by mountain ranges whose southern slopes belong to China proper. The soil, far more arid than that of Mongolia itself, eonsists nearly everywhere of sand or clay chargel with salt, and quite unsuited for cultivation. Immediately south of the IIcang-ho valley the surfuce is intersected by low dunes, mostly from 40 to 50 feet ligh, of a uniform yellowish colour, relieved here and there by a few green oases, and amimated only by the grey or yellow lizards, which are scarcely distinguishable from the surrounding sands. Towards the centre of the plateau the Dabsun-nor morass forms a vast deposit of salt mingled with a nitrous efflorescence, and encircled by low hills. \(\Lambda s\) in the Kashgarian deserts, the very air in these frightful solitudes is full oi awe-inspiring
athern limit of that in this - is only 6,960 Gobi steppes. sts, but on the rds the south-
are continued the valley of vely known as to the northeiss, und porhed surface of distinguished ch vegetation. land, sends to een mantle of the eglantine, it the Chinese many valleys
cially in the tose of Tibet, species of the to haunt the o-ho encloses Ordos plateau as the Gobi, ith its fertile tion of about ded on three uthern slopes itself, consists d for cultivasected by low our, relieved ey or yellow 1s. Towards posit of salt in the Kash-we-inspiring
sounds, associated in the populur funcy with the massacres of Jenghiz Khan, who is supposed to have died here, and to now lie buried in a silver and wooden coffin somewhere under a yellow silk tent. At a respeetful distnnce from the spot are also interred the various members of his family, and a horse and sheep are said to be still sacrificed every evening to the shades of the mighty eonquelvr.

Some 20 miles south of the Hoang-ho the ruins are visible of a city now buried in the sands, whose ramparts were 5 miles long both ways, and about 50 feet thick. At present most of the land beyond the river valley is a complete solitude, and the Dungan rebels have even destroyed the encampments of the Ordos Mongols. The very eattle have again run wild, losing the dull, heavy air aequired in the domestic state, and assuming the habits of a free life. In two or three years the change was complete, and at the approach of man these animals take to flight like wild beasts. Camels and horses also roam in herds over the steppe, but all the sheep have been devoured by the wolves. In 1871, when Prjevalsky explored the country, its only visitors wero a few traders, who came in search of the liquorice plant, characteristic of this region.

Near the right bank of the ILoang-ho, where it flows northwards, a range of hills gradually increasing in elevation attains towards its southern extremity the proportion of true mountains. This range, known as the Arbuz-ola, is continued on the other side of the river by the loftier ehain of the Ala-shan, whose highest summits, the Dzumbur and Bugutu, 10,000 and 11,000 feet respectively, still fall short of the snow-line. Both sides of the Ala-shan are fringed by a narrow strip of verdure, watered by the rivulets flowing from its slopes. But its flora is very poor, although the uplands are here and there clothed with forests of pines, spruce, willows, and aspens, the resort of the deer, musk deer, and ibex.

Beyond the Yellow River the sands of the Ordos country are continued westwards by a still more barren and desolate region. Its fieree sand-storms, combined with the absence of water and herbage, render this one of the most inhospitable sections of the Gobi. This Trans-Ordos steppe stretches uninterruptedly between the southern spurs of the In -shan and the northern extremity of the Ala-shan as far as the Az-sind River and the plains of the Mongolian Kansu. For a stretch of some 300 miles the eye lights on nothing but sandy and gravelly wastes, or saline clays overgrown with the hardy saksaul and thorny sulkhir (Agriophyllum gobicum), the latter yielding a small grain from which the Mongols make a sort of flour. Here the lowest depression is occupied by the Jaratai-dabasu lake bed, which has a circumference of 30 miles, and is everywhere inerusted by a layer of pure salt from 2 to 6 feet thick. "The sparkling surface of the Juratai-dabasu appears like water in the distance, and resembles ice when you are near it. So deceptive is its appearance that a flock of swans, apparently attracted by the sight of water in the desert, descended before our very eyes almost to the surface of the false lake, but discovering their mistake, rose again in the air with affrighted cry, and continued their flight."-Prjecalsky.

The Great Wall.
The border-line between Mongolia and China proper was formerly indicated by the Great Wall, which, including all its windings and the double and triple lines crected at some points, has a total length of about 2,000 miles. Allowing a mean height of no more than 26 feet and a width of 20 feet, this prodigious structure will represent a solid mass of somo 4,000 million cubic feet of musonry. Those who assert that the Great Wall was of no more practical use than the pyramids of

Fig. 42.-Tha Gheat Wall. View taken at the Nankow Pass.


Egypt forget that for many centuries it served to arrest the military expeditions of the Hiungmn, ancestors of the present Mongolians. The sentinels mounting guard on the towers crected at intervals along tho ramparts gave timely warning of the enemy's approneh, while ull the natural passages were guarded by eneampments. Every gute had its little garrism, around which towns soon sprang up, serving as market-places for the surromeling populations. Sheltered behind these
barriers, the Chinese were able to develop their national unity, and coneentrute their energies, in ord er henceforth to enter into continuous relations with the Western world. When the "wall of \(10,000 \mathrm{li}\)," forced at last by Jenghiz Khan, thus lost all further strategic importance, it had at least already protected the empire for a period of fourteen hundred years.

In its present condition the Great Wall belongs to various epochs. In the severe Mongolian elimate, with its sudden and violent trunsitions of temperature, a very few years suffice to crumble most ordinary buildings, and it muy be doubted whether any portion of Shi Hoangti's original work still survives. Nearly all the eastern section from Ordos to the Yellow Sea was rebuilt in the fifth eentury, and the double rampart along the north-west frontier of the plains of Peking was twice restored in the fifteenth and sixteenth centuries. With the changes of dyuasties and the vicissitudes of frontier wars, the lines themselves were modified, portions being abandoned in one place, consolidated in another. Thus is explained the great difference in the style and workmanslip at various points. North of Peking it is still in a state of perfect repair, whereas in many western districts along the Gobi frontier it is little more than an carthen rampart, while for consideruble distances all vestiges of the wall have disappeared. Similar structures in the Transbaikal region north of Mongolia, traditionally referred to Jenghiz Khan, still recall the perennial struggles between the agricultural populations and their nomad neighbours.

\section*{Inifaitants-The Mongolians.}

The Mongolians, against whom the Chinese were fain at one time to protect themselves by such vast barriers, are a people without any national cohesion. Conquerors may have occasionally united them in a single army; but on their return to the steppe they again broke up into tribal divisions. Thanks to the intestine feuds maintained between these sections of the race, the Chinese have been enabled to triumph over the Khalkhas, Eliuts, and Zungars, while the Buriats and Kalmuks fell a prey to the Russians. The very name of Mongol was applied during the two centuries of their political supremacy to all the different races who took part in the conquests of Jenghiz Khan and his successors, penetrating on the one hand into the Chinese Empire, on the other into the heart of Europe. Even after the extinetion of the family of Jenghiz the vast empire of Timur was still attributed to the Mongolians, although it really represented the reaction of tl.9 Western Asiatic world against the East. Later on the title of "Great Mogul" was extended to Buber and his successors on the throne of Delhi, although they had no longer any Mongol warriors in their armies. Pride in a remote descent from the great conqueror was the only elaim to the title. The Zungarian Empire, founded towards the end of the seventeenth century, was on the other hand really of Mongol origin; but it nowhere stretched beyond the Central Asiatic plains and plateaux.

In mediaval times the Mongols were confused with the Tatars, or Tatas, u feeble tribe, in the twelfth century occupying the In-shan valleys, but which, in the
chnos of conflicting elements, contrived to give its name to Mongols, Manchus, Turks, and to all the warlike nomad peoples of Asia and last Europe. Neither Jenghiz nor any of his people took pride in this nume of Tatar, which belonged originully to un obseure section of one of the seven Mongoliam nations. The title of honour assumed by them was that of Blue Mongols, "because azure is the sacred colour of heaven," and they were themselves the masters of the earth. But the world-wide fame of the Taturs was due to the fact that they generally formed the van of the Mongol invasions, while the name itself suggested a mythological

Fig. 43.-Monool Invabiona and Conquesth of their Sucoegrorg.
Fente 1: 90,000,050.

play of words with the Tartarus of elassic writers. "Let us be consoled," said St. Louis of France; "for if they come hither we will hurl them baek to the Tartarus whence they came, or else they will send all of us to heaven!" At present the term is no longer applied, except in the vaguest way, to the Mongols proper or their Manchu neighbours, and is now restricted to the peoples of Turki stock, ulthough nowhere acknowleged or adopted by them.

Before the period of their conquests the Mongolian tribes were restricted to the northern and eastern portions of the vast region now known by the general name of Mougolia. Here all the streams and lakes are worshipped as gods, and legends
rols, Manchus, ope. Neither aich belonged ns. 'The title azure is the e earth. But terally formed mythological

nsoled," said back to the aven!" At the Mongols les of Turki
ricted to the eneral name and legends
are associated with every mountain, which always bears the title of Khan, or king. The extreme north-east corner of this domain is now occupied by the Manchu Solons and other Mongol tribes, which are more or less mixed with foreigu elements, and which furnish numerous recruits for the military colonies founded by the Chinese in the western regions of the empire. The Khalkhas, so named, like the Mongols themselves, from one of their ancient ehiefs, are mainly concentrated in the northern steppes near the kindred Buriats, now subject to Russia. The eight tribes of the Tsakhars occupy the south-eastern steppes towards China, and these the Inperial Government has specially intrusted with the defence of the frontiers against the Northern Mongols. The Ordos, now almost extinct, dwelt in the fluvial peninsula named from them, and farther west are the Eliuts, more or less mixed with Turki elements, and embracing the Kalmuk hordes of the Altai

Fig. 44. - Inhamitants of Monoolia.
Scale 1 : 93,000,000.

and Tian-shan. Lastly, in the Upper Yenisei basin, the Turki Dorkhats and Donvas, or Urianhai, have been largely assimilated to the Mongolians. In a general way the race is divided into Khalkhas, or Eastern, Eliuts, or Western, and Buriats, or Siberian Mongolians. But the only real division is that of the Khoshun, or "Banners," and according to the vieissitudes of wars and allianees the tribes of the various Bamers combine in more or less powerful confederacies.

The national type seems to have been best preserved amongst the Khalkhas, who also claim a certain superiority over the other branches on the ground that amongst them are the families of the Taïtsi, descendants of Jenghiz Khan. Yet the Khalkha least resembles the typical Mongol type, as described by most ethnologists. He is rather brown than yellow, with open eyes, not inclined obliquely, like those of the Chinese or Ostiaks. He has, however, the broad flat 40
features, prominent cheek bones, black hair, and seant beard usually deseribed as distinctive characteristics of the type.

The Mongols are generally of middle size, with strong constitutions, capable of resisting the extromes of temperature, and enduring hardships which would kill most Europeans. But although they will remuin for fifteen hours in the saddle withont a murmur, they will complain of having to walk 100 yards from their tent, for they are unaceastomed to walking, and even feel ashamed to be seen on foot. Hence they despise the dance and all foot exercises, luat display extraordimury skill in every kind of horsemanship. They are excessively fond of racing, in which young and old all take part. At the races held in honour of the birth of a Mongol Buddha in 179: no less thun 3,732 riders competed for the prize.

It is surprising that such a hamly race, descendunts of the compuerors of Asia, should have so completely lost all political influence in the Old World. As a nation they havo even beeome poltroons, and recently thousands might have been seen flying in disorder before the undiseiplined bands of Inngun rebels, whose courage was largely inspired by the terror of the foe. Sublued, dismembered, and disorganized, the mation feels its weakness. How different the cruven attitude of the present nomads towards Buropenn truvellers crossing the steppe from the haughty bearing of Kuyuk Khan, who in reply to the l'ope's legute, John du Plan Carpin, proclamed himself the avenging instrument of God! "I have the right to kill you," he added, " since you resist my will; and the proof of my right is my might. Think you I, a man, would have the strength to do these things if God had not lent we LIis arm?" Before Carlyle and other modern theorists these Asintic rulers of men had discovered the formula of might.

At the same time the energy formerly displayed by the Mongol race was due not only to their personul bravery, discipline, and warlike spirit, but also to their natural love of equity and to the progress they had already made in social culture. For they were by no means the barbarians pictured in the medixval chronicles. They had, in the first place, the grand privilege of being far more free than most of the peoples subdued by them. According to their Yassak, or legal code, they gathered once a yeur for the thoi, or great feast, when the princes appeared before the assembled multitude to be questioned, reproved, and even deposed for the wrongs committed by them in the exercise of their powers. The conquered nations were themselves treated with far more consideration than the Mohammedans or Christians were at that time wont to show towards the peoples subdued by them. "The empire has been acquired on horseback," said a minister to Jenghiz Khan, "but it cannot lo governed on horseback." The Mongol sovereigns displayed a high sense of justice in adjudieating between their subjects of all races and languages, and anongst those who received lands free of imposts every nationality in the empire was represented. The Mongols also showed a degree of religious toleration, at once the amazement and reproach of the Catholie missionaries. Mohammedans and Christians were among the friends and advisers of the Khans, and such names as John, Nicholas, George, and Mark occur in the lists of the imperial magnates.

Exhausted by their struggles, morally debased by the ferocity of warfare, the

Mongols soon relupsed into barbarism. Most of then have doubtless still the sume sense of right, the sume kindly feeling for strungers and heartiness for their equuls, whom they always address as "comrules." But they have become extremely indolent, whilo their filthy habits and disgusting gluttony baftle all deseription. They have allowed slavery to take root in their social system, and many familics descended from prisoners of war are condemmed to tend the flocks of the Khans, who claim the power of life and death over them. However, the pasture lands have not yet been divided, and still belong to all, like the air we breathe and the water of the lakes and running streams. At the same time un abstruct right to the use of the land can be of little consequence to those who own no flocks or herds, und the nobles and lamas, to whom the live stock belongs, are ipso facto the proprictors of the soil. The high priest of Urga alone possesses a domain peopled by one hundred and fifty thousand of his slaves.

Few of the Mongols have turned to the cultivation of the lamd, nearly all being still exclusively occupied with their herds of camels, horses, and cattle, and their flocks, mostly of fat-tailed sheep. When they neet the first question turns on their live stock, more important in their eyes than the family itself. They cannot understand that there can be any human beings so forsaken of heaven as not to possess domestic animals, and receive with ineredulity the assuranees of the Russian travellers that they own neither sheep nor camels. All the work falls on the women and children, who not only tend the herds, but also manufaeture the hourohold utensils, saddles, arms, embroidered robes, te' \(t\) felts, camel-hair cordage, and other artieles of camp life. From the Chinese and Russians they procure all the provisions and other supplies they require. Ten especially is indispensable to them, for they never drink cold water, to which they even attribute a malignant influence. Besides tea they also drink kumis, mare's milk, and too often the vile brandies supplied to them by the Russians. Their diet consists almost exelusively of mutton, camel, and horse flesh, varied with a sort of paste or dough; but the flesh of birds and fish is by most held in special abhorrence.

The Mongol speeel, which belongs to the Ural-Altaic fumily, and which has a large number of roots in eommon with the Turki branch of that family, is spoken with considerable dialectic variety by the Khalkhas, Buriats, and Elints, who are not always able to converse together. Many foreign elements have everywhere crept in, and the pure national speceh has been much corrupted by contact with the Chinese, Manchus, Tibetans, and Turki tribes on the frontiers. Over two thousand years ago it was reduced to writing, at that time employing the Chinese ideographic characters, which were supplanted at the beginning of the tenth century by an alphabetical system. This was again ehanged in the twelfth century for another style, employed to translate the Chinese classical works. Unfortunately all these works have perished, and the very characters in which they were written have been completely forgotten. During the period of conquest the Mongols adopted the alphabet of the Uigur Turks, but a national system invented in 1269 by a lama, honoured by the title of "King of the Faith," finally prevailed. The Mongols write with a pencil on wooden tablets painted black and powdered with sand or ashes.

The liturgienl works are written in Eincoliak, or Tibetun, the sucred languge of the Mongolians since their conversion to Huddhism. Hence the priests, who wish to know something more of their religion than the outward form, are obliged to stuly 'Tiketun; yet those whose knowledge is limited to the rending of the saered volmes lave all the more venerntion for the text that they do not understand its menning. The Kalmuk lamas have sometimes paid as much as \(£^{0}, 000\) for the Kanjûr and 'Tanjùr, and the Siberian larints have given seven thousand oxen for a single cops of the Kianjur.
'libet is the "Holy land" of the Mongolians, who regard the Dulai-lama as of superior divinity to their own Turunath-huma, or Jetson-tampa. Nevertheless the latter is ulso "Burlht", or "living lBukdha," who muder divers forms is sup\(p^{\text {mosed to }}\) have succeded to himself since the middle of the sixteenth century, if not from a more remote perionl. At each mparent death he is required to renew himself in 'libet, whither a solemn embissy sets ont to recover him in the form of m infant. Formerly the Mongolian pontiff resided at Kinku-khoto, near the Chinese frontier, but, having been assussinated in consequence of a dispute abont preeminonce with the bimperor Kung-hi, he was ordered by imperial decree ta get born again at Urga, in North Mongolin. Since that time the names of the Buddhas elect must be first submitted to the Foreign Office at Peking.

The chicf Mongolian divinities, like those of Tibet, are of Hindu origin, but some are also of national descent. Nor are these the least venerated, although oceupying a lower rank in the Mongol pantheon. Such, for instance, is Yumandag, or "Gout Fuce," figured with the head of a gout or else of an ox, wearing a coronet of human skulls, vomiting flmmes, and in his twenty hands grasping human limbs or instruments of torture. He is painted a deep, blue, and his wife a light blue, like the eolours of the Oxforl and Cambridge rival boating factions.

The Mongols are animated by grent religious zeal, spariag themselves no hardships and sulbmitting to the severest penances to obtain remission of their sins. Some have been known to make the round of the lamussaries, measuring their length at every step in the dust or mud. The best of their incomes goes to the lamus, and the temples and monasteries everywhere bear witness to the boundless generosity of the fuithful. When the lamas go the rounds colleeting alms in the ume of the "Old Buddha" they ure always well received, and they soon return followed by pack unimals laden with gifts and contributions for the building of the temples. The priests are the true masters of the land, and they form the only cluss living in comfort without the necessity of working for their daily bread. Hence the proportion of clergy to the rest of the population is far greater than in uny other comutry, not even exeepting Tibet. One-third is said to consist of lamas, or " white men"-that is, shaven-and there is scarcely \(u\) fumily that is not represented by one or more of its menteers in the lamassaries. Nowhere else are the outward forms of religion more scrupulously observed, and even the Chinese of the frontier, when retailing their adulterated wares at short measure, do not forget to wrap the parcels in paper bearing the sacred formula, Om mani padme hüm. The Chinese Government, which pays little heed to i:s own bonzes, protects the
d lungrange of iests, who wish are obliged to ; of the snered understand its \(£^{*}: 000\) for the usind oxen for

Dalai-lama ns Nevertheless s forms is supcentury, if not to renew himthe form of an var the Chinesse te about predecree to get of the Buddlhas
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Mongolinn lamaism by gunrantecing ucertain revenue to most of the monasteries. Its eonstunt policy las been to increase the priestly order, in order thereby to diminish the nataral growth of the population, and repluce benceful communities the ohd encanpments of its hereditary enemies. Nevertheless the national hatred still smoulders, fomented by social differences und conflieting interests. Most of the suvings of the Mongolian tribes find their way to the colfers of the Chinese denlers und usurers, whence they pass into the hunds of the lnmus.

Althongh the monasteries nre both numerous and extensive, some contuining as many as ten thousand immates, a grent many lamas also reside in their own families or romm about from place to place, while the old Shamamism has also maintained its prestige amongst most of the tribes. The wizarls ure still uppealed to when the flocks are attncked by diseuse, when "fine weuther"-that is, rain-is needed, when the ailing are to be healed, or the healthy stricken with a mortal illness. As indieated by the very nume of Shamun, originally upplied to the "Samaneans," or Budlhist monks, every possible transition is still observed between the old natureworship and Buddhism, introduced after Jenghiz Klun's death. Since the close of the last century some Chinese exiles and colonists have also disseminated Christianity amongst the tribes.

The various Manchu, Chinese, Tibetan, und 'Iurki influences to which the Mongols have been subjected are reflected in their customs. Thus the Manchus have imposed on them, as on the Chinese, the fashion of shaving the hend, leaving nothing but the "pigtail." Monogamy also supplanted polygamy in the seven" teenth century, und, as in China, the betrothals are all settled by the parents after the astrologers have announced a happy conjunction of the sturs. The purchasemoney is paid as anongst the Kirghiz, while a simulated abluction is gone through, as in Turkmenin. In burinls the Chinese rites ure observed in the ease of princes and princesses, who are placed in coffins, before which the family sacrifiecs are offered at the prescribed times. The bodics of prelates are burnt, and their ashes covered with little mounds or cairns, whereas the poor lamas and the common folk are thrown to the wild beasts or dogs, as in Tibet. The ravens, called by the Chinese the "Sepulchres of the Mongolians," seldom quit the nomad steppes, where they fatten on human remains, and the dogs regularly follow the funeral processions beyond the camping grounds.

The Chinese immigrants are continually encroaching on the Mongolian domain, mud the imperial territory of Jehol, oecupying some 20,000 square miles north-east of Peking, hus alrearly been entirely settled by Chincse colonists. Jehol has taken the Chinese name of Chengte-fu, und all the neighbouring places have in the same way changed their names. Here the immigrants increased from 477,000 in 1792 to 884,000 in 1897 , and they uppear to be now far more numerous. The region usually culled " luner Mongolia," in contradistinction to the "Outer Mongolia" north of the Gobi, is already more than half Chinese. Formerly the Great Wall coincided roughly with the etlinical, political, and geological limits of the conterminous states. But this line has long been burst through by the Chinese traders and peasantry, who have occupied all the fertile valleys draining south-
wards. The whole region known by the name of Kow-vei, or "Beyond the Gates," is now (Chinese territory, sad has been recently incorporated with the two provinces of Shansi and Pechili. One of the chice inducemente to settle here is the liberality shown towarls the cultivators of the poppy, who, for a slight tux of less than 20 s. the nere, are allowed to grow this phat freely, and nre thas embled to proenre opinm at a molerate price. Athough the Mongolians, as a rule, keep aloof from the intruders, extensive alliances have ulrendy tuken place, and the Eirlita, or rfifspring of Chinese fathers and Mongol mothers, are very mumerons in some tribes. The Twathars esprecially have ahnost heoome assimilated to the Chinese in type and sucial habits, preferring asteled life to the freedom of their nomud kinsmen.

To insure the pencefin possession of Mongolia the Imperial Government has hitherto pursued the simple poliey of dividing the race into hostile tribes, and flattering the vanity of the chiofs hy allowing them to contract alliances with the imperial famity. The prinees, most of whom cham deseent from Jenghiz Khan, bear varions bereditary titles answering to those of king, duke, earl, baron. But they ure bound to consult the Chinese minister in all weighty affnirs, depending in ull other respects on the high priest of Urga. Ammul national gatherings are held under the presidency of one of the chicfs chosen by the prople ; but their decisions do not nepuire the foree of law until approved of by the Chinese Government. The Emperor hus the power of deposing the ruling prinees at plensure, and in any ease they are all little more than State pensioners, receiving a yearly subvention of from \(£: 30\) to \(\mathfrak{e x} 800\), according to their rank. Thus, instend of adding to the imperial treasury, Mongolin is netually a burden to the State, it least financially. The Mongols pay no direet tribute, but they are bond to military service, all the men between their eightcenth und sixtieth yeurs forming purt of the imperial eavalry. But the late Dungun insurrection has shown that the Mongoliun army exists only on paper.

The Khalkhat territory, eomprising the larger half of Outer Mongolia, is divided into the four khamates of Tushetu, Tsetien, Suinoün, and Jesuktu; that is, of the north, cast, centre, and west, and the different tribes are by usage interdicted from passing the limits of these khanates in their periodical migrations. Southern and Eastern Mongolia are in the same way divided amongrt the Suniut, Göshikten, Barin, Naman, Korksin, Urhumsin, Uniot, Jarot, Tumet, Ahkhanar, the Durban. and the eight Tsakhar Banners. The ulministrative coincide with the military divisions. Fach troop of one hundred and fifty men forms a squadron, six squadrons a regiment an indefinite number of regiments a Khoshun, or "Banner," this last answering best to the tribsil division. A certain number of Khoshuns form an Aimak, or section, which varies according to circumstances in size and importance. The Aimaks und Khoshuns are distributed as under:-


\section*{Topocirapliv.}

The largo Mongolian towns are maturally concentrated in the mouth-enstern region " Beyond the Giates," oceupied by the Chinese settlers. Nevertheless even in the north there are a few places enjoving a certain importance, centres of trude, and converging points of the caravan routes. Thus hoblo, lying 4,000 feet ubove the sen, on the platenu of like mane in the Mongolian Altaï, is the entrepot of tho Russian dealers from the Altaï mines on the Upper Irtish valley. Sime distance to the enst of Kolnlo, but on the sume hilly platemu, is the commercinl town of Uliusutai. Both places resemble each other in their general disposition, consisting of a walled enclosure, seat of the administration, und an open quarter, the Maima-

Fig. 4i.-Kohdo l'lateat. Reale 1:2,050,000.

chen, or trading borough, where the Chinese me: ? ants reside, and round which are seattered the Mongol encampments. Both suffered much in 1870 from the Dungan insurreetion, Kobdo having been completely saeked, while the suburbs of Uliasutai were burnt. On the sume occasion Tsakhar-tsin, 120 miles south of Kobdo, was entirely destroyed. Nevertheless trade has since then rapidly revived, and Kobdo now sends over 200,000 sheep annually to Kansu. But the population inereases slowly, the Chinese settled here not being allowed to bring their families with them, or to found permanent communities.

The true capital of North Mongolin is Urga, the Bogdo-kuren-that is, the "Great Camp"-of the Mangols. It lies on the Siberian slope in the basin of the river Tola, which drains through the Orkhon and Selenga to Lake Baikal. North
of it stretches a chain of gently sloping hills, while to the sonth rises the nbrupt Khan-ola ridge, the genius of which is honoured with yearly sacrifiees. The Kuren properly so called, which eneloses one of the three palares of the Jetson-tampa, or "Living Buddlu" of Mongolia, stretches for eomsiderably over a mile to the north of the Tola, aud formen a labyrinth of courts and alleys, whero probably more than 10,000 lmmas have pitched their tents, or built their mud huts, beneath the shadow of the gildecl domes of the temples. Here is a sort of university embracing the faculties of medicine, theology, and ustrology. The Maïma-chen, or commercial quarter, lying east of the Kuren, is oeeupied by mbout 4,000 Chinese dealers. Here is the cumping around of the Russian curavaus, und here is eurrent a "Pigeon" Mongolimn jurgon mixed with ull the dialects of Chim and Siberia. A

Fig. 46.-Uroa.
Scale 1 : \(45,0 C J\).

new quarter has also sprung up romd the Russian consulate, established in 1861, where have been organized most of the recent seientific and commercial expeditions across Mongolin. A large triemial fair is held at Urga in September, visited by about 200,000 persons from every part of Mongolia.

All the trading routes converge on Urga, which is the chief station on the great tea highway between Kiakhta and Kalgan, at one of the gates in the Great Wall, while it is also connected with Kobdo, Uliasutai, and the towns of Kunsu and Manchuria by regular postal routes. Along these tracks camps of fifteen to twenty teuts are established at intervals, and placed under a postmaster, who is bound to provide travellers with night lodgings and mounts free of charge. By the treaties concluded between Russin and China in 1859-60, the St. Petersburg Government
has acquired the right to muintain at its own expense a postal service, between Kiakhta mul Tientsin, via Urga. In nll the towns of Vrga, Kalgm, P'eking, und Tientsin, lussiun ngente look after the transit of goods, which are forwarded once a month, and the comfort of travellers, who start every ten luys. The journey nceupies on nu average about two weeks.

Karuhorum, the old eapital of the vast Mongolian Empire, lies in the same river basin as Kiakhta. It might seem surprising that the imperial residence should hnve remained for nearly seventy yeurs in the midst of the drenry plains of the Upper Selenga. But what the nomul conquerors most needed was a position on the open steppe, whence sudden expectitions could be directed either against China

or Western Asia. At the beginning of the fourteenth century, when the work of conquest was completed, and the empire divided into eastern and western sections, such a capital as Karakorum could serve no further purpose; hence it was soon succeeded by Peking and Samarkand. Holin, or Khorin (Kara-kuren, or " Black Camp"), is already mentioned by the Chinese chroniclers of the eighth century ; but although Jenghiz Khan may have here established one of his chief encampments, it did not become the imperial capital till 1234, when Oktai Khan caused it to be enclosed. Here Longjumel and Rubruk beheld the Mongol Khan in all his glory, courted by the mighty of the earth, and surrounded by adventurers from nll the Buddhist, Mohammedan, and Christian states in the Old World. Guillaume of Paris laid out his pleasure grounds, planning elegant fountains with their jets of
wine, milk, kumis, and beer falling into silver basins. Novertheless Karakorum was never a great eity. According to Marco Polo the ramparts were only 3 miles in circuit, and even most of this space was oecupied with pulaces and temples surrounded by extensive courts. Beyond the enclosure wero two other cities, the Mainma-claen of the Chinese, and the Mohammedmen bazaar. But these do not appear to have been large quarters, and Rubruk describes the whole pluce as inferior to St. Denis, near Paris. Hence it is not surprising that soon after its abaudonment by the Khans the " Black Camp" should have vanished from the fuee of the earth. For a long time its very site was known only to the Khalkha nomads. D'Anville placed it on the very verge of the Gobi, near the salt lake, Kulen-ulen, while Rimusat removed it mueh farther north, about the sources of the Orkhon, some 240 miles south-west of Urga. And not far from this spot Puderin came upon its ruins in a plain traversed by the Orkhon. Here are still visible the remains of a crenellated rampart, five hundred paces both ways, and enclosing some crumbling walls.

In the region east of Urga, watered by the Kerulen and Khaïlar, und partly attached to the administration of Manchuria, the centres of population are mere villages, deriving some little importance from their position as capitals of aimaks and truding stations. The most frequented are Keruleu and Khuilmr, named from the rivers on which they stand. But the trade of the country is naturally concentrated in the sonth-castern regions annexed to Shansi and Pechili, where the Chinese, "devourers of the Tatars," have founded several industrious towns. Amongst these are Sarchi, on a tributary of the IIoang-ho, and Kuriluna-cheng, in a small basin also draining to the Hoang-ho. The latter, which is the Kulin-kihoto of the Mongols, consists of a religious and a trading quarter, and till the end of the list century was the residence of the Mongolian Buddha, now enthroned in Urga. It is still a great centre of Buddhist learning, and according to Hue 20,000 lamas and students crowd its sehools and convents. Kuku-khoto is a great cattle mart, and nearly all the dressed hides, camel's-hair cloth, and cordage forwarded to Tientsin for the London and New York markets come from this place.

Farther east are the extensive ruins of Khara-khoto, or "Black Town," and of Tsugau-khuto, or "White Town," the former a very ancient place, the latter founded at the beginning of the fourteenth century as capital of the Mongol Empire, and visited by Marco Polo, who calls it Chagan-nor. Thirty miles east of it is the Chinese village of Sivantzc, centre of the Mongolian Catholic missions. In 1873 the Mongolian Catholies in this diocese numbered about 12,000 .

No less important than Kuku-khoto is Dolon-nor, lying at an elevation of 4,000 feet in the south-cast corner of the plateau near the extremity of the Great Khingan range. It takes its Mongol name, meaning the "Seven Lakes," from a number of meres, now choked with the sands of the desert. The Chinese call it Lama-miao, or the "Lama's Grave," from a structure here erected by the Emperor Kang-hi. Like the other cities of the plateau, it is an open town, consisting of a religious and trading quarter. Its Chinese inhabitants carry on a brisk trade at the expense of the surrounding Mongol nomads, and are also skilled artisans,
producing statues and ornaments of all sorts in iron and gilt eopper for the Mongolian lamassaries and temples. The grand effigy of Buddha, over 30 feet high, in the great templo of Urga, was brought across the desert from Dolon-nor.

In the midst of the wilderness, some 24 miles north of Dolon-nor, lies Shang-tu, or the "Superior Court," which succeeded the "White Town" and Karakorum as residenees of the Khans, and where Kublai Khan erected the marble and bamboo palaces deseribed by Marco Polo. Its usual Mongolian name of the "IIundred and Eight Temples" is taken from its many religious edifices, formerly as numerous as the sacred volumes of the Kanjûr, all now in ruins and enclosed by a double rampart overgrown with grass and serub. A grassy enelosure at least 5 square miles in extent, lying north-west of Shang-tu, was probably the wonderful park of which Marco Polo speaks; but the fountains, artificial streams, groves, and greenswards described by the illustrious Venetian all have vanished.

Immeasurably more extensive was the park of Jehol, a wooded distriet peopled by wild beasts, which covered a wide expanse along the hills and valleys between the Mongolian plateau and the palisade of Manchuria. Here grazed those herds of ten thousand spotless white horses offered in tribute to the Emperor Kang-hi. Jehol, or Chingte-fu, is noted for its summer palace, built in 1703 on the model of the Peking structure, and rich especially in inlaid wood artistic objects. Palil, or Pingchuen-hien, \(\mathbf{6 0}\) miles east of Jehol, which consists of a single street nearly 5 miles long, is the centre of the silk industry in Inner Mongolia. IIadn, or Chiffeng-hien, is also a busy place, much frequented by dealers in furs. In this northern district there is a gegen-suma, or temple of a living Buddha, with a lamassary said to contain as many as 5,000 priests.

\section*{V.-CIIINESE MANCIIURIA.}

This province is bounded north and east by the course of the Amur and its tributary, the Usuri ; sonth-east by the higblands and solitudes separating it from Korea; south by the Yellow Sea; but westwards-that is, towards Mongolia-there are no natural frontiers. Here the north-eastern corner of Mongolia, west of the Great Khingan range, is assigned to Manehuria, while the forest lands and fertile tracts of the Upper Shara-muren, east of that range, now form what is called Inner Mongolia. Formerly the boundary between this section of Mongolia and South Manchuria was marked by a long line of palisades, which, however, have long disappeared. A few clumps are shown here and there, which are said to be the remains of the plantations made in the time of Kang-hi. But no plan can be detected in the disposition of the clusters occurring on either side of the old frontier in the two Manchu provinees of Mukden and Girin. Such barriers, which the Chinese, Japanese, and Koreans were formerly fond of erecting, can never have had any strategic importance; they were simply a sort of magic circle traced round the land, which was thus placed under the protection of the terminal deities.

In any caso any conventional frontier between Mongolia and Manchuria can have all the less significunce that both races are steadily retreating before the Chinese immigrants, who already form the majority of the population. Probably not more than one-twelfth of the inhabitants of Manchuria belong to the race whence the country takes its name.

\section*{Main Piysical Features.}

Manchuria is naturally divided into two distinct regions, draining one northwards through the Amur to the Sen of Okhotsk, the other southwards to the Yellow Sca. The two basins are separuted by a slightly elevated ridge which runs westwards to the Mongolian plateau. But great differences prevail in the regions lying on either side of this low water-parting, Northern Manchurin forming part of the Siberian work, while South Manehuria belongs in its elimute, vegetation, and inhabitants to China.

The Great Khingan presents a far more imposing appearance as seen from the banks of the Nonni than towards the west, where its base is deeply rooted in the Mongolian plateau. The conic crests of the now extinet volcanoes formerly stretehing along this range stand out boldly at the head of the deep and densely wooded gorges exeavated 'y the affluents of the Nonni. But other cones rise also above the plains watered by the Nonni, and which were formerly dotted over with now dried-up lakes. In the valley of the Udelin, a tributary of the Nemer, which joins the Nonni between Mergen and Tsitsikhar, a group of voleanic hills marks the spot where the ground was violently agituted by an earthquake in 1720, followed the next year by a fieree eruption, which lasted for over a twelvemonth. These igneons phenomena were carefully deseribed by five imperial envoys, who visited the district at different times, so that there can be no reasonuble doubt of the occurrence. From a new erater which rose to about 830 feet, with little over half a mile in circumference, four lava streams flowed down to a great distance across the plains, one of them damming up the Udelin, and converting it into an extensive lake. The group of hills contains rich sulphur beds, which, however, the Government does not allow to be worked. Several other hills in the valley are of igneous origin, but it is doubtful whether they have shown any activity in recent times. In this respect the group here described is quite unique. Such voleanic action at a distance of over 600 miles from the sea-coast is a clear proof that the saline waters of elosed basins may perform the same office in nature's underground laboratories as do the marine waters in the production of volcanic eruptions.

North of the Upper Nonni valley the Great Khingan is connected by a highland region with the Dautsé-alin, or Little Khingan of the Russians. This upland tract, known by various local names, is crossed by a much-frequented route between Mergen and Aïgun. In a forest clearing at the highest point of the route a Chinese temple entertains travellers of all nations in the empire who come to worship at its shrine. The custodians of the sanctuary, banished from the "Flowery Land," are required to look after their comfort and guide them over the dnugerous parts of the country. The Dadsé-alin, which appears nowhere to rise higher than 5,000
feet, is continned north-eastward across the vast semicircle formed by the Nomi and Sungari, and beyond the Amur by the Burcya range in Siberia. But the Lagar-aul, culminating point of this section, has an elevation of no more than 3,500 fect.

The true main range of Manchuria is the Shan-alin (Shanyen-alin), the Chang-peï-shan, or "Long White Mountain," of the Chinese, so mamed both from its dazzling limestone rocks and snowy crests; for the highest peaks about the sources of the Sungari attain elevations of 10,000 and 12,000 feet, thus rising considerably above the snow-line. The chain rums mainly north-east and south-west from the Usuri-Amur confluence to the Linoti-shan headland on the Yellow Sea, a total distance of some 900 miles. The system is partly of volcanic origin, and in its central section an old crater is said to be filled by a lake enclosed in rocky walls over 2,600 feet high. The Manchu poets sing of the Shan-alin as the sacred home of their forefathers, and in their eyes it is the fairest land in the world, with its woodlands, sumny glades, and sparkling streams, all bathed in the bright atmosphere of heaven.

Other ridges running between and parallel with the Shan-ulin and Khingan traverse the central plains, and one of them follows the valley of the Liao-ho,* on the west, skirting the west side of the Gulf of Liaotung as far as the promontory at the eastern extremity of the Great Wall. At its northern end this coast range is known as the Kwangning chain, from a eity of that name lying at its foot in the neighbourhood of some extinct volcanoes. Like the Shan-alin, the Kwangning Mountains have always been regarded as amongst the tutelar deities of the country, Mount Wulin being from a remote period included amongst the nine guardians of the empire. On its highest peak the hermitage is still shown where Yenhwang, one of the most renowned Chinese princes, passed most of his days, surrounded by books and manuscripts.

\section*{River Systems-The Sungari and Lino-he.}

Although differing greatly in size, the two chief Manchurian rivers resemble each other in the disposition of their respective valleys. Both flowing in opposite directions, describe semicircles of remarkable regularity, that of the Upper Nonni, or main branch of the Sungari, corresponding with that of the Shara-muren, or Upper Liao-he, while the Lower Sungari reproduces the bend of the Lower Liao-he. Between the two the Eastern Gobi plateau, covered with "yellow earth" and dotted over with closed lac: triue basins, has been gradually cut up into divergent valleys by erosive action.

The Sungari is regarded both by the Manchus and Chinese as the main stream of the common basin which it forms with the Amur. Yet it seems to be inferior to the latter both in length and volume, except in summer, when its discharge is greater, thanks to the melting of the snows on the White Mountains. In many places it is considerably over a mile wide between its muddy banks, which are alive

\footnotetext{
- Or rather Liao-he, he being the term answering to ho, " river," in North China.
}
with myriads of swullows. During the floods the Sungari becomes an inland sea dotted with islands, the resort of countless flocks of wild geese, swuns, and duck. As un historic highway across the continent it has been eclipsed by the Amur, down which the Russians reached the Pacific seaboard. But the regions watered by the Amur are little better than wildernesses compared with the smiling plains, espeeinlly of the Middle Sungari. Here also the river traffic is fur more extensive, the chamel being often completely blocked by tho fleets of junks lying at anchor near the large towns. It is navigable by craft drawing 40 inches for at least 900 miles between the city of Girin and the ford of the Amur. The Nomi, or Si-kiang, its main upper branch, is also accessible for boats of the same size us far as Tsitsikhar, while the Mutan-he, or Khurkha River, which joins the Sungari at Sansing, is

largely available for inland *affic. Still all this movement by water can never have more than a lecal importance, for so great is the westward sweep of the main stream between Girin and Sansing that goods in transit are mostly forwarded by the shorter overland route. The steamer carrying the explorers Usoltzev and Kropotkin was the first to ascend the Sungari.

The Shara-muren, or "Yellow River," which has its source on the Mongolian plateaux, is not navigable even during the floods above the point where it enters the province of Liaotung under the name of the Liao-he. In its lower course it is accessible to vessels drawing about 10 feet, which at high water are able to cross the bar and ascend to the port of Yiukoa. .The alluvia brought down by the stream have encroached to such an extent on the Gulf of Liaotung that the eity of

Niuchwang, said to have formerly stood at the mouth of the river, now lies many miles inland. From century to century the ports have been shifted according as the river advanced senwards, and the navigation of the gulf is now endangered by banks and shallows, which, however, may be partly due to a slow upheaval of the land. The Liao-he valley was at all times an important historic highway. This route lerl the Manchus down to the Yellow Sea when they advanced to the conquest of Chima, and it was also followed by the Chinese military expeditions to the Sungari basin and the Korean frontier. Henee the eare with which the Liao-he valley has always been guarded by the Imperial Government, as shown by the remains of extensive rampurts and fortifications in the neighbourhood of Mukden. At present the same region has acquired an exceptional political importance, as afforling to Manchuria its only outlet seawards. By a strange lack of foresight, or prrhaps because at the time too weak to resist Russian pressure, the Chincse Government has deprived itself of all its seaports north of Korea. Hence all the foreign trade of the Sungari basin has to be carried on either through the Lower Liao-he valley or across Russiun territory. The Russian naval station, founded to cripple China on its north-eastern flank, stands on the Gulf of Peter the Great; that is, at the very spot where North Manchuria formerly enjoyed most direct access to the Japanese waters.

The surface of Manchuria is extremely varied, with its sandy wastes, its grassy steppes, rich arable lands, and dense forest tracts. The region, some 40,000 square miles in extent, stretehing east of the Great Khingan from the Shara-muren to the fort of the Duûsé-alin range, now depends on Mongolia, and is often called the Eastern Gobi. Here the monsoons from the Pacific are arrested by the lofty Shanalin highlands, which receive most of their moisture. Under the influence of these atmospheric currents, thus deprived of their humidity and mingling with the still drier north-west winds, the Eastern Gobi necessarily remains an arid region. But proceeding thence eastwards to the lands affected by the cloud-bearing sea breezes, every transition may be observed in soil and climate. Along the Sungari valley stretch vast prairies like those of the Amur, where the tall grasses, 8 to 10 feet high, are interlaced with the foliage of the bushy shrubs, and where the only tracks are those formed by wild beasts. Most of the North Manchurian mountains are green to their summits, while in the intervening valleys the solar rays are arrested by the impenetrable foliage of the oak, elm, and willow forests. From the lofty peaks the eye sweeps over a sea of verdure stretehing from hill to hill, from valley to valley, beyond the horizon. The vegetation in certain parts of the Sungari basin rivals in exuberance that of the Eastern Archipelago itself. In South Manchuria, where nearly all the arable lands have been recluimed, the forest vegetation is less dense, and most of the headlands on the Gulfs of Liaotung and Korea are bare or treeless.

\section*{Flora and Fauna.}

In its flora and fauna Chinese like Russian Manchuria forms a connecting link between East Siberia and China proper. Certain species of trees and shrubs give
to the country in nlmost Europemn aspect, which is enhunced by the fruit trees, cerculs, vegetables, and other cultivated \({ }^{\text {limants }}\) growing round the houses. But wild animals are still numerous, including the punther and the tiger, or "lord," as he is here called. The royal benst frequently attacks the inlabitants, even in the very streets of their villages, and almost more dangerous are the wolves, the packs sometimes sparing the flock and falling upon the shepherd. The wild bour, bear, fox, polecat, and wild cat are common in some districts, and in the northern forests the squirrel and sable are still trapped for their furs, which are used to adom the head-dress of the natives. Notwithstanding the penceful invasion of the Chinese immigrants, Manchuria continues, as of old, to be a famous hunting ground, mul although the attacks of wild beasts ure less dreaded than formerly, the chase is still considered as a sacred pursuit incumbent on all.

Birds, mostly of npecies analogous to those of West Europe, are very numerous, nnd multitudes, esperially of singing birds, are met almost everywhere. The hamlets are visited by large flocks of ravens, which are looked upon by the Munchus as the spirits of their ancestors, and consequently supplied with daily offerings. The running waters abound to such an extent in animal life that whole communities live exclusively on a fish diet. In the Sungari the salnon are so large and plentiful that their skins form a not unbecoming article of summer attire, which is elegantly embroidered by the women. The Y"pi-tatzr, or "Fish-skin people," as the Chinese call them, are all Tunguses of the Gold tribe, like those of the Usuri River and the Russian maritime province.

\section*{Inhabitants-The Manchus.}

The present Manchu race recognises the Ninchi as their ancestors. The name now applied to the whole nation was originally restricted to a single tribe occupying an upland valley in the White Mountains. Taïtsu, ehicf of this tribe, having subdued all his neighbours, proclaimed the perfect equality of all his subjects, to whom he extended his tribnl name of Manchu. To this stroke of policy he was probably indebted for his victories over the Chinese, resulting in the complete conquest of the "Middle Kingdom" in the year 1644. This conquest, however, had the effect of transforming the Manchus themselves. With the exception of the Solons, Golds, Manegrs, Oroehons, who still wander along the river banks, there are in Munchuria no longer any nomad Manchus, or Tung-tatze; that is, "Eastern Tatars," so named in opposition to the Si-tatze, or "Western Tatars." There is now nothing more than a Chinese province, and even in the Upper Nonni valley the natives have, under Chinese influence, gradually abandoned their wandering habits. They live in, finzas, like the immigrants from the south, and own arable lands, which they usually rent to the Chinese peasantry, with whose speech they have also become familiar.

Of all the Manchus the Solons, or Salons, have best preserved the ancient national usages. They reject Buddha, and still believe in the Shaman wizards, who practise their magic rites round about certain hallowed eminences. The Solons
the fruit trees, houses. But , or " lord," as ts, even in the lves, the packs rild boar, bear, the northern h are used to invasion of the mous hunting formerly, the
cry numerous, ywhere. The \(y\) the Manchus aily offerings. tole communia so large and ttire, whieh is in people," as of the Usuri
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manche ministele-chilefs of manners.
burn their dead, placing the ashes in leather sacks, which they attuch to the branches of the trees. On the other hand, the Dautrimes, although the bravest and fiereest of all the race, have become zealous Budllinists, one member at least of every family being a lama.

Owing to the mixture of ruces, which has produced a larger and more vigorous population than that of Central China, it has become almost impossible to distinguish the natives from the intruding Chinese. But the Manchus are distinguished above all the northern peoples for their mutural politeness aud courtesy towarls strangers. Although descendants of the conquerors of China, they have the good taste to avoid any reference to their origin in the presence of the "Soms of INeaven," in this respeet differing grently from their kinsmen in Chin, the insolent mandarins, whe have been corrupted by the enjoyment of power und privileges. The Solons, Dautrs, and other northern tribes, like tho Siberian Tunguses of tho same original stock, ure brave, checrful, goorl-matured, and resemble the Jupmese in their aptitude far assimilating foreign ideas and adapting themselves to tho altered surroundings. Henco in Manchurin religious differences have at present far more importance than those of race. The Mohammedans, who form in some districts one-thirl of the whole population, reside mostly in villages or in separato quarters, where they constitute quite a distinct element, holding aloof from thoso of other religions, although themselves of Chinese race and speceh.

For military purposes the Manchus are grouped in eight banners, whenco their name of Paki ; that is, "Eight Flags." But the men, whose only arms till 1873 were tho bow and arrow, are at present employed more frequently on hunting than on strategical expeditions. They are bound to pay a yearly tax of 2,400 deer and a certain number of sable-skins. But even into this organization the Chinese element has been largely introluced, multitudes of immigrants from Shantung having been enrolled at the time of the conquest. Theso military colonists are collectively known as Tsi-jen, or Ki-jen; that is, "Banner-men."

Altogether the Manchus as a distinct mationality seem to be threatened with rapid extinetion. The ehildren mostly attend the Chinese sehools, where they study the four books of Confucius and the "Book of Ceremonics." Most of the native geographical names have already given place to a Chinese nomenclature, and the Manchu speech would have probably alrealy disappeared as a cultivated language, had it not been specially studied, owing to the Manchu origin of the reigning family. This circumstance has caused it to become one of the classic languages of the empire, which candidates for high offices of State are obliged to learn, and a knowledge of this idiom has become almost indispensable to savauts enguged in the study of Chinese history and literature. Since the conquest the more importunt Chinese works have been translated into the language of the conquerors, and these translations often throw great light on the obsewrities of the eriginal texts. Manchu is a sonorous language, easily acquired, thanks to the regularity of its inflections and syntux. Lik: all Tungus tongues, it consists of monosyllubic or dissyllalie roots, whose meaning is modified by agglutinated suffixes. The Ninchi, ancestors of the present Manchas, and who gave to China the Kin dynasty,
borrowed their writing system from the Chinese in the Iwelfth century. But the letters cmployed by them since the chase of the sixternth century are of Mongol origin, med are conseg口untly derived from the Armmen system introduced by the Nestorimes into Centroll Asia. The Bmperor Kang-hi cansed a Manchu lexicon to be compiled, from which ull words of Chinese origin were carefully excluded. Amiot's was the first Manchu dictionary pmblished by a Buropenn towards the end of the last century, since when several others have appeared in various Buropenn languages.

In Manchuria, as in the other outer possessions of the empire, Chinese colonisation began with convict stations and military estahlislments. The first settlements were founded immediately beyond the Great Wall; hut at isent most of the political or crimimal exiles are bun-
 ished to the forestes and steppe lands near the Russiun frontier. Tsitsikhar has become the chief place of exile for high functionaries, and for the more dangerous members of secret socicties. When visited by Palladius in 1870, this pluce contained 3,000 exiles, all free to ply their own trades and choose their own place of residence on the condition of presenting themselves once or twice a month before the authorities. A great number of Mohammedans are also interned in North Mongolia, where they havo their own mosques and schools, living altogether apart from their co-religionists who have voluntarily migrated to this region. All these new elements contribute to modify the local population, which becomes yearly more assimilated to the Chinese type. But before settling down peacefully by the side of the natives, the exiles and free immigrants often combined in formidable bands, such as that of the Hunhutze, or "Rel lleards," of the Upper Usuri, who still remain hostile to all the peaceful settlers of the surrounding districts. By means of the improved weapons smuggled across the Russian frontier, they have even become a formidable power, and have built strongholds, above which flies their red flag with the inscription, "Vengennce."

The Chinese inhabitants of Liaotung take the collective name of Mandzi, whatever be their origin. They come chiefly from Shansi, Shantung, and Peehili ; but in North-west Manchuria there are many descendants of the Yumnan exiles lanished to this region by the Emperor Kang-hi in the seventeenth century. Still the immigrants from Shantung are the most numerous. They supply the agricultural
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\section*{ese colonisa-} at settlements most of the iles are banateppe lands ntier. 'l'sitchiel place tionaries, and menubers of on visited by is place conIl free to ply choose their \(e\) on the coneusclves once e the authorir of Mohamned in North y have their hools, living their eo-revoluntarily n. All these ate to modify Chinese type. xiles and free Hunhutze, or the peaceful pons smuggled wer, and have "Vengennce." Mandzi, what1 Pechili ; but xiles banished ry. Still the e agricultural
and settled clements, and their dialect is now current throughont the whole of Manchuria. Those from Shansi are chielly itinerant dealers, hawkers, haeksters, money-lenders, and lankers. They betray a remarkable tulent for acquiring languages, in their denlings with a stranger always conversing in his language, unless it happens to be Manchu. This they affect greatly to despise, and have the less need to learn it that Chinese is now evorywhere understood by the natives. These Shansi traders are gradually aequiring all the substance of the lame. In their flat-roofed Manchu houses the place of honow is taken ly Laoyeh and Taikin, the gools of wealth, whom they worship most solulonsly.

Thanks to its fertility und temperate climate, Sonth M nchuria yields a great variety of agricultural produce. The Chinese breed swine and cultivate wheat, barley, maize, millet, besides the "yellow pea" (Soya hixpiila), from which they extract a swect oil used us a condiment, exporting the refuse to China as manure. Notwithstanding the severe winters, the hot summers enable them to grow a species of intigo, besides cotton and the vine, carefully protecting the roots with straw and earth during the cold season. The mulberry and onk are planted for the sake of the silkworm, of which there are several varieties, not only yielding the precious fibre, but also supplying the table with its greatest reliency. As in Mongolia, the imperial edicts against opium are a dead letter, and the bright bloom of the poppy is everywhere intermingled with the other crops. Lastly, the Manchu tobaceo, expecially that grown in the Girin district, is famous throughont the empirc. The practice of tobacco-smoking spread originally from Manchuria to Jupan, and thence to China about the time of the conquest. But the Manchus still remain the greatest smokers in the empire. Some Chinese peasants in the Usuri valley also cultivate ginseng, which the Manchus call arotha, or "first of plants," and which fetches its weight in gold in China. Its cultivation was formerly reserved as a monopoly by the Manchus, and the line of willow palisades is said to have been originally erected in order to prevent the Mandzi from penetrating into the forests abounding in ginseng. But the trade has now passed altogether into the hands of the Mandzi, who either cultivate or procure it in the wild state. The latter is much preferred to the garden produce.

Till recently the only important local industries were the preparation of vegetable oils, and of brandy distilled from sorgho. The Manehus of both sexes drink this spirit, " to the forgetfulness of good and evil," as they express it. Thousunds are now also occupied in tho gold mines, and accorling to the official returns, over 30,000 were employed about the middle of this century at the Wanlagu washings, on tho Upper Suifun. But the coal and iron mines of South Manchuria promise to become a still more productivo source of national wealth. Thanks to these varied resources, Liaotung has already become much richer than many provinces in the interior of the empire.

\section*{Topoghapity.}

The only Manchurian town on the right bank of the Amur is Aigun (Aïkhun), which is by far the most populous in the whole valley of the Helun-kiang, or
" IBiver of the Black Dragon," as the Chinese call the Amur, probably from the dark colour of its wateres. Sïgun stretches, with its submobs and garlens, for over 5 miles along the river, and villuge follow in quick succession all the way to Sakhalin, some 24 miles north of Aignu, over against the Rassiun town of Blagoviewhehensk. The Chinese city is not mily the eapital of all the Amar district, but is also regarded as their chicef town by all

Seale 1 : iankr, ran
 the Datirs, Manchus, mad Chinese of the Siberime side, who carefnlly uvoid their Russian masters, and still continne to pry their taxes to the Aigmon authorities. But us a military station this place is tow far removel from the heart of the empire to be able to resist the Russians, should they attack it. Its enclosure consists of " simple palisade and the remains of un avenue, while its communicutions with the rest of the country are obstructed by the steep Khiman-alin range. All its relations with the empire are carried on through Meryen, which lies in a wooded and fertile district in the Upper Nomni basin. When visited in 1870 by Palladius, this phace had not yet been reached hy the tide of Chinese immigration, which had scarcely got much beyond \(T_{\text {situilihur }}\), or Pukulhih, capital of North Manchuria, and centre of administration for all the luatkhans or Manchus still in the tribal state. These natives assemble here every year in the month of June to pay their tribute of 5,500 sable-skins, and on this occasion a great fair is held, which attracts the Chinese dealers from all quarters.

The Upper Sungari valley, lying farther south and nearer to China, is much more densely peopled than the province of Tsitsikhar, and Girin, its capital, has alrendy become a large city. It occupics an admivable position in the midst of an amphithentre of wooded hills on the right bank of the Sungari, which is here about 1,000 feet wide. The place is called Chuan-chang, or "Boat-yard," by the Chinese, from the number of river craft
which are here built for the nuvigation of the Sungari. The strente are entirely paved with square wooden blocks or planks, and piles of lumbee obstrout the trattic ashore, while the stream is covered with rafts. The neightouring gold mines are the seene of comstant violence and boodshed, which the Chinese anthorities endeavour to suppress with atrocions eruelty. When Palludias visited Girin he had to pass through a line of stakes, each surmonated by a gory limann head.

In the marshy and fever-stricken phains lying ahout the Nomin and Sumgari confluence the only place of any size is Beffurl/ (l'etman), or Sincheng, which hus succeeded nuother town of the same nume lying nemrer to the junctien. Here converge the main routen of the two valleys, and a considerable trade is donc, espeecially with Kiranychruy-t: or S'inngtn ; that is, "Great Capital." 'Ihis town lies farthor south on thre great highway to China, and is the matural murt of all the nomad Mongol tribes of the Eastern Gobi steppes. But in this district the main ronte leals direetly north towards the Sungari. Along this line of busy trallic
 the main stremn is joined by the Khulan and on a bluff eomananding this triple junction stands the town of K/hultherthen.

The most northern Chinese city in the Sungari basin is Samsing, which lies on the right bank between the two rivers, Khurkha (Mam) and Khung-ho, und facing the mouth of a third. Sansing is the old Inlun, hula of the Manchus-that is, the eity of the "Three Families"-mad itw almirable situntiv, at the junction of four river valleys could not fail, in a more fuvourable clishate, to ruise it to a commercial centre of the first rank. But Sansing is conesod to the fu! "ury of the northern blasts, while in summer it is drenched by the heavy rains from the monsoons, which change the river banks into malurious swamps, flood the cultivaice? tracts, and drive the people to tuke refuge in the uphand valleys. Hence Sansing has remained little more than a mart for the peltries brought hither by the Manchu hunting tribes. Higher up the Khurkha vulley is neopled by numerous colonists, and here was founcled the important town of Ninguta, in the midst of the fertile valleys watered by the streams from the White Mountains. Ninguta occupies the most convenient site in Chinese Manchuria for the Russiun and Jupunese trade; for the routes converge here, which run over casy passes aeross the Sham-alin range east and north-east to the valleys of the Suifun and Tumen Rivers. Thus the commodious ports on the Gulf of Peter the cirentiare the natural outlets of the Ninguta district. But since the Russian occupation of the maritime province the fiseal measures of its new masters have resulted in the depopulation of the border-lands.

The main highway from Girin to Mukden, skirting the foot of the volcanic Taku-shan range, traverses scveral large places, such as Kucli-ehung, Kü̈iyuen, and Ti" ling, or "Iron Mount," so named from a range of hills abounding in ores, thanks to which Ti'ling has become the " Birmingham and Sheffield of Manchuria."

In the southern or Liao-he basin the ehief place is Mukden, the Shinyang or Fungtien of the Chinese, which is the present eapital of the three Manchu provinces. It lies in the midst of extremely fertile but treeless plains, watered by an affluent of the Liao-he from the east, and it is regarded as a holy city, because
it was the former residence of the ancestors of the reigning imperial family. It is surrounded by an outer earthen rampart 11 miles in circuit, within whieh is a second enclosure, 3 miles round, built of bricks and flanked with towers. The streets are much cleaner thain those of Peking, and like them lined with shops and crowded with busy throngs all day long. Northwards stretches the extensive and

Fig. ól.-Lower Tumen Valley and Possirt Bay. scale 1 : 700,000 .

industrious suburb of Pekuan, or " Northern Barrier," where the gold from Korea is refined. As an administrative centre, Mnkden enjoys great privileges, holding, in some respects, the same rank as the imperial capital itself. On the west stands a rich Buddhist temple, built in honour of the present dynasty, and on the opposite side, 3 miles from the outer walls, is situated the sacred enclosure containing the
tombs of the ancestors of the imperial family, access to which is forbidden under pain of death. Till 1804 the reigning emperors never fuiled to make a pilgrimage to the sacred eity of their dynasty; but since then the "holy face" (the portrait of the Emperor) is sent every ten years to Mukden with much pomp and ceremony.

South of Mukden the scaward route traverses a thickly peopled district, in which largo towns such as Liaoyang, Haïchung, Niuchucang, and Tiencheang follow in quick succession. The two last mentioned have been succeeded as ports of the Liao-he River by Yintion, or Yiugtze, which lies 26 miles south-west of Niuchwang. Although ice-bound for four or five months in the year, the trade of this place has rapidly inereased since it has been made a treaty port. It exports chiefly cotton, raw silk, hemp, pea oil, and coal to a total yearly value of about \(£ 2,250,000\).

The whole of South Manchuria abounds in coal, and the mines in the hills south-east of Mukden already supply the towns and metal works of the surrounding distriets. It is also used by the steamers plying in the Yellow Sea, and is said to be superior to that of Japm, and equal to the best Cardiff.

On the west coast of the peninsula projecting seawards between the Gulfs of Liaotung and Korea are several towns and ports, of which Kaïehece and Kinchew are the most important. On the side facing the Yellow Sea the chief place is Tayamg-ho, at the mouth of the river of like name on the Korem frontier. This river is navigable by light craft for 12 miles to the busy town of Takiu-shan, whieh is the outlet for the trade both of Siuyen, an old Manchu capital famous for its marble quarries, and of Fuuyıang-shan, the frontier bulwark towards Korea. In the latter place the mandarins of the two states meet to exchange the presents sent by their respective sovereigns.

West of the Liao-he the narrow strip of land between the west fronticr and the coast contains several trading-places and other towns, of which the most important are Singmiutön, on the route from Mukden to Peking ; Fakiu-min, on the East Gobi frontier; Kivangning, at the foot of the mountains to which it has given its name; Kingcheu-fu, 12 miles from the north-west corner of the Gulf of Linotung, important as a great outlet for the produce of Manchuria towards China; Ningyuen, 42 miles farther south ; lastly, Shanghai-kean, the largest in this region, on the Chinese frontier at the eastern extremity of the Great Wall, consisting of three distinet quarters separated from each other by walls and gates. The inner town, occupied with trade, is the most populous; the eastern comprises the military and administrative departments; while Ninghai, lying on the west side, is occupied ehiefly by Chinese immigrants. All three are enelosed in a common half-decayed cincture connected southwards with the Great Wall, and stretching some 3 miles along the coast, where it is commanded by a citadel. A little temple near a breach in the wall commemorates a legend which illustrates the sufferings of the unfortunate wretches engaged by the Emperor Tsin on the construction of these ramparts. A woman, finding the body of her hushand amongst those who had perished of their hardships, dashed her head against the wall, which immediately fell, burying her by the side of her partner in sorrows. "This woman is vencrated," says an inscription on the temple, "but the Emperor Tsin is for ever execrated."

\section*{CHAPTER V.}

CHINA.
General Survey.


HE term "China," applied by Europeans to this region, is unknown to the natives, and the \(T s i n\) dynasty, whence probably the Hindu form China, has for nearly fifteen hundred years ceased to rule over the plains of the Hoang-ho and Yang-tze-kiang. Nor do they recognise the epithet "Celestial," attributed to their empire, the expression Tien-hia, or "Uuder the Heavens," being applied by their poets to the whole "sublunary" world in general as well as to China itself. In ordinary language the usual expression is Chung-kwó; that is, "Middle Kingdom," or "Central Empire," in reference either to the preponderance gradually acquired by the central plains over the surrounding states, or to the idea common to so many peoples, that China was reully the centre of the world. To the usual four points of the compass the Chinese add a fifth—the centre; that is, China. Since the Manchu conquest the official desiguation is Tatsing-kwó; that is, the "Great und Pure Empire," or, perhaps, Ta Tsing-kwó, the "Empire of the Tsing, or Pure." Other expressions ure Se-hai, or "Four Seas"-that is, the Universe; Nwi-ti, or "Imer Land;" Shipa-shang, or " Eighteen Provinces;" Hoa-kwó, or "Flowery Land," a poetic form synonymous with "Land of Culture and Courtesy." The people themselves are the "Children of Han," or the " Men of Tsang," in allusion to two famous dynasties. They also call themselves " Jimin," an enignatical term commonly rendered "Black-haired Race." But there is no precise natural term of general acceptanco either for the country or the people, and the same is largely true of the mountains, rivers, provinces, and inhabited distriets, the names of which are mere epithets, descriptive, historical, military, or poetical, changing with every dynasty, or replaced by other epithets of an equally vague character.

The natural limits of China proper are sufficiently well defined. On the west the eastern extension of the Tibetan plateau, here separated by deep river valleys into divergent ranges, forms a clear frontier between the Chinese and the halfsavage Lolo, Sifan, and other hill tribes. Northwards the Great Wall indicates throughcut most of its course the parting-line betwecn the arable lands and the



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steppe or desert. East and south-enstwards the Pucific Ocean washes the seaboard, which develops a semicircular const-line over 2,000 miles in extent. Lastly, on the south mountuin ranges, pluteaux, marshy tructs, difficult river gorges, separate China from the Trans-Gangetic peninsula. Here, however, the frontier-line is often purely conventional, and in this direction China merges more gradually than elsowhere with the border-lands. It oceupies in the extreme east of the continent a space of almost cireulur form, with one semicirele traced on the mainland, while the

Fig. j2.-The Nine Phovinces accomdino to the Yukuno. Scale 1 : 22,000,000,

other is formed by the Pacific seaboard. Thus circumscribed, China represents about one-half of the empire, and comprises the rleventh part of the whole mainland, with a population estimated at about \(400,000,000\).

\section*{Progress of Discovery.}

For thousands of years the Chinese have been making observations on the form and relief of the land, at least in its general features. The Shuking, or
"Book of Annals," relates how the Emperor Iu, twenty-two centuries before the vulgar era, had a census taken, und had mups of the nine provinces engraved on nine bronze vases. These vases, luving been leposited in a temple, wero supposed to secure tho crown to their possessor, and in the middle of the third century n.c. an emperor land them thrown into the river to prevent them from falling into the hands of his enemies. The series of works executed under the direction of Yu constitutes probably the oldest topogruphical survey in the world. Mountains and headlands, lakes und rivers, quality and products of the soil, are all indicated in this description of the nine provinces. Legions of commentators, native and foreign, have studied this geography of China, and have ideutified its names; nor ean there be any doubt that at this remote epoch the land was already known even in detuil from the seaboard to the Gobi desert. It would seem to have been even

Fig. 63.-China accomino to the Native Groobaphers.

better known than in subsequent epochs, and most of the later commentaries had the effect rather of obscuring the original text of the Yukung, which was not thoroughly understood till subjected to the critical examination of recent European sinologues.

Under the IIan dynasty, in the second century of the vulgar era, there existed a veritable topographic office, the so-called Chifang-shi, intrusted with the survey of the land and the preparation of maps. Since that time geographical studies have never been neglected, but in all the native works there is an utter lack of the sense of proportion analogous to that betrayed in their paintings. An isolated peak, a range of mountains, and a whole orographic system all assume in their descriptions an equal importance, and are designated by the same name. A brook, river, lake, or sea is traced on the maps with equally bold touches of the pencil, while rivers, highways, towns, mountains, and coast-lines are all confused in the
general tableau. The mensurements lack precision, or have merely a generul value, and the li, or unit of distances, clanges according to time and place. The li is usually estimated at one-third of a mile, but there are great discrepancies, and 185, 192,200 , and 250 aro vuriously reckoned to the degree.

The itineraries of the first Europenn explorers are often truced in a somewhat vague manner, und of these pioneers of discovery very few have left a name in history. Marco Polo, who spent seventeen years in the country, was followed by other traders or missionaries, such as Pegolotti, Montecorvino, Odorico di Porlenone,

Fig. 54 --Kiang-bu, accordina to Mabtini.


Marignolli. In his description of the splendours of Cansai, the modern Hangehew-fu, Odorico appeals to the testimony of many Venetians, who had also visited the place. But exploration in the strict sense of the term, together with the direction or improvement of the native maps, did not begin till the time of the missionaries. In the seventeenth century Martino Martini, of Trent, reproduced the Chinese maps, modified by himself from his own observations, and accompanied by eritical documents. At the end of the same century the French missionaries, having become the official astronomers and mathematicians of the empire while retaining their relations with the geographers of the West, were able to explore the country
under favourable conditions, curefully preparing their itineraries and astronomicully determining several places on their mups. In 1688-9 Gerhillon was even requested to co-oprerate in determining the new frontier-line between lussiu and the Chinese Empire, und until quite recently his memoirs remuined our chief source of knowledge for some of the northern regions. Later on Bouvet, Regis, and Jartoux received orders from Kung-hi to construct the imperinl map of China, which is still the standurd to which molern explorers have to refer their observations. This general fusion of the old Chinese maps was completed in ten years, und by its memes l'Anville was enabled to prepare the nthes, of which all subsequent mups of China ure merely more or less faithful reproductions.

At the sume time recent seientific research in various parts of the empire has supplied copious materiuls for a more accurate map, especially in respect of the pusition of the towns, the river systems, and tho relief of the land. Most of the senbentrd, estuuries, islunds, und sand-banks have alrendy been enrefully surveyed by European und Americun hydrogruphers. Blukiston, amongst others, hus traeed the memaderings of the Yang-t\%e, thus supplying a solid basis across the empire for future chartographie work. Fritsche, Soenovsky, and above all Riehthofen, have comnected their itineruries with those of Siberia und Central Asia by a series of valuable astronomic observations, and the mutive geographers have now begun to take part in these labours. Some of the maps recently published by them show that fancy and :aysticism have already given place to a more careful study of nuture.

\section*{Piysical Features-Climate.}

Within its natural limits China proper enjoys a fair degree of geographic unity. The mountain systems run mainly in the direction from west to cast, thus everywhere opening easy routes from the coast inland. The plains on either side of the main ranges ure also connected by means of frequent gaps and easy passes, so that the few isolated plateaux are nowhere extensive enough to prevent the fusion of the surrounding populations. The national unity has been promoted in a special mamer by the disposition of the two great river systems. Both the Yellow and Blue Rivers flow mainly parallel with the equator, and although their middle courses are widely deflected north and south, the intervening uplands are almost everywhere crossed by accessible routes. The first serious obstacle is presented by the rugged upland region between the Yang-tze and its great tributary, the Min; but even here more than one practicable track has been followed from the remotest times. A still more easy approach is offered by the valley of the Kialing, while farther east the IInan-kiang flows through a broad depression obliquely connecting the two streams. Lower down their alluvial plains are merged in one vast lowland region, where the shifting course of the Hoang-ho has at different epochs reached an estuary communicating through two side branches with the Hoaï and the Yang-tze. The two great fluvial basins, comprising in Tibet, Kuku-nor, Mongolia, and China an area of over \(1,360,000\) square miles, may even be regarded as forming a common hydrographic system. The section of this vast area lying south of the

Mongolian steppes and eust of the Tibetun plateanx has naturally become the domain of a united agrienltural nution.

The southern lands south of the two great twin rivers are less solidly united with the rest of the empire. Here the momutains are more elevited than in the heart of the country, and are grouped in a greater number of indeprodent ridges, rumning, not west and east, but mainly south-west und north-mast. Nor can the Si-kiung, the chief river of this region, be compared with the two main streums of Chinu, either in extent or in the fucilities afforded ly its laterul valleys for freo inland communicution. Hence this portion of the empire constitutes a distinct territory, more neurly allied physi-
cully and ethnicully with Further India than with Chinu proper. The Southern Chinese differ widely from those of the centrul and northern recgions, both in speech and customs, and havo within the historic periorl frequently formed distinet politieal systems.

In the eastern he,msphere China corresponds with West Europe in its climute, products, and historic development. The mass of the land doubtless lies much nearer to the equator, for its northern frontier at the eastern extrenity of the Great Wall is crossed by the 40 th parallel, like Mount Athos, Minorea, and South Spain, while the whole coast south of the Canton estuary lies within the tropies. But the isothermal lines, so to say, deflect China proper northwards, imparting to it a relatively cold climate. Thus the mean temperature of South England

Fig. 65 .-Inutimbmala or Cuina
Scale 1 : 45,000,000.
 and North France, about \(50^{\circ}\) Fahr., answers to that of Peking and the Pei-ho valley. Shanghai corresponds in the same way with Marseilles and Genon, while the isothermal of \(68^{\circ}\) Fahr. intersects the South Chinese seaboard, Andalusia, and the south of Portugal. The extremes, however, are greater in China, which in this respeet is thus at once a more northern and a more southern region than temperate Europe. In the Old as in the New World the climate of the east is severer than that of the west coast, a fact due to the disposition of the occanic basins, and to the rotation of the earth from west to east. In Europe the conflicting atmospheric currents are those of the pole and the tropical trade winds, which are deflected by the earth's motion,
the former to the north-enst, the latter to the nouth-west. On the East Asiatic senbourd the vast busin of the Pacific diverts these curronts from their normal direction, wo that the polnr winds passing over Siberia devinit it the south amb sonth-enst in order to replace the warmer atmosphere dilitur \({ }^{\text {rom }}\) the tropical waters towards the prole. On the other hand, the marine bre , we attracted in sumuer by the "Yellow lamis" of the Homag-loo and the barren steppes and sauds of Mongolia, the Pacifie trude winds leing thus often deflected towards the interior of Chim. Further south the opposite currents from the Buy of Bengal and the l'acitie produce an unstable equilibrium, often succeeded by those terrifie typhoons (th:fun!, or "Grent Winds"), wi dreaded by mariners in those waters.

Thinks to the regular south-west wiuls and the marine monsoons, Chinu reccives a larger nverage qumatity of moisture than West Lurope. Aloug the coast the menn rainfall is rather more than 40 inches, and the greater regularity of the seasoms ins also largely eomeributed to the early development of agriculture in the Yung-tze aul Houng-ho basins. Neverthelens this advantage over Europe is comuterbalanced by extensive inumbations, and occasionally ly long periods of drought, followed inevitably by widespread famine.

\section*{Fiola and Fiauna.}

Thanks to its normally temperate, and in the south almost tropical elimate, China possesses an extremely rich flora, in which both Indian and European types are mingled together. In some intermediate southern tracts the same lands will grow the sugar-cane and potato, while the oak and bamboo flourish side by side in the neighbouring thickets. Proeceding northwarls, there is a gradual transition from the Indian to the Manchurian flora. The spread of tropical varieties has been stimulated by the inclination of numerous valleys towards the Malay peninsula. Hence a large number of Indian plants are found as far north as Canton, and even Amoy, under the 24 th parallel. Of theso one of the most valuable is the indispensable bamboo, which is used for building purposes, and even for food, the young sprouts being regarded as one of the choice delicacies of the Chinese cuisine.

A great contrast between the European and Chinese floras is presented by their respective forest speceies, which are more varied and of a more tropical character in China, although the woodlands have here largely disuppeared. Even in the Peking distriet, and throughout tho northern provinces, where for a portion of the year the climate is almost Siberian, fully one-fifth of all the plants belong to the arborescent orders. The evergreens especially are very numerous, the resinous species presenting more varied types even than those of North America itself. The laurel is a characteristic feature of the Chinese landscape, and the syeamore, ash, linden, muple, and many other forest trees belong to the same genera as those of Europe. But China is especially noted for the great number and beauty of its flowering shrubs. From the "Flowery Land" come the camellia, azalea, jasmine,

East Asiatio their normal te south and the tropieal attractel in sterpres und 1 towards the ay of Bengal those territio rs in those wons, Chinu Along the regalarity of griculture in er Europe is g periods of ical climate, ropean types ne lands will le by side in ual transition varieties has ay peninsula. on, and even is the indisor food, the the Chinese
nted by their cal character Even in the ortion of the elong to the the resinous a itself. The jeamore, ash, ra as those of beauty of its lea, jasmine,
and so many other lovely plants, which form the pride of our gardens und eonservatories.

Notwithstanding the lubours of many zenlous muturalists, the faum of Chim is wtill far from being thoroughly know:, and every suceessive explorer here discovers new species. Many have ulso probably disuppeared before the encronchnents of

Fig. 86. - Manoe of the Chingme Fauna. Scale \(1: 20,000,000\).

agriculture during the historic period. Thus the old accounts spenk of the rhinoceros, elephant, and tapir as still surviving in China proper; nor is it now possible to say when they became extinct. But what remains is nevertheless far more varied than that of Europe, although wild animals have become very rare in the cultivated districts. As with the flora, there is an insensible transition from the Indian to the Manchurian fauna. Monkeys, which may be regarded as here
representing the tropical world, occur in small numbers in the thickets and rocky caverns as far north as the neighbourhood of Peking. At least nine simian species are foumd in China and Tibet, and as many as a dozen of the feline order, including the tiger and panther, infest the less populous districts of China proper. Of two humdred mammalians not more than ten are common to China and Europe, and even theso present certain differences sufficient to constitute, according to some naturalists, distinet varieties. Relutively more numerous are the European birds, of which as many as 146 species in a total of 764 are found in China, which has also about 60 in common with America. The numerous Chineso varieties of the lizard, snake, salamander, and turtle are altogether unrepresented in Europe, and, with the single exception of the cel, all the fresh-water fish differ from those of the West, betraying, on the whole, a more general resemblance to those of North America.

\section*{Inhamitants-Tile Chinese Race.}

The Chinese people constitute one of the most distinct varieties of mankind. They are commonly regarded as a branch of the so-called Mongol type, although presenting a marked contrast to the nomad tribes of this name. The very expression Mongol, to which a more precise meaning was formerly assigued, denotes at present little more than the relationship of contact or proximity between the East Asiatic nations. The Chinese are evidently a very mixed race, presenting a great varicty of types in the vast region stretching from Canton to the Great Wall, from the Pacific seaboard to Tibet. But of these types the Mongol is perhaps the least common amongst the "Children of Han." The average Chinaman, considered as belonging to this assumed Mongolic type, is represented as of low stature, somewhat symmetrical form, although occasionally inclined to obesity, especially in the north, with round face, high cheek bones, broad flat features, small nose, small oblique and black eyes, coarse black hair, scant beard, yellow, brown, or even light complexion, according to the climate. The head is mostly long or sub-dolichoeephalous, whereas that of the Mongolians is rather round or brachycephalous.

The old Chinese writings, including those of Confucius, already speak of the contrasts presented by the physical traits and moral character of the different peoples in the empire. Those of the north are spoken of as brave, the southerners as endowed with wisdom, the men of the east as kind and friendly, those of the west as more upright and honest. But however this be, it is certain that the natives of the various provinces present the sharpest contrasts with each other. The true national link is their common culture raiher than any common racial type. For the aboriginal elements have been diversely modified by mixture with Tibetans, Tatars, Mongols, Manchus, Burmese, Shans, Malays, besides the Si-fan, Miaotze, and other still half-savage hill tribes, which have no collective ethnical designation. For thousands of years the agricultural populations of diverse origin settled in the Hoang-ho and Yang-tze-kiang basins have had the same historic destinies, speak dialects of ihe same language, and have become one nation. Many differences between the primitive stocks have been gradually effaced; but the differences are
rets and rocky simian species der, including oper. Of two l Europe, and rding to some uropean birds, which has also of the lizard, , and, with the 3 of the West, th America.
\(s\) of mankind. type, although e very expresled, denotes at tween the East enting a great eat Wall, from rhaps the least , considered as ture, somewhat ly in the north, , small oblique or even light or sub-dolichocephalous. y speak of the f the different the southerners \(y\), those of the ortain that the ith each other. common racial y mixture with les the Si-fan, ethnical desigse origin settled toric destinies, lany differences differences are
still conspicuous in some of the southern provinces, notably in Fokien and Kwangtung, the natives of which seem to form two races not yet thoroughly fused.

But whence came that primitive stock, which, blending with diverse elements, resulted in the great Chinese nation? The people formerly called themselves the " IIundred Families," and pointed to the north-west beyond the Foang-ho as the region whence the migratiug groups descended to ihe fluvial plains, where they either expelled or subajued and absorbed the less civilised aborigines. Nor is it at all unlikely that the vast and fertile region of the "Yellow Lands," lying mainly north of the Hoang-ho, played a leading part in the early history of the Chinese people. Here was room for millions of agriculturists, who may have gradually migrated castwards according as the lacustrine basins dried up and the sands of the desert encroached upon the cultivated plains of Central Asia, where the forefathers of the Chinese had dwelt in close proximity with those of the Turki, Iindu, and Iranian races. Every river valley became a highway of migration, and consequently of dispersion for the peoples of higher culture, and the arts, manners, and specel of the carly settlers may have thus been gradually diffused from north to south throughout the empire.

Like those of Europe, the peoples of China have had their stone age, and the collections of the extreme East include implements and objects of all kinds similar to those of the palmolithic and neolithic periods in the West. Sladen has brought from Yunnan a number of jade hatchets, which, as in Europe, were formerly supposed to bo " thunder stones," bolts hurled to the earth by the god of thunder. The Chinese have divided the prehistoric ages into three periods corresponding with those of the Western archæologists. "Fu-hi," they say, " made weapons of wood; Thin-ming, of stone; Shi-yu, of metal." But after the introduction of iron implements the stone arrow-heads were still credited with a symbolic virtue, and in the hand of the sovercign regarded as emblems of royalty. Down to the twelfth century b.c. the Chinese emperors received in tribute stone arrow-heads, and long after that time these arms continued in use amongst the wild tribes of the western highlands. Amongst the Chinese ideographic characters there is still a particular sign to indicate a stone used in manufacturing arrow or dart heads.

The Chinese nation has thus passed through successive stages of progress answering to those of other civilised peoples, only in China the early evolutions were brought sooner to a close than eisewhere. The European races were still rude barbarians when the Chinese were writing their history some four thousand years ago. In spito of all their shortcomings, the Chinese annals constitute the most authentic and complete historical record possessed by mankind. Here are faithfully registered the political vicissitudes of the land, as well as the natural phenomena and astronomic observations by means of which the dates of historic events may be tested or determined.

\section*{The Chinese Language.}

But notwithstanding their ancient culture, the Chinese are distinguished amongst all civilised peoples for the still primitive form of their speech. In this 12
respect they lave remained in a stage of development answering amongst the Aryans and Semites to the prehistorie cpoch. Their dinlects eontain nothing but a small number of monosyllabic roots expressing merely general ideas, and conveying a definite notion only in the sentence. In virtue of their position alone they become nouns, adjectives, verbs, or particles, und gramnar is thus reduced to a question of syntax. And, strango to say, of all the dialects, the so-called " Mandarin," or Kican-hoa, eurrent in Peking, is the poorest, containing, according to Williams, no more than 460 distinct monosyllables. Those of Shanghai and Ningpo are not much richer ; but that of Swatow, in the south-east of Kwangtung, has 674 , and that of Canton as many as 707. But the riehest of all is that of Changehew, near Amoy, whose 846 roots yield, according to Medhurst and Douglas, as many ns 2,500 different somds, thanks to the variety of its intonations; for the poverty of sounds obliges the Chinese, like other peoples of monosyllabic speeeh, to vary the sense by means of the tones with which they are uttered. Hence the vague and undeeided character of Chinese pronuneiation, which, moreover, varies immensely from province to province and from city to city. Thus the sign rendered into English by the word "child," and found in a vast number of geographical names, is pronounced \(t s\) in the north; \(t z\) or \(d z\) in Canton; chi in Macao. So also the sign for two is diversely pronounced eul, olr, \(u l, w \cdot h, w h, h u\), \(u!e, n g i, z h e, z h i, e\), and \(i\).

This variety in the pronunciation, combined with the poverty of words, gives all the more importance to the shing, or tone, which plays a greater part than the mere phonetic utterance of the sounds. Thus the sign for water may be indifferently pronounced sui, shui, sh'ui, or even chvui, and will be intelligible to all, provided it be uttered with its proper ascending tone: uttered with the descending tone, none will understand it. The number of tones varies considerably, some dialects eontaining four, others five, six, or even seven, and that of Fokien possibly more than twelve, if account be taken of all the delicate shades of intonation characteristic of that dialect.

Thanks to these intonations, thousands of meanings may be evolved from the few hundred phonetic roots. Kang-hi's dictionary contains 44,449 signs, each representing a grc \(\cdot\).p of distinct neanings, but a great number of which will be pronounced alike. Thus over a hundred and fifty different characters, each denoting a particular series of ideas, are all pronounced \(i\). The philosophic writings can only be understood by readers with the text before their eyes, and whenever the conversation rises above the usual eurrent of ideas, recourse must be had to the pencil to make the subjeet intelligible. This astonishing poverty of phonetic sounds is commonly attributed to the premature culture of the people, whose speech became fixed by the official scribes and academieians at too carly a date. The nation has never since been able to overcome the artificial obstruction thus opposed to the free evolution of their language.

The Buddhist missionaries often vainly attempted to introduce one or other of the syllabic alphabets of India, based on the Devanagari. The Christian missionaries also have employed the Latin alphabet for prayers and hymns, which the

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one or other of hristian missionymns, which the
converts learn by heart after the senso has been explained to them. But to be of any value for literary purposes these letters require to be burdened with so many diacritical marks that they become more difficult than the Chinese ideographs themselves.

But under the influence of Western ideas a gradual transformation is taking place. Many polysyllabic words, detested by the purists, have already aequired the

right of eitizenship, and have a natural tendency to modify the Chinese method of thought, and assimilate it to that of the Europeans. Hundreds of strange forms have also been introduced in the treaty ports to express foreign notions. Such are "steam-air-carriage," "steam-air-bcat," "air-swim-steam," meaning locomotive, steamer,
and balloon respectively. These compounds, so alien to the genius of the national speeeh, are ulready current not only in the spoken language, but even in popular writings. The chunges that have taken place in the Aryan linguistic family during the historic period are now going on under our very eyes in the Chinese language.

The nutives of the various provinces wonld have long ceased to be able to communieate together but for the common ideographic writing system, which can be read not only in China, but also in Korea, Japan, Annam, and Siam. The most marked dialeetic varieties are the "Mandarin," or Court language, current throughout the northern and many of the central provinces, the Kwaugtong, Fokien, and Chekiang in the south-eastern proviness, which are quite unintelligible to the inhabitants of the rest of the empire. The Nanking dialect is a form of the Mandarin, approaching nearest to the Chekiang, which, aceording to Edkins, best preserves the primitive elements of the common national specei.

\section*{Religion.}

In religion there are no such marked differences as in language between the natives of the northern and southern provinces. In the various districts divers rites are praetised, which, however, meige so imperecptibly together, that it seems impossible to draw any sharp line between them. The same iudividuals may even be at once Buddhists, Taoists, or disciples of Confucius. In virtue of his position the Emperor himself belongs to all three religions, and serupulously fulfils their observances. There is, in fact, more fundamental resemblance between them than might be supposed from the ceremonies and religious treatises. The ju kiao, commonly referred to Confucius and conformed to by tho lettered classes, is based on the old national worship. The tan kiao, or Taoism, completely forgetful of its founder's elevated teaching, has returned to the ancient superstitions, and is now little more than a system of magic. Lastlv, the foreign origin of the fil kiao, or Buddhism, has not prevented it from baving also become thoroughly imbued with the national ideas, or from accepting the outward national observances.

At the dawn of history, some four thousand years ago, the national cult consisted in the worship of natural objects. All the phenomena of the outer world were supposed to be the work of good or evil spirits, to be propitiated by prayer and sacrifice. Trees, rocks, running waters, the whole land, the scas, and the world itself, were all equally animated by some special deity, while above this lower nature, thus poopled by invisible beings, the boundless regions of the heavens were themselves full of angels or demons. Man, product of all the natural forces, was himself a god, although one of the feeblest; hence obliged by supplications and conjurings to guard himself against so many other beings in league against him. In this multiplicity of spirits a certain hierarchy was gradually estr.blished. First came Tien, or "Heaven," enveloping the earth, encompassing all nature, illumining it with its rays, and thus merging in the Shangti, or "Supreme Lord," the active principle of universal nature, as opposed to \(T i\), or tho "Earth," which reecives and matures the germs. For three hundred years European scholars have been
f the national ven in populur family during ase language. e able to comich can be read e most marked hroughout the and Chekiang inhabitants of rin, approachves the primi-
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l cult consisted er world were by prayer and and the world ove this lower e heavens were ral forces, was pplications and te agrainst him. blished. First ure, illumining rd," the active ch reccives and ars have been
wrangling about the true meaning of this term or attribute "Shangti " upplied to heaven, and they ask whether it may be translated by the word "God," taken in the theological sense. Abel Remusat supposed he had even discovered the nume of Jehovah in the "Taoté King," or "Book of the Way and of Virtue," where the three syllables I, Hi, Wei, ench taken from a different sentence, might represent the sacred name of the Jewish God. But modern eritics generally reject all such subtle proofs of relationship between the religions of the East and West. Before

Fig. 68.-The Nine Sacked Mountaing.-The C'hew Efoch. Scale I: 21,000,000.


300 Miles
the introduction of Buddhism the evolution of religious thought in China seems to have been spontancous, starting directly from the hasis of spirit worship.

Fancying themselves encompassed by genii, the Chinese supposed that their favour was to be secured, like that of men more powerful than themselves, by prayer and petitions, which required neither a priesthood nor a regular liturgy. Hence the head of each patriarchal family offered food and perfumes on behalf of his kith and kin, while the head of each clan or commune did the same for all its members. In these rite; there was no place for a sacerdotal class, und priests are even formally excluded from the religious feasts in which the Emperor appears.

No revelation having been made from ubove, no interpreters of the divine word were needed; but a hierarehy corresponding with that of the spirits themselves was naturally developed in the social body. Thus to the Emperor was reserved the privilege of presenting offerings to heaven and earth, to the chief rivers and to the sacred mountains of the empire, which from age to age varied in number from five to nine. The feudal lords sacrificed to the secondary deities, while the devotions of private persons were restricted to trees, rocks, and streams. Worship having become one of the functions of the Stute, its minutest details were regulated by ceremonial codes. Between tho speceh and religion of the Chinese there has thus been maintained a renarkable amulogy. Both have been refined to the utmost, but both still remuin at one of the lowest stages of human culture.

Tho propitiatory sucrifices form an element which has been attributed rather to the surrounding populations than to the Chinese themselves. From the nomad Mongol tribes the "Sons of IIan" aro supposed to have adopted the sanguinary rites formerly practised on a largo scale. Hundreds of courtiers have at times ceisused themselves to be buried alive in order to accompany their master to the vither world. At the death of Hoangti, about two loundred years before the Christian era, several of his wives and body-guard followed him to the grave, and ten thousand working-men were buried alive around his funeral mound. Traces of these savage rites still survive in remote districts, where the people often seek to buard against witcheraft by throwing their new-bom babes into the running waters. Wishing to put a stop to these abominations, a mandarin on one occasion eaused several of the infanticides to be cast into the Kiang, charging them to convey his compliments to the water gods.

To Confucius and his disciples is usually attributed the cessation of human sacrifices in China. Yet long before that time religious sacrifices had ceased to be offered, while long after it such rites continued to be occasionally practised. Confucius deserves none the less to be regarled as the true founder of the national religion, as regulated by the book of ceremonies. He aimed especially at the revival of the ancient practices associated with ancestral worship, the glorification of the past, as handed down by tradition being, according to him, the best means of insuring the permanent prosperity of the empire. The supernatural element, which plays such a large part in other systems, he almost excludes altogether. "How," he ask;," should I pretend to know anything about heaven, since it is so difficult to cearly understand what takea place on earth?" "You have not yet learnt to live," he said to one of his disciples, "and you already rave about what may happen to you after denth." The duties of man to his superiors, to his neighbour, to the State, were what he was most concerned with, and religion in the strict sense of the term was dealt with only so far as it formed an element in the general system of government. Well balanced by nature and habit, without religious zeal, and ever striving to observe the golden mean, the Chineso have recognised themselves in the sage of Shantung, who has gradually taken the foremost rank in the memory of his people. The accurate historic records left by his disciples, as well as his own simple life, have prevented his name from being obscured by myths and miracles.

\section*{THE FENG-SHUI.}

But although he has escaped deification, his moral influence has increased from age to age. Four hundred years after his death his only title still was Kung, or " leader;" eight centuries later on he became " the first saint," after which his statue was clothed in a royul robe and crowned with a diadem. During the Ming, or last native dynasty, he was declared " the most holy, the wisest, und most virtuous of teachers." After his death a colony of diseiples settled romid his grave as vassals of his family, sixteen hundred temples were raised to his honour, and he was solemnly recognised as the "teacher of the nation." Exeept those who havo receivel divino worship, no other mortal has ever been the object of so much vencrution. When the Emperor Hoangti ordered tho destruction of the old books, and nspecially of the Shuking, or "Book of Annals," composed by Confucius, four hundred and sixty of the lettered class perished in the flames with the writings of Fig. 60.-The Taint, on Maotc Lookingtheir master.

\section*{The Feng-shur}

But a public cult, however well regulated by official ceremonies, could not embrace all the popular superstitions, or conjure all the invisible demons hostile to mankind. Hence there remained a considerable number of unofficial praetices embodied in the feng-shuithat is, "wind and wate""-a system which, by a play of words, is said to be "invisible as the wind, untenable as the water." It may, lowever, be described as the collective body
 of ceremonies, by means of which we propitiate the spirits of air and water-that is, all nature from the stars of the firmament to the wandering ghosts of the dead. Two prineiples govern the uni-verse-the yang, or male prineiple, represented by the sun, and the yin, or female principle, represented by the moon, the former vivifying and propitious, the latter hostile and deadly. Yet nothing could exist but for this mingling of the two prineiples, through whose union everything is born and flourishes, and the perfect understanding of which confers immortality. In every house is seen the image of a tiger bearing the taiki, on which are represented the yang and yin interpenetrating each other in a magic circle, and surrounded by lines of various lengths indicating the cardinal points and all nature. These lines are the famous diagrams which have served to compose the Yi-king, or "Book of Transformations," attributed to Fchi, and the sense of which so many native and European scholars have vainly endeavoured to fathom.

The faithful observers of the feng-shui are bound to be guided in all things by the magic urts, which substantially resemble those practised elsewhere. The shades of their forefathers are amongst the beings who fill the earth and circumambient spaces, and who exercise a good or baneful influence over the destinies of
the living. The Chinese recognise in the individual three distinct luen, or soulsthe rational residing in the head, the sensuons in the breast, the muterinl in the stomach. Of these the first two may ufter death be fixed, one in the memorinl tablets, the other in the tomb; but the third escupes into space, seeking to enter some other berly, and its influence may become hostile to the fanily if they negleet their religious observances. The huen of ehildren aro most to be feared, because they were still imperfect at the moment of denth, and unappensed by a regular cult. The incense sticks burning at the entrance of the houses und shops are to prevent these und all other mulignant spirits from entering.

The choice of a gruve is of the last importance. Should the soul of the decensed be exposed to baneful influences, it will certuinly endenvour to avenge itself, und its anger will be shown in the endless disasters that may full on the fumily. The goorl and evil genii, who " como in the cloud and vanish in the fug," are eternally wandering over the surface of the earth, und the essential point is to build the houses, erect monuments, lay down rouds, construct canals, and sink wells in such a way as to obstruct the flight of the hostile and favour that of the beneficent spirits. But the knowledge of all this is extrenely difficult, and all calamitios are attributed to the carclessness or ignormee of the professor of feng-shui. In every part of the country mines and quarries have been filled by the local authorities, because the inhabitants have complained that they have cuused bad harvests by allowing the demons to pass by. Lawsuits often occur between neighbours aceusing each other of having made changes on their lands, turning the good spirits aside. A single tree planted on the right spot, or a tower raised on an eminence, will at times suffice to place the whole district under a happy conjunction of the elements. From the north came the bad, from the south the good spirits, and in generul winding streams or gently rounded hills promote prosperity, while sharp turnings and steep bluffs aro dangerous to the surrounding populations. Hence straight lines must be avoided, and all the roofs of the buildings are curved upwards, so that the evil influences may be turned aside.

In some respects the feng-shui constitutes the rudiments of natural science. According to its professors it embraces the study of the general order of things, their numerical proportions, their inner life and outward forms. When the European engineer digs straight trenches in the ground, throws bridges athwart the torrent, tunnels the hills obliquely, lays down iron rails across the graves of the dead, the people look on with a feeling of downright dismay. The great opposition to railways is due not only to the fear entertained by the Government that Europeans may gradually make themselves masters of the land, but also to the traditional respect of the people for the earth that bears and nourishes them.

Tho religious system founded by Lao-tze, and which originally differed essentially from the national religion represented by Confucius, has gradually reverted to the old superstitions, and now differs little, if at all, from the practices of feng-shui. Lao-tze did not, like Confucius, look to the past to discover a model of conduct for the future. He sought for absolute truth, without troubling himself with precedents drawn from the history of the emperors. Heedless of good or evil
cin, or soulsweterial in the the memorial king to cuter f they neglect eared, because a regular cult. are to provent
f the deceased ago itself, and fumily. The ' are etermally \(s\) to build tho wells in such the beneficent calamities are ui. In every :al authorities, ad harvests by bours accusing l spirits aside. inence, will at f the elements. and in genoral sharp turnings IIence straight pwards, so that

\section*{atural science.} rder of things,

When the ridges athwart e graves of the reat opposition ent that Euroit also to the es them. inally differed has gradually m the prnetices iscover a model publing himself of good or evil
spirits, or of ancestral shates, he studied the first causes of things, and his language, as far us it can be ascertainel from the obscuro text of the 'Taote-king, recalls that of the Western philosophers. For him "matter and the visible world are merely manifestations of a sublime, eternal, incomprehensible prineiple," which he calls Tro ; that is, the "way of salvation." Whoso controls his passions may eseape successivo transmigrutions, and through contemplation pass directly to everlasting bliss. Such was the doctrine of the great mystic and his immediate sucecssors. But the 'laoist priests soon claimed to have diseovered immortality even in this world, and sought the favour of emperors by means of elixirs and nostrums. Thus was Thoism gradually confounded with magic, and of the tenchings of Lan-tze nothing remained but an empty name. The Taoist priests, most of whom, like the Buddlist lumus, tuke vows of eelibacy, are the magicians, wizards, "table-turners," and "modiuns" of China. Without any common body of doctrine, some are mere Shamanists, others astrologers and fortune-tellers. 'The learned generally affect to despise Taoism, although some of its practices are imposed on the mundarins, or introduced into the national calt, as observed in presence of the Emperor. The Taoist high priest, or "heavenly doctor," who claims direct descent from Lao-tze, receives a subvention from the State in exchange for the amulets, holy objects, and instructions on red or green paper which he distributes throughout China.

\section*{Budnirism.}

The Buddhist religion, more faithful than Taoism to its original doctrines, has secured the adherence of the great majority of the popu-

Fig. 60.-Bumhot IMast.
 lation. Although of foreign origin, it has become at least outwardly the national religion, but in a form which closely assimilates it to the primitive spirit worship. It was introduced twenty-two centuries ago, and three hundred years afterwards received official recognition. Yet it had to struggle both against the disciples of Confucius and the Taoists, and did not reach the regions south of the Yung-tze till the sixth century. At this time thirteen thousand Buddhist temples had been erceted, but the alliance had already begun with the old national cult. The spirits of wind and water, the shades of the great, all the members of the Chinese pantheon were easily introduced into the multitude of Boddhisartas, and other more or less incomplete incarnations of Buddha. To make room for all, new degrees of holiness and beatitude were added to those already in existence. The domestic gods remained under other names by the side of those worshipped by the community, and the number of ceremonies was increased without exciting the suspicion of the people. To the cultivated classes

Buddhism offered its metaphysieal mubtleties, while it gained than adherence of the lowly and wretched by admitting them to its pompous ceremonial, and promising redemption from their sufferings in the after-life. The most widespread Buddlist work in China is the "White Nenuphar," a collection of consolatory and loving

words and promises. Of all the Buddhist sects the most popular is that which worships Kwanyin, the only woman included in the number of Buddha's disciples. She is the goddess of merey, the patroness of childless women, of mariners threatened by shipwreck. She is often represented with a child in her arms, and many of her images are exactiy like those of the Madonna, whose
crenee of the ad promising cad Buddhist \(y\) and loving child in her lonna, whose
worship was contemporaneously developed at the opposite extremity of tho Old World.

The flourishing period of Buddlism in China is comprised between the sixth and eleventh century, when the monks, fired by their zeal for the propagation of the faith, traversed all China and tho neighbouring lands. Then were made those important explorations, not all the records of which have yet been trunslated. Then ulso were made the Chinese translations of nearly fifteen humdred Sumskrit works, most of which no longer exist in the originul, und which eontuin the mont vuluulle documents on the history of Buddhism. During this perion of eurly fervour the country was covered with those comntless ta, or pagorlas, without which Jiuropenns can hardly imugine a Chinese landscape. In these temples the rites consist of hymns, offerings, prostrations, procossions, and eternal repetitions of the syllables \(O, \mathrm{mi}\), to, f , the Chineso phonetic transcription of Amitabha, one of the Hindu names of Buddha.

The multitude of monasteries attests the former preponderunce of the religion of Fo, or Buddha. Like the pagolne most of the larger ones date from it least several hundred years ago, and are , nostly in ruins, overgrown with shrubs and rank vegetation. The decline of Budihism is evident, and in many districts it has already been reduced to an empty ritual left to the monks. Emperors and high functionaries have often issued edicts against superstitious practices not recognised in the official ceremonials, and warning the people against the priestly "impostors who rob the beehive." But although the public aro daily forsaking the bonzes, they continue none the less their religious practices. The secpticism of the lettered classes has created a fulso improssion as to the real sentiments of the people, whoso worship of their housohold gods, prostrations, pilgrimages, bear witncss to the vitality of their belief. They are not even satisfied with one, but practise all three of the national religions, worshipping their ancestors with Confucius, conjuring the genii with the Taoists, communing with the saints in conformity with the Buddhist doctrine. In other respects the three cults harmonize perfectly, the first appealing to the moral side of man, the second to his sense of self-preservation, the third raising him to the higher world of thought and imagination. Thus the three, as the Chinese themselves say, "make but one religion." The priests of all the rites frequently officiate at funerals.

\section*{The Jews and Mohammedans.}

Amongst the foreign religions introduced at various times is the worship of Jehovah, which, however, has almost become extinct. The Jews, who are often called "Blue Mohammedans," from the colour of their rabbis' head-dress and shoes, are regarded by many Chinese as forming a sect of Islam. They are also called Lehtze-kin, or "Cutters of Veins," and Tan̂-kin-kedu, or "Extructors of Sinews," in reference to their manner of killing and dressing the animals caten by them. They were formerly far more numerous, and many rose to high rank in the State; but they are now reduced to a few hundred souls, nearly all settled at Kaïfung-fu, capital of Honau. The old Jewish colonies of Nanking, Peking,

Ning(x), have all died out, and the conversions to Mohammatanism and the Chinese nutional religions have gradually redneed the Semitic imangruate to a mere handful. Even these speak Chinese ouly, und their present rabbis, the "Aronists," or "Aonites," us they are called, read the Hebrew texts nccorling to the Chinese pronunciation. Thus the name of Isruel becomes in their month Ye-se-lo-ni. Aceording to thoir unnimons tradition they belong to the tribe of Asher, and entered Chima during the Han dynasty (202 n.c.-264 a.n.). They eall their

Fig. 62.-Domegtic Altah.-The Smlino Buddia.

country Tienchew, which is the Chinese name for Ceylon, and when the European Jews recently succeeder in opening relations with them, it wis found that they had lost all sense of national cohesion. The synagogue was in ruins, no one could rend the Pentateuch, and rewards were even offered to any persons capable of interpreting it. They supposed that Mecen and Medina were their holy eities, and arrangements were being made for definitoly changing their religion.

On the other hand, the Mohammedans have aequired great influence, and according to the lowest estimates number at present at least \(20,000,000\). They are
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said to form a majority of the population in Kansu, and one-third in several distriets of China proper. To these must be udded the Dunguns and the other Mussulmans of Zungaria, Kulja, and Eastern Turkestan, in order to form an adequate idea of their power and influence in the empire.

All the Chinese Mohmmedans are collectively known us Hwei-hwei, a term formerly applied to the Uigurs, while they call themselves Kino-mm, or "Religious people," in contradistinetion to the other Chinese, regarded by them as Unbelievers. The Mongolian epithet Dungan, usially explnined to mean "outcasts" or " loafers," is restricted to those of the north and north-west, who hold no direet intercourse with their co-religionists the "Panthays" of Yuman. Nor do the Chineso Mussulnans anywhere form a homogeneous ethnical group. Descended from the Uigurs, Tanguts, and Tatars, they are intermingled in the north and west with Chinese proselytes, while in Yuman the Turki and Mongol elements are represented only by the descondants of the soldiers settled here by Kublai Khan. Since the aceession of the present Manchu dynasty all are obliged to wear the pigtail, and their women have even been eompelled to conform to the lurbarons Chinese fashion of preventing the natural growth of their feet. Nevertheless, Mohammedme can always be distinguished from the other natives by their haughty bearing, frank expression, and in the west by the practice of carrying arms. Abstaining from alcoholic drinks, tobacco, and opium, they are generally more healthy than their neighbours, while their spirit of clanship insures for them a material prosperity far superior to that of the surrounding populations.

According to the unanimous tradition Islam first reached the northern provinees during the reign of the Emperor Taïtsung in the seventh eentury, when Ibn Hamsa, related to the Prophet, settled with three thousand immigrants in Shangan, the present Singan-fu. Being well received, they freely raised their mosques, and their ministers were invested by the Government with a certain civil authority over their congregations. About the same epoch others entered Yunnan, and the Chinese annals of the year 758 speak of Arab pirates who sacked the suburbs of Canton and plundered the imperial granaries. The communieations between the Yunnan Mohammedans and the rest of Islam have at all times been maintained either through Canton or more directly through Bhamo and Burmah. The standard of education being higher in this provinee, natives are always found capable of interpreting the Koran and the Arabic prayers recited in the mosques.

At present the northern Hwei-hwei keep up their relations with their western brethren through Zungaria. Here the Uigurs as well as the Tanguts of Kansu, formerly Buddhists or Nestorians, were converted to Islam when this religion was adopted by their fellow-countrymen in the Jagatai State. Their numbers were increased by immigrants from East Turkestan, and by the Moslem Mongolians left in Zungaria by Tamerlane. Thus they gradually aequired the aseendaney in this purt of the empire, where are situated the two cities of Salar (Huchew) and Kinkipao, the Mecea and Medina of the Chinese Empire. Some of the Kansu towns have hundreds of mosques, and their Mohammedan inhabitants have monopolized the whole trade of the country.

Compared with their co-religionists elsewhere, the Inwei-hwei are free from uggressive funaticism, many submitting to the public examinatious in the moral precepts of Confucius, und practising the rites of the State religion. As Mamdurins they even offer the preseribed sacrifices in honour of the local divinities. Nevertheless they have by no means lost the spirit of proselytism, und they keep earefully aloof from the surrounding "pagan" populations. All ure Sumnites, divided into the two sects of the Shafich and Azemi. But in the presence of the common enemy

Fig. 63.-Regions wasted by the Mghammrdan Insurhections.
Scale 1 : 45,000,000.

all differences are forgotten, rich and poor bringing their offerings to the imams of both rites.

In Yunnan also the Panthays made common cause with several of the Miaotze hill tribes against the hated Manchu. Here the first rising was caused by rival interests in a mining district, where Chinese and Mussulmans were working in separate groups. In the early conflicts the advantage generally lay with the latter, and to put an end to the disorders the Mandarins planned a scheme of wholesale extermination. A day in the month of May, 1856, was chosen for the massacre, and in the districts where they were in a minority most of the Panthays were butchered. But elsewhere they held out successfully, and even seized the rich city of Tali-fu, a stronghold of the first order, through which they procured arms and supplies from Burmah. In 1860, Yunnan-fu, capital of the province, fell into their hands; but many of the chiefs were bought over, and turned against their
co-religionists. Nevertheless the eivil war raged for thirteen years longer, when it was concluded by the slaughter of 30,000 Panthays in the streets of Tuli-fu.

In North China the insurrection began in 1860 with the massacre of the Chinese of Hoachew, east of Singan-fu. At first the Chinese and Mongolians everywhere escaped to the mountains or deserts, or even allowed themselves to be killed without resistunce. In Shensi and Kunsu the work of destruction was carried out with pitiless fury, and here the heads of families were seen to slay their women and ehildren in order to devote themselves entirely to the holy war. In the valley of the Wei not a single village remained standing. With the exeeption of the Christians, all the inhabitants who could not escape were put to the sword; the prisoners were burnt alive; old und young alike were murdered; and the dead were numbered by the million. In certain distriets a few solitary buildings still standing exeite the wonder of strangers, and but for the impregnable works of a few large cities, the northern and western provinees would have been entirely freed from their Chinese inhabitants. The country seemed finally lost to the empire, when the lack of cohesion and a common plan of operations proved fatal to the Dungan rebels. After fifteen years of strifo vietory remained with those who commanded the best-disciplined troops. The Chincse generals successively recovered Shensi and Kansu, and after seizing the military stations in the Tianshan they were able to scatter the last embers of revolt in the Zungarian steppes. But although thus vanquished at both extremities of the empire, the worshippers of Allah still constitute a power in the State, and certain writers, perhaps somewhat prematurely, foresee the time when they will become the ruling element in the extreme East.

\section*{The Christians.}

Although they entered China contemporancously with the Mohammedans, the Christians are far less numerous, and their influence may, relatively speaking, be regarded as of no account. But it was not always so, for the Nestorians from Mesopotamia and Baktria had at one time developed flourishing communities in the empire. Besides the evidence of the native records, there existed till recently a rock inseription commemorating the entry of the Christian missionaries into China. Discovered near Singan-fu in 1620, and since frequently visited by Europeans, this stone was probably destroyed during the Taïping rebellion. It was seen so recently as 1867 by Williamson, but it had already disappeared when Richthofen visited Shensi in 1872. About its authenticity there can be no doubt, the inseription having been frequently reproduced, and a correct copy deposited in the National Library. According to this document the Syrian missionary, Olopeunn, reached China in 635 with the sacred writings and images, and three years afterwards obtained permission to build a church in Singan. The new belief spread rapidly, and in spite of subsequent persecutions, especially in the ninth century, Christian communities wero found in all the provinces when Marco Polo traversed the country. To these communities is probably due the legend of
"Prester John," which haunted the imagination of the Western peoples during the Middle Ages.

Christianity is no longer represented in China by the Nestorim seet. The Uigurs, Tatars, and other northern ruces, who had conformed to this religion, were converted to Islam probably about the time of Tamerlane. It was these very deseendants of tho Nestorians who, under the name of Dunguns, recently threatened the integrity of the empire. The Nestorians were sueceeded by the Roman Catholic missionaries, and towards the close of the thirteenth century Montecorvino founded churches in China and became Bishop of Peking. Later on these proselytizers were received with less favour, and were even opposed by their own countrymen, the European traders of Macao, who feared to be bunished from the empire if they favoured tho Christian propaganda. But in 1581 the Italian Jesuit, Ruggiero, penetrated to Canton disguised as a native, and ho was followed the next year by the celebrated Ricci, a shrewd man of the world, who secured the favour of the great by his vast learning, and who at last became a court pensioner. The Jesuit missionaries, who continued the work of Ricei, pursued the same policy, and made many converts amongst the higher functionaries. They were careful not to condemn absolutely the national rites, and especially those associated with ancestral worship. They even tolerated the offerings of fruits and flowers, and the sacrifices in honour of the dead, regarding these ceremonies merely as evidences of filial devotion. But the Dominican friars, who arrived towards the end of the seventeenth century, denounced all these acts as idolatrous, and, as in South America, an open rupture took place between the two religious orders. A bull issued by Clement XI. in 1715 condemned the Jesuits, and ever since the native neophytes have been required to renounce the traditional rites of their country. IHence conversions have become rare, and mostly restricted to the poorer classes, whom poverty exempts from performing the funeral ceremonies. Infants also rescued during times of war or distress, or even purchased from the famine-stricken, are brought up in the Catholic faith, and thus are reeruited the Christian communities of the empire. "For a hundred francs," says Bishop Perrocheau, "we are able to regencrate at least 300 or 400 infants, of whom two-thirds go straight to heaven." In 1876 there were about 300 European missionaries, besides hundreds of native priests and catechists, ministering to from 400,000 to 500,000 faithful, with a yearly increase of about 2,000 .

The Protestant missions were first opened in 1842, after the treaty of Nanking, and were for a time restricted to the five treaty ports. Since 1860 they have been gradually diffused throughout every part of the empire except Tibet and Eastern Turkestan. Numbering about 250 , nearly all English and Americans, and assisted by over 600 natives, the missionaries have founded over 20 hospitals and nearly 350 schools, attended by 7,500 pupils. In 1878 the Chinese Protestants numbered about 50,000 , chiefly centred in. Fokien. Most of the converts are drawn from the Buddhist sect of the Ningpo district, which abstains from eating flesh. To the opium trade, imposed by Great Britain on China, is largely due the failure of the Protestant missions, the natives naturally asking themselves whether
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seet. The gion, were these very threntened he Roman mtecorvino hese prosein country e empire if suit, Rugd the next the favour oner. The policy, and reful not to with aneeses, and the vidences of end of the is in South rs. A bull e the native eir country. orer elasses, also reseued trieken, aro ommunitics a are able to to heaven." ls of native ful, with a
of Nanking, y have been nd Eastern and assisted spitals and Protestants onverts are from cating ely due the ves whether
the nation poisoning them with its drugs is likely to improve them with its tenchings. But Protestant and Catholic missions alike suffer from contact with the Furopean element in the seaports. The Catholic priests teuch the faithful latin only to prevent them from being perverted by the "pernicious literature" of the West, while the l'rotestunts take care not to teach their converts linglish to prevent them from going to seek a living as interpreters in the treaty ports.

\section*{Lamits and Cesoms.}

It is difficult to pronounce a generul judgment on the Chinese moral standurd, and assign their true place amongst civilised peoples to the "Sons of Han." Most

Fig. 64.-A Culnear Savant.

travellers have a tendency to treat them with ridicule, and some seem ineapable of speaking in a serious tone of the "Celestials," as they ignorantly call them. With the missionaries the case is different; but they, on the other hand, see in everything the consequences of original sin, and usually deseribe the "Heathen Chinese" as a degraded being, a prey to every vice. Others again, and these would seem to be the most numerous, grow aecustomed to the new surroundings and become naturalised Chinese. Some of the missionaries, whilo preserving their Western eulture, become prejudiced in favour of the natives, and feel inclined to 43
recognise in them a ectrain moral superiority. Thus in the last eentury the enthusiastic descriptions sent to Europe by the Jesuits conferred a halo of virtue and wisdom on the natives, which was by no means justified by their history. Authors delighted in choosing their examples from this new world of the remote East, comparing the Chinese, taken as their models, with the inferior eivilised veoples of the West.

Tho Chinese on their part, comparing themselves with the "Western Barbarinns," naturally claim the superiority, if not in industry, at least in true culture, and appearances certainly often lend a colour to their pretensions. Nowhere else are courtesy and kindly feelings more general. The people are naturally reserved, earnest, good-natured. "The men of the Four Seas are all brothers," says the national proverb, and oven strangers have travelled from one extremity of the land

Fig. 65.-Chingsz Cmbinze.

to the other without even meeting with a rudeness or incivility. In Yunnan, Hunan, Kiangsi, and some other provinces the crowds are doubtless somewhat importunate, but even here the protection of any aged person always insures respect. No drunkards are seen in the crowded streets, and scenes of violence are seldom witnessed beyond the limits of the European "concessions" in the treaty ports. But the national character shows perhaps to the best advantage in the schoolroom. None of the children ever dream of causing a disturbance or neglecting their tasks. Here they show themselves such as they will continue to be throughout life-docile, thoughtful, painstaking, and persevering. Grave beyond their years, they are none the less bright and merry, neither choleric nor given to boisterous laughter like the Mongolian children. From their early years they seem already fully conscious of their dignity as civilised beings.
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A feebly developed spirit of enterpriso is perhaps the feuture in which the Chinese betruy their reul inferiority to Europenus. They may doubtless show themselves usingenious as others in the struggle for existence, but they also remmin ensluved to routine and trudition, relying more on pussive resistance than on personal energy und daring to overcome their difficulties. As a rule they ure freo from "vaulting ambition," as shown by tho popular sayings and tho precepts of their moral codes. They shrink from adventures, speculution, and sudden changes of life, and no other nation has fewer warlike songs or more enthusiustic eneomiums of the arts of peace. "When we departed the plants were alrealy sprouting; when wo returned they were withered. The journey is long, meagre the diet! What undeserved miseries, sinco I hnve had to bear arms, ceasing to follow the plough!" Such is the sad song of the Chineso peasant recruit, so different from the fiery hymns sung in chorus by the Western conseripts. A strange spectncle is presented by this national poetry, celebrating above all things the praises of peace, sobriety, regular toil, the calmer affections of the heart. Yet it lacks neither dignity nor depth, and vivid thoughts and sentiments are often embodied in a fow striking strophes. But it is a poetry seldom inspired by personal enthusiasm, while the meaning is often hopelessly clouded by the exigencies of conventional forms and storeotyped symbolisms. During the natural evolution of the national intellect the Chinese writers havo even at last confounded poetry with a rhymed code of ethics, the Chinese bard lacking all lyrical sentiment, and appeuring always to speak in the name of a family or a community.

In Chinese society the family group is in any case far more solidly constituted than in the West. The whole nation, which formerly bore the name of the "Hundred Families," is regarded as forming one family, in which the social duties resolve themselves into those of the child towards the parent. The whole moral system is based on filial respect, and the Government itself is merely an extension of the paternal authority. As laid down in the Hiao-king of Confucius, filial piety is the foundation of society. The " five immutable laws" are the relations of father and children, of king and subjects, of man and wife, of age and youth, of friend and friend. All flows from the natural authority of the father and obedience of the son, cemented and sanctified by tradition and the laws. Such is the principle which has for ages held together the various elements of Chinese society, constituting it a lasting hierarchical system. Social changes have accordingly become more difficult to realise, and have been attended by more sanguinary struggles than elsewhere. The Chinese have a fainter conception than Europeans of morality and freedom, of whatever gives to the individual his personal worth, independent of the community of which he is a member. The family alono is considered as possessing any political powor in the State, and in former times, when the people were consulted, votes were taken by the family. Even now in municipal matters the head of the household alone has a voice, the father being considered as the depositary of the sentiments of all his kindred. He is honoured and rewarded for their virtues, but also responsible, and even punished, for their faults. The great deeds of the son ennoble the father and the whele line of his ancestry; his crimes
diserace all privious gencrations. Such is the power of these patriarelal ideas that a single blow aimed by the son agrinst futher und mother is regarded as purvicidal, mul punished by death. In limes of distress the young often carn a fow humbed pouads for their starving familios by offering to take the place of wealthy oriminals condemmed by the magistrate. For the law seeks only the expiation of erime, and as long as justice is satisficd, it mutters littlo what head falls. Pions noms thus dying with their purents' blessing are

Fig. 66.-Thhace with Funehal Vhse npar Amoy,

filled with the ineffable joy of having fulfilled their filial duty in all its sublimity.

In the funeral ceremonies, especially of the father, eustom requires the children to give public expression to their grief. The eldest son, ehief heir and head of the family, or, he failing, his first-born or adopted son, has to fix one of the three souls of the dead in the commemorative tablet of his virtues, burn incense to his shade, render his journey easy by supplying him with fictitious money in paper, as well
hal ideas regarded ug often take the uw seeks ; mutters ssing are

us chothes, horses, servants, bonts, ulso of paper, representing evorything that the depurted may require in the other world. Momming lasts lor threo yours, mad fore the whole of this tine the monrners must ubstain from ment and wine, und kerp from public gatherings. Custom alse requires that the remains of the dead be bronght to their native places, and as the carvinge of a wiagle body would oflen be expensive, they genernlly wat until a sulficiont manler can be got fogether form " larige convoy. Hence the numerons temporary cemeteries and murtury villages, with their funeral urns and collins, all tastefully decomated with emblematio paintings, representing flowers, birds, or musienl instrments. Vessels are also freighted by the friendly societies to bring lack the romains of those dying in foreign lands. Fivery year the people clothed in white, the colour of deep monrning, resort in the month of May to the graves and mortury temples with fruits, flowers, amb other offerings, which wro soon picked up by the birlds nesting in the surromading thickets. In theso hallowed places there is no distinction of rank, ago alone taking precedence. The simple peasants and duy labourers generally know the history of their families for many generations back, and are able to repent not only the names, but even the great deeds of their forefuthers. The contempt entertained for the bonzes is due mainly to the fuct that they have renounced the family ties, or have become outeasts by being sold in their youth to the monasteries.

Long funeral rites are not usual in the case of children, bachelors, spinsters, illegitimate women, or slaves. The
 bodies of infants are often even left by the banks of streams, a custom which has led many truvellers to attribute the general practice, especially of female infanticide, to the Chinese people. But this crime has never been sanctioned by public opinion, or authorised by the Government, as has often been asserted. Nevertheless it is certain that in some provinces the poor are in the habit of exposing their children, while female infanticide is common, especially in the Amoy and other overpeopled distriets of Fokien. Extreme poverty is the sole cause of the practice, which tho Mandarins content themselves with denouncing in proclamations read by nobody. The impossibility of providing a dower for girls condemns them to a life of hardship or dishonour, from which their parents rescue them by an early death, unless they succeed in selling them as slaves or the future brides of some village youth. In these cases the price runs at the rate of eight or ten shillings for every year of their age. Many
"re also bought by the missionarien, whose congregations are thus fictitiously increnserl.

But while infunticide is either censured, or at most tolerated, in eertuin distriets, the uboblute right of the futher to sell his offepring into bomalage is fully recognised by tho law. Fet the practice is rare, ulthough a large number of girls are destined to a life of slavery. Rich fumilien often own them by the doren, und most fumilien in cusy circmastances have at lenst one slave mongst their servants. However, the slave state in for women only temporary, their masters being obliged to provide them with a husband when their condition is ultered. Male slaves ulso may before their thirtieth year repuire their owners to find them wives, and us heals of funilice they trunsmit the slave state to the male issue only down to the fourth generation. In other respects the slaves are mostly trented like the other servants, recciving instruction in tho schools, competing at the public examinations, and obtainiug officinl appointments. In the latter case the owner is bound to ullow them to redeem themselves and families. Married women also may be sold by their hushands, but only as wives, never as slaves.

A material proof of the inferiority of woman in Chinese society is the practice of deforming the feet, to which comntless millions are subjected, even amongst the poorer classes. Loekhart refers the introduction of this custom to the year 925 ; but it must have spread very nlowly, for no allusion is made to it either by Marco lolo or tho other medixval travellers. Now it is so rigorously enforeed that everywhere throughout the northern provinces, exeept in Peking, all the women submit to the torture, from which the peusantry in the south and in Sechuen are completely emancipated. The Munchu ladies also, as belonging to the conquering race, are not required to conform in this respect to the national custom, although they imitate it by confining their feet in such small shoes that they aro obliged to walk tiptoe, whence numerous aceidents and serious complaints. In general the artificial deformity has become in Chima the distinctive mark of "good society," so that oven those who condemm the practice as barbarous are fain to inflict it on their daughters, in order to save them from a life of celibacy. The feet aro usually banduged up according to various methods at the age of five or six, and when once crippled in this way the unfortunato victim of fashion becomes almost absolutely helpless. She can lift no heavy weight, apply herself to no useful work, nor even walk straight, but is obliged to totter along with short quick step, balancing herself with her outstretched arms. And this is the motion compared by the poets to the waving of the willow in the zephyr! Yet the rustic women seem to take their share of the field operations without npparent distress.

Remote traditions point to the exis \({ }^{4}\) ce of the "Matriarchal" state in China. "Before the time of Fohi," say the old books, "men could tell their mother, but not their father." But since the constitution of the modern family, law and custom establish the absolute inferiority of woman as wife and daughter. After venerating her parents she must venerate her husband. "If I wed a bird," says the proverb, "I must fly after him; if a dog, I must follow him to the hunt; if a clod of earth, I must sit by its side and watch over it." All the symbolic acts of the
betrothed remind her that submission is for the wife the virtue of virtues. Whatever be the hushmal's conduet, she must needs submit and ohey in silense. She may uppeal neither to parents ner magistrate, und muy at most suspend in the temple apmer inuge of her lord, and ask the "Gooldess of Mercy" to change his henrt. P'uhwei-pun, the most illustrions of leurnen Chinese women, who flominhed in the first contury of the new cru, hus laid down all the duty of wommen in the chassie memoir of the "Seven Articles." She tells us that the old custom was nt the birth of a laughter to offer to the father bricks and tiles, " bricks becomes we tread them under foot, tiles because they are exposed to the inclemency of the weuther." "The wife must be n mere shalow, n simple eeho." When her husbund selects one or more concubines, generally from amongst his slaves, she is bound to welcome and live in pence with them. The husbund alone has the right of divoree, and without arbitration he may dismiss his wife, even though her ouly fault be bodily ailments or a love of gossip. But when she displeases him he usually prefers to get rid of her by sule, entering into a formal contract with the purchuser, which is regarded us a purely personal matter. Nor hus the selfimmolation of the widow on her husband's grave entirely dismpenred, the nsual methods being ly drowning, hanging, or poisoning themselves, never by fire, as in Indin. Their resolution is mmounced beforehand, when relatives, friends, and the curious assemble from all purts to encourage and applaud. When the AngloFrench army entered the province of Pechili in 1860, thousands of women committed suicide to avoid falling into the hands of strangers. Thus the wife is taught to consider that she has no existence apart from her husband, and for whatever liberty she may enjoy she is indebted to the general mildness of the national character. Virtuous maidens and widows are also honoured after death with numerous triumphal arches outside the large eities.

Like all other social acts, marriage is accompanied by endless ceremonies, the symbolism of which is little understood. "Heaven itself," says tho Shuking, "has made the distinction of ceremonies, which are for us immutable laws." The \(l\), or "ceremonial," however, comprises manners and etiquette, as well as everything that distinguishes eultured from barbarous peoples. Whoever respeets tradition finds his line of conduct already laid down for him in every civil or religious ceremony, in his visits, receptions, and other social duties. He knows the preseribed number of salutations and knee-bendings; culculates to a nicety the length of his strice, his "bowing and scraping," the pitch of his voice, the extent of his smile. In his tender years the greatest delight of Confueius, the typical Chinaman, was to salute his playfellows with all the ceremony of his elders, inviting them to be seated, yielding them the first place, imitating the rites associated with ancestral worship. "All virtues have their source in etiquette" is a sentiment attributed to him.

\section*{Secret Societies-The Taïpings.}

Nevertheless the numerous revolutions which have shaken the Chinese social system to its foundations show that, beneath all this formal parade, the pulse of the
nation is quickened more by the pressing interests of life than by the rigorous performance of a symbolic ceremonial. The struggle for existence prevents the masses from seeking a sanction for their acts in the conduet of the Emperors Yao, Shun, and Yu. "The son," says the national proverb, " resembles the times more than he does his father and mother;" and the times bring about constant changes,

Fig. 68.-Lands wabted hy the Taiping Insurbection.
Scale 1 : 22,500,000.

if not in the moral code, at all events in the real life of the people. The oftrepeated statement that China has been exhausted by its precocious development is false, for no other race recovers more rapidly from apparently overwhelming disasters. The distinctive fcatures of the national character are none the less fuithfully reflected in the profound changes continually taking place. In Europe the initiative comes mostly from the individual; in China from the hui, or
rigorous vents the rors Yao, mes more changes, lopment is :whelming e the less In Europe le hui, or
societies, which are maintained from generation to generation. For here nearly the whole nation is influenced and guided by the action of these social unions. In all the towns nearly every person, rieh or poor, belongs to one or other of the numerous brotherhoods, which are either publiely constituted, or else secretly organized. The very mendicants, or "ehildren of the flowers," as they are

Fig. 69.-Routrs of the Chief Modern Explorers in Cinna.
Soale 1:25,000,000.

called, have their associations, with their statutes, special code, feasts, and gatherings.

The late civil war has shown the great influence of the seeret societies, and has also made it evident that the "sons of Han" are by no means a stagnant people hopelessly wedded to the old ideas, as is so often asserted. The common error of confounding the Chinaman and the Mandarin has been rudely dispelled by recent events, and Confucius himself had long ago said that the "Law of the Great Philosophy is to renovate mankind." The Taïpings represented a fresh departure in the national development, and if they were not upheld to the end by public
opinion, it was probably because they plunged too daringly into the new religious and political career. Too indifferent to the claims of the old national Ming dynasty, they had not sought in the past history of the country a stand-point of common action against tho Manchu usurpers. In 1848 began the great revolt, urising at first out of a petty quarrel about some idle ceremony, but soon assuming the proportions of a general outbreak, in which religious passion, elass interests, and hatred took part. From the Kwangsi valley the flames spread rapidly throughout the southern provinces, whence they gradually reached the Yang-tze basin, the Hoang-ho, and the very gates of Tientsin. The kingdom of the "Taïping"-that is, the "Great Peace"-was proclaimed in 1851, and in 1853 Nanking was chosen as the capital, under the name of Tienking, or "Heavenly Abode."

Mistress of the fertile central provinces, of all the Lower Yang-tze valley, and even of Ningpo and other seaports, the insurrection had every ehance, if not of ultimate success, at least of profoundly modifying the whole political and social system. But now came the European intervention in favour of the Manchu dynasty, first with volunteers, and then with regular Anglo-French forces. Although mingling Christian rites with their worship, using in their edicts a language borrowed from the missionaries, including the Bible amongst their sacred writings, and even offering official positions to foreign Christians, the Taïpings fuiled to secure the sympathy of the European residents, who preferred their commercial to their religious interests. By their means the Imperialists saved Shanghai in 1862 , and soon after rapidly recovered all the more important strategical points. Then followed the usual wholesale butcheries, to escape from which the rebels banded together as brigands, still wasting the open country, but without further political aim. The empire was preserved, but the restoration of the old order of things is only apparent. The various secret societies of the "Nenuphar," the "Three Precious, Heaven, Earth, and Man," and so many others, all aiming at the political and social renovation of the land, are still at work. The old machinery of the laws, formularies, official practices, also become daily more out of joint with the times, while the growing relations with foreign countries are exercising a profound influence, and hastening the ruin of effete institutions.

The few European colonies settled on the coast and along the banks of the Yang-tze, although a mere handful compared with the surrounding multitudes, are the real starting-point of a new epoch in the national life of China. Henceforth East and West are united in the great movements of history, while the empire is becoming yearly better known to the outer world by geographical exploration. Europem travellers have already traversed the land in every direction, and fresh itineraries are thus constantly added to the network of previous research. Nothing now remains to be done except the methodic exploration of the several provinces.

\section*{Basin of the Peï-ho-Province of Pechili.}

The region of China proper, in which the capital is situated, forms the northernmost of the eighteen provinces. It even lies at some distance from the
heart of the land, which is comprised between the two great rivers, Yang-tze-kiang and Hoang-ho. During the long epochs of internal peace the seat of empire was naturally established in a centrul city liko Nanking, but the Government was necessarily removed to a more northern position when the Mongol and Manchu nomads began to threaten the land through the valley of the Peï-ho. The invaders, when successful, also willingly fixed their head-quarters in the same region, whence they could receivo help from tho kindred tribes, and whither they coald take refuge in case of disaster. From these causes Peking has, with little interruption, remained the imperial residence since the tenth century. It lies, in any case, in the same natural region as the southern cities, being separated by no

Fig. 70.-Ranor of the Floodings of the Lower Pechili.
Reale \(1: 3,000,000\).

hills or uplands from the plains watered by the Yellow River. From Pechili to Honan, Kiangsu, and Nganhwei, the changes of climate, vegetation, and inhabitants are very gradual, and in the density of its population Pechili itself rivals the more central provinces. Accerding to the official census taken previous to the Taïping invasion, the change in the course of the Hoang-ho, and the great famine, it contained \(37,000,000\) souls in an area of little over 49,000 square miles.

Washed on the east by the Yellow Sea, Pechili is limited north and west by the scarp of the Mongolian plateaux. Here the ranges run mainly south-west and north-east, parallel with those of the Liaotung peninsula and Shantung. Their streams, after following for some distance the line of the upland valleys, force their
way somewhat abruptly through side fissures down to the plains. In the highlands comprised between the gorges of the Peï-ho and Wen-ho, which water the Peking district, scareely any summits reach an elevation of 6,700 feet, but south of the Wen several rise to 8,000 and upwards, while according to Bretsehneider the snowy paks of the Siao-Utaï-Shan ("Little Five-erested Mountain ") attain an altitude of 12,000 feet

The coast-line, which stretches for about 300 miles from the mouth of the Lino-he to that of the Peil-ho, formerly ran parallel with the inland ranges, but has gradually been modified by alluvial deposits. An extensive semicirele of new lands has even been formed at some distance from the coust by the Laomu-ho, which collects all the streams from the south-east corner of Mongolia. The whole region of the Lower Peï-ho was at one time a marine basin, which has searcely yet been eompletely filled in by the sedimentary matter washed down from the interior Numerous lagoons or swamps still cover large tracts, and the slope of the land is so slight that at times the whole country, for a space of 6,000 square miles, is converted into a vast lake from 2 to 6 feet dcep. On these occusions the crops are destroyed, the land wasted by famine, the rivers and canals diverted from their cours. Thus the Wen-ho, which formerly formed the northern section of the Grand Canal between Tientsin and the Yang-tze, has reeently ceased to be navigable. Nearly all the names of the villages bear evidence to the constant shifting of the streams in this low-lying region.

The inhabitants refer the inundations to the anger of a black and green dragon, who must be propitiated by offerings, while the Europeans attribute them, on insufficient grounds, to a subsidence of the land. But the direct cause of the evil must be traced to the destruction of the forests on the highlands where the streams take their rise. The heavy summer rains, being no longer retained by the vegetation, sweep in foaming torrents down the slopes to the Tientsin depression, where they are collected too rapidly to be discharged through the single ehannel of the Peï-ho. To the disappearance of the woods is also due the inereased violence of the kuafung, or "dust storms," so destructive to the crops and injurious to the health of the people. All these evils have driven the natives to emigrate in hundreds of thousands to Mongolia and Manchuria, where they have formed many flourishing settlements.

\section*{Topography-Peking.}

The chief city in the province is the imperial capital, Peking, pronounced Peting or Betzing in the Mandarin dialect. The term means "Northern Residenee," in opposition to Nanking, the former "Southern Residence." It was so named at the beginning of the fifteenth century by an emperor of the Ming dynasty, but the name is known in China only to the learned. The people call it simply Kingeheng, or "Residence," which is also the meaning of the official name Kingtu. Amongst its numerous other designations was the Mongolian Khan-balik (Cambaluc), or "City of the Khans," imposed upon it by the northern conquerors, and introduced into Europe by Marco Polo.

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nouth of the d ranges, but semicircle of he Laomu-ho, The whole s scarcely yet the interior. of the land is uaro miles, is the crops are d from their ection of the be navigable. hifting of the
green dragon, ute them, on se of the ovil re the streams he vegetation, , where they of the Peï-ho. ce of the kuathe health of a hundreds of ny flourishing

7, pronounced is "Northern nce." It was of the Ming ; people call it e official name an Khan-balik in conquerors,

view taken frox the sommer palace, peging.


PEKING AND NEIGHE


According to Bretachmeider. Moll

\section*{1:400000}

NEW YORK, D. APPLET



Peking stunds in the middle of a plain searcely 120 feet above sen-level, and a little sonth-enst of the last spurs of the Mongolian escarpment. It is intersected by two rivulets, which flow thenee for 12 miles enstwarls to the Pei-ho. The still more copious Wen-ho, which at one time flowed ulmost under the walls of the city,

Fig. 71.-Succemaive Dinplafementa of Prkino.
Scale 1 : 135,000.


8 Miles.
is now 9 miles farther west, where a strong embankment prevents it from flooding the plains of Peking. The Wen-ho has frequently shifted its bed, and in the plains numerous marble bridges still cross its old channels, now flushed only in the rainy season.

Peking covers an area of some 16,000 acres, or about four-fifths of Paris within
the fortifientions. But this apnce is far from being completely oceupied. The imperial quarter and the residences of the princes are surrounded by extensive garlens, kiosks, nud nbandoned buildings, und even the Chinese quarter in occupied by houses for a distunce of little over a mile in the direetion from east th west. bisewhere the enclosed spuee is eavered by extensive waste grommls, interspersed with swampy tracts, old gravegards, and fields. Here are also the parks of the Temples of Heaven and \(\boldsymbol{A}\) griculture, while ruined ntructures also take up much

Fig. 72.-The Hioil Sthekt, I'rkino.

spaco. Hence Peking would seem to be inferior in population, not only to the large eities of the central provinces, but even to its own seaport of Tientsin. Brotsehneider thinks it can scarcely have more than 500,000 inhabitants, so that instead of rivalling London, as was formerly supposed, it would seem to be eight times smaller than the British metropolis. Hitherto the Government has declined to publish the statisties of the place, although all the materials are available.

Peking eonsists of two cities, separated from each other by a lofty inner wall.

The northern, which forms " regular spluare, is the "Tatur" or "Manchu; " the southern, the Chinese town. This quarter was formerly a mere suburb, which in the sixteenth century was enclosed by an imposing earthen rampurt fuced with bricks, 50 feet high, flanked by square towers it intervals of 200 yards, und broad onough on top for carringe traftic. The walls are separated by a mont from the outer gardens and some wretched suburbs straggling into the comntry. The


Chineso town, which, if not the more populous, is the more industrious of the two, resembles a large camping ground or market-place rather than a city properly so called. The irregular open spaces are obstrueted with carts and tents, while the thoroughfares are bordered by hollow footpaths little better than muddy quagmires in wet, and sand-heaps in dry weather. The foul liquid of some open drains is used to water the streets, and at one of the most erowded cross-roads
the headsman and his assistants are constantly occupied with their sanguinary office.

Although more regularly luid out, the Manehu town is scarcely superior to the Chinese except in the neighbourhood of the foreign embassies and ulong the triumphal avenues, where the eanals are crossed by marble bridges adorned with symbolic animuls. Formerly the inhubitants of the two quarters lived quite apart, but the races have gradually become intermingled, while the trade of the Manchu town is now largely monopolized by the Chinese proper. Several thousand Mohammedans, mostly artisuns and workers in metal, are distributed amongst both communities, and there are also some native Christians, largely engaged in the clock and watch trade, taught them by the missionaries during the last century.

In the heart of the Manchu eity is the se-called "Yellow" quarter, also within an enclosure with four gates fucing the cardinal points. This is the sacred city, in which stands the imperial palace, the only building in China faced with yellow poreclain. Most of the space, from which the public are rigorously excluded, is occupied with an artificial lake, groves, and shady avenues. Of almost equal extent are the two fancus Temples of Heaven and Agriculture, both situated in the midst of extensive groands at the southern extremity of the Chinese quarter. The Temple of Heaven, with its double roof, stands on a terrace approached by marble steps, and is decorated with enamelled poreelains and woodwork, whose bright red, blue, and golden tints contrast agreeably with the surrounding green vegetation. The Temple of Agriculture, of smaller size, but more elevated, and surmounted by three superimposed roofs, is encircled by a forest of carved pilasters ornamenting the balconies and steps. Close by is the field where the Emperor and imperial princes assembled every spring to guide the ivory and gold plough while invoking the blessings of heaven and earth on the fruits of the land. But since the triumphant entry of the allies into the cupital this ceremony has fallen into abeyance. The Temples of the Earth, of the Sun and Moon, and the other sanctuaries, where are celebrated the solemn rites of the national religion, lie beyond the walls of the Manchu town. But just inside the ramparts, and near the Temple of the Sciences, stands the old observatory of the Jesuit missionaries, with its curious bronze astronomic instruments of native workmanship, which form the finest known collection of Chinese bronzes. The Russian observatory at the northeast corner of the enclosure contains a valuable Chinese library, and in the Lazarist mission is a rich natural history museum formed by Armand David. But the magnificent imperial library has been to a large extent dispersed. Under the Ming dynasty the Government maintained schools in which were taught Siamese, Burmese, Persian, Turki, Tibetan, and two dialects of the south-western wild tribes. But since the "Opium War" the ministry have discovered that there are other languages of more importance than those of Indo-China and Central Asia. Hence in the Government school attached to the Foreign Office young mandarins are now taught English, French, German, Russian, and Manchu.

As a trading-place Peking is scarcely as importunt as in the time of Marco

Polo, when " of silk alone a thousand carts entered every day in the year." Nevertheless the road between the eapital, with its port of Tungchece on the Pei-ho, is still daily thronged with waggons, pack animals, and wayfarers. The two eities are also connected by a eanal about 15 miles long, which is frequented by junks laden with opium, wine, and other produce. Tungehew is usually erowded with eraft, at times forming a floating bridge all the way to Tientsin. But for about three months in the year the navigation is blocked by ice, and then the traffic between Peking and Shanghai is carried on by the wretched overland route. The only good roads radiating from the capital are those running to the Summer

Fig. 74.-Celegtial Sphere in the Old Ohnervatohy, Peking.


Palace and south-westwards to the famous Luku-kiao bridge over the Wen-ho. This magnificent structure, with its twenty-four arehes, as described by Marco Polo, gave way in the seventeenth century, and was restored by the Emperor Kang-hi, who adorned it with two elephants and two hundred and eighty lions in marble.

The ehief industries in the neighbourhood of the capital are market gardening and coal mining. The distriet abounds in carboniferous deposits, and the rieh mines of the Tsing-shui valley are already being actively worked. The anthracite, however, still continues to be brought by pack animals to the centres of population, and when some English speculators lately proposed to construet a railway from

Peking to the productive Chaitang mines, they reeeived from the Government officials the usual unswer : "Mules have hitherto sufficed; they will still suffice." Sinee the days of Marco Polo not even a good road has been laid down, so that it is found more profitable to import good English coal, and even firewood, through Shanghai from Culifornia. South-west of Peking there are also some productive marble quarries and magnetic iron mines.

South of the capital, and separated from it by a marshy plain, is the extensive park of Nanhai-tze, occupying about 80 square miles within a fortified enclosure some 40 miles in circumference. Numerous villages, cultivated tracts, and military stations are seattered over these woodlands, from which Europeans are jealously excluded. Amongst the herds of deer hero maintained Armand David discovered a new and remarkable species, the Elaphurns Davidiamus, some specimens of which are now preserved in Europe. In the neighbouring hills was also found the Macacus Cheliensis, a curious species of monkey marking the northernmost range of these animals in Asia. But a still more famous park is the Yuangming-yuan, or "Splendid Garden," better known to Europeans as the park of the "Summer Pulace." This imperial residence was plundered by the troops of the allies in 1860 after the Chinese army had been dispersed at Palikino. Those who first penetrated into the interior might have fancied themselves in a public museum, such was the profusion of artistic objects in jade, gold, silver, ivory, and lacquerware lying about. Large quantities of these curiosities were broken, melted down, or otherwise dissipated; but enough remained to enrich many private collections in Europe. The gold and silver ingots were distributed amongst the troops according to their rank; but the great bulk of the precious metals is supposed to have been concealed. Since this event most of the buildings have remained in ruins, one palace only having been rebuilt for the Empress Dowager. From the summit of the neighbouring Hiang-shan, a wooded hill about 1,000 feet high, a varied prospect is commanded of the surrounding gardens, with their lakes, temples, bridges, kiosks, glittering pagodas, and in the hazy distance the sombre outlines of the massive ramparts enclosing the imperial capital.

At the northern foot of these heights are the famous sulphur springs long frequented by the Chinese, and now visited also by European invalids. These waters lie on the route to the renowned sanctuary of Miaofeng-shan, where the monks show a spot whence young men throw themselves down a precipice "through filial love," thus hoping to insure a long life for their parents. Most of the numerous Buddhist monasteries scattered over the Peking district have fallen to ruins, their bronze and plaster statues being now exposed unsheltered from sun and rain, whilst their walls are disappearing amidst a rank vegetation. Of these monasteries the largest and most celebrated is the Hoang-sze, or "Yellow Convent," where a "living Buddha" has taken up his abode. Farther west is the Temple of the "Great Bell," contaning one of the largest bells in the world, which is nearly 27 feet high and covered with 35,000 exquisitely chased letters representing a complete volume of Buddhist liturgy.

The Peking district is also strewa with marble monuments, mostly family tombs,
nearly all in the form of hage turtles, with inseriptions on their carapace. The upproaches to the burial-places of the nobles are adorned with colossal effigies of lioms in brome or marble. luat more nttractive to Luropeans are the so-called "l'ortuguese" mad "French" cemeteries, where repose the remains of Ricei, Verbiest, Amiot, Gaubil, Gerbillon, and other famous missionaries, to whom we are so largely indehted for our knowledge of China und its inhubitants.

The tombs of the Ming dynasty lie some 24 miles from Peking, in a solitury amphitheatre amongst the Tienshu hills, approached by a gorge, which terminutes

with a magnificent marble portal. Of these tombs the most noteworthy is that of the Emperor Yung-le, at the head of a vast avenue of marble statues representing twelvo high officials, priests, or warriors, and twelve pairs of animals, elephants, camels, lions, horses, and the fubulous unicorn and kilin, some kneeling, others ereet. Although some exceed 13 feet in height, all are cut in a single block; but being distributed over too large a space without an eye to the perspective, or to the general effect, the result is not satisfactory. The body of the Emperor lies at the end of a long gallery under the matural pyramid of the mountain, and near it is the sacrificial temple resting on sixty pillars of the nanmu laurel, cach 43 feet high
und 10 feet in circumference. The blocks of marble required for these and other imperial tombs were conveyed along specially constructed roads on huge trucks with sixteen wheels, and drawn by six hundred mules.

Tientsin-that is, "The Ford of IIeaven"-is the scaport not only of Pechili, but ulso of Mongolia und the Russian province of Transhaikalia. It is happily situated in an extremely fertilo district, on a navigable river at the converging point of several nutural highways formed by the rivers of the interior. Thanks to the development of its foreign trade, it has become one of the great cities of China, already surpassing the imperial capital itself in population, which, according to the consular reports, is now close upon a million. The imports are chicfly rice, woven goods, opium, European hardware, taken in exchange for raw cotton and wool, skins, furs, plaited straw, and camel's hair. Here are the Government granaries for the supply of Peking, and the salt depôt for the whole of North China. Aftor

Fig. 76. -The I_owzk Pfï-ho.
8cale \(1: 1,550,000\).


Tientsin became a treaty port in 1858, most of the navigation of the Pei-ho, here commonly known as the Hai-ho, or "Ocean River," fell into the hands of the English; but since then the Chinese have gradually recovered the first place. Besides the river junks the natives now own vessels of the European type, and even numerous steamers, which ply daily on the Peit-ho above and below Tientsin.

A few miles farther down is the European settlement of Tzekhulin, in its street architecture and general appearance quite a Western town, where nearly all Europeans reside who have business relations with Tientsin. Even in the Chinese city there are several buildings in the European style, amongst them the new hospital and the ruins of the Roman Catholic cathedral, destroyed during the terrible outbreak of 1870, when all the French priests and nuns with one exception, besides some other foreigners, were massacred. A cotton-spinning factory has here been recently established, and some 60 miles to the north-east a horse tramway now connects


the Kaïping coal mines with the port of Lutaï, on the river Peïtang, at the head of the deep-sea navigation. Works have also been undertaken to improve the waterway below Tientsin, where the bar has only 4 feet at ebb, and about 12 feet at flow. Tho approach to this important strategical point is now defended by formidable lines at Sincheng above the delta, and by the forts of Taku ("Great Mouth"), near the main entrance of the river. These forts, which fell so easily to the allies in 1858 and 1860 , have since been reconstructed, armed with the heaviest ordnance, and completed by a vast entrenched camp and docks for the Government gunboats. Peitang, at the mouth of the river San-ho, just north of the Pei-ho, has also been strongly fortified.

On the route leading from Peking through the Kupei-kow Gate in the Great Wall to Manchuria there are several towns, amongst them the administrative city of Yungping-f \(u\), which, however, is a small place. West of the Kupeï-kow Gate the Peitho valley is approached from Mongolia by the Kwan-kow Gate, formerly a point of great strategic importance, through which all the nomad invaders penetrated into China. Hence this highway is defended at various pointe by strong lines, some of which have been mistaken for portions of the Great Wall itself. But here the most remarkable monument is a triumphal arch erected at the southern entrance of the Kwan-kow Pass, and bearing an inscription in six languages-Sanskrit, Chinese, Uigur, Mongolian, Tibetan, and Ninchi, or ancient Manchu, the last mentioned being the only known specimen of that tongue. The chief importance of this highway, however, is now due to the traffic of the Russian caravans and postal service, which follow this route between Kiakhta and North China. The convoys of brick tea for the Siberian market start directly from Tungchew, on the Peï-ho, without passing through Peking, which they leave to the south-west.

In the upland valleys watered by the tributaries of the Wen-ho the most important place is Kalgan (Changkia-kow), guarding one of the gates of the Great Wall leading to Mongolia. The military quarter, with its forts and barracks, is built up against the wall itself, while the trading quarter lies 3 miles farther south, beyond which are the houses of the Protestant missionaries and Russian dealers. Sivan-hor, at the entrance of a defile on the route from Kalgan to Peking, is also much frequented by the Chinese and Mongolians. Its imposing ramparts, triumphal arches, and extensive parks date from the time when this place was capital of the empire under the Mongol dynasty. Like Tatung-ju, lying much farther to the west and more in the heart of the mountains, Siwan-hoa is conveniently situated in the midst of fertile valleys and rich coal-fields, and does a considerable trade in tobacco and felts. Kiming, on the route thence to Kwan-hoa, is the chief postal station for the whole of North China. Its vineyards produce a highly esteemed white wine, which is found only on the tables of the wealthy mandarins.

In the southern section of Pechili, watered by affluents of the Wen-ho and Peï-ho, the largest place is Paoting-fu, which has been chosen as the capital of the province and official residence of the Viceroy, who, however, lives mostly in Tientsin. It is regularly built, very busy, and better kept than the imperial capital. The
surrounding plains, which are admirubly cultivated, are largely under millet, the stuple crop in P'echili. South-west of this place is Chingting, near the Shensi frontier, where iron images of Buddla are manufuetured for all the northern provinces. The bronze idols in its temples are amongst the most remarkuble in the empire, and one of them is no less than 80 feet high.

\section*{THE SIIANTUNG IVNINSULA.}

Shantrixn is a geographicul region entirely distinct from the rest of China. This comntry of the "Lastern Hills," as the term meuns, consists of two detached masses of mountuins and hills, one of which projects far senwards between the Gulf of Peehili and the Yellow Sea, and is limited landwards by extensive alluvial plains deposited in un old marine basin. In this direction the Hoang-ho has shiftel its course for ages, washing down its sedimentary matter at one time to the north, at unother to the south of the Shuntung peninsula. In its general outlines this peninsula resembles that of Liaotung, but is of larger sizo. Its shores, visited by European vessels for the first time in 1793, on the occusion of Lord Macartney's embassy to Peking, are indented by innumerable littlo inlets developing a series of regular curves from headland to headland. Some of these headlands are continued by banks and islets for a long distance into the shallow waters of the Yellow Sen. The north coast of Shantung is even connected by a sort of half-submerged isthmus with the southernmost extremity of Manchuria. The mean depth of this marine basin is only about 80 feet, yet most of the inlets of the peninsula are accessible to Chineso craft. The facilities thus afforded for intercourse have largely contributed to the development of the great natural resourees of Shantung. The population is said to be here denser even than in Belgium, and from the summit of many hills the whole country as far as the eye can reach presents the aspect of a vast city interspersed with garden plots. The natives are also more robust and energetic, as weli as of a more swarthy complexion, than those of the Hoang-ho and Yang-tzo lowlands. In the Chefu distriet and elsewhere they show many graves attributed to a pre-Chinese raco.

The Shantung highlands may be regarded as the remains of a plateau denuded and cut up in all directions by small streams. In the north a series of regular rounded eminences stretch along the coast, but nowhere reach an elevation of 3,400 feet. The mean altitude is lower in the south, although here the peninsula, properly so called, culninates with the Lo-shan, an isolated peak rising 3,550 feet above the neighbouring island-studded bay. But towards the west the Ta-shan, or "Graat Mountain," fumous in Chinese mythology, attains a height of 5,100 feet close to the plains of the Hoang-ho. Ta-shan is the most sacred of the five holy moumtuins of the empire, the " beneficent king," the "equal of heaven," the " controller of births and deaths," the "arbiter of human destinies." Confucius, born in the neighbourhood, vainly attempted to reach its summit, a temple now marking the spot where he stopped short. Since then the ascent has been rendered easy by a good paved road 12 miles long, with broad shady steps, convenient landing-
places, and palanquin bearers for old and infirm pilgrims. Between these western hills aud the peninsula proper a broud depression, stretching from the Gulf of Pechili to the Yellow Sea, was formerly traversed by a navigable emmal truced like a river on the old map of the Jesuits. Here ulso the Peima-hu, or "Lake of the White Itorse," would seem to be a remmant of the strait which formerly flowed alung this depression from sea to sea.

Nearly all the forests have disuppeared from tho hills, and the indigenous vegetation has almost everywhere yielded to the useful plants introduced by man. The wild animuls have also been mostly exterminated, and little room can even bo spared for live stock in this fertile and highly cultivated region. It abounds also in conl-fields, iron ores, gold, und other metals, besides precious stones, including diamonds of small size. The climate, as elsewhere in North China, is characterized by the extremes of heat and cold. But the trunsitions are effected very gradually and regularly, thanks to the warm marine waters and the shelter afforded by the neighbouring Manchurian and Korean uplunds from sudden polar winds. The typhoons also spend their fury in the Yellow Sca before reaching the Gulf of Pechili.

\section*{Topography.}

The largest towns are naturally found on the western alluvial plains, watered by the Hoang-ho and its tributarics, and traversed by the Yunho, or "River of Transports," which was till recently navigable. But

Fig. 7i.-Old Shantuna Strait.
Scale 1: 2,000,00n.
 many of these places are exposed to destructive floodings, while others have been plundered by the Taïing rebels and Nienfei brigands. However, they rapidly recover from such disasters, and Tungchung, on the Grand Cunal, amongst others, has already resumed its place as one of the great industrial centres of the empire. Farther north Lintsing and Chingkia-ker. which also suffered severely during the late insurrection, are now flourishing towns, carrying on a large trade with the central provinces, Pechili, and even Mongolia. Tsinan, the Chinangli of Marco Polo, and the present capital of the province, also lies west of the mountains in a fertile alluvial district, dotted over with isolated
cones of long-extinet volcunoes. With a circuit of nbout 35 miles, it is both one of the largest and best-built cities in China, noted expecially for its trude in fulse gems and mannfacture of a peculiar silken fabric, woven from the cocoons of \(n\) wild silkworm which lives on onk-leaves. IIere is a Roman Cutholic community of 12,000 souls, besides many Mohammedans, variously estimuted at from


10,000 to 20,000 . Three miles east of Tsinan is a hill consisting of partly magnetic iron ores, and on the Yellow River lies its port of Lokao. In the basin of the Yellow River is also situated Taingan-fu, the "City of Temples," on the Tawan-ho (Wun-ho), which traverses a district abounding in coal and iron. The chief temple dedicated to the holy mountain, Tai-shan, occupies a large space to the
north of the 'own, in the midat of a pmok the acrea in extent, all the trees of which have been \(p\) inted by ariens emp rors eme the tenth century. When visited in 1869 by Markham re were 2 lean that 70,000 pilgrims assombled in this place from all jurl of Chinn Farther south lies Yencherc-fin, in a marshy district traversed by se Grand amal, formerly capital of one of the nine provinces into which the empuro wns divided by Yu four thousand yeurs ugo, and still the largest place in the south-west of Shantung. This is one of the classic regions

Fig. 79.-Curry.
Scale 1: 150,000.

of China, the towns, mountains, and rivers of which figure on almost every page of the old chronicles.

Some 12 miles west of Yenchew-fu is the far-famed city of Kinfao, birthplace of Confucius, and still inhabited almost exclusively by his descendants, at least 20,000 of whom bear his name. Although a fine, vigorous race, not one of them scems to have distinguished himself in any way during the twenty-four generations which have elapsed since their common ancestor bequeathed his moral code to the empire. The chief temple raised to his memory is one of the largest and most sumptuous in China, and contains a series of inscriptions dating from all the dynasties for the last two thousund years. The accumulated treasures of vases, bronze ornaments, and carved woodwork form a eomplete museum of Chinese art. At the entrance of the palace is still shown the gnarled trunk of a cypress said to
huve been planted hy Confucius, while urns, tripols, manuscripts, und other precions objects, suid to have belonged to the philosopher, uro preserved in the private unartments of the prinecely head of the family. The domain of this diguitary, who is a direet fendatory of the empire, is no less than \(10.0,000\) acres in extent. When kiufuo was seized by the Tuiping rebels, they respected the temple, the palaee, und all their contents, und even spured the life of the local governor, contrary to their invarinble practice. Neur the temple is the grave of Confucins, in the centre of a vast space oeconpied by the family necropolis. Towards the south-west is another cemetery near the sumull town of Tsin-hien, which for the last twenty-two centuries has received the remains of all the descendants of Mengtze (Mencius), the most renowned disciple of Confucius.

Tisingherer-fu, the old eapitul of Shantung, lies on the northern slope of the mountuins in a valley druining to the Gulf of l'echili. Although mueh reducel, it is still a large place, und n now ulmost deserted Tatar quarter recalls the early days of the Manchin comquest. Tsingelew has become a chief centro of Islum in East Chima, nud a knowledge of Arubic is still kept nlive in its selools. The surromuding district is extremely productive and densely peopled. The hills in the southwest contain rich eval mines mad sandstono quarries, the powdered materinl of which is sent to every part of China for the manufacture of glass.

Although ranking as a simple hien, or "town of the third cluss," Wei is renlly the most important phace in Shantung. It is conveniently situated in the plain which sepurates the two upland regions of the province, and enjoys easy communieation with the northorn and southern shores of the peninsula. To Kiaying and other ports on these shores it forwards the silks, tobacco, coal, iron, saltpetre, and other produce of the country, for which it has become the chicf emporium. The long-projected railway to the coast is still opposed by the Government; but it is connected by earringe roads with the southern ports, with the great market of Cheretsun, with the gold mines of Pingtu, and with Laches, on the Cxulf of Pechili, noted for its rich deposits of soapstone. Hoang-lien, in the northern section of the peninsula, does a largo forwarding trade, especially to Manchuria, through the port of Luagkev, and with Europe through Tengchecr, recently made a treaty port. The harbour of Tengehew was formerly deep enough for Chinese craft to penetrate into the interior of the city; but they are now excluded, while large vessels are obliged to anchor a long way from the shoro. Hence tho foreign merchants have renoved most of thoir business to the more commodious port of Yentaï, the "Smoky," so named from a beacon-fire which formerly served as a signal to warn the people of the coast from the Jupanese pirates. But the place is better known by the nume of Chefu, from a promontory protecting the harbour on the north, und commanded by a cone 1,000 feet high. In summer Chefu is the "Scarborough" of the fureign communities in China. Other seaports at the eastern extremity of the peninsula are Weihai, with a good harbour ; Yungching, and Shitauc, both doing a brisk trade with Korea.

On the southern slope of the peninsula the chief places are Laiyang, on \(\Omega\)
river flowing to the port of Tinytai; Tximi, a depot for grain, fruits, pigs, and other ugricultural produer; Kinomi, kianehner, und liahen, the last with a comsiderable Moslem commmity, and proluctive conl mines in the neighbmaring hills.

\section*{Tite hoang-ho basin.}

Phovinges of Kanse, Shemel, Shanst, and Hunan.
Ther region drained by the Ifoung-ho, or Yellow River, comprises in Tibet and Chim proper a total aren of some 600,000 spluare miles, or nhent three times the extent of France. Yet it ranks only as the second river basin of the empire, und there were even times when it formed merely a tributnry system, diselurging a portion of its waters into the Yung-tzo-kiang. Novertheless it presents a striking contrast to this great stream in the salient fentures of its estuary und winding course, no less than in the character of tho lands and peoples fringing its bouks. 'To mark this contrast the nutives have identified the twin stremms with the two mate and female principles of henven und earth (Yany and Yiiu), which divide the world between them. The Honng-ho is the femate river, devited to the earth, and designated by the name of Yellec, which the inhabitunts of the "Yellow Lands" naturally regarded ns pre-eminently the terrestrial colour.

Both streams rise on the same inland plateau, and in their lower course truverse the same ulluvinl phains. But in their middle course they are deflected north and south into regions far distant from eneh other, and differing grently in their physical aspect. After emerging from the upland pasturages of the mysterious und still unexplored "Starry Lakes," the Hoang-ho escapes from the highlands through formiduble gorges, but without describing the vast bend which is traced on most mups. Swollen by numerous torrents from the Kuku-nor Mountains, it reaches the verge of the desert, already a large stream. Here it is suddenly defleeted northwards along the scarp of the Mongolian plateaux, and even beyond China proper round the Ordos country, and through a gorge in the Ala-shan range, beyond which it throws off several shifting channels intermittently flooded according o the extent of the annual inundations. When visited by Prjevalsky in 1871 the muin stream, 1,300 feet broad, lay to the south. But it was of recent formation, and lateral branches were at that time winding through the plains as far as the foot of the In -shan range. To these displacements of the stream is probably due the legend that the Hoang-ho disappears altogether in the sunds north of the Ordos peninsula, und again reappears among the rocks lower down.

Below this half-lacustrine region the stream, resuming its easterly course, impinges ugainst the gneiss hills forming towards the south-east the outer scarp of the Mongolian plateau. Pumpelly thinks he has discovered the traces of an old bed, through which the Yellow River formerly flowed along the base of the plateau. A string of lakes connected by narrow depressions would seem to indicate the former course of the stream, when it discharged through the Peï-ho into the

Yellow Sea. But it is now deflected southwards through two parallel chains, thus completing the circuit of 1,200 miles which it describes round Ordos and the province of Shensi. The formation of this new bed is perhaps referred to in the Chinese legend of the contest between Kingkung and Chwanchew for the empire

of the world. "In his rage Kingkung butted with his horn against Mount Puchiao, which supports the pillars of heaven, and the chains of the earth were broken. The heavens fell to the north-wesit, and the earth was rent asunder towards the south-east."

Below these ranges the middle course of the river is abruptly terminated by a sharp bend towards the east at the confluence of the Wei. In some respeets the Hoang-ho, notwithstanding its greater volume, might cven be regarded as the tributary of the Wei, which maintains its original direction throughout its entire course, as does the Saône after its junction with the Rhone in France. The Wei is in any case its largest affluent, and even more important as a navigable highway.

Fig. 81.-Cliffe of Ylllow Earth on the Hoana-ho.


Thousands of flat-bottomed craft ascend its stream to within half-way of the Lanchew bend, whero the Hoang-ho is deflected towards Mongolia.

Both rivers wash down large quantities of sedimentary matter, estimated in 1792 by Staunton at one-fiftieth of whole volume for the united stream. This is three or four times in excess of the average even of such rivers as the Ganges and Pei-ho, which carry down an unusual amount of alluvia. These deposits are one of the great sources of danger to the riverain populations. Natural embankments are thereby gradually formed along the course of the stream, whose bed is raised,
and new channels formed during the floods, which often cause widespread ruin. Like the Nile, l'o, and Mississippi, the Yellow River thus flows occasionally at a higher elevation than the surrounding plain, although not so high as has been represented by the terror-stricken faney of the inhabitants. A vast system of embankments has been erected on both sides to keep the stream within its bed during the rising of its waters. Above Kaifung-fu the two main dikes on the left side, each 72 feet high, run parallel, and from 3,500 to 2,700 yards from the matural bank of the river, and the intermediate space is cut up into rectangular sections by transverse mounds. The more exposed districts are thus divided into a

Fig. 82.-Shiftings of the Hoang-ho durino Thres Thouband Years. Scale 1 : \(10,000,000\).

number of independent tracts arresting the overflow, ard enabling the people to raise their crops in comparative security. But this very system itself, maintained by the constant labour of \(\mathbf{6 0 , 0 0 0}\) hands, has the inevitable result of increasing the height of the banks by the rapid deposits of alluvia in the lateral seetions. The difference in level between the river bed and tho low-lying plains becomes proportionably increased, and the higher the embankments are carried the more dangerous becomes the stream. Nevertheless the risk may be diminished by the construction of cunals conveying the overflow to one or other of the lacustrine depressions in Kiang-su north of the Yang-tec-kiang. Thus in 1780 the
pread ruin. ionally at a as has been ; system of thin its bed likes on the Is from the rectangular vided into a maintained \(f\) increasing ral sections. ins becomes d the more shed by the the lacusin 1780 the

Emperor Kienlong caused a canal 60 miles long to be constructed in fifteen months, which diverted half the discharge of the Hoang-ho into Lake Jlangtzen. But in spite of all precautions great disasters are occasionally caused by the bursting of the dikes, when the crops of whole provinces are swept away, and millions become a prey to famine and pestilence. For China the ILoung-ho still remains the Nih-ho, or "Rebellious River," as it is called by the old chroniclers. The riverain populations are always at the merey of invading hosts, or even of predatory bands strong enough to seize and open the sluices. In 1209 one of the few defeats experienced

Fig. 83.-Recent Siliftinas of the Honng-ho.
Scale \(1: 8,000,000\).

by Jenghiz Khan was due to this cause. In 1642 a mandarin submerged the city of Kaifung-fu, with its 200,000 inhabitants, and later on the Emperor Kung-hi in the same way destroyed half a million of his subjects.

The lowlands, subject to tho shifting course of the IIoang-ho, comprise the vast region stretching from the mouth of the leï-ho to that of the Yang-tze-kiang. The stream thus oscillates to the right and left over an area some 550 miles long north and south, presenting within these limits changes elsewhere unrivalled in extent and importance. These disastrous shiftings, at times laying waste a region as large
as Great Britain, are due to the Shautung uplands, which arrest the direct easterly course of the stream, deflecting it either to the right or to the left, and thus causing it to flow at one time north to the Gulf of Pechili, at another south-eastwards to the Yellow Sea. Since the mythical times of \(\mathbf{Y u}\), said to have flourished some forty-two centuries ago, these complete or partial changes have been regularly recorded by the native annalists. For the last two thousand five hundred years the bed of the Lower ILoang-ho has been displaced as many as nine times, when one or more fresh channels have been excavated in the alluvial plains, and each of these events has been attended by the partial depopulation of the land.

In the middle of the present century the Yellow River flowed south-eastwards below Kaifung-fu to the coast about midway between Shantung and the Yang-tze estuary. A small branch was even thrown off through a series of lakes to the latter basin. But in 1851, when the Taipings began their ravages, the inhabitants being unable to keep the dikes in repair, the stream made a breach over a mile broad through its left bank near the village of Lungmenku. Still the old bed was not completely dried up, and the new course northwards to the Gulf of Pechili was not definitely established till the year 1853. Even then the channel was not thoroughly excavated, and at many points the stream preserved the aspect of a permanent inundation, covering a space from 10 to 15 miles in extent. It thus overflowed into the bed of the Tatsing-ho, formerly an independent river. Along the old course most of the embankment works remained intact, while the villages were converted into heaps of ruins, the cities deserted, and the cultivated lands allowed to lie fallow. The change was, in fact, a twofold disaster, for, on the one band, it caused fertile tracts to be submerged, while on the other districts were necessarily abandoned whose productiveness depends on the irrigating canals derived from the river. The direct evil caused in the region at present traversed by the Hoang-ho is a small matter compared with the ruin indirectly occasioned by the withdrawal of the water which fed these canals. Hence the inhabitants of the southern districts have repeatedly petitioned to have the stream restered to its old bed, while those in the north have adapted themselves to the altered conditions. Numerous villages have sprung up, and embankments have been constructed for nearly 100 miles on both sides, regulating the course of the river in its new channel, which, however, still varies in width from a few hundred yards to 2 miles. But after the loss of millions of lives a fresh disaster was threatened in 1870, when a breach was opened in the embankment on the right side above Kaifung. On this occasion the overflow took the direction of the Yang-tze-kiang through the Kulu-ho, the Sha-ho, and Lake Hang-tzew, west of the old bed. Through numerous other smaller openings on both sides the Hoang-ho would seem to still send contributions to the Yang-tze, the Hoaï, and Peï-ho, a fact which explains the remarkable diminution of volume observed by recent travellers in its lower course.

Near the Gulf of Pechili the stream winds through a marshy tract, which was evidently at one time a marine basin. The town of Putai, said to have been within 600 yards of the coast twenty-one centuries ago, now lies over 40 miles from the sea, and all the surrounding lands are still saturated with saline particles.
ect casterly hus causing h-eastwards rished some n regularly ndred years s, when one and cach of

\section*{th-eastwards} he Yang-tze to the latter jitants being milo broad bed was not chili was not t thoroughly a permanent is overflowed long the old rillages were ands allowed one hand, it e necessarily ved from the he Hoang-ho e withdrawal the southern ld bed, while Numerous d for nearly new channel, 2 miles. But 1870, when a ng. On this the Kulu-ho, umerous other contributions o remarkable ct, which was to have been 40 miles from line particles.

Owing to the narrowness of the navigable channel, large vessels are now obliged to anchor some distance off the bar, although it nas a depth of 7 feet even ut low water. The cargoes, transhipped to smaller craft, are carried to Tiemen-kwan, 24 miles above the mouth of tho river, beyond which point the "ungovermublo Hoang-ho" has almost ceased to be available for navigation. Its upper course in Kansu might be navigable by small bonts; but here the natives prefer the road to the river for transporting their produce.

\section*{The Grand Canal and Lower Hoano-ho.}

The "Grand Canal" so often spoken of by travellers, especially in the last century, is one of the great monuments of human industry, ulthough, perhaps, less wonderful than it may seen to be at first sight. It is not a eutting, like so many European works of the kind, carried by a series of loeks over extensive tracts at different levels, but simply consists of a string of abandoned watercourses, lakes, and swamps, all connected together by short artificial channels. Ience it has almost everywhere preserved the aspect of a winding river, constantly varying in width. As related by Marco Polo, the Emperor Kublai Khan, towards the end of the thirteenth century, created the Yun-ho, or "River of Transports," as it was named, mostly by connecting river with river, lagoon with lagoon. Even before that epoch goods were conveyed by water and across a series of difficult portages from the Yang-tze to the Peï-ho basin. But although the course of the canal was thus already indicated and partly constructed by nature, none the less enormous are the sums that have been spent on the formation, and especially on the maintenance, of this great navigable artery. Thousands of hands have been constantly employed in dredging, embanking, protecting the exposed sections from the fury of the winds, so that a regular canal constructed on the European principle would have probably been less expensive in the end. The Grand Canal, which is mainly fed by the IIoang-ho, the Wan-ho, and other streams from Shantung, has in recent times lost much of its importance, and is at present in such a bad state that the navigation is actually interrupted at some points. Since the introduction of steam Peking and North China receive their supplies chiefly from the sea, so that the inland navigation for which the canal was constructed has no longer the same commercial and economic significance. It still, however, presents many advantages for the lucal traffic, and it may be hoped that the work of restoration, already begun at the Tientsin end, will soon render this artery navigable by steamers throughout its entire length, from the Peï-ho to the Yang-tze basin.

According to one estimate the mean discharge of the Hoang-ho is about 80,000 eubic feet per second, or nearly equal to that of the Nile. The sedimentary matter brought down in its turbid waters is slowly yet perceptibly diminishing the basins of the Gulf of Pechili and Yellow Sea. Staunton and Barrow have calculated that these alluvia would be sufficient to ereate, in twenty-five days, an island half a square mile in extent and 120 feet thick. They have further calculated that in about twenty-four thousand years the Yellow Sea will have entirely disappeared,
just us the inland seas west of Shantung have already become dry lnud. Its muvigution is already much obstructed by the rhifting sand-bunks, as well us by the dense fogs in which these shallow waters are frequently wruphed. The Chineso limit the term "Yellow sal" to the portion discoloured by the alluvia, applying

the expression "Black Sea" to the marine waters preserving their natural purity.

The extensive plains stretching between the Lower Hoang-ho and Yang-tze are traversed by the sluggish Hoaï, which, notwithstanding its great length and volume, cun scarcely be regarded as an independent river. From age to age it has never ceased to oscillate from right to left in seareh of a fixed channel. At one time it flowed to the Hoang-ho, at another to the Yang-tze, while occasionally throwing off branches in both directions. At present it discharges into Lake Ilang-tzew and the other lacustrine basins, which are the remains of the ancient inlet penetrating northwards between Shantung and the mainland.
land. Its 11 us by the The Chinese a, applying 1 and volume, it has never it one time it throwing off -tzew and the penctrating

\section*{The Tsing-ling and other Ranges.}

The central highlands about the head-streams of the IIoung-ho are still lofty enough to supply alluvial deposits which may some day convert the Arehipelago of Japan into an Asiatic peninsula. Extensive ranges rooted westwards in the Tibetan plateaux form the water-parting between the Hoang-ho und Yang-tzo basins, and these are succeeded farther north by other less elevated ehains forming the outer scarp of the Mongolian terrace lands.

The main range, which may be regarded as an castern continuation of the Kuen-lun, is separated from the Kuku-nor highlands by the deep gorge of the Upper IIoang-ho. South of Lanchew-fu this range takes tho name of Sikingshan, and is here broken by the valley of the Tao-ho, an upper affluent of the Yellow River. But east of this point its snowy peaks stretch away to the south of the deep valley of the Wei-ho, where it is known as the Tsing-ling, or "Blue Mountains." In the upper valley of the Han, north of Hanehung-fu, this section is crossed by passes practicable throughout the year for mules. The pass ehosen by the maturalist Armand David, in the winter of 1873, is 6,300 feet high, and runs along the west side of the funous Tapei-shan, whose snowy crest has an extreme elevation of from 12,000 to 13,000 feet, while Richthofen assigns a mean altitude of 6,500 feet to the main rango. In its central section the Tsing-ling consisting of granites and old schists, is so difficult to cross, that travellers generally prefer to turn its eastern extremity through one of the depressions which here scparate the great bend of the Hoang-ho from the valley of the Han, a tributary of the Yang-tze. Northwards the Tsing-ling terminates in the granite mass of the Hoa-shan, which overlooks the triple confluence of the Hoang-ho, the Wei-ho, and Lo-ho, over against the imposing Fungtiao-shan, traditionally said to have been separated from it by an earthquake.

Like the Pyrences, which they resemble in their general aspect and elevations, the Blue Mountains form a parting line between two vegetable and animal domains. The chamernps palm grows only on the slopes, but on the north side the paulovnia, catalpa, and magnolia are found intermingled with the spruce and oak. Here also flourishes the red birch, while a species of rhododendron attains the proportions of a tree. Some of the woodlands still harbour a few carnivora, and the northern and southern fauna are represented by several species, among which are the chamois, antelope, monkey, and a wild ox protected by religious scruples from the native hunters.

The parallel treeless ridges of the Funiu, which form an eastern continuation of tho Tsing-ling, attain here and there an elevation of over 6,500 feet, but their mean height scarcely exceeds 2,600 . Like the Tsing-ling, they form a parting line between the Hoang-ho and Yang-tze basins. In a single day the traveller passes from ono region to another, presenting the greatest contrasts in soil, elimate, vegetation, and even in the appearance, habits, and speech of the inhabitants. In the south the crops are endangered by a superabundance of moisture, in the north by prolonged droughts. On one side rice is the staple of agriculture and food, on the other maize, wheat, and millet.

Parallel with the Tsing-ling other ranges run north of the Wei-ho valley in the peninsala formed by the two great bends of the Hong-ho. But they are intersected by other ridges rumuing south-west and north-enst, and forming with them numerons valleys radiating in every direction. Some of the breaks oceuring at the points of intersection afford importunt passes between the upper and lower courses of the Hoang-ho. Between tho King-ho and Wei-ho a mountain mass,

Fig. 8i.- Thrrack Lanid of Shanat.
Scale 1 : \(5,400,000\).

formerly known as the Yo, was long regarded as one of the bulwarks of the empire. North-east of Lanchew some of the peaks take the name of Siwe-shan, or "Snowy Mounts," but the ranges rising to the north of the Wei-ho valley are gencrally of moderate elevation. The ranges skirting the south side of the Ordos steppe are continued east of the Hoang-ho through Shansi. Here the "Western Mountaius." from which the province of Shansi takes its name, run uniformly in a
north-easterly direction, and the whole region rises in successive terraces from the Honan lowlands to the Mongolian plateaux. Thus are formed severul parallel basins in which the streams flow until they find u breach through whieh they reach the plains. One of the ridges skirting these bnsins is the Siwe-shan, or "Sierra Nevada" of Slansi, and towards its nortli-enst end ure severul venernted peaks, the most frequented of which is at present the Utai-shan, or " live I'eaks," with an extreme height of 11,600 feet. As many us three hundred and sixty temples are said to stand on its slopes, some of whieh are imposing structures, and one of them is built of pure copper. Aceording to the popular belief those buried

here are insured a happy transmigration, and the flowers growing especially on the Nanting, or "Southern Peak," are credited with ecrtain medicinal properties. From the summit of these holy mountains a view is afforded of the Heng-shan, also one of the old "guardians of the empire." Traditional sacrifices are still offered here, but the Chinese do not display the same fervour as the Mongolian pilgrims to the shrines of the Utai-shan.

\section*{The Yellow Iands.}

Apart from the highlands and alluvial plains, most of the Hoang-ho basin is covered with hoang-tu, or "yellow earth," which prevails throughout Pechili,

Shansi, Kansu, lalf of Shonsi, the northern divivion of Homm, and extensive tructs in Shantmig. This formation, comprising a region larger then the whole of Franee, reaches in some places even to the banks of the Yang-tae, and stretehes westwarls to the Tibetan phatemas. In these regions everything is yollow-hills, ficlds, highways, honses, the very torrents and streams charged with alluvia. biven the vegetation is often covered with a yellow veil, white every pulf of wind raises clouds of fine dust. From these lands the limperor himself tukes the title of Hoang-ti, or "Yellow Lord," equivalent to "Master of the Worll," According

Fig. 87.-Yrllow Lands of Numti Cuina.
Sente 1: 18,000,000.

to Richthofen, the houng-tu, regarded by him as a formation analogous to the loess of the Rhine and Damube basins, is nothing more than so much dust accumulated during the course of ages by the northern winds. In any ense it cannot be of glacial origin, for, instead of being simply lieaped up like the moruine deposits, it is pierced by vertical holes ramifying in various directions, and cansed by the stems and roots of phants gradually covered by the dust. Nor is the hoang-tu deposited in layers like the alluvia of ruming waters, while it is destitute of marine fossils attesting a possible submersion of the land under the occan.
- whole of A stretches low-hills, th ulluvia. If of wind the title of According
s to the loess accumulated monot be of deposits, it is by the stems -til deposited urine fossils

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On the platenux encircled by monntain barricen foming cosed basius the yellow eath forms a miform layer of unknown depth. But wherever the erosive action of rumang waters has had full phay, mormons fiswres with vertical walls have twen opened in the argillaceons mase. The water, penctrating rapidly through the comutless empty spuces left ly the ronts of phants, gradully disintegrates the soil, breaking it up inte perpendionlar hoeks. The mare exposed maseow, giviag way, form irregular clifls, broken ap in all directions, and creatiag a labyrinth of deep gorges llauked ly perpudicular walls. Iu some phares the work of erowion has left litto beyond mere termees, or iswlated eminemees, often resembliag fendal strongholds. Eisewhere the gradual intilt ration has excavated underground galleries in muny districts affording shelter for the whole popmlation. The erosions reveal in some phaces a thickness of at lomet 2,000 fort, offoring a prodigions guatity of fertilising soil constantly washed down, and mantaining tho promuctiveness of the phains watered liy the llomer-ho. Bor this yellow earth is the richest suil in China, being far more fortile even than ordinary allaviam. It reppires no mamuing, and goes on producing lenavy crops for ages withont showing any signs of exhanstion. It contains all the mutritive elements of plants, while its porons character is such that the moisture penetrates far into the soil, retaraing by capilary attraction, charged with all the chemicul sulastances in solution which contribute most to the alimentation of the vegetable growils. It even serves as a manure for other lauls, over which it is distributed in large quantities. Such is its efficacy that it emables the pensmatry in the cold regions of North Chima to raise crops of cereals at un clevation of 6,500 feet, and in some phaces even 8,000 feet, whereas in the warmer provinees of the south the hand is seldom cultivated beyond 2,000 feet above sea-level.

Mach ingenaity hax been dixplayed in overeoming the diffeulties offered to free commmication ly the perpendieular walls of the yellow lands. 'To pass from river basin to river basin whantage has been taken of every murrow fissure, deep enttings have been made in many places, and fresh routes opened when these have been filled up by the landslips. Some of the most-frequentel rouls havo been excavated to depths of from 40 to 100 feet and upwards, and the labour expended on all these works is at least equal to that lavished on the building of the Great Wall, or the construction of the Grand Canal. The roads are sometimes continued for hundreds of miles almost in the bowels of the earth, but are seldom more than 8 or 10 feet wide, the whecled traffie being conducted by means of shuntings like the "gares" in the Suc\% Canal. In dry weather the waggons sink into the dust up to the axle, while after the rains the tracks are converted into quagmires, dangerous alike to man and beast. Yet these difficult highways, being quite unavoidable, possess great strategic importance, the blockade of one of these detiles at a single point being often sufficient to eut off all communicution between extensive regions.

The mountains whose lower slopes are covered by the yellow earth also contain some of the richest coal beds in the world. Anthracite and other varieties are found in all the provinces watered by tributaries of the Ifoung-ho-Pcehili,

Shantung, Shansi, Shensi, Kansu, Honan-and some of the doposits are conveniently situated on the river banks, whence the produce can be easily exported by water to the seaboard. The anthracite basins of IIonan alone cover an area of over 21,000 square miles, so that one of the most agricultural regions on the globe offers every element of future industrial develonment.

\section*{Topograpiy.}

The Ifoang-ho basin has in recent times suffered so much from the ravages of civil war, inundations, and long droughts, followed by famine and pestilence, that not even an approximate estimate can be formed of its present population. The country, however, appears to be rapidly recovering from these disasters, and according to the reports of recent travellers, the towns and villages are again everywhere assuming their normal appearance. Thanks to the introduction of the potato plant, some of the upland valleys hitherto uninhabited are now receiving numerous settlers, and at the present rate of increase the Hoang-ho basin will in a few decades be again peopled by some eighty millions, as it was before the Mohammedan insurrection and the bursting of the Kaifung-fu embankments.

Gomi, the most elevated town on the Hoang-ho, was recently visited by Prjevalsky. It stands at an altitude of 8,000 fect on the extreme verge of the cultivated zone, which is here succeeded by the wooded tracts where the blue pheasant is indigenous. Siuing-fiu, lying east of the Kuku-nor, on the left bank of the Sining, is the capital of Kansu, and residence of the authorities, who administer the Tangut and Mongol populations of the Kuku-nor region. Its position at the north-east corner of the Tibetan plateaux, and near the historic route to the Tarim basin and Zungaria, renders it strategically and commercially a place of great importance. But the wide circuit of its walls now oncloses many ruins, while much of its trade has been transferred to Donkir, some 24 miles farther west. Here the Eastern Tibetans and Si -Fan tribes assomble to exchange their rhubarb, hides, wool, live stock, and minerals for provisions and other supplies. Amongst these varied and unruly elements the exchanges are not always effected without bloodshed; the dealers go armed, and disputes about the market prices sometimes end in free fights. This region is sacred in the eyes of the Tibetan and Mongol Buddhists, as the birthplace of the great reformer, Tsonkhapa, and amongst the lamassarics held in special reverence is Kunbum, which lies south of Sining, on a wooded terrace noar the deep gorge of the Hoang-ho. Before the recent Mohammedan and Si-Fan troubles this place contained 4,000 lamas, and its university comprises four schools devoted to the study of the occult sciences, ceremony, prayer, and the art of healing the "four hundred and forty ailments of mankind." One of the chief romedies is the foliage of a sacred tree, a species of elder, growing in front of the great temple, cvery leaf of which is said to bear a representation of Buddha and various characters of the sacred Tibetan alphabet. Huc fancied he saw this marvel, and Szechenyi, after much inquiry, was shown a leaf on which had been traced the rude outlines of a figure of Buddha.
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road cut throvah the "yellow earth."


North of Sining-fu and Chumpé-hien, which also lies on the Sining-ho, nearly all the towns were reduced to heaps of ruins during the late Dungan rebellion. But thanks to its strong ramparts, Lancher-fu, starting-point of the main route to the west, was not only preserved, but also afforded an asylum to innumerable refugees from the surrounding districts. Official capital of Kansu, although the Viceroy resides alternately at Suchenc, near the "Jade Gate," Lanehew-fu oceupies an advantageous site on the right bank of the Hoang-ho, which near this point bends suddenly northwards round the Ordos peninsula. Although its forty thousand houses are mostly mere wood huts, its well-kept streets, paved with granite and marble blockz, impart a pleasant appearance to this place. Amongst

Fig. 88.-Singan and the Lower Wel-ho Valley. Soale 1: 1,700,000.

its numerous industries are a cannon foundry and a factory conducted by Europeans for the manufacture of cloth for the army and other coarse materials in wool and camel's hair. There are even some steam-engines supplied from the neighbouring coal mines, and broad roads of modern construction, planted with elms and willows, radiate from this important eentre to every part of the province. Some 60 miles south-west of Lanchew-fu is the fortress of Salar, or Hochew, the chief stronghold of the Dungans during the insurrection. From this place they probably take the name of Sah-la', by which they are known in Kansu.

On the left bank of the Hoang-ho stands the commercial town of Chonguei, at the cast foot of the Ala-shan, and close to one of the gates of the Great Wall on
the very verge of the desert. Firther down the historic eity of Ninghin, a former emporimm of trule with Mongolia, and capital of an independent state in the tenth and eleventh centurics, still presents an imposing upporance with its pagodas, lolty brick walls, and ramparts. Below Ninghia the chief places uro Baotu (Bichukhai), on the left bank, and Chuyon-kuren, near the north-enstern angle of the Ordos peninsula. South of the Great Wall the stronghold of Puotriguards the chief passage leading across the Howng-ho, between the provinces of Shensi and Shansi. Here the stream is scareely 4 jon yards broad.

South of the Ordos peninsula the chicf stations on the grent historic highway between the two bends of the IIoang-ho are marked by the towns of Pingliany-fin, Kizurlere, and P'inchere, ull of which were enubled by their strong ramparts to resist the Dungion rebels. But all the surrounding lands were wasted, and the Dungan prisoners themselves have since been employed in repairing the damage done and raising extensive defensive works against similar outbrenks in the future. A grotto near linehew eontains the largest and most famous statue of Buddha in Central China. It is abont 56 feet high, and flanked by two others half the size, representing two disciples pointing at the divinity. In the Wei-ho valley the ehief place is hiunchere, below which, on the same river, lies the administrative town of liuchanghien, near a hill surmounted by another colossul Buddha. Farther south, on the banks of a tributery of the Wei-ho, rise the pagodas and domes of Tsingelien, which forms a group of five municipalities with a common mayor, but each surrounded by a separate enclosure of high walls. Tsingelew is a large mart for tea, tobaceo, and indigo, and has some silk embroidery and metal industries.

Singan-fu, the chicf town of Shensi, and capital of the Niddlo Kingdom under the Tsin dyuasty ( 906 to 1280 ), is still one of tho largest places in the empire, being exceeded in population probably by Canton alone. It stands in a plain at the conflumee of the Wei-ho, King-ho, and a few other smoller streams, and each of its square walls faeing the cardinul points is over 6 miles long, and pierced in the centre ly a monumental gate with lofty pavilions. Thanks to its central position and fertile soil, Singan has for thousands of years been a commercial city of the first class, and although none of its old buildings have been preserved, it contains a rave arehaerlogical collection of designs and inseriptions some two thousamd years old, and of great historical importance. During the late Dungan revolt the fifty thousand Mohammedans of Singan were interned within the walls under pain of death, and the inhabitants were with difficulty prevented from exterminating them.

On the Wei-ho, below Singan-fu, lies the formerly important town of Hou-cherr, where the terrible outbreak began in 1860 which devastated so many flourishing lauds and eost the lives of millions of their inhabitants. Of this place nothing now remains except one of the oldest monuments in the empire, a temple ereeted at the begiming of the Christian era. In the district the largest place now is the fortress of Tung-itcru, or "The East Gate," which is the central stronghold of the Howng-ho basin, and one of the best-defendel points in China. Oceupying a vital position where the Hoang-ho, after receiving three copious affluents, suddenly
trends eastward, Tung-kwan is the matural junction of several main routes, and in the neighbourhood is the sacred Hoa-shan, a hill like the Tai-sham of shamtung, covered with shrines and mueh frequented by pilgrims. Enthroned on the summit and encireled by heavenly spirits is the "White Emperor" (Pei-hi), guardian of the western provinees.

North Shansi, bordering on the Ordos country, is one of the least-known regions in China. It is known, however, to contain some commercial places, such as Furhere, in the valley of the Lo-ho; Yangan, in a rich coal and petrolemm distriet farther north; Yufin-fin, at a gate in the Great Wall near the Mongolian steppe. The northern division of Shansi, being more accessible, has been frequently visited by European explorers, who have carefully studied its geology aurl natural resources. Here lies Taiyuan-fu, eapital of the whole provinee, in a rich district watered by the Fuen-ho, a tributary of the Hoang-ho. Like Peking, Taiynan has its Manchu quarter separated from the Chinese town by a lofty enclesure. It had formerly a well-known manufactory of small arms, and it still contains a Government arsenal and gun foundry. The district produces the best grupes in China, from which the inhabitants make a good wine, following the method introduced by the early Roman Catholic missionaries.

South and south-west of the capital are the busy towns of IIienkno and Cliihien, and farther on are the flourishing cities of Taiku-hien and Chunglan-rhin, which have extensive relations with London, Marseilles, and San Franciseo. Every town and village of this district has its special industry-woven goods, paper, hardware, porcelain, bronzes-while the coal mines are largely worked for the local demand.

Before the Taiping revolt Pingynug-fu, in a sandy plain on the Fuen-ho, was one of the largest places in Shansi; now it is a mass of ruins, from which, however, it is gradually recovering. It is one of the oldest cities in the world, and within 2 miles of its triple enclosures lies the site of the imperial capital during the Yao period, over forty-two centuries ugo. Close by is a temple dedicated to the memory of the three venerated Emperors, Yao, Shun, and Ya, and according to the legend Yao lics buried in a groto amongst the hills east of Pingyang. Severr i large places, such as Pucherr-fu, Kiai-chen, Ngamyi, and Yuenching, lie in the south-cust corner of Shansi, where the rich salt works supply the requirements of the whole province, besides the greater portion of Shansi, Honan, and Kansu. The chief saline stretches along the north side of a lake 18 miles long, whenee is probably extracted more salt than from any other spot in the world. The primitive method of working it seems to have little changed since the time of Yao, yet it still yields about 154,000 tons yearly, which is forwarded to the surromading provinces chiefly through Yuenehing. The numerous saline springs of South Shensi and Honan show that vast salt beds exist; also in these regions. On the opposite slope of the luugtiao-shan salt marshes streteh away to the banks of the Hoang-ho, and here the yellow-earth cliffs are everywhere saturated with salt.

Below Tung-kwan towns and villages follow in rapid succession ulong both sides of the Hoang-ho. Honan-fu occupies the site of a former imperial eapital,
and near it stood Loyang, the imperial residence during the Wei and Tang dynasties in the third und seventh centuries of the vulgar era. It lies near the north bank of the Lo-ho, which here flows parallel with the main stream, from which it is separated by a long range of hills. Honan oecupies one of the most eentral points in the empire; and when the Great Asiatic Railway is completed, it cannot fail to become a chief emporium of the transit trade with the W'est. The surrounding hills are crowned with some of the oldest and most curious temples in China.

Kaifuuy-fu, cupital of Honun, and still universally known by its old name of Pien-leany, is deprived of the full advantage of its favourable position on the right side of the Hoang-ho by the inundations both of the main stream and of its tributary; the Pien, by which the riverain tracts are here often devastated. In 1541 it was almost entirely destroyed by its own inhabitants, who broke down the embankments in order to drown a rebel army. Unfortunately they nearly all perished themselves, while most of the besieging forces had time to escape. Kaifung-fu, which was the imperial capital from 1280 to 1405 A.D., has preserved none of its old monuments, and is now merely a trading place, presenting the aspect of a permanent fair. Here is the only Jewish community in China, engaged almost exclusively in gold and silver work, brokerage, and money-lending.

North of the Hoang-ho the city of Hoaiking:fin, surrounded by a vast garden, watered by rivulets from the Taishang-shan hills, although a busy place, is surpassed in importance by Chingra-chen, which lies 11 miles farther northwest, and which is a great centre of the coal and iron industries. The route rumning thence to Tientsin traverses the large city of Wei-hui-fu (Wei-kiun) and the port of Tankov-chen, at the head of the navigation of the Wei-ho. West of this river lies Changte-fil, noted above most Chinese towns for its well-kept streets and prosperous appearance.

South of the Hoang-ho the most importunt place in the extensive plains watered by the Houï and its tributaries is Chorkia-korr, at the confluence of the three headstreams of the Sha-ho, and west of the provincial city of Chinchev-fiu. The plains surrounding Kiceité, south of Kaifung-fu, are quite as productive as those of West Honan, but they suffered far more from the ravages of the Taïing rebels. The lacustrine region stretehing from Nunking to Tsinan, and traversed by the Grand Canal, being undefended by any strongholds, all its towns were seized and sacked by them.

BASIN OF THE YANG-TZE-KIANG.
Srchurn, Kwbicheq, Mlypei, Hevan, Noanhwet, Kiangav, Kiangbi, Chbriang.
Thes Yung-tze-kiang basin comprises three-eighths of China proper, with a population estimated, before the late civil war, at no less than \(200,000,000\). Although not originally founded here, the State drew from this region the chief elements of strength, which enabled it to develop into the paramount power of East Asia.

Of the two great Chinese rivers the Yang-tze is by far the largest, and is
hence commonly spoken of simply as the Ta-kiang, or "Great River." Like those of the Hoang-ho, its waters are turbid and of a yellow colour, from the alluvia washed down with the stream. But while the Hong-ho is compared to the "earth," or "Femule Principle," whose symbolic colour is yellow, the Yang-tze, according to some commentators, is the "Son of the Male Principle;" that is, of Heaven. The titlo of "Bluo" given to it ly the early missionaries, and still current in Europe, would thus be justified, azure being the colour of the sky. But much doubt prevails as to the real meaning of the characters commonly used to desigmate this river, which may possibly mean "Son of the Ocean," in allusion to its vast inundations, or may be a purely geographical expression, derived from the

Fig. 89.-Compahative Dibeharoe of the Yang-tzr and other Rivers.

old province of Yang, now called Kiangsu. But however this be, the grandiloquent epithets applied to the river of Central China need cause no surprise, for it is certainly one of the very largest in the world. In the length of its course and the extent of its basin it is no doubt surpassed by three others in Asia alone-the Ob , Yenisei, and Lena.* But in volume it far exceeds those Siberian streams, and according to the careful measurements of Blakiston and Guppy, it is surpassed in this respect by three only in the whole werld-the Amazons, Congo, and La Plata. Below the confluence of the Han the mean discharge is about 635,000 cubic feet
* Length of the Yang-tze according to Ritter, 2,800 miles; approximate area of drainage according to Blakistun, \(\mathbf{7 5 0 , 0 0 0}\) square miles.
per second, and at high water in August \(1,260,000\) cubic feet. Assuming that the proprortion between rainfall and dischurge is mintuined thronghout its lower course, the aremuge volume of the Yung-1ze would be 8 :js, 000 cubic feet, or six times that of the Nild, mul ten times that of the Rhone.

When instituting comparisons between their two great water highways, the Chinese never fuil to contrast the benefiecnt elarneter of the sonthern with the disistrous influence of the northern stremm, which they have entitled the "Scourge of the Suns of Han." The Yung-tze has never caused such widespread ruin as that which hus uttended the shiftings of the IIoung-ho, nor is any river in the world more useful for mavigution. If it does not yet number us many steamers as the Mississiphi, or even the Volga, it is none the less crowded with flotillas of junks and river craft of every description, while its flouting population is numbered by

Fig. 60. Ninhoaile Cothar op the Yano-tze and ity 'Pumutahes. Scale 1 : \(20,0 \times 0,0 \times 0\).

humdreds of thousands. Murco Polo was eertninly guilty of no exaggeration when he declared that the wuters of the "Kian" bore more vessels laden with more merchundise than on all the united seas and rivers of Christendom. A conflugration caused by lightning in the port of Cchang in 1850 consumed seven hundred lurge junks and thousands of small boats, and on this occasion as many as fifty thousund people are snid to have perished by fire or water. One local merchant ulone ordered no less than ten thousand coffins. Thus were destroyed in a single port more boatmen than are found in all France. The Taïping rebellion, which raged chicfly along the banks of the Yang-tze and its great uffluents, for on time swept the river of its inhabitants. But since the restoration of peace the local trade has revived, and long lines of craft engaged in peaceful pursuits have again made their appearance on its waters. But these flotillas are from time to time
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es. aden with more n. A conflagrad seven hundred as muny as fifty c local merchunt oyed in a single rebellion, which uents, for or time peace the local rsuits have again om time to time
tossed by the waves raised by the passing steamers, as if to wirn them of the revolution that is taking place in the methods of transport.

The Yangrot \% has received from the Mongolians the title of Dalai, or "Sen," and in the history of China it has played the sume part as the orean and great marine inlets elsewhere. It has afforded even greater facilities for travel, for the transport of goods, and for the mutual intercourso of the surrounding peoples. At the present day Europenn influences are penetruting into the heart of the empire through the same channel, which for practical purposes may be regurded as a continuntion of the seabourd, stretching some 2,400 miles inland. The total length of the navigable waters in its basin is equal to half the circiunference of the ghlobe.

\section*{Tie Upper Yang-tze and Mis.}

The head-streams of tho Yang-tze ure known to rise on tho Tibetan plateaux, fur beyond the limits of China proper. Although still anexplored by European travellers, its actual sourec may be indicated with some appronch to aceurucy. Three rivulets, known to the Mongolians ns the Ulan-muren, or "Red livern," und more particulurly discriminated as the Nancitu, Toktonai, and Ketsi, tuke their rise in tho north-enstern region of Khachi, south of the unexplored Kuen-lun runges, which are here continued westwards by the Bayan-khara chain. These three streams jointly form the Murui-ussu, or "Winding Water," of the Mongoliuns; the Dichu, or Brichn, of the Tibetans-that is, the " River of the Cow ;" und in Chinese territory the Yang-tze-kiang. Where it was crossed by Prjevalsky, at an elevation of 13,000 feet above the sea, its bed was 750 feet broad, and its current very rapid. From the appearance of its banks it is evident that during the smmmer inundetions its waters are spread over a spuce at least 5,300 feet wide. Hence at an altitude of nearly \(2 \frac{1}{3}\) miles above the sea, and over 3,000 miles from its mouth, the Murui-ussu already discharges more water than many famous striams in West Lurope. In this region the two great rivers of Chinu approach nearest to ench other, their basins being here separated only by the ridge of the Bayan-knara, whose snows feed both streams.

The Murui-ussu at first follows the same direction as the other rivers of Last 'Tibet, flowing parallel with the Lu-tze-kiang and Lantzan-kiang southwards, as if intending to dischargo its waters into the Gulf of Siam. But after falling for over 600 miles towards the Indian Ocean, it fails to pierce the Yuman pluteuu, and is thus deflected eastwards to the China Sea. At this part of its course it has received the nanes of Kinsha-kiang, or "River of the Golden Sands," and Peshuikiang, or "White Wuter." The title of Kinsha-kiang has also been conferred on the Yalung (Yarlung), or Niachu, whicin flows from the slopes of the Bayan-khara parallel with the Murui-ussu and the other Tibetan rivers of the province of Kham. At the confluence of both the Yalung, nearly as large and more rapid than the main stream, plunges into a wild rocky gorge which has never yet been pierced by a path.

Below the Yalung the Kinsha-kiang receives another tributary from the Bnyan-
khara, or at least from its eastern extension, the Min-shan. This is the Wen, or Min of our mans, which also flows parallel with the other watercourses of the province of Kham. 'There can be no doubt that the Min must be regarded as an afthent of the Kinslum-kiang, to which it is greatly inferior in volume mad length, while its valley is merely a lateral trough in the grent depression traversed by the wuters of the Yung-t\%e. Nevertheless most Chinewe nuthorities hnve considered the Min as the main branch, a fuet which must doubtless be attributed to the common culture prevailing in the valleys of the Min and Lower Yang-tze. The grent river coming from the upper regions inhabited by wild and hostile tribes seemed to the civilisel Chinese to belong to another world. They considered, in fact, that the Kiang, or "River," pre-eminently so called, shonld flow altogether within the limits of their domain. In the Yukurg, the oldest Chinese geograplical work, the Min is already described as forming the upper course of the "Grent River," mad Mareo Polo, who lived in its valley, ulso gives it the name of "Kian." On the old maps all the upper course of the Kinshn-king is suppressed, while nu exaggerated importunce is assigned to the Houng-ho, whose valley had been the first to be settled. Since Mareo Polo's time the Min has shifted its bed in the plain where is situated Chingtu-fu, capital of Sechuen. It flowed formerly through the heurt of the city in a deep chamel half a mile brodd, whereas now it no longer traverses the place, and ramifies into several branches, of which the one nearest to the town walls is only 330 feet wide. This change in its course has been largely caused by the irrigation oamals constructed in the surrounding pluin, which is one of the most fertile in China.

During the inundations the Min is navigable as far as Ohingtu, but at other periods the boats camnot get beyond Sintsin-hien, the converging point of all the natural and artificinl channels in this basin. Here begins, at a distance of 2,000 miles from the sea, the vast and unbroken water highway by which the whole of China proper is intersected from east to west. One-tenth of this navigable artery is formed by the Min, whereas above the confluence the Kinsha-kiang would appear to be only navigable for some 60 miles by ordinary craft. At the same time the falls spoken of by the boatmen of Pingshan are probnbly mere rapids which might easily be overcome, and the solitude of these waters should perhaps be attributed to the terror inspired by the surrounding Miaotze wild tribes. But even below the junction of the Min the navigation of the main stream is not everywhere clear of rapids and other obstructions. According to Blakiston's measurements the total fall of the Yang-tze below Pingshan is about 1,500 feet in a distance of 1,760 miles, or little more than an average of 10 inches in the mile, but very unevenly distributed. Below the junction the river, here flowing north-east, follows the direction of the rocky ranges which fringe both its banks, but which at intervals present gaps, through which the stream rushes in an abruptly winding bed. The projecting bluffs are here crowned with strongholds and entrenched camps, which offer a refuge to the peasantry of the surrounding districts during civil war. At their foot are rich deposits of coal, carbonate of lime, and here and there of iron ores, while a little gold-washing is done along the more level banks.

Ture Mimole Vino-tre anil Han-kiano.
In all this regiom, to which blakiston has given the mume of "Cross langes," the old hmaks may be traced at a considerable elevation above the present level of the highewt flowlings. It is evident that the river formerly flowed at a much higher elevation than at present. In this frontior regriom, between the provinces of Sechuen and Hupeh, the " Tra-kiang," or "Great River," presents some of its grandent mad most varied scenery. Below the Shipuchai, or "House of the I'recions Stone," a Budhlist temple romunticully perched on as square rocky bluff, tho stream phanges into a gurge with vertical walls over (ian) feet high. At some points the chamel is searcely 470 feet wide, and, us most of these deep fissures rum east und west, their depths are seldom reached by the solur rays. Their glome recesses are overgrown with ferns and other vegetable growthe delighting in the shade and moisture, while their summits are clothed with forests of conifers. Sunken ledges fringe the bunks, but in many places the chanel is fully 100 feet deep, rising during the Angust fiveshets from 60 to 70 feet above its ordinary level in the nurrow ravines. To avoid these inundations all the houses have to be perched on the crests of the heallumds. Ordinary eraft, if well managed, pass down without much risk of going to picees on tho sunken shouls; but those ascemding the stream have to struggle agninst a current, in some places ruming over 10 miles an hour. Hero a regular towing system has been orgunized, and at the more dangerons points villages have sprung up peopled mainly by skilled boutmen engaged in this work. As muny as a hundred aro sometimes attuched to the bamboo towing-rope of a single junk, and are often preceded by a clown or hired buffoon lenping and bounding along, and encouraging them with his merry antics.

Between Kweichew and Ichmeng the series of tan, or chicf rupids, have a total length of 114 miles, and terminate with several romantic gorges, such as those of Lou-kan and Mi-tan. Beyond these the hills suddenly fall on either side, the stream expunds to a wilth of over 5,000 feet, and hero porpoises are met following in the wake of the junks. For at this distance of 1,000 miles from the const murine influences are already felt in a river to which tho natives have applied the saying, "Boundless is the ocean, fathomless the Kiang." For ordinury cruft it may truly be deseribed as fathomless, being scarcely anywhere less than 20 feet deep even at low water. But as we approach the sea the danger of inundations increases with the gradual lowering of the banks, and in the plains the stream is enclosed on both sides by regular embankments, like those of the Hoang-ho. The evil, however, is here greatly mitigated by the extensive lagoons, and even veritable lakes, which now begin to make their appearance on both sides. Of these lakes the largest is the Tung-ting, which lies above the confluence of the IIan. With an area of at least 2,000 square miles, the Tung-ting serves as a reservoir for the overflow of a basin some 80,000 square miles in extent, comprising nearly all the province of Human. This lake changes in form and extent according to the volume of water discharged into it by the Yuen, Su, Siang, and its other influents, and according to the level of the Yang-tze itself, from which there is at times a
back flow through tho Tungting-ho emiswary. Daring tho floods the riverain population forsake their villages, seeking a temprary wfuge cither on the sirromeding hills or on the boats and rafts. From the 'Tung-tiag are named the two alljacent provinces of Hupeh and Ituman ; that is, "North of the Lake" and "South of the Lake" respectively.

Both in size, commercial and historical importance, the chief affluent of the Lower Yang-tze is muluestionably tho Itan-kiang, which presents a matural highway of trade and migration between the two great arteries of the cmpire. In the Lan basin aro also concentrated all the elements of prownerity-a temperate and hacalthy elimate, fertile soil, abondant water of goom quality, an endersely varied flora, gypum, marbles and other building muteriuls from the neighbouring hills; lastly, rich carmmiferoms deposits. The Han is available for mavigation mearly throughout its whole course, and in summer might be aseended by stemers for a distance of (j00 miles. Even ubove Danchung-fu, where it is a mere torrent, it becomes navigable for bouts during tho floorls; but, on the other haul, its middle course is obstructed by rapids, which canse frequent shipwrecks. Lawer down the chamel stands at a higher elevation than the surrounding plains, und here the villages are often built on broad terraces, resting aguinst the cmbunkmente, and during the inmodations forming artificial islamds amid the survounding waters. The whole plain, stretehing from lake Tomerting to the Han and Yang-tze confluence, is it times converted into a vast inland sea, although in its lower course the bed of the llan itself is murower than higher up. At low water in winter it is only 900 feet broal at Lankow, whereas it expands in its middle course to 2,600 feet, and in some places oven to \(1 f\) miles from bank to bank.

\section*{Lake Povang and the Lower Yanfi-t\%e.}

Lake Poyang resembles the Tungting in its position south of a great bend of the Yung-tze, its vast extent, its hydrographic system, and its importance for mavigation. It also receives a large influent, the Kia-kiang, whose alluvial delta is seen at low water projecting far into the lake. Here also there is a back flow from the Yung-tze, raising the level some 30 feet. Lake Poyang is studded with ishunds, but many parts of the surface, some 1,800 square miles in extent, are little more than marshy forests of reeds. In the north, however, it is very deep, and here the shores are fringed with wooded hills, headlands, and steep bluffs crowned with the towers and pagodas of numerous towns and hamlets. The animation of the picturesque prospect is enhanced by the numerous flotillas, rafts, and junks plyis, on these busy waters. Near the outlet rises the "Great Rock of the Orphan," confronting the smaller but more elevated "Little Rock of the Orphan," which stamls on the Yang-tze itself over against the confluence. The water-fowl and schools of porpoises which penctrate into the lake give it the appearance of a marine inlet, and the resemblance is often heightened by the fierce storms to which it is subject.

Below Lake Poyang the Great River trends north-east across one of the most pleasant landscapes in China. Here the current flows in its broad bed with a
s the rivoruin or on the surmaned the two e" and "Sonth wflluent of the 1 hatimul highmpire. In the temperato und millessly variod hbouring hills; vigution nemrly - stemmers for a were torrent, it ther hand, its nrecks. Lower ling plains, und st the embonkho surrounding the 1 Inn und although in its At low water iss in its middle to bank.
a great bend of ortance for nuvialluvial delta is a back flow from led with islunds, t, ure little more deep, und here ffs crowned with animation of the and junks plrit, g of the Orphan," Orphan," which -fowl and schods of a marine inlet, ieh it is subject. one of the most road bed with a

placid un:form motion; the monotony of its grey waters is broken here and there by leafy islets; the hamlets along the banks nestle amid their bumboo thickets and clusters of trees; the neighbourhood of the busy murts is amounced by the towers and pagodas crowning every eminence; the cultivated plains ure intersected on both sides by low grassy ridges, which wind away till lost in the haze of the distant horizon. But the true alluwial plains are not reached till we get beyond Nanking, where the Yang-tze turns eastwards and gradually expauds into a broad estuary, in which the tides ascend for a distance of 215 miles. Here the channel in some places exceeds 300 feet in depth, but the bed contruets us it upprouehes the coast, where it is separated by extensive sand-banks from the seu. At the mouth the distance from headland to hendland is about 60 miles; but most of this space is occupied by islands and shoals, where the deepest elammels ueross the bar have a mean depth of 13 or 14 feet, rising at high water to 24 feet and upwards. Vessels drawing 16 or 18 feet are thus easily able to pass up, the chief dunger to navigation here being the dense fogs which settle on the shallows, und which, as elsewhere in the Yellow Sca, are due to the sudden ehange of temperature produced in the currents surrounded by deeper waters.

The Yung-tze carries in solution less sedimentary matter than the IIoang-ho. According to the observations of Guppy, the proportion of solids in the lower reaches is \(\frac{1}{\text { ITत }}\) in weight, and \(\frac{1}{515}\) in volume. Yet the alluvium at the mouth represents a solid mass of nearly 210 eubic feet per second. Thus the yearly inerease of fluvial deposits amounts to 6,300 millions of eubic feet, a quantity sufficient to spreal a luyer of mud nearly 7 feet thick over an area of 40 square miles. Hence the position of the navigable channels is modified from year to year; new sand-banks make their appearance, and the islands in the estuary are constantly inereasing in size. The island of Tsungming, or Kianshe, running north-west and south-cust, immediately north of the Wusung roadstead, is said to have been just rising above the surface at the time of the Mongol rule. Eaten away by erosion on the side facing inland, it is continually increasing seawards, and is thus drifting, so to say, in the direction from west to east. Its earliest settlers were exiles banished from the mainland; but these were soon followed by free colonists, who gradually changed the aspect of the land with their canals, embankments, villages, and cultivated fields. Some Japanese pirates also gained a footing on the const fucing seawards, where their descendants, turning to the arts of peace, have become intermingled with the Chinese peasantry. At present about \(2,000,000\) souls ure crowded together in an aren of scarcely more than 800 square miles, which is thus one of the most densely peopled as well as one of the richest spots in China. During the first half of the present century the colonists of Tsungming enjoyed complete exemption from imposts, official control, and all vexatious intermedding on the part of the mandarins. The consequence was that they were at once more prosperous und more civilised than their kinsmen on the mainland. At present these islanders take suecessive possession of all the new lands formed in the Yang-tze estuary. In this way has been colonised the large island of Hitei-sha, which has itself been formed of a hundred different islets
connected by mud-banks with the northern headland at the mouth of the estuary. In this part of the province of Kiangsu the settlers find themselves in contact with un almost savage aboriginal element, to which they present a marked contrast in their gentle disposition and superior intelligence.

Although inferior in importance to those of the IIoang-ho, freat hanges have nevertheless taken place in the course of the Lower Yang-tze-kiung. Besides its present mouth, it had formerly two others farther south. Of these the largest branch, which may still be traced throughout most of its windings, ramified from the northern channel, at the point where is now the city of Wuhu, abovo Nanking. From this point it pursued a meandering course south-eastwards to the Hangehew

Fig. 91.-Old Mouthe of the Yang-tze.
Renle \(1: 4,800,000\). After Edkins and Dekker.

estuary. The outlines of its ancient bed are still preserved by a string of lakes in the Shanghai peninsula, now abandoned by the Yangtze. Thus the \(T a-h u\), the largest of these peninsular lakes, recalls its former fluvial character in tho outlines of its western shores; which follow the right bunk of the Yang-tze. The Gulf of Hangehew itself still retains the aspect of a river mouth, although the process of alluvial deposits has been interrupted, and in many places even reversed, the waves washing away the sand-bunks and eating into the old coust-line. The whole district, which formerly comprised the Yang-tze delta between the two estuaries, is a low-lying truct resembling Holland in appearance, being eut up in every direction by dykes and canuls, and all the traffic being conducted by water. North of the Yang-tze the alluvial plain, which stretehes
northwards to the old bed of the Moang-ho, prosents much the samo aspeet, and here also the natural and artificial chumels form an inextricable labyrinth of watercourses. This region is traversed south and north by the Grund Canol, a former affluent of the Yung-tze, which now joins the Moang-ho, while the Moaï, fed by the torrents from the extreme spurs of the Kuen-lun, is distributed over the plain in numerous branches, which converge in the old beds of the Moang-ho. A

Fig. 92.-Channels and Breakwaters netween the Hoang-ho and Yang-tze.
According to the Missionarien Seale \(1: 2,500,000\).


good idea of the appearance of this watery region may be had from the chart of the early Roman Catholic missionaries, since rectified by the Chinese geographer, Li-fong-pao.

\section*{Sechuen Mighlands.}

Between the outer terraces of Tibet and the shifting shores of the Yellow Sca the Yang-tze basin is divided by the varying relief of the land into severul natural regions, differing one from the other in their elimate, products, and the character of their inhabitants. A well-marked region is that of the West Seehuen highlands,
where the "River of Golden samd" winds its way ahong deep nurrow gorges through the lands of the Tibetims, of the Manter and Lalo. Bast Sechuem, again, is sepmentent from the plains of llupeh by the "Cross Ranges" and the ravines bet ween Kwerchew

Fig. 93--Channels and Bheikwatvin hetween the Monvo-ion and Yang-tze. Areorling th Li-fong pao. Seale \(1: 2.675,0\) o.

-60 Milea.
and Ichang, while the Nganhwei hills mark the extreme limits of the uplands and the beginning of the lowland plains more recently conquered from the ocean.

The ranges on the Last Tibetan frontier are evidently the remains of a plateau gradually worn by the action of ice and running waters into parallel ridges running mainly north and south. Although cut deeply into the thickness of the
prges through a, is sepurated on IWoichew
is of a plateau parallel ridges ickness of the
plateun, the very river beds in this region still lie at elevations of from 8,000 to 10,000 feet ubove sen-level. The great trade route leading from Lassa, through Butang and Tatsienlu, to West China, maintains between those two towns an ulmost uniform clevation of 11,000 feet, and three passes on this route stand at a height of nearly \(: 0,000\) feet. These pusses are much dheaded by travellers, far more on account of the rarefied atmosphere than for their stecp inclines, severe cold, and fieree gales.

The runges separating the Kinsha-kiang from the Yahug, und the lutter from the Min, fur to the sonth of the Kuku-nor and Buyan-khura plateaux, also present summits rising ubove the snow-line, which has been fixed by Gill at from 14,000 to 16,000 feet in these regrions of the lust Tibetan frontier. Thus the Nenda, or "Sacred Mountain," rising to the cust of the Upper Kinsha-kiang valley, under the parallel of lBatang, is no less than 20,500 feet high, and sends down in all

Fig. 94.-Mountains metwern 'Iateienlu and Batang. Aceording to Oill.

directions vast glaciers from its bounciess snow-fields. With its spurs it covers the length of a whole day's march. during which the blue glint of the ice on its upper slopes remains constantly in view. East of the Nendn rise the scarcely less elevated peaks of Surung, which probably form a portion of the same system. East of the Yalung the crests of another range rumning parallel with the Surung all rise above the snow-line, and one of them towers some 4,000 or 5,000 fect above all its rivals. This is the Ja-ra, or "King of Mountains," and Gill deelares that he "never saw one that better deserved the name." "Never before," he adds, " had I seen such a magnificent range of snowy mountains as here lay stretched before me, and it was with difficulty I could tear myself away from the sight." The range culminating with the Ja-ra is connected northwards with the highland region, forming a continuation of the Bayan-khara, and here also numerous peaks exceed Mont Blane in altitude. Armand David even thinks that amongst them
may yet be foume summits rivalling those of the IIimalnyas themselves. The best known at present are the Ngomi-shan, ascended in 1879 ly the missionury Riley; the Siwelung-shme, or "Dragon of the Snows;" the neighbouring "White Cloud," 14,000 to 1 it, 000 feet; the "Seven Nails," a seven-praked pyramid, 18,000 to 20,000 feet (Gill); farther north the Shipangfang, upparently about the same height, with a side pass between two tributaries of the Min, 13,500 feet.

The West Sechuen and Tibeto-Chineso frontier ranges receive a sufficient quantity of moisture under the form of snow and rain. There being no higher elevations between them and the Bay of liengral, they are exposed to the direet influence of the moist winds, and in some places, such as Litang and Mupin, there are said to be duily showers throughout the summer. IIence the vegetation is marvellously luxuriant, especially in the sheltered valleys. The slopes even of the higher valleys rising above the zone of arboreseent vegetation aro covered for three months with magnificent pastures, which disappear beneath the snow

Fig. 95. - Fhom the Min Valley to Tathenle
According to Gill.

during the long winters. Lower down there is a surprising varicty of forest trees, some of which acquire proportions elsewhere unknown. Conspicuous amongst them is a yew rivalling the finest European firs in height. The rhododendrons acquire tho dimensions of trees, and lovely azaleas grow to a height of 18 or 20 feet. Fcrns, shrubs, and even trees find a footing on the almost vertical scarps, clothing the rocky slopes with their verdure and bloom. On emerging from a mountain gorge the traveller turns and looks in vain for the tract he has followed. Nothing is visible except a tangled mass of flowering lianes and bushy foliage. Every village in the valleys of the streams flowing to the Min is embowered in a thicket of fruit trees, walnuts, peachos, and apricots, and clusters of bamboo are found struggling up to an elevation of 5,000 feet. The vine and mulberry flourish in the Batang district at a height of no less than 8,500 feet, and sericulture might here be easily introduced, but for the fact that tho dovout Tibetan Buddhists would regard the destruction of the silkworm as a mortal sin.

The wild animals of this region, mostly of the samo species as those of Tibet, have already disappeared from the greater part of the districts colonised by the Chinese. Hence, in order to study its rich fuma, Armand David took up his residence in the Miaotze principality of Mupin, at an elevation of 7,000 feet above the sea. Like the Tibetan plateaux, the Sechuen highlands abound in large ruminants, various species of antelopes, the musk deer and mountain sheep, somo of which aro hunted for their valuable horns, sold for their weight in gold. The wild yak roams in solitary dignity round about the grazing grounds of thousands of the domestic species, and the upland forests of Sechuen are frequented by the takin (Budorcas taxicolor), a variety of the ox, found also in the Eastern Himulayas. The whito bear of Khachi is also met in the Mupin country, and probably on all the intermediate plateaux. Many even of the tropical animals have penetrated into these bleak highlands, amongst them a flying squirrel and two species of ape, one of which, the kintsin-hew (Rhinopithecus Roxellance), is almost as large as tho apes of the Eastern Archipelago. It has a short face of a bluish-green colour, an upturned nose, and a cranium attesting a renarkable degree of intelligence. Rut the Mupin uplands are chiefly distinguished by the splendour of their avifauna. Here the loveliest pheasants, besides various gallinaceer noted for their brilliant plumage, are found associated with numerous species more modestly adorned, as well as with tho nightingale and other singing birds of the European type. Armand David's collection alone contains thirty new species, and no doubt many more remain to be discovered. In summer green parrots, probably from South Yunnan, find their way into the Upper Kinsha-kiang and Yalung valleys, so that at altitudes of 9,000 or 10,000 feet we still faney ourselves lost amidst the dense woodlands of Indo-China.

\section*{Inhabitants of Sechuen.-The Si-Fan.}

Most of the Alpine distriets enclosed southwards by the great bend of the River of Golden Sand belong ethnically to Tibet, although politically separated from that region. The civilised inhabitants of the country aro of Bod stock, like those of Lassa, with the same customs and the same social institutions. In Tibetan Sechuen, as in the province of Kham, the rivers are crossed by suspension bridges, or in movable seats slung from bank to bank on bamboo ropes. In Chinese Tiibet the shepherds have also their black tents woven of yak hair, while the permanent dwellings are rudely built of undressed stone, pierced with narrow openings, and terminating with flat roofs. They are generally perched on solitary crags, where they have the appearance of ruined strongholds. The contrast is very striking between the Tibetan and Chinese villages. While the latter are generally grouped in compact masses, the former are scattered over a wide area, so that in districts occupied by both races all the enclosed towns are Chinese, the straggling suburbs Tibetan. Nevertheless the lamassaries, where hundreds and even thousands live together in a single community, are inhabited exclusively by Tibetans, with perhaps a few half-caste Chinese forsaken by their parents.

The lumus are the true masters of the lund. Relntively more numerous even than those of Tilnet itself, they own fully one-hulf of the soil, the finest herds of yaks and sheep, und multitudes of slaves employed as shepherds or husbandmen. The practice of usury has even rendered them the renl proprietors of the lauds cultivated by the laity. Membership is cusily acquired in these religious communities of Scchuen. The fulfilment of a vow, the fear of vengeance, the desire to eseape the imposts, any pretext will serve to gain udmission as a novice, and thus gradually uequire all the privileges enjoyed by the confraternity.

But while the lamas are thus placel ubove the law and exempt from taxes of all sorts, the common people are all the more ruinously oppressed, and the imposts, distributed over a continually decreusing number of fumilies, have already become ulnost unbearable. During the last hundred years the population subject to taxation has diminished fully to one-half, especiully through migration to Yunnun; the country is covered with ruined houses und hamlets, certain districts have even been entirely depopuluted, and extensive cultivated tracts have reverted to the condition of forest or pusture lands.

The still half-savage Tibetun tribes of the North Sechuen highlands are commonly designated collectively by the name of Si-Fan, or "Western Strungers." Clothed in skins or coarso woollen garments, and with their dishevelled locks falling in disorder over their shoulders, the Si-Fun present a ferocious appearance to the cultured Chinese of the plains. Yet they are far less formidable than they seem, und the stranger seeking hospitality amongst them never fuils to meet with " friendly welcome. Lamaism has been introduced to a limited extent into their social system, and their priests possess books written in the Tangut eharacter. Those of the Upper IIoang-ho, like many other wild tribes of the interior, and like muny Chinese themselves, funcy that the Europeans can penetrate with their glance to vast depths in the land and water. They can also fly over the hills, and if they cross the plains on foot it is because they would be encumbered in their flight by the pack animals which they cannot dispense with. The chief of Sining asked Prjevulsky's interpreter whether it was true that his master was able to see the precious stones sparkling 250 feet below the surface of the earth.

\section*{The Mantze, Lolo, and Cineese of Sechuen.}

Northwards the Si-Fun come in contact with the Amdoans, while towards the south and south-west they border on other tribes also of Tibetan origin, commonly known as Mantze, or "Indomitable Vermin." But the tribes which understand the meaning of this word reject it as an opprobrious term, and claim to be called I-jen; that is, "Different People," or "Strangers." One of these tribes, the Sumu, or "White Mantze," dwelling on the bunks of the Luhoa-ho, a western tributary of the Min, numbers, according to Gill, as many as \(3,500,000\) souls, living on agriculture and stock-breeding. But however this be, there ean be no doubt that the Muntze form a considerable element in the population of West China. Politically distinct from the surrounding tribes, the Mantze of Seehuen are grouped in
eighteen petty states, in which the authority of the kinglet is ubsolute. Mre ruises a tax on the cultivated lund as well as on the herds, and every fumily owes him the yenrly tribute of six months' munul linkur paid by one of its members. He dinpuses of the land at his pleasime, trunsferring it from one to mother aceording to his caprice. Tho throne of the White Muntze, the most powerful of all these stutes, is ulways oceupied by a queen, in grateful memory of the brilliant deeds performed by un uncestress of the reigning fumily.

The epithet of "Savage" applied to the Muntze is not justified, for they carefully till the land, weave textilo fubries, build houses und towers in the Tibetun style, possess Tibetun and Chinese writings, and support sehools for their children. Towards the west 'Tiketum influence prevails, and hero the lumas are fully as powerful as amongst the Si-Fan. In the enst the Chinese are in the ascendant, and here muny of the Mantze have shuved their slock hends and adopterl the costume of the lowlanders. It is evident that the Muntre stutes will not be uble long to resist the pressure of the Chinese colonists, who are continually encroaching on their domuin. These colonists seize every pretext for declaring war against the "Savages" and taking possession of their lands. Thus the Mantze are undergoing the fate of all conquered races, and they are aceused of committing the very crimes of which they are the victims.

In the great bend formed by the Kinsha-king between Sechuen and Yumun dwell other tribes south of the Mantze, and like them threntened by the Chinese settlers. These are the Lolo, a name without any meaning in Chinese, unless it be a reduplicate form like the Greek " Barbar," indieating " stammerers" unable to oxpress themselves in a civilised language. In any case, under this designation of Lolo, the Chinese confound a large number of tribes in Sechuen and Yuman, all differing essentially from the Si-Fan, Mantze, and others of Tibetan stock. Edkins regards them as members of the Burmese family, and their writing system would seem to resemble the Pali current in Ava and Pega. By Thorel they are divided into "White" Lolo, akin to the Laos people, and "Black" Lolo, whom he regards as the aboriginal element. They are generally taller and slimmer than the Chinese; their features are also sharper and more pleasant, at least according to the European taste. But in some valleys goitre and cretinism are very prevalent affections. In the eity of Ningyuen many of the Lolo have adopted Chinese ways, and some have even passed the examinations for the "civil service." But in the surrounding hills the tribes have preserved their independence, and are aceordingly avoided by the Chinese traders and travellers, who pass north and south of their country. After centuries of warfare the colonists have failed to subdue these barbarians, whose chiefs have in very few instances consented to recognise the Imperial Government. Even the military stations established at intervals aleng the frontier do not prevent the Lolo from frequently swooping down from their eyries, and carrying off the salt and other supplies of which they stand in need. In tho northern districts of Sechuen a half-caste race of Chinese, Si-Fan, and Mantze has been developed; but in the south no crossings have taken place between the rude Lolo and their cultured neighbours.
rhile towards the rigin, commonly h understand the be called I-jen; jes, the Sumu, or tern tributary of iving on agriculo doubt that the ina. Politically are grouped in

The portion of Sechaen ocenpied exclusively by the Chinese is limited by the slopes of the momitains rising west of the Min valley. Bast of this matural frontior the aboriginal elements have completely vanished from the land of the "Four Rivers," which was exclasively held by them some twenty-two centuries ago, before the alvent of the first Chinese immigrants. Since then frequent massacres have tuken place, und in the time of Kuhlai Khun most of the settlers were extirputed. At the Manchu comquest the conntry was ugain depopulated, after which fresh strenms of migration flowed in, especially from the provinees of Shensi und Huzelh. Hence the pepmation of the "Four Rivers" is of very mixed origin; but from the mixture has sprung a race endowed with speciul qualities. Of all the Chinese the people of Sechuen are perhaps the most courteous, kindly, and refined, and at the same time the most upright and intelligent. But ulthough extremely industrions, they have little taste for trule, and the dealers in their country come cither from Shensi or Kiangsi, the money-lenders and usurers from Shansi. The people of Sechuen also supply fewer of the lettered and militury classes than perhaps any other province. Their practieal common sonse repels them from the official course of ntudies, in which so littlo true knowledge is entungled in mn endl-web of memingless formulas. But us husbandmen and artisuns they have placed their comutry at the hend of all the provinces of the empire. Having taken little part in the Taïping war, they have had all the more leisure for developing their inexhaustible industrinl resourees. Their salines, petroleum wells, iron and coul mines are extensively workel, and the lowland distriets are admirably irrignted, prolucing vegetubles in greater varicty and abundanco than in any other part. For sericulture Sceluen is ulso unrivalled even in China, and so common is silk as an article of dress that on gula-dnys more than half of the inhabitants of the capital are clothed in this costly fubric. Not only the pluins and undulating hills, but even the steep slopes with a gradient of \(60^{\circ}\), aro brought under cultivation. Thanks to tho "foreign root"-that is, the potato-introduced by the missionaries apparently in the last century, tillage has been developed to an altitude of 8,000 and even 10,000 feet, and the cultivated lands havo already been continued across the intervening ranges into the neighbouring provinees. The superfluous population of Sechuen is overflowing in the same direction, and thus returning to the surrounding lands more colonists than it formerly reeeived from them.

The soap-tree, the tallow-tree (Stillingea sebifera), and many similar useful plants are here widely eultivated, and one of the most remarkable industries is that of the pei-lu, or vegetable wax, which has to be carried on by a division of labour between the inhabitants of two distant distriets. The insect (Coccus pela) which seeretes the wax is born and reared on the leaves of the Lignstrum lucidum growing in the Kienchang country near Ningyuen. At the end of April tho eggs are carefully gathered and brought to Kiating-fu, fourteen dnys distant, and at the other side of a mountain range. The difficult journey has to be made by night to protect the eggs from the heat. But after the journey begins the most delicate operation; for the eggs havo now to be detached from the branch on which they have been emveyed, and transforred to the Fraximes Simensis, a tree of quite a different species,


on which the insects are hatched, and secrete the highly prized white vegetable was.

\section*{Ther Puovinet of Kiwhermes.}

Fast in in ? !in und its tributaries, the "Four Rivers," " rise the red sumbstone mad cartwe... :ons rumges, all ruming someth-went and north-east, the detritus from which has been strewn over the surfare, impurting to it the ruddy tinge which has suggested to Richthofen its name of the "Rod Bawin." These ranges are conneredel with tho erests separating the Min afllaents from the valley of the llankiang, and which, necording to Armund David, uttain an elevation of 10,000 feet sumth of Hanchung-fin. This water-parting, known as the Lan-shan, fulls gradnally castwards as it "pproaches the Yang-tze, disapparing at hast in the lacustrine region, which receives the overflow from the Yung-tze mid the Han.

South of the Great River the province of Kiweichew presents in its general relief a form unalugrons to that of Sechuen. Thus towards the west it is commandel hy a highlamd region, or rather a broken platem, above which rise tho snow-clad peaks of the Lemur-shan, or "Cold Monntains." Somthwards it is separated by border ramges from the Yuman tableland, while the chain known to Suropeans as the Nan-ling (Nan-shan), or "Southern Range," forms the waterparting between the Yang-tze mad Si-kiang busins. In the interior of Kwechew the parallel ridges, ruming in the same direction us those of the led basin in Sechuen, have a lower mean elevation, while the waters of the Wa and other stremms, having a less rapid incline, are here and there collected in swampy tracts, rembering the comntry very insalabrions. Marsh fevers and civil strife have been the chicf canses of the back ward state of Kweichew as compared with most other provinces of the empire. In the southern districts war, or rather "man hunting," is the normal state of the relations between the Chinese and the aborigines.

\section*{The Miaotze.}

The Minotze-that is, according to Morrison und Lockhart, the "men sprung from the soil"-iormerly occupied the lowland regions, expecially about the shores of Lakes Tungting and Poyong. Gradually driven by the Chinese intruders back to the hills, these Nan-man, or "Southern Barbarians," as they were formerly called, have settled mostly in the Nanling and surrounding valleys. Here they have been broken up by the intervening plains into numerous tribes, which have in the course of ages become differentiated to such an extent that it becomes difficult to recognise their common parentage. The Shu-king of Confucius divides the Miao into three main groups-tho White, Blue, and Red. Certain tribes known by these names are still found in the South Kweichew highlands. But such epithets, derived from the colour of the dress, nee probably no longer applied to the same tribes as those mentioned by Confucins. To the now scattered nation of the Miaotzo also belong the Chung Miao, Ngnchung Miao, Kilao, Kitao, Tuman of Kweichew, Tung of Kwangsi, and the "eighty-two" tribes described in a Chinese work translated by Bridgman. Some of them take the name of the "Six
- 'There are the Min-kiang, the To-kieng, the He-shui (Blnck Wutcr), and Pei-shui (White Water).
to red mindatone lie retritus from tinge which has ranges uro collloy of tho IlanIII of 10,000 leet 1, falle grualually the lucustrine ts in its general west it is come which rise the wards it is sepuchuin known to forms the waterior of Kwachew ho Red Basin in - Win ind other a swampy tracts, strife have been with most other " mun hunting," origines.
he "men sprung about the shores e intruders buek \(y\) were formerly eys. Here they ibes, which have it becomes diffionfucius livides Certain tribes highlunds. But to longer applied senttered nation o, Kitao, Tuman \({ }^{3}\) described in a ume of the "Six ui (White Water).

Hundred Fumilies," perhups to indiente their present dispersed condition. Scremb of the malyect tribes luve berome gradually assimilated to the congucring race, and some Dino scholars have alrealy passed the miversity examinations and beren roised to the rank of mambins. On the other hand, many half-conte Chimeno live in the surage state, while the still imdependent Mian Song lave tuken refigge in the mommain fustnesses. Here they have built their fortitiod villages on the hill-tops; but, with the exerption of one or two maranding tribes, they remain mostly on the defensive. They eultivite maize, mad aven a litto rice in the more abeltered districts. They also ruise cottle, and ure skilful hunters, exchanging the akins, hartshorn, musk, and other produce of the chase for the supplies brought by the hawkers and pedlars from the surrounding phins. Being of a hanghty tempermunt und intolerunt of injustice, the Mian uro unble to endure the oppression of the mandarins, and are consequently in a chronie state of revolt. But thoir highland recesses ure everywhere surrounded hy Chinese settlements; the aren of their domnin is being continually eneroached upon, and whole tribes have alrady been exterminuted. During the late Thiping and lunthay insurrections the Chinese forces destroyed severul of their villages, and many of their chicfs wore sent to Peking, where they were behended nfter undergoing frightinl tortures.

Not only are the Minotzo thus cruelly treated, but they are also acensed of every crime, and scarcely regrarded as human beings worthy of the least considerition. The Yno of the Lipo district, south of the Nunling range, are credited by their neighbours with short tails like monkeys, and there can be no doubt thut some of the tribes have lost their former culture and relapsed into barbarism under the treatment to which they have been subjected. In eertain places they dwell in caves or huts made of brunches, or else in the fissures of sterp rocks appronehed by bamboo ladilers. Yet the Chinese annals, and even modern acconnts, have npoken of the Miaotze as possessing a knowledge of writing, and composing works in their language written on wooden tablets or on palm-leaves. They ure also skilful weavers, their women manufucturing fino silken, linen, cotton, and woollen materials in great demand amongst the Canton dealers. They are good musicians, playing on a kind of flute more agreeable than that of the Chinese. Some of the national dances, accompanied by drum and guitar, have a religious character, while others are highly expressive of sad or joyous emotions. But their great vice is drunkenness, which increases the contempt in which they are held by the people of the plains.

It is to be feared that the survivors of this ancient race will have disappeared before their true affinities have been determined. They are regurded as of 'libetan stock by most Chinese writers, who include the Miaotze amongst the Pa-Fan, or " Eight Strangers," of whom the Si-Fan are only a branch. Yet their langrage would seem to affiliute them to the Siamese fanily, in common with the l'ai, P'apeh, and other peoples of South Yumnan. In general of smaller stature than the Chinese, they have more regular features, and their eyes are round and straight like those of Europeans. Both sexes bind up their flowing hair like a ehignon at the back of the head, while the women of some tribes gather it round a flat board, which serves to
shelter them both from sun and rain. All wear linen or woollen blouses and straw sauduls, and the men often envelep, their heads in turbans of some gay colour. There is no organized government, but disputes, if not amicably arranged, are usually referred to the arbitration of the elders, after which there is a final appeal to brute

force. Family feuds are often thus perpetuated to the ninth generation, and the victims are sometimes said to be devoured by the rival faction. Their Buddhist cult is associated with the worship of demons and anecstry. In some tribes the remains of the dead are removed from the cotlin every twi or three years, and curefully washed,
the public health de pending, as they suppose, on the clean condition of the bones. Amongst others, deceased friends are mourned for, not at the time of death, but with the return of spring, when all nature is renewed. If the departed do not then return it is clear that they have forsaken their people for ever. The curious custom of the "couvade" is said to prevail in one of the Minotze tribes. After childhirth, as soon as the mother is strong enough to leave her ceuch, the husband takes her place and receives the congratulations of their friends.

\section*{Muran, Kiangei, and Ciemiang.}

The highlands of Hunan, Kiangsi, and Chekiang have as yet been explored only at a few points. On most European maps of China winding ranges are traced between the river basins on the lines of the old Jesuits' charts, while the native maps show mountains seattered at haphazard in all direetions. Into this chaos some order has at last been introduced by Pumpelly and Riehthofen, who have shown that in an area of 320,000 square miles the south-eastern region of China is covered with heights which are neither anywhere blended in one continuous plateau, nor commanded by any central range of exceptional magnitude. Probably no other region of equal extent displays a similar labyrinth of mountains and hills varying so little in outline and elevation. Here open plains are rare, ehort and moderately elevated ridges occurring almost everywhere, with narrow intervening valleys connected at sharp angles with each other. Most of the eminences have a mean height of from 1,500 to 2,500 feet above the river beds, and even in the chief ranges no erests attain an altitude of 6,500 feet except perhaps in Fohien.

All these low chains run mainly south-west and north-east, like the Cross Ridges of the Upper Yang-tze. Hence throughout the greater part of their course the southern affluents of the Blue River flow north-eastwards to its right bank. From the Min confluence to the Yellow Sea the main stream itself develops a succession of three windings, in each of which the wtstern segment follows the same direction parallel with the gencral axis of the land. Lastly, this is the line also traced by the indented seaboard of the provinces of Kwangtung and Fokien.

The main axis, to which Richthofen has given the name of Nan-shan, or "Southern Mountains," begins about the sources of the Siang, the chief influent of Lake Tungting. Beyond the gorges pierced by the Kia-kiang it develops into the massive Wukung-shan, forining towards the north-east the water-parting between the Yang-tze basin and the streams of Fokien flowing to the coast. To this main axis belong the Ningpo hills, which are continued seawards by the Chusan Archipelago. A submarine prolongation of the Nan-shan is even supposed to rue between the Yellow Sea and the Tung-hai, or Eastern Sea, reappearing in the volcanic masses of the large island in the Japanese group. On either side of the broad marine strait the hills present the same outlines and formations, being uniformly composed of sandstones, schists, and limestones, probably of the Silurian period, with porphyry and granite cropping out at intervals.

The water-parting between the Yang-tze and Si-kiang basins traverses the 47
province of Kiangsi, far to the south of the mountains forming the main axis of the Nan-shan. To this water-parting have been given the names of Nan-ling, Mei-ling, Tayu-ling, from the various ling, or passes, leading from the northern to the southern basin. Of all the Chinese mountains the Mei-ling has been most frequently visited, for this range is crossed by the main route connecting the port of Canton with the central regrions of the empire. According to the local saying, the Mei-ling is the "gullet" between North und South Chim. All the goods brought by the river craft to either foot of the hills are conveyed by porters over the pass, and as many us fifty thousand hands are said to be constantly engaged at this difficult point of the route. At the beginning of the eighth century, when the trade with the Eastern Archipelago had been greatly developed by the enterprising Arab merchants, this highway was constructed, or more probably repaired, by the Emperor Changkuling. Ritter estimated the height of the Mei-ling at 8,000 feet, but modern exploration has shown that this estimate is much too high. Still the passes in this region are everywhere so steep and rugged that all goods are carried across the hills by porters, pack animals being employed only in the neighbourhood of the large towns.

The parting-line between the peoples and languages of the north and south does not follow the water-parting between the two basins. It passes much farther north, here following the normal axis of the Nan-shan range, which is enticely comprised within the limits of the Yang-tze basin. Thus the traveller ascending the Kia-kiang River through the province of Kiangsi passes from the domain of the Mandarin dialect to that of the southern languages as soon as he has entered the defiles above Kingan. Hence, notwithstanding its low elevation, the main axis has played an important part in the distribution of the populations in this part of China. The division of the land into innumerable valleys has also had the effect of developing a multitude of isolated clans largely independent of each other. Except along the main commercial highways the inhabitants of the secluded Nan-shan valleys know nothing of the outer world, and most of them suppose that beyond their narrow domain the rest of the earth is occupied by savages, or is a prey to wild beasts.

The vegetation of Hunan and Kiangsi is naturally of a more tropical character than that of the Upper Yang-tzo provinces. The aspect of the plants betrays the neighbourhood of the torrid zone, while even such trees as the oak, chestnut, and willow are of different species from those of North China and Mongolia. On the upland slopes the magaificent golden pine (Abies Kiempferi) is distinguished by its great size from the other evergreens; lower down one of the most common trees is a much smaller pine with extremely narrow leaves. At the foot of the hills the camphor-tree is cultivated round about the villages jointly with the Elanoocca and varnish plant (Rhus vernicifera). A great part of the country has been completely eleared of its timber, and in many towns the only available fuel is straw, dried herbs, or brushwood from the neighbouring hills. The woods are the property of the Emperor, say the natives, and they accordingly take all the wood they require for their houses and boats. But the hills are still clothed with a magnificent vegetation of shrubs and plants of small size. The Chusan Islands especially are transformed to a land of enchantment by the spring and summer flowers. In no other temperate
rain axis of the -ling, Mei-ling, to the southern uently visited, Janton with the Mei-ling is the \(y\) the river eraft and as many as ult point of the ith the Eastern merchants, this or Changkuling. lern exploration 1 this region are hills by porters, ge towns. \(h\) and south does ch farther north, tirely comprised ig the Kia-kiang of the Mandarin the defiles above is has played an of China. The et of developing Except along the an valleys know ond their narrow wild beasts. tropical character dlants betrays the ak, chestnut, and ongolia. On the stinguished by its \(t\) common trees is of of the hills the he Eleococca and s been completely straw, dried herbs, property of the \(d\) they require for nificent vegetation \(y\) are transformed no other temperate
region, exeept perhaps in Japan, is there found such a surprising variety of plants remarkable at once for their exquisite foliage, brilliant blossom, and sweet perfume.

On the other hand, all the large wild animals have disappeared with the forests which sheltered them. The wild boar alone has again increased in number since the country has been wasted oy the Taïping rebels and the Imperial troops. In some reedy islets of the Yang-tze a small species of deer (Hydropotes) is met bearing a remarkable resemblance to the musk deer, although separated from that animal by vast intervening spaces, and found nowhere else in China. The only domestic mammals raised in the country are the ox, buffalo, and pig. The heron is held in great veneration by the peasantry, and large communities of these birds are often seen, especially in the thickets surrounding the pagodas.

\section*{Inhabitants of the Lower Yang-tze Basin.}

The Nan-shan is a highly favoured agricultural region. From the Lower Yang-tze provinces China draws most of its exports, and the chief tea plantations are found in the eastern distriets of this basin. The tract stretching for some 360 miles from the banks of the Chang to the alluvial lands about the Yang-tze estuary, and including the southern slopes of the Fokien highlands, is pre-eminently the home of the tea plant. It is gencrally cultivated on the slopes with a southern aspect, not in continuous plantations, but either in small plots, or else in the hedges between the fields, and on the embankments between the rice grounds. The Yang-tze-kiang varieties are used especially in the preparation of the green teas. Sericulture is also widely developed in the Nan-shan and Lower Yang-tze regions, which take the first, or almost the first, rank not only for tea and silk, but also for rice and other cereals, as well as sugar, tobaceo, hemp, oleaginous plants, and fruits of all kinds. The sweet potato is cultivated to the very top of the hills, and in the Nan-shan country cotton alone is not produced in sufficient quantity for the local demand. But the deficiency both in the raw material and in woven goods is amply supplied from the provinces of Chekiang, Nganhwei, and Hupeh.

The industrious character of the people is revealed in the allies they have procured for themselves in the animal kingdom. Like the English in mediæval times, they have domesticated the cormorant, turning to account its skill at fishing. Being furnished with an iron collar, to prevent them from swallowing the prey, these birds are trained to dart from the junks to the bottom of the river, returning each time with a fish in their bill. After the day's labour they roost in regular rows along both sides of the boat, thus maintaining its equilibrium. Elsewhere otters are empioyed in the same way, and pisciculture, a recent invention in Europe, has been practised for centuries in China. Dealers in the fry traverse every part of Kiangsi, supplying the tanks, where the fish are reared and rapidly fattened for the market. Some of the processes of this remarkable industry are still unknown in the West.

Such pursuits could only have arisen in the midst of teeming populations, and
towards the middle of the present century the provinces of Kiangsn, Nganhwei, and Chekiung were found to be the most densely peopled lunds in the whole world. According to the returns for 1842 Chekiang had a population of no less than \(26,000,000\), or upwards of 560 to the square mile. But after the late massacres, followed by fumine and pestilence, tho survivors were estimated by Richthofen at no more than \(5,500,000\). Yet even this would be a higher proportion than that of France, and the country is now being repeopled with surprising rapidity. The wasted plains of Chekiang have been occupied by immigrants from the provinces of Honan, Hunan, Kweichew, Sechuen, and especiully IIupeh, and the new settlers, speaking various dialects of the Mandarin language, do not always understund cach other. But harmony is being gradually established, and the common speech resulting from these diverse elements resembles the Mandarin standard far more than did the old local variety. Thus it is that the mixtures following every great convulsion contribute more and more to the remarkable mutional unity presented by the inhabitants of China. The only formality required of the new settlers on abandoned lands is the payment of a nominal sum to the punti jen, or nearest representative of the former possessors. After two years the soil becomes their absolute property.

\section*{Topography.}

Since the recent troubles the number and size of the towns in the Yang-tze basin have been much reduced. Yet several still remaiu whieh rank amongst the largest eities in the world; but these are naturally found only in the fertile regions below the Upper Kinsha-kiang.

In the part of Sechuen commonly included in East Tibet the chief place is Batang, which was completely ruined by a series of earthquakes in 1871. It now consists of a few hundred new dwellings standing in a fertile plain, watered by an eastern affluent of the Kinsha-kiang, und by copious hot springs. Nearly half of the people are lamas, living in a sumptuous monastery with gilded roof, and the place has no importance except as a station on the great highway between Central China and Lassa. Here the traders from the East exchange their brick tea and manufactured wares for the musk, borax, peltries, and gold-dust of the native Tibetans. These are under their own magistrates, and controlled by a Chinese garrison, while the surrounding hills are occupied by the completely independent Zendi tribes. Litang, another mart on the route between Tibet and Chingtu-fu, is one of the most wretehed places in the world, lying in a depression of the Kichu basin over 13,000 feet above the sea at the limit of the vegetable zone. In this eradle of the Tibetan monarchy nothing grows except a few dwarf cabbages and turnips, yet here reside some 3,500 lamas in a rich monastery all covered with gold-leaf. Tatsienlu (Tachindo) lies some 5,000 feet lower down, in a pleasant valley watered by a tributary of the Min. Here is the eustom-honse on the Tibetan frontier, besides a Chinese garrison and several Buddhist or Mohammedan traders from Shansi. Yet the nominal ruler of the country is a Mentze king,
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whoso territory stretches southwarls to the Lolo domain. Chinese women are not ullowed to cross this state to enter Tibet, but they are numerons in Tutsienlu, where the Tibetan element is mainly represented by lulf-custes. Tatsienlu is the present centre of the Roman Catholic missions for Tibet.

Relow Tatsienlu, the Tatu-ho River, after emerging from a formiduble gorge with sheer walls 650 feet high, reaches the walls of Luting-chao, the first city lying completely beyond the Tibetan and Mantzo lunds. Beyond this point it is joined by several tributaries, tho united stream forming the Tung-ho, the chicf affluent of the Min, and even exceeding it in volume. The Min is navigable by boats at all seasons as far as Kiatimy-fu, at the confluence of both rivers. This placo is one of the chicf marts of Sechuen, whence tho pei-la, or valuable vegetable

Fig. 98.-Chingtu-fu Basin.
Scale 1: 1,800,000.

wax, is forwarded to all parts of China. It also receives by water the raw silk of Yaehev-fu, lying to the north-west on the ronte between Tibet and Chingtu-fu. Here is prepared most of the brick tea intended for tho Tibetan market. In the neighbourhood is cultivated a species of the plant whose coarser leaves are used in this traffic. Yachew is the chief stronghold and largest military depott on the frontier. In 1860 it held out successfully against the Taiping rebels, without the aid of the imperial troops.

Chingtu-fu, eapital of Scchuen, still remains what it was in Mareo Polo's time, a "rich and noble city," although since then more than once plundercd and even destroyed. Nearly the whole population, said to have exceril . million, was exterminated by Kublai Khan. The present city is of recel , the Imperial Palace, probably its oldest building, dating only from the fou мини century. The
walls and most of the houses were rebuilt towards the end of the last enitury, after the place had been wasted by a great firc. Few towns cover a larger area, vast suburbs stretching far beyond the enclosure, which is itself 12 miles in circuit. Like most provincial capitals, it consists of a Chinese and Manchu quarter, of which the former is by far the largest and wealthiest. Chingtu is the "Paris of Chinn," the finest and most elegant city in tho empire, with broad, straight, and regular strects, lined by handsome wooden houses with gracefully carved façades. Tho red sandstone arches crected at several points are also covered with fine sculptures in relief, representing fabulous animals or seenes of social life. The natives have ulso the reputation of being the most highly cultured and the greatest lovers of the arts and sciences in China. The surrounding plain, one of the best-cultivated tracts in the world, is well watered by countless irrigating rills from the Min and its tributarics. This district contains as many as cighteen other cities with the rank of chew or hien, besides several other unwalled towns and villages with more inhabitants than many commercial marts. A population of perhaps \(4,000,000\) is crowded together in this basin, within an area of less than 2,500 square miles. The capital is at once a great agricultural and industrial centre, with thousands of hands engaged in weaving, dyeing, and fancy work. Some 36 miles to the southwest stands Kiungchex, at the foot of the mountains skirting the plains, where is manufactured the best paper in China. In the Upper Min valley lies Sungpan-ting, near the Kansu frontier, which has a vast Mohammedan population, notwithstanding its elevation of nearly 10,000 feet above the sea.

The road leading from Chingtu across several ranges north-castwards to Shensi, and known as the Kiuniu-tao, or "Route of the Golden Ox," is said to have been traced some twenty-three centuries ago, in order to connect the two kingdoms of Tsin and Shu-that is, of North China and Sechuen-which were not yet grouped in one empire. The highway from Chingtu-fu to the basin of the Yellow River remnined unfinished for six hundred years, when the road from Hanchung over the Taing-ling to Tingan was opened by the Seehuen Emperor Liupi, whom legendary history has transformed to a sort of Chinese Hercules.

The Kinsha-kiang regions cannot be compared with the Min basin for the importance of their urban populations. Yet even in this part of Sechuen there is at least one large city never yet visited by any European, except possibly by Marco Polo. This is Ningyuen, the chict place in the flourishing valley of the Kienchang, which joins the Yalung near the confluence of this river with the Kinsha-kiang. The Chinese speak of this place and of the surrounding district as an earthly paradise, presenting a marvellous contrast to the rugged mountains enclosing it on all sides.

Pingshan marks the extreme point reached by Blakiston during his exploration of the Yang-tze. But a more important place is Surhew (Sui-fu), at the junction of the Min and Kinsha-kiang. This is the entrepôt for all the produce of Yunnan exported to the interior of China, and here are manufactured mats noted for their strength and pliancy. The coal mines above and below Suchew yield the best coal in the whole Yang-tze basin. Farther down Lucher, at the confluence of the
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Most of the bores tap the brine at depths of from 600 to 1,000 feet, beyond which they reach the petroleum reservoirs. Inflammable gases cscape from these with great violence, whence the term "fire well" commonly applied to these pits. In 1862, when the country was invaded by the rebels, one of the pits took fire, and burnt for a long time, illuming the whole country like a lighthouse. According to Gill, the district is pierced by at least 1,200 wells, vielding from 80,000 to 120,000 tons of salt ycarly. Most of the mines belong to wealthy corporations, but the bulk of the people are extremely poor. Few places present a more wretched appearance than Tzuliu-ching, whose industry enriches the capitalists of Chungcheng. Recently some of the master miners, associated with a company of European traders, attempted to introduce English pumping engines to economize
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time und labour. But the experinent caused a strike umongst the workmen, who drove the innovators from the conntry.

Chumg-cheng (Chung-king) is the grent emporiam of Enst Sechuen. Dieturesuruely situated on the left bumk of the Yang-tze ut the junction of the navigable river I'a-ho (Kialing), this city has become the chief depot for all the produce of Sechaen and for the manufactured wares imported from the Liast. It does a larger trade, especially in silks, tobaceo, vegetuble oils, und musk, even than the provinciail capital itself. This "Shanghai of West China" has its exchange like

Fig. 100,-Coling of the Yang-tze ahove the Gonoes.
According to Dlakiston. Scale \(1: 1,000,000\).

the European towns, where current prices are regulated, and here is also a silver refinery, which works up ingots to the daily value of some \(£ 4,000\). Chung-cheng really consists of two distinct towns, both ranking as administrativo centres, Chung-cheng proper and Kiangpel (Limin), west and east of the confluence, besides a vast suburb on the right hank of the Yang-tze. Most of the wholesale dealers are strangers from Shensi, Shansi, and Kiangsi, and an English Consul has been stationed here since 1878. At the beginning of the century the population was estimated at 36,000 , in 1861 Blakiston raised it to 200,000 , and according to
the latest returns this figure has been moro than trebled. North of Chung-cheng the busy town of \(1 H\) ochere ocenpies a convenient position neur the junetion of the three heul-streums of the Pa-ho. In the neighbouring hills : a fatty eurth, which in times of distress is kneaded into small loaves, baked on chracter! fires, und largely consumed in all the surrounding districts.

Below Chung-cheng the large emporium of Fuchet', stumds at the confluence of the Kungtan, or Kien-king, and thus commands all the naviguble waters of the province of Kweichew. Most of the junks stop at the Kungtun Rapids, beyoud which a few flat-bottomed cruft ulone ascend us fur as Kirfi-y/ang, capitnl of Kweichew. This city lies near the sonree of the river, and commmicutes across low water-partings on the one hand with the Si-kiang basin, on the other with that of the Yuen, an influent of Lake Tungting. In the neighbouring highlands are some


12 Miles.
independent Miaotze tribes, who have been partly evangelized by the Catholic missionaries. In a mountain gorge near Nganshun in this region a torrent is precipituted from a height of several hundred yards. Hero also quicksilver occurs, probably in greater abundunce than elsewhere, and in many places lumps of cinnabar are constantly turned up by the plough. But since tho sanguinary outbreak of 1848 the mines have been closed, and in 1872 they were still under water.

The pleasant city of Kuceicheu-fu is situated, not in the province to which it gives its name, but within the Sechuen frontier on the left bank of the Yang-tze, at the upper entrance of the gorges which terminate lower down at I-chang, in the province of Hupeh. I-chang, where is produced the best opium in China, is the most inland city opened to direct trade with foreigners. A Europenn settlement was established here in 1878 , and since then its trade has rapidly increased.

The exports consist muinly in conl, mediciues, und drugs of ull sorts. Although lying 1,000 milew abowr Shughai, this place is now regularly visited by a Yung-tze stemuer, which usually finds 20 feet of water as fur us the rapids. Most of the Sechuen loats diseharge their eargoes either at I-chang or at Shazi, lower down, whence the merehandise is conveyed in larger craft to Hankow. Before the introdaction of stemm navigation, Shazi, which stretcher for over 3 miles along the river, had a larger trade than I-chang, and it still enjoys the advantage of direet communicution through the nuviguble Tuïping Canal with Lake Tungting. Near Shari stands the stronghold of Kiuchire, on the left bank of the Yaug-tze, a plaee ubrealy mentioned by Confucius, but now peasessing merely an administrative und militury importunce.

The great cities of Hunan lie not on the lang-tze, but in the interior, along the routes between the Yung-tze and Si-king busins. Here one of the main water highways is the river Yuen, flowing to Lake Tungting, and connected by cmal with other naviguble waters. But most of the large junks on tho Lower Yuen get no farther than Churlmer-fin, the chief emporium of West Hunan. Farther down, the thriving eity of Chungte-fiu, 36 miles below the first rupids of the Yuen, is accessible throughout the yenr to river eraft of the largest size. But a much more important place is Sianglan, whieh, though not the capitul, is the chiof city in Hunan, and one of the great marts of the empire. It stands on a rapid of the Siang, stretching for 3 miles nlong the left bank of the river, and with vast suburbs radiating in every direction. Thousands of junks, from 25 to 30 tons burden, are constantly anchored in front of the eity, while lighter craft are able to pass beyond the rapids much farther up. Siangtan, which occupies the most eentral point in the eastern or riehest division of Human, is the natural entrepot of the traffic between the central and southern provinces, through the vitally important Kwei-ling, Che-ling, und Mei-ling I'usses. It thus lies in the very heart of the vast triangular space formed by the three great emporiums of Chungeleng, IIankow, and Canton. It has also become the chief centre of the trade in medicines and all kinds of drugs for the whole of China. The surrounding tracks are constantly blocked by curavans exclusively laden with roots, herbs, pills, and an endless variety of nostrums required to meet the prodigious demand in a country where these things are far more highly esteemed than amongst any other people. The commereial revolution brought about by the opening of the treaty ports and the introduction of steam navigation must, no doubt, ultimately diminish the relative importance of Siangtan, which lies off the main line of this traffic. But the loss may be more than repaired by the development of the coal-mining industry in a region where the carboniferous deposits rival those of Pennsylvania in extent. The bituminous coal of the immediate neighbourhood is little valued, but the anthracite of Luiy,(ny,y, in the Lui basin, is amongst the best known. Thousands of boats are employed in transporting it to Siangtan and the Yang-tze, whence it reaches Hankow and Nanking. The annual yield of the Lui-ho mines has been estimated by Richthofen at about 150,000 tons.

Changcha, capital of Hunan, lies on the Siang, midway between Siangtan and
worts. Although al by a Yang-tze ls. Most of the azi, lower down, Before the introalong the river, ge of direct comTungting. Near Yung-tze, a pluce dministrutive und
nterior, along the \(f\) the main water mnected by camul Lower Yuen get
Farther down, ids of tho Yuen, ize. But a much s the chief city in on a rapid of the er, and with vast om 25 to 30 tons ter craft are able nich occupies the m , is the nutural nees, through the nus lies in the very oriums of Chungtre of the trade in urrounding traeks herbs, pills, and an mand in a country any other people. e treaty ports and tely diminish the f this truffie. But al-mining industry sylvania in extent. e valued, but the wn. Thousands of ing-tze, whence it ho mines has been

Siangtan and

IMAGE EVALUATION TEST TARGET (MT-3)


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CIHM/ICMH Microfiche Series.
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Lake Tungting. On a hill facing the eity stands the college of Yolo, one of the most renowned in Chinn, where over one thousmad students, from twenty-two to twenty-five years of age, pursue their studies in private, consulting their teachers only in the case of extreme difficulties. Below Changcha a granite ridge crossing the Siang is largely used in the manufacture of flags and mortar, while the argillaceous sand is in great demand umongst the numerons potteries of Tungk wan. Here are produced enamelled tiles of all colours, and covered with funciful desigus, much used for the roofs of temples and houses in Human and the surrounding provinces. Lower down Siany,in may be regarded us the upper port of lake Tungting, while its outlet is commanded by Yochew, which stands on a eliff overhanging the right bank of the Yang-tze.

Before the middle of the present century the three cities of \(W u c h n u g-f i n\), on the right bank of the Yong-tze; Ifankoor, over against it, east of the IIan confluence; and Hanyang-fu, in the peninsula formed by the junction of the two streams, constituted probably the largest collective urban population in the whole world. London, which now knows no rival in this respect, had at that time senreely more than two millions, whereas, before the Taïping ravages, these three vust hives of human industry are said by some travellers to have had a joint population of eight millions! But however this be, the number had been reduced to below one million when Blakiston ascended the river in 1861. Of the three cities, Hankow, capital of IIupeh, is alone enclosed by ramparts, which comprise an area of over 15 square miles. Beyond the walls the suburbs stretch along both rivers, while the connection with Hanyang is completed by a multitude of junks, forning a living bridge from bank to bank. Even the main stream, here nearly a mile wide, is covered with craft, amongst which are numerous English and Chinese steamers. As a trading-place Hankow enjoys special advantages, standing as it does at a central point on the navigable course of the Yang-tze, and at the confluence of the Han-kiang, which gives direct áccess to the Hoang-ho basin and the province of Shensi. Hankow-that is, "Han Mouth"-may even be said to command the course of the Siang and the whole of the Tungting lacustrine basin. Standing thus at the converging point of the great navigable arteries running east and west, north and south, Hankow is the true commercial centre of China. The only drawback to its advantageous position is the danger it runs from the inundations of the Yang-tze. When the embankments give way its streets are flooded, and the people seek refuge on the surrounding hills and artificial mounds seattered like islands in the midst of \(a\) vast inland sea.

No other city of the interior has such a large foreign population as Hankow. A fine European quarter, separated from the river by an extensive open space planted with trees, overlooks the native city. Vast works have here been undertuken to raise the land above the level of the inundations; and a so-called "bund," or embankment, 50 feet high, now protects the European concession from this danger. Hankow is the chief centre of the tea trade in China. The foreign settlement may almost be said to depend on the oscillations in the current prices of this article. The arrival of the first crop is the signal for a general commotion;
crowds swarm in the warehonses and romating-houses, stemmers are moored along the embankment, night and day streets and sifuares are alive with the busy throng. All this bustle lasts for threr months daring the very hottest und most relaxing suason of the year; and the excitement grows to fever heat towards the end of May, when the vessels bound for Landon luve completed their cargoes. For the betting on the quickest homeward passage carns for the winner not merely an

Fig. 102.-Wuchang: View taken from the Tunef ur the Yelow Crane (Hoano-ho-lew).

empty triumph, but double the ordinary freight. After the start silence reigns in the European quarter, which is now deserted execpt by a few elerks and employés. The nutive merchants deal exilusively in tobaceo, hides, and other local produce, including opium, which is now mixel with that of India for consumption in China. The Russians, who buy both the best and the worst sorts of tea, have made ILankow the centre of their operations for the parchase and preparation of the brick tea. But the direct overland trade between Hnnkow and Siberia, through Singan and



Mongolia, dutes only from the year 1879. The teas intented for Rusia are shipped at shanghai either directly for Odessa or for Tiemtsin, whener hory ure taken by caravan to Kalgan and kiakhta. Hamkow is destined one day to be the
 kimug basin. Negotiations have already heen set on fuot with a view to the oproing of this route, which will itself be replaced sooner or later ly the great C'ontral Asiatic trimk line of railway. Memame the direet seawnel trude of lamkow is represented by over fifteen hundred vessels, with a tomagre of nearly a million, of which less than onc-half is ('hinese, mad most of the rest British.

Along the lanks of the Hun the chicf ports are Hanchmeffin, of former imperial cupital; Simpurenen, noted for its steel works; Chichiatien, ut the heul of the navi-

Fig. 103.--Hankow and nomoondmo Lakts.
Scule 1: 3,750,000.

gution, over 4 miles in circumference: Zanoho-kon, with a large coton trade; and 54 miles lower down the twin cities of inimyyany-fu and Fang-chrug, on the right and left banks respectively, near the confluence of the Tang-ho aml Peï-ho, which give aecess to the rich plains of IIonan and the Hoang-ho basin. Midway between Fung-cheng and Hankow is the busy port of Shayang-chen, where Richthofen saw as many as five huadred large junks moored to the quays. Most of these places stand at some distance from the Han to avoid its disastrous floodings.

Below Hankow the narrow rocky peninsula between Lake Poyang and the Yang-tze is occupied by Kin-Kiang, or the "City of the Nine Rivers," which does a large trade in tea and tobacco, and where there is a European quarter, protected like that of Hankow by a strong embankment of recent erection. Numehmy, capital of Kiangsi, lies in a fertile plain at the head of the delta of the Kia-kiang
(Chung), and at the converging point of several important trade routes. Here ure some of thase triumphal mrehen ruised in so muny places to the memory of illustrious women. Nunchung is a chief eentre of the porechin industry, and no less thun five hundred factories were at work in this district during the last century. 'The prorceluin of Kimytr-chen, in the Chang-kiang valley enst of lake Poyang, is still the mont highly esteemed in Chima, yet it is now far inferior to the Europem ware in pmste, form, and design. In the eastern mad wouth-enstern valleys towarls the Fokien frontier the exquisite tens are produced which are named from the city of

Fig. 104. - N..nkino.
Sonlo 1 : 140,000.


Hokior. In the north-east rises the Seunglo-shan Mountain, where was discovered the art of utilising the tea-leaf.

One of the finest cities on the Lower Yang-tze is \(N_{\text {Ifanking ( }}\) (Anking), eapital of the province of Nganhwei. Farther down are the treaty ports of Tutung and Wuhu, both on the right bank. The latter produces a red yarn known throughout the empire, and is also noted for its knives and other articles in steel, which, however, ure very inferior to those imported from England. In the neighbouring district is manufactured some of the best paper in China, chiefly from the bark of the tallow-tree and mulberry.

Nauking, enpital of Kimgsu, and residenee of the Viecroy of Kinugnun-that is, of the two provinces of Kimugsu and Ngulwei-was formerly the metropolis of the empire, and hong the hargent eity in the world. Even after the removal of the court , Peking it rivalled the northern capital in its pmpulation, trule, and
 King," or sovereign of the 'Taïping relels, having chosen it for his cupital. But ufter un olstimate sidge of two years it was cuptured in \(186 t\) by the haperial forres, its surviving defenders put to the aword, and the phace converted into a leenp of ruins. Yet a fow years of pence have sufficed again to restore Nanking to its phace umongst the grent cities of China. The area inchuled within its enclownere, some 18 miles in extent, still comprises many open spuces, waste gromuls, und piles of débris, where the snipe, phemsunt, and even large gume are pursued. A Govermment arsenal has recently been established in the neightourhood, and several factories lave again resumed the manufucture of the cotton fubrice formerly known as "Sunken." Here are also producel the finest natins in China. Nanking, or Kiangning-fu, us it is officially called, has resmmed its position as the metropolis of letters and learning, and as many as twelse thousand stulents here undergo their yearly examimations. Large libraries lave been again collected, und new printing-offices opened, with Chinese und European uppliances. Amongst the recent immigrants, the Mohummeduns are suid ulrendy to number over fifty thousand. Except its ramparts, Nanking has lost all its famous momuments, including the celebrated "Porcelain Tower," which was destroyed during the Tuïping war.

The commercial enterprise of the province of Kiung-su has been chiefly concentrated in the city of Chingkiang, lying east of Nunking, and also on the right bank of the Yang-tze, at the southern terminus of the Grund Canal. It also communieates by water with Shanghai, and is the converging point of several extremely important trade routes. Hence the rapidity with which it has recovered from two disasters during the present century. In 1842 the English army, after the victory followed by the treaty of Nanking, found Chingkiang converted into a eity of the dead. Its Manchu defenders had destroyed their women and children, and then made away with themselves, in order to escape the hated rule of the "red-headed barbarians." In 1853 the place was taken by the Taïpings, and the inhabitants four years afterwards massacred by the Imperialists. As in Nanking, nothing remained except the ramparts and a few of the wretched survivors crouching amid its ruins. Yet Chingkiang has already become the second port in China for the importation of foreign goods. On the opposite side of the river formerly stood the large city of Roacherc, where the Government had established its chicf salt depôt on the Yang-tze. But this place has been washed away by the erosion of the stream, and now nothing remains except a few houses. Yangchece, a little farther north, on the Grand Canal, was the old capital of the Yang kingdom, which, according to snme etymologists, gave its name to the Yang-tze-kiang. This is the "great and noble city" of Yanju, governed for three years by Marco Polo.

Shanghai, the nearext menport to the Pang-t\%e athary, han herome the first
 Pet whon in \(1 \times t:\) tho linglish chose this phace for their fuctories, it mermed ditheralt to indieve that they conld ever eonvert it into a rival of Cunton or Amoy. It was dombtless the outpert of Suchere und the rieh surromming district, and it
 highnay which traversen the whole empire from enst to west. Bat there were formidable dificulties of soil and elimute to contend ugainst. 'The very ground on which it stond had to be rased and eomsolidated; cmuls had to be cut, lagooms drained, the mavigahle channed dredged, the utmosphere purified from its miasmatie

exhalations. Most of these improvements have been successfully carried out; but " dangerous bar still separates the Yang-tze estuary from the Houng-pu, or river of "Yellow Wuters," on which Shanghai is situated. The evil has even increased during the last decade, and vessels of deep draught do not now ascend the Hoangpu to the city. Unless the Chinese Govermuent allows the nceessary works to be undertaken to keep open the narigation, Shanghai runs the risk of sooner or later getting lost on the margin of a marshy creek in the interior. To bring about this result, all that is needed is a further slight geological change in a tract where the ulluvin of the Yang-tze and the marine waters are struggling for the ascendancy. According to the local tradition, Shanglai formerly stood on the sea-coast, from
which it is nt present 24 miles distant. It is much exposed to the "yellow wind" from the north mad north-west, charged with the duat of the descrt.

The tratie in the loenl pronluce made the fortume of the tivat buropean metters at Shungha, who flourished, so to saly, on the national disasters. The 'Taiping war drove thousamds to take refuge on the land ceded to the foreigneres, and when Surhew was destroyerl in INtio, Shanghai took its place as the foremost city in the country. But after the overthrow of the rehels the population flowed buck into the interior, and the number of mative inhabitmuts.s foll from half is million (t) (i5,000. Nevertheless, Shuughai became the chief depont for the dintrilution of Europem imports throughout the empire. The Einglish "Coneession," which enjoys the privilege of self-govermment, is the "model colony, the republic of the Honng-pu." The territory conceded to the Americans to the north of the Suchew River has been united since 1863 to the British municipality, which is also occupied by over a hundred thousand natives, as well as by most of the French residents, glad to take refuge here from the despotic power of their consul. South of the Chinese quarter lies the suburb of

Fig. 100.-Sthanghat anh the Hoang-Ple.
 Tongkatu, while the opposito or east bank of the river is occupied by Puutung, often called the "Little Europe," from its numerons native Christian population.

Shanghai does a very large export trade in tea, chiefly to Linglaud and America, and in silk mainly to France, while opium forms ly far the most important item in its imports. Five liues of river steamers have their head-quarters at this

\section*{EAS'I ASLA.}
station, which also owns forty consting steamers. This is the only Chinese city which possesses doek yards, where merchant vessels are built under the direction of Europem engineers. Here also a cotton-spinming mill, a tannery, and some other industries were established in 1879 on the European model. The coal mines of the Yang-tze yield sufficient fuel for all the steamers plying on the river, and are

gradually replacing the foreign coal in Shanghai itself. The city is traversed by tranways, and the racecourse is surrounded by fine arenues, which are continued as far as the "Bubbling Well," a hot spring discharging sulphuric acid gas. Broad macadamised roads radiate for 6 or 7 miles round to the villas and eountry seats of the foreign and native merchants; but the Government has not yet
allowed these routes to be continued farther inland. Eveu the short railway ( 9 miles long), the only one in China, recently built by an English company hetween Shanghai and Wusung, on the Yung-tze estuary, was bought up and destroyed by the authorities after a short and useful cureer of six months. The terminus and goods station at Wusung have since heen replaced by fortifications armed with heavy guns. Nevertheless the imperial administration must sooner or

later yield to the force of circumstances, and withdraw its veto from the plans of the foreign engineers. The surveys for a railway from Shanghai to Suchew, and even to Hangchew, have already been completed, and now only await the imperial sanction. A telegraphic line connecting Peking with Shanghai, and by submarine cable with Japan, was finished, after much local opposition, early in the year 1882. Since 1858 Shanghai has been the seat of the "North China branch of the Royal Asiatic Society."

Five miles south-west of Shanghai lies Sukiahrei, the approach to which is murkel by the lofty pagoda of Long-hua. Here is the Jesuit College, founded in the seventeenth century, to which is now attached a meteorological observatory. Amongst the other large places in the thickly poopled lacustrine peninsula between the Yung-tzo estuary and the Gulf of Hangehew are Huchew, noted for its crapes and foulards, and Nantsin, a great depôt for the traffic in silk cocoons.

In the fertile region of South Kiangsin the chief industrial centre still is the fumous city of Suchere, Marco Polo's "great and noble Suju." Doubtless the place has no longer " a circuit of 60 miles," or "six thousand stone bridges, high enough to allow the galleys to pass under," nor are its inhabitants numerous enough "to conquer tho world." Nevertheless this Venico of China has already recovered from the ruin wrought here by the Taïping rebels, and its citizens, as of old, are still noted for their intelligence and good taste. "Whatever is beautiful comes from Suchew-paintings, carvings, tom-toms, silks, and women," says a local proverb; and another adds, "To be happy, you must be born at Suchew and live at Hangehew." The "Great Lako" (Ta-hu), stretching west of Suchew, and formerly traversed by a branch of the Yang-tze, presents the aspect of an inland sea, the permanent home of a numerous fishing community.

Hamycher-fiu, at the west end of the extensive bay of like name, commands tho entrance of an old branch of the Yang-tze, forming a southern prolongation of the Graud Canal. Lying in a fertile district and pleasant elimate, it was formerly capital of the sonthern empire, ani long held out against the conquering Mongol hordes. Since then it retained for centuries the title of Kingtze, and Mareo Polo speaks of " Quinsuy," as he calls it, in terms of admiration inspired by no other city visited by him. Nothing astonished him moro than this "most noble city without fail the noblest and best that be in the world." But the details given by him were receivel with laughter in Europe. For he speaks of a circumference of 100 miles, \(1,600,000\) houses, 3,000 buths, 12,000 stone brilges high enough for fleets to pass under, and each guarded by a company of 10 men. The twelve working corporations are each stated to have had 12,000 houses for their industries, and other travellers speak in similar terms of Quinsay. Oderico of Pordenone calls it "the largest city in the world," and Ibn Batuta tells us that it takes three days to treverse it from end to end. Even in the seventeenth century, long after it had lost the rank of capital, Martinus Martini gives it a circuit of 100 Italian miles, and even more, including the vast euburbs. You may walk, he adds, in a straight line for 50 li through the place without seeing anything but houses closely huddled together.

Hangehew has still a circumference of 12 miles, beyond whieh the ground is strewn in every direetion with the ruins of temples and palaces. The great lake (Si-hu), which mediaval writers speak of as enclosed within the city, now lies beyond the ramparts. The delightful scenery of this lake, combined with the genial character of the people, has earned for Hangehew the title of the "Chinese Paradise." "Heaven is above ; Suchew and Hangehew are below," says an oft-
to which is founded in bsservatory. peninsula cherr, noted uffic in silk
still is the ess the place high enough enough " to y recovered ; of old, are atiful comes says a local hew and live fuchew, and of an inland mmands the gation of the was formerly ring Mongol Marco Polo by no other st noble eity ails given by umference of enough for twelve workdustries, and enone calls it three days to \(g\) after it had Italian miles, in a straight ouses closely
the ground is ge great lako city, now lies ned with the the "Chinese says an oft-


TOWER OF LONG.HUA, SHANGHAI.

quoted proverb. The chief local industry is silk-weaving, which cmploys 60,000 hands in the eity and 100,000 in Inchert, Kichling, and the neighbouring towns. But the whole district has suffered much from the Tuipings, the pupulation of Hangehew alone having been reduced, according to some writers, from \(2,000,000\) to less than 500,000 since the middle of the century. Here the Mohammedans are more numerous than in any other city on the coast.

Shaohing, on the south side \(f\) the bay, is the commercial and industrial centre of one of the richest and most densely peopled lowland regions in the enpire. The hydraulic works here constructed to reclaim, protect, and druin the land are elsewhere altogether unrivalled. Amongst them is tho longest virduct in the

Fig. 109.-Hangchew and the St-he.


Canals and Hridges.
world, being 86 miles long, and consisting of about 40,000 rectangular arches supporting a roadway 6 feet broad, protected by a graded parapet. Mount Taying, lying between the eities of Ningpo and Yuyao, contains probably the largest quarries in China. They have supplied the material for the construction of the viaduct, and blocks here cut into columns and statues are forwarled ns far as Siam.

The viaduct, which terminates castwards in the red sandstone fortress defending the city of Tsinhai at the mouth of the Yung-kiang, or river of Ningpo, dates probably from a period when the whole country was a vast saline marsh. Although the draining of the soil has rendered it no longer necessary, it has been built with such solidity that it still continues to be used as a highway and towing-path for the neighbouring canal. An extremely fertile tract has also been reelaimed by an
enormous embmament skirting the shore, erected at an manown period. It is faced seawards by dressell stone slabs bound together with iron eramps, and stretches from the Langchew estuary to the Ninglo River. But Shaohing, capital of this mhealthy region, is a decayed place, although still distinguished hy the culture of its inhabitunts. Some two thousund years ago it was the capital of a state which comprised all the sonth-eastern lands from Kiangson to Cunton, Outside the wall is still shown a tomb, said to he that of the Emperor Yu. Hero

Fig. 110.-Ning apo and Timinial.
Scale 1 : 220,000.

is prepared the exquisite perfuned liqueur known as "Shaohing wine," compared by travellers to Sunterne. It is extracted from a species of rice.

A walled city on the north side of Chekiang Bay still bears the name of Kampu, although the true Kampu (Ganfu, Gampu) spoken of by Marco Polo is supposed to lie submerged in the waters of the bay. Here the seat has encroached considerably on the coast, and nowhere else does the cagre, or bore, cause such disasters. From a distance it seems like a white cable stretehed across the bay, but it advances with a velocity of over 30 feet per second, constantly inereasing in size, and producing a din like lond peals of thunder. Its daily attacks require the embankments to be kept in constant repair, and during the reign of Kien-lung (1736-96) the hydraulic works along Hangehew Bay cost over \(£ 2,000,000\). All the culti-
vated lunds on the coast and neighbouring islands are protected by dykes, which give to the disfrict a geonetrical aspect, und the sweet waters are retuined by slaices, which serve ulso to keep out the sen ut high tide. Most of the const towns are intersected by numerons cunuls, whenco the title of "Chinese Venice" commonly given to them.

The Tsienting busin, some 16,000 scpure miles in extent, suffered ulnost more thun any other region from the bavages of the Thipings. Scarcely more than onethirtieth of the inhabitants survived the massacres und ensuing famine. Yet the country soon recovered from these disasters, and its export trade in silks, teas,

Fig. 111.-Guand Cuesin and l'utu.
Salle 1: 500,000.

fruits, hams, has already revived. Of its twenty-nino towns, Lanki (Nanchi, or Lanchi), although a simple hien, is the chicf commercial centre. All are accessible by boats during the floods, but large vessels are obliged to stop at Chapu, below Hangehew. But by far the most important place strategically is Niugjo, which stands at the junction of two navigable streams and of numerous canals radiating thence to all the cities of Chekiang and Kiangsi. Ningpo also enjoys the advantages of good anchorage, abundant supplies, und great facilities for defence. Hence the district has become fumous in the military records of the empire. Within 5 miles of the city the Tatars were routed by the Chinese peasantry in I130; in

1504 the phace was seized und oceupied by Jupanese pirates; and it was again captured in 1841 by the l3ritish forees, who made it the centre of their operations against Namking during the "opium war." The Portuguese also had a settlement near Tsinhai, which was entirely destroyed by the Chinese in 1542 , when eight humbred Europeuss were massacred and twenty-five vessels sunk.

Of late years a number of missionaries have been settled at Ningpo, which is favoured by a fertile soil, a delightful climate, and picturespue surroundings. The blue mountuins bounding the horizon towards the south-west ure unongst the best wooded in China ; and one of their gorges, the so-ealled "Snowy Valley," is famous throughout the East for its white rocky wulls, forests, and cascades. Below theso uplunds stretch the rich phains renowned in the history of Chinese agriculture, where the Emperor Shun is traditionally supposed to have guided the handlo of a plongh drawn by an elephant over forty ecnturies ago. In the district are also shown his well and stone bed. Ningpo is a learned city, and one of its private librarice, with upwards of fifty thousund volumes, is the common property of a community of blood relations, every member of which holds a key. Tho local industry is very activo, and the inlaid or luequered cabinet-work, carpets, and nottle mats manufactured in Ningpo are exported even to Japan. Its foreign trade, formerly amounting to \(£ 2,000,000\) yearly, was reduced in 1880 to little over \(£ 23,000\), most of the shipping having been removed to Shanghai. Ningpo, however, still remains the chief mart in China for fish.

The surrounding district is occupied by several large towns, such as Yuyuo and Tseliye (Zkiyu). Tinghai, on the south side of Great Chusan (Chew-shan, or "Ship Mountain"), is the capital of the Chusan Arehipelago, which has a population of fully one million. Although of difficult aceess, the port of Tinghai is deep and well sheltered, and a large export trade is here carried on in such local produce as cordage, mats, fans, cloaks of palin fibre, and the so-called "Chinese orange," largely used by the Canton preservers.

The famous monasteries of Puto (Putu), on a small island in the archipelago, consecruted to Kwanyin, goddess of merey and protectress of mariners, are mueh frequented by pious Buddhist pilgrims. These monasteries, about 100 in number, with about 2,000 priests, serve in summer as hotels for visitors, who resort to this place for sea-bathing. The great industry of the archipelago is fishing, these islands abounding in fish of every kind. Being mostly deseended from pirates, the natives have preserved a very independent spirit. So recently as 1878 they successfully resisted the Imperial forees, and thus got rid of the Government imposts.

\section*{EASTERN SLOPES OF THE NAN-SHAN.}

\section*{(South Chekiang and Fokibn.)}

Turs is one of the most elearly defined regions in China, the main ridge of its mountain system sharply separating Fokien from the Yung-tze and Tsientang basins. The Nan-shan ranges, all running south-west and north-east, indicate r operutions a settloment when eight po, which is dings. The ugst the best ," is fumous Below theso agriculture, haudle of a rict are ulso f its private roperty of a The local carpets, und Its foreign to little over Jingpo, how-
as Fuyao and an, or "Ship ropulation of is deep and ul produce as ese orange,"
archipelago, rs, are much 0 in number, resort to this ishing, these from pirates, as 1878 they Government
ridge of its ad Tsientang east, indicute

the natural direction of the historie route followed ly trade and migration between the Yang-tze estuary und the Canton River. This route was necossurily deflected inland to the west of Fokien and the water-parting. Between langehew-fn and Canton it followed the valley of the navigable 'Trientang as fur us a puss leading into Kiungsi, whenee it trended southwards over the Mei-ling l'ass.
lant of this formerly much-frequented commercinl highway the spuce between the water-parting and the const was too narrow und rugged to ullow the streames to merge in a common river basin. Hence they flow senwards in severul independent channels, some of which are separated from each other by difficult intervening ridges. Thus South Chekiang is muturully divided into two districts, watered by the Thichew und Wenchew Rivers respectively. lokien ulso is distributed into a number of distinet regions corresponding with the busius of the Min and of the stremus flowing to the Amoy and Swntow estuaries. The axes of the uplands run parallel with the coust und the Nun-shan system, so that the afthents of the muin streums truserse intermediate valleys in the same direction; that is, either southwest and north-east, or north-east und south-west. Hence here also the matural routes, avoiding the hilly and much-indented seabourd, take advantage of the depressions in the upland vulleys between the parullel main ranges. Intercourse between the inhubitants of Fokien hus thus been maintained cither by sea or by the uplunds of the interior. But although thus eut off from the grent imperial highways, this region, thanks to the fertility of its valleys and its healthy elimate, has become one of the richest and most densely peopled in China. Its secluded position has also largely protected it from devastating wurs, so that agriculture and industry have been almost uninterruptedly developed for thousands of years.

The Fokien senboard, cut up into countless headlands and rocky peninsulns, and fringed by myriads of islets and reefs, presents a somewhat sombre aspect, notwithstanding the infinite vuricty of its coast-line. Most of the granite hills are entirely destitute of vegetation beyond a few elumps of dwarfed conifers. In some places the shore is skirted by white sandy dunes, and although the flora is mainly tropical, it is too scanty to form a marked feature in the landscape. Hut farther inland, and beyond the marine winds, the country assumes a pleasant aspect, with a rich spontancous vegetation clothing even the slopes, which are too steep to be cut into terraces and brought under cultivation. Below Fuchew the banks of the Min unfold a succession of enchanting prospects, in which a pleasant contrast is offered by the tropical foliage of the lowlands and the temperate plants of the higher grounds.

\section*{Inimaimants of Fokien.}

Their relative isolation in their secluded valleys has enabled the natives of Fokien to maintain their special physical characteristics, so that in some respects they contrast with all the other inhabitants of the empire. Here are current at least five distinct dialects, of which the most marked seems to be that of Amoy, which has been carefully studied by Medhurst and Douglas. Besides possessing several tones unknown to the Mandarin variety, this dialect employs numerous
diswyllulie compounds, und even varies the inflections of common words by means of masal or contracted cudings. These Fokien dialects, which encrouch uron the northern und castern districts of K wangtung, give a certain nutional unity to the populations spenking them. They have been diseminated hy migration over the Philippines, Malaysia, Indo-China, and even purts of Americn. The Amoy med Swatow varieties prevail in Bangkok, Lima, und Sarmmento.

In Fokicn, as well as in Kwangtung und the Chusm Arehipelago, there still exist certuin denpised classes which ure regurded as the survivors of un nboriginal element. They live unart fron the rest of the population, und in many distriets, eqpeciully Fuchew, they can neither own property nor even reside on the mainland. Being compellod to live uflont, they move about from port to port, exposed to wind, ruin, und storm, or taking shelter in the creeks and inlets along the const. These umphibious communities huve even their floating temples and Taoist priests, who celcbrute their murriages und perform the ceremonies in homour of the "Nine Kings." But neither Buddhism nor the rites of Confucius have ever penetrated umongst them. The outensts are condemned to ignorance, because their children ure not ulmissible to the public examinations; while three generations must puss beforo their descendments, toleruted us harbers or palanquin-beurers in the towns, can nequire full citizenship. Many of the compralores, or agents of the Europenn truders, belong to this class; but however wealthy they muy grow, they are never permitted to hecome landed proprictors. Custom has thus proved stronger than the lenefieent ediets of the Emperor Yungehing, publiwhed in their favour in the yeur 1730. In the highlands stretehing west of Fuchew some aboriginal tribew still heur the nume of Min; that is, of the chief river and of the old kingdom which has become the province of Fokien.

\section*{Torography.}

South of Ningpo the numerous inlets along the coast offer safo harbours of refuge to the junks navigating these waters. Shipu is the busiest port on the South Chekiang senboard, although here the treaty port is Weucher, at the heud of an estuary formed by a navigable river. Wenehew was formerly a place of much importance, as attested by the ruins of its paluecs, sculptured gateways, and triumphal arches. The "Feng-shui," say the natives, is no longer favourable to the loeal prosperity; but the true culuse of its decadence are the people themselves, who have become probably the most inveterate opium smokers in all China. Even the inmates of the numerous eonvents lead dissolute lives, and to put an end to the scundals the civic governor reeently caused the nuns to be seized and publiely sold "ly weight." The average prico was about \(£ 3\) per head.* All the trade is in native hands, and in 1879 not a single British vessel entered the port, although the imported goods are almost entirely of English manufacture.

Of the numerous inlets following southwards the most spacious is that giving access to the city of Funing:fu. It forms a broad land-locked basin dotted over with
- W. Everard's Consular Report for 1879.


buddhist monastery at yuen-fu on the min, south of fuchu-fu.

islets, and completely sheltered from thll winds. But the chief seaport on the southeast coast between Shanghai and Cunton is Fucher-fin, capital of Fokien, und one of the great cities of the empire. From its delightful surroundings it secms to take its name, which is usually exphined to menn "Inuppy Land," although by the natives more commonly ealled Ilokehew, or else Yung-cheng; that is, " Bamana Castle." Fuchew lies, not on the coast, but some 33 miles above the mouth of the Min, near its junction with unother large stremm from the south-west. After crossing the bar, which has 13 feet at low water, the shippiag passes through a deop channel 400 yards wide, flowing between steep granite walls und defended by the Kin-pai forts. Higher up succeeds the Mingan passage, also commanded by forts on both sides, above which the Min expands into a spacious sheet of whter 00 feet deep at the ursenal where the shipping stops. This ursenal, constructed in 1869

by the French engineers Giquel and D'Aiguebelle, is the most important naval establishment in the empire. It includes a school of navigation, extensive workshops and building yards, from which fifteen men-of-war were launched within five years of its foundation.

The walled city of Fuchew-fu stands 2 miles from the north bank of the Min, but the intermediate space is occupied ly a large suburb, where are concentrated all the industries and trude of the place. Within the walls is the "Tatar town," whero reside ten thousand deseendants of the Manchu conquerors. On the opposite side of the river lies the populous suburb of Nantai, and the small island of Chungehew, in the middle of the river, is also covered with houses. This island is connected with both banks by two granite bridges, one of which, the " Bridge of Ten Thousand Years" (Wenchew-kiao), is 500 yards long, and is said to date from the eleventh century. Unfortunately some of the huge granite blocks of the

\section*{EAST ASIA.}
roadway have fallen into the stremm, where they have formed rapids, barring the further progress of junks. In 1876 this bridge, although completely subnerged by the inumdations of the Min, suceessfully resisted the violence of the current.

The European quarter lies in the Nuntai suburb, where most of the houses ure seattered amid old Chinese tombs on the slope of a hill commanding a prospect of the eity. The chief staple of export has for years been tea, forwardel almost exclusively to England and

Fig. 113.-Fucnew-iv.
Scale 1 : 55,000 .
 Australia. Recently, however, the Russian truders settled at Fuchew have begun to preparo brick tea, whieh is shipped for Tientsin and Siberia. The loeal traffic consists of lumber, bamboos, furniture, paper, rice, fruits, exchanged for Europem gools from Hongkong, Cunton, and Shanghai.

Six miles above Fuchew the Min is crossed by another bridge like the Wenchew-kino. But all river craft are arrested at Shui-korc, below the great city of \(Y\) umyping, which stands at the converging point of the chicf routes of the Min basin. The botanist Fortune ascended the main stream to visit the distriets where the best black teas of Fokien are grown. But various obstacles compelled him to retrace his steps, returning by a pass over the "Bohea" Mountains, which attain a mem elevation of 6,000 or 7,000 feet, with peuks rising in the castern ridges to 10,000 feet. The great tea mart in this upper region of the Min is Tsongan, not far from the isolated Wi-shan, one of the most venerated mountains in China, consisting of conglomerate sandstone, granite, and quartz, and rising 1,000 feet above the plain. Here is also one of the best tea-growing tracts, extensively cultivated by the Buddhist monks of the " 099 temples" scattered over the surrounding hills.

Before Fuchew the more southerly eity of Tsuranchere was the capital of
barring the subnerged current.
houses are prospect of rded almost igland and ly, however, \(s\) settled at a to prepare shipped for a. The local of lumber, , paper, rice, or Europeun ong, Canton,

\section*{ve Fuchew} by another nchew-kiao. are arrested \(w\) the great which stands point of the e Min basin. une ascended to visit the c best black are grown. les compelled steps, returnthe "Bohea" h attain a of 6,000 or peaks rising ges to 10,000 tea mart in of the Min is ed mountains z , and rising owing tracts, cattered over

1e eapital of

Fokien, and is still the residence of the provincial military governor. Nost commentators identify this place, vulgarly called Tsütury, with Mareo l'olo's Zayton (\%aïtum), which Ibn Bututu deseribes as "the largest pret in the word." In modieval times it was much frequented by the Arab traders, and won the Armonians and Genoese had settlements here. Marignoli saw "three beatiful churrhes" in this city "of incredible extent," where an Italiun bishop resided from \(1: 318\) to 1392 . Its harbour was erowded with vessels to such un extent that,

Fig. 114.-Shei-kow, on the Upper Min, Fokien.

on the occasion of a war with Japan, the local merchants boasted that they could throw a bridge of boats from their port to the archipelago of the "Rising Sun." Zayton supplied the Western traders with sugar, velvets, and silks, and Ibn Batuta expressly declares that the word Zaïtuniah, or " satin," is derived from this place, an etymology which Colonel Yule seems half inclined to aecept.

But the roadstead of Tswanchew was gradually ehoked with sand, and its vust trade transferred farther south to the great Bay of Amoy, which scems to have also
been known by the name of Zaittm, as commerciully dependent on Tswanchew, in the district of which it is situated. At present the little port of \(\boldsymbol{N} y\) Iminhai serves as the cutrepoit of traffic betwere the old port of Zaition and its surecesor.

Amoy (Hiamen, or Miammen), now open to the trude of the West, lies on an island uppurently at one time comnected with the mainland, in one of the very

finest harbours in the world. It was already the chief port in the province of Fokien when the Portuguese arrived here in the beginning of the sisteenth century. It remained aceessible to European shipping till the year 1730, after which it was elosed till reopened by the guns of the Eug!ish in 1840. The colony of the "red-haired devils," which numbered three bundred souls in 1880, has been established in the little island of Kulang-su, over half a mile from Amoy, and
round about this settlement quite a large native city has sprung up. Here the naturalist Swinhoe founded a learned society in 1857, which has done much goord work in various branches of natural history.

Tho trade of Amoy, about as extensive as that of Fuchew, consists mainly in opian taken in exchange for tea and sugar. Here also emigrants are shipped, and "a large passenger traffic has been developed between this place and Singamore. Amoy, which is one of the most enterprising cities in China, is now provided with repairing docks large enough to accommodate stemmers of 2,000 tons burden. The chicf island in the harbour consists partly of a larren mass of granite, but the rich district on the mainland round about the large cities of Chmugchew and Tumgan has been converted into a vast garden.

\section*{BASIN OF THE SI-KIANG.}
(Provinces of Kwangsi and Kwangteng.)
Wituin the torrid zone is comprised about one-half of this region, which in its climate, prolucts, and inhabitunts presents the sharpest contrasts to the rest of the empire. During the historic period the Si -kiang basin has been more than onee politically independent of the northern rulers, and here the formidable Taïping revolt had its origin about the middle of the present century. The province of Kwangtung, eomprising about one-twentieth of all the inhabitants of China, still exercises a political influence out of proportion to its population, and its capital, said to be the largest in the empire, is regarded as in many respeets acting as a counterpoise to Peking, at the opposite extremity of the state. While the "Northern Residence" watches over the Mongolian plateaux, the cradle of so many invasions, Carton, or "the Eastern City," almost half Indian in its clinuate, maintains the relations of the Chinese world with the peninsulas and islands watered by the Indian Ocean.

North of the Si-kiang valley the various mountain ranges, known by a thousand local names, and to which Richthofen gives the collective name of Nanshan, develop, as in the Yang-tze basin, a series of parallel ridges running south-west and north-east, with large intervening breaks. Conspicuous amongst these is the Ping-yi-shan, said to rise above the snow-line. The northern chains are believed to have a far greater mean elevation than those in South Kwangtung, which skirt the course of the Yu-kiang, stretching thence parallel with the gulf far into Tonking. Beyond the lofty and massive Loyang they are pierced by the Si-kiang, the gorges here formed by this river constituting the natural frontier between the two provinces of Kwangsi and Kwangtung. Other ridges, running mostly in the same north-easterly direction, occupy the eastern region of Kwangtung, whence they are continued into Fokien. One of these begins at the very gates of Canton, here forming the picturesque group of the Peiyun-shan (Pak-wan-sham), or "White Cloud Mountains," whose slopes are covered with countless tombs. Farther on the Lofu Hills, 4,000 to 5,000 feet high, are clothed with a forest vegetation, in the shade of which the Buddhist monks have built their monasteries.
east asia.
Still further eust these chains are comnected by un unsurveyed highland region with the parallel Fokien ranges. According to the rejorts of the missiommes some of these crests, especinlly between the Han-kinug and Tun-kiang river basins, ure lofty enough to be covered with suow in winter.

South of Fokien, the copions ILan-kiang, collecting the drainage of West Kwangtung, flows from the Kimugsi frontier due sonth through the breaks in the purallel manges. But its chicf affluent, the Mei-kiang, follows one of the intermediate north-easterly depressions, thus offering a transverse route from Fokien to the Si-kiang basin.

\section*{The Sthinag Rivel Sistem.}

The Si-kiang, or Sei-kong, as the Cantonese pronounce the word, which means "West River," contains a large volmme of water, due mainly to the summer monsoons. These trade winds send to the southern slopes of the Nan-shan un abundunt rainfull, which in the province of Kwangtung is estimuted for the whole year at over 20 inches. The Si-kiung, known also as tho Pué-kiang, or "River of l'ué"-thnt is, of the two southern provinees-receives its farthest hend-streams from Yumnm and the Kweichew uplands oceupied by the Miaotze tribes. The IIung-shui, its main branch, flows under various names before receiving from the Cuntonese the designution by which its lower course is known. This want of a more preciso nomenelature has enabled every traveller to regard the hend-stream visited by himself as the main branch. Thus Ine und Gubet, who embarked on a stream rising at the foot of the Mei-ling in the north of the province of Canton, and Moss, who aseended the Yu-kiang, which rises in Tonking, all supposed they had explored the chief branch of the Si-kiang. Below the conflucnce of these two tributaries the main stream is joined by the K wei-kiang, after which it penetrates through a series of defiles into the province of Kwangtung. At some points it is obstructed by shoals, and at low water there is little more than 6 or 7 feet in the channel. But during the summer rains it rises from \(2 \overline{5}\) to 30 feet and upwards, while the tides are felt in Kwangsi, 180 miles from its mouth. In some parts of the channel the plummet reveals depths of from 150 to 170 feet.

After emerging from its last narrow gorge, where it contracts to 630 feet between its roeky walls nearly 1,200 feet high, the Si -kiang is joined by the Pe-kiung, or "River of the North," at the head of the delta. From its source to this point it develops a course of about 800 miles, throughout which it presents the only commercial highway from Canton to the three provinces of Kwangsi, Kweichew, and Yunnan. Through the same channel a portion of the traffic is carried on with the regions of Indo-China, watered by the Red River and the Mekhong. Yet the Pe-kiang is still more important than the main stream as a trade route, for it forms a section of the great highway connesing Canton with the Yang-tro basin, where the only interruption is the Mei-ling I'ass. 'This is the route followed by most European travellers who have visited the southern regions of the empire. The Pc-kiang was explored in 1693 by the missionary Bouvet, and


CANTON AND THE


\section*{NTON AND THE PEARL RIVER.}


in 1722 Gnubil surveyed the basin astronomic: Iy. ", all the historic ronter of the empire this is the most important, us but for the whole if the southern regien would remain detached from the "Middle Jii sedom." A we the development " stean navigution on the coast the traffic on the l'e-king has beent th redues although tho overland intercourse between the Si-kiang and Yang-1\% .sins is nt very considerable.

\section*{Tue Canton Delita.}

Below the confluence of the Si-kiang and "River of the North" the united stream is again divided almost at right angles. The main chamel flows sonthwards to the const, while a secomd brunch trends eastwards to the network of countless branches and backwaters everywhere intersecting the ulluviul plains of Canton. This labyrinth of waters is joined from the east ly anether grent stream, the Tung-king, or "River of the East," whose furthest sources rise in the northeast on the frontiers of Kiangsi and Fokien. This is ulso an important highway, especially for the tronsport of sugar, rice, and other agricultural produce.

Thumks to the tides, nearly all the chamels of the delta are naviguble, and so numerous are these watereourses that in a region over 3,000 siquare miles in extent land routes are scarcely anywhere required. Thus the whole population has almost become amphibions, living indifferently on land and afloat. Large water fairs have even been held in the delta, when reaches, at other times almost deserted, have been temporarily converted into extensive flouting eities. Other industries beside fishing are pursued by the inhabitunts, and many even of the agricultural classes reside permanently in bouts moored to the shore. This region has thus nuturally become the great centre of commerce in the empire. But here also during times of disorder piruey has found a convenient home amid the intricato maze of chamels rumifying over the delta. Even the European war vessels found it difficult to rid this region from the daring corsairs by whom it was infested.

The city of Canton stands about midway between the two heads of the delta which is formed on the west by the united Si-kiang and Pe-kiung, on the east by the branches of the Tung-kiang. Thus from this point junks reach the two estuaries by the shortest channels. Of these the broadest and deepest, rumifying eastwards, is known as the "River of Canton," or the "Pearl River" (Chu-kiang), a nume supposed to be derived from that of Fort Hai-chu, or "Pearl of the Sea," better known as the "Dutch Folly." * But even by this channel large vessels are unuble to reach Canton, junks of deep draught and ordinary steamers stopping 8 miles lower down at Hoang-pu (Whampoa), while large men-of-war are arrested much farther down by a bar which has only 13 feet at ebb tide. The limit of the Pearl River and of the estuary is elearly marked by the rocky eliffs confining the ehannel on both sides, and the fortified headlands of which have been compared by the Chinese to the jaws of a tiger. Hence the expression Humen, translated by the Europeans into "Bocca Tigris," or the "Bogue." The shoals and even the banks of the stream are subject to constant shiftings, the land generally encroaching on
- That is, the "Duteh Fut," from Forli, the Pigeon English pronunciation of the word.fort.
the channel, owing to a line of hills which run sonth-west und north-enst neross the allavial soil, and which sorvo to retain the medimentary matter bromght down by the stream and washed back by the tides. The northermmont of thene ridgos consists of harge indmals, above some of which rise elevated crests, such us the two penks of the island of Wungkan at the cntry of the Canton estuary, better known by its 'oortuguese nume of Montanha. I'lise ladrones, or "Robber" Islands, like Mong Kong itself, form portions of un intermediate chain, while still further semwards stretches the long arehipelago of the Laiping and Lema groups.

\section*{Chmate of Soleti Cimina.}

In the Si-kiang basin the torrid and tempernte zones are intermingled. With the altoruation of tho monmons, Canton oscillates between the two, so that its climate is far less equable thm that of Culcutta, Monolulu, Mavana, and other places siluated under the same parullel.* Inring the moist summer monsoon the sonthern provinees are as loot as Indian cities equally distant from the equator. But the temperature rapidly falls in winter, when the dry north-east polur winds swerp down between the parallel mountain ranges, ruming muinly north-cast and south-west. Rain seldom falls in Junamry, when the nights are clear, and even frosty. At the same tinat, the regular alternation of moist summer and dry winter winds is occusionally disturbed by atmospheric currents, deflected in various directions by the relief and contour of the seaboard. Thus the south-west monsoon lecomes ut Cunton a south-ensterly gale, and the lofty Mount Lantao is daily exposed to fierce storms for months together.

Theso climatic disturbances aro also reflected in the flora of the southern provinces. Here the plains are bare in winter, when nature presents the same bleak aspect as in more northern regions. But all is changed with the return of the hot moist monsoons, under whose influence the tropical vegetation is revenled in all its splendour. Now the palm and camellia flourish by the side of the oak, chest nut, und sombre pine, while the bunana, mango, litchi ( \(N f_{p}\) helium litchi), orange, and citions of divers species ure intermingled with the fruit trees of the temperate zone. Many leafy shrubs, confined in Europe to the conservatory, here thrive in the open air, deeking the landscape with their brilliunt blossom, charging the atmosphere with a balmy per fume. The small island of Hong Kong contains, so to say, an epitome of this varied and beantifal southern flora.

In this favoured region the unreclaimed tracts are far too limited to afford shelter for many wild animals of large size. Few mammals are met besides the wild goat and fox on the coust and islunds, and in the interior the rhinoceros and tiger. Smuller animals, as well as birds, insects, and butterflies, are numerous, and mostly of species allied to those of India.
- Comparative temperature of various tropical cities:-


\section*{Innamitante of Sorth Cuma.}

Southorn and especially Malay dements seem to have beeome intrimingled with the populations of Sonth Chim, ulthough mo truce of their pronence enn now be detected in the customs or speech of the matives of K wangtung. Here the purely Chinese dialect is even of a more arehaic charneter than the present

Fig. 116.-Compabative Temprmaterf of Canton and otikr Towns.


Mandarin variety, while all local geographical names belong to tho same stock as those of other parts of China. It is now ascertained that the number of original terms unrepresented by particular signs in the literary standard is far more limited than was formerly supposed. But in the interior there still survive certain aboriginal communities which have not yet become amalgamated with the Chineso
proper, and which by them ure regurded as barbariuns of alien blood. Thus some Miaotze tribes are found in the north-west of Kwangtung, about the sources of the Lienchu, a western affluent of the Pe-kiang. Others occupy parts of Kwungsi, where they form autonomous commmities, settled on lands conceded to them by the Emperor Yungehing in 1730. In the seventeenth century other Mi:otze tribes seem to have peopled the uplands about the head-waters of the Han-kiang, but all this recrion on the Fokien frontior is now settled by Chinese colonists. The Yoo (Yia), a large group said to be of Burmese origin, occupy a highland district in the south-west of the province, near the Amnam frontier. The Yao of distinct

Fig. 117.-Inhabitants of Kifangtung.
Scale 1: 8.500,000.

speceh appear to number altogether less than 30,000 , yet they have hitherto succeeded, more by policy than open foree, in maintaining their independence. The custom of the vendettu, or blood vengeance, pursued from generation to generation, common amongst the Cherkesses, Albaniuns, Corsicans, and some other Western peoples, but extremely rare in the far East, still survives amongst the Yao tribes.

Although belonging, if not to one original stock, at least to one nation fused together by a common language and historic development, the natives of Canton and surrounding regions are divided into three distinet groups-the Moklo, Punti, and Hakka.

The Hoklo (Hiolo, Hiaolo) dwell ehiefly on the seaboard and about the river
estuaries. The Chinese sign for their name means " Ancient in Study," apparently implying a civilisation anterior to that of tho other inhabitants of the lamd. Yet amongst the IIoklo persons devoted to the learned professions are at present less numerous than elsewhere. They are, however, also known by the nume of Fo-lo, or "Ancient in Prosperity," and these terms Hok and Fo-that is, "Study" and "Prosperity"-are components in the name of the province of Hok-kien or Fo-kirn. Hence the true meaning of Hoklo is probably "People of Fokien." According to the Chinese tradition, they migrated in the fourtenth century into the adjacent province of Kwangtung, and it is noteworthy that here the flouting population about the creeks and inlets, who have the greatest affinity with the IIoklo, aro ulso supposed to have come originally from Fokien. Their peenliar manner of life has made them a special caste, no less despised than that of the Fuchew waters, and also stigmatized by abusive appellatives. In Canton, as in Fuchew, the members of this caste would appear not to be admitted ashore, so that they live from generation to generation grouped in floating villuges along the river banks. In the learl River the moorings become hereditary property, and when a junk falls to pieces, it is inmediately replaced by another.

The Punti-that is, " Roots of the Soil"-are tho most numerous element in the southern provinces. Although priding themselves in the title of autochthonous, they probably represent a fusion of northern immigrants with the aborigines, and now regard themselves as the natural masters of the land. Even in Yunnan they reject the name of Chinese, and clain to be considered as a distinet ruce. Representing a sort of southern aristocracy, they affeet to despise not only the plebeian Hakka and Hoklo, but even the people of the north, whom they certainly surpass in elegance and refinement. Their beautiful dialect, which is the current speech of Canton, takes the title of pe-hoa-that is, "white language"-in the sense of the pre-eminent speech, and in it have been composed many literary works.

The Punti have a numerical majority in the Canton district, where, however, they are now threatened by the proletariate Hakka element, descended from colonists originally settled in the north-east of Kwangtung. The Hakka dialect differs greatly from the Punti and Fokien, and appears to be a variety of the "true language;" that is, of the Nanking form of speceh, although now affected by numerous Punti elements. Tho Hakka are a hardy, laborious race of agriculturists, who supply a large proportion of the coolies now employed in Formosa, Java, Saigon, Bangkok, the Sandwich Islands, Peru, and California. Their dialect also prevails in Singapore, and amongst the Chinese villages in Borneo. Thus, although despised by the haughty Punti, to their industrious enterprise is largely due the share at present taken by the Chinese nation in the common work of humanity.

\section*{Topography.}

East of Canton, and in that part of Kwangtung which belongs ethnically to Fokien, the chief trading-place is Shashantor, which the English call Sirutor. A mere fishing bamlet in 1840, thanks to its happy situation on a navigable river
estuary in a rich alluvial plain, it soon rose to prosperity after being thrown open to the trade of the West. Even before this time some English merchants had settled on " Double Island," at the mouth of the Han, which they converted into an entrepôt for opiam and all kinds of merehandise. Here they were encircled by a cordon of pirates and smugglers, forming a sort of republic, with its head-quarters on the island of Namao (Nangao). Having also taken part in the detested coolie traffic, the traders of Donble Island were very badly received at Swatow when this place was made a treaty port in 1858. Hence most of the comanting-honses belong still to merchants from Canton or Singapore, who have formed themselves into a sort of trade guild, which regulates current prices even for other ports along the coast. Swatow exports chietly sugar, hequer-ware, and other prolucts of the local industries. At high water the har-
 bour, lying 5 miles from the sea, is accessible to vessels drawing 20 feet. Swatow is one of the healthiest places on this seaboard, but it has suffered much from the typhoons, to which it is exposed.

In the Si-kiang basin the only routes being the rivers and portages, all the cities have been built on the banks of streams, and especially at points where confluents, rapids, and portages required depôts of merchandise to be established. Thus Krei-liny, capital of Kwangsi, stands at tho issue of a mountain gorge on the banks of a canal comecting the Yang-tze and Si-kiang basins through the Siang and Kwei-ling Rivers; but the latter is so obstructed by rapids as to be scarcely navigable exeept during the floods. Hence, notwithstanding its administrative rank, Kwei-ling itself is a place of no importance. The grent eity of Kwangsi is Wucher, or Nyrher, lying below the confluence of the Si-kiang and Kwei-ling on the north side of the main stream. IIere the salt and manufactured wares from Canton are taken in exchange for the copper ore, lumber, cabinet woods, rice, and other produce of Yuman and Kwangsi. In 1859 the AngloFrench expedition, unuler MacClaverty and Aboville, ascended the Si-kiang as far as Wuchew.

Shuthing, or Shaohiut! (Chaoking, Shakoing), on the left bank of the Si-kiang below the last gorge above its delta, was long the residence of the Viecroy of Kwangsi and Kwangtung. But the administration of the two provinces was afterwards removed to Canton, with which it can no longer compare in extent or importance. Yet, although sacked by the Taipings, it still does a large trade in tea,
porcelnins, and murble slabs from the neighbouring hills. Beyond this point tho traffie and population increase continually on both sides of the river, coming to a focus at the confluence of the Si-kiung and Pe-kiang, where stand the eities of Sunshui and Sainan, near the head of the delta. Firfhun (Fiu-shan), although ramking as a simple villuge, without walls or fortifications, is no less tham I2 miles long, and is classed among the "Four Marts" of the Middle Kingdom. It forms the largest centre of population in the district comnecting the Sanshui, or "Threo Waters," with the l'earl River. Here the channel seems to have become much shallower than formerly, whence probably the decadence of Fachan, whose population has fallen from about ono million in the seventeenth century to half that number. It may now be considered not so much a rival as a dependeney of Canton, where silks, hardware, mats, paper, sails, and all sorts of wares are manufactured. Another dependency of Cunton is Shihhuy, (Shäk/umy), at the head of the delta formed by the Tung-kiang, which is the great depots for the sugar and other produce of the East destined for the eapital. In the Pe-kiang valley there are also several large pluces, such as Nanhinny, at the foot of the Mei-ling, and Shrochre, a much-frequented riveruin port.

Mention is made of Canton in the Chinese records as far back as the fourtl) century before the vulgar era, at which time it bore the name of Nanwu-cheng, or "Warlike City of the South," a title fully justified by its frequent revolts. In a.n. 250 it succeeded in expelling the Imperial forces, and maintained its independence for hail a century. At the beginning of the tenth century it became the capital of a separate state, paying an manual tribute to the empire, but sixty yeurs afterwards it was again conquered by the founder of the Sung dymasty. In 1648 it rose against the Manchus in the name of the Ming dynasty, and held out for over a year. Upwards of \(\mathbf{7 0 0 , 0 0 0}\) Cantonese perished during the siege, and the city, given up to plunder, becane a heap of ruins.

At 1 resent Kwangehow-fu, or Sheneheng, as Canton is called in the local dialect, is one of the most thoroughly Chinese cities of the empire, although lying on its southern limits over against the great southern peninsulus and archipelagos. It probably exceeds all the other imperial cities in population, as it certainly does in the originality of its appearanee and fidelity to the national types. It laeks the broad dusty streets and tent-shaped houses of Peking, recalling the neighbourhood of the Mongolian steppes. It presents no such imposing aspect as Shanghai or IIankow, with their new European quarters, houses, quays, and shipping; nor has it had to be rebuilt in recent times, like Hangehew-fu and so many other cities destroyed by the " long-haired" rebels. Canton is still what it was over four hundred years a \(\mathbf{a}\), when first visited by Europeans, altogether a unique city as approuched through a floating quarter, where are anchored all kinds of craft, disposed in blocks like the houses ushore, with intervening water streets crowded with traffic. Although at this point nearly three-quarters of a mile broad, the river is completely covered by this city of boats, no less animated by its dealers, artisans, innkeepers, pleasurescekers, than the city on terra firma.

Canton proper, lying on the north side of the Chu-kiang, is enclosed by a

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rampart, and, as is usual in China, divided by another enclosure into two distinct cities. Within these spaces, with a joint area of several square miles, the population is crowded together in narrow, tortuous streets, lined by rickety houses, with their lacquered or gilded signboards still further shutting out the prospect. In many alleys mats are stretched from house to house, the finer shops are exposed fully to view, the motley throng is jostled by the rude bearers of palanquins. Beyond the walls vast suburbs stretel right and left along the river, while the south side is occupied by the eity of Honan, on tho island of like name. Canton is one of the most insalubricus places in China. Amongst its inhabitants there are no less than 8,000 blind and 5,000 lepers, while the general type of features seems exceptionally repulsive to tho European eye. The English, by far the most numerous and wealthiest of all the European settlers, have converted their quarter on the island

Fig. 119.-Canton, Whampoa, and Honan Island.
Scale 1 : 200,000 .

of Shamin into a sumptuous city, far more healthy than the native town, provided with promenades, shady avenues, and a racecourse. The site of this "Concession" has been well chosen, at the diverging point of the two deepest branches of the Pearl River.

For its industries Canton takes the foremost rank amongst Chinese cities. Its artisans are engaged in the most varied pursuits, such as silk-spinning, dyeing, paper, porcelain, and glass making, lacquer-work, ivory and wood carving, cabinetwork, metal casting, sugar refining, and in the production of the thousand knickknacks known as Canton fancy goods. The embroiderer's art has been brought to great perfection, being elsewhere absolutely unrivalled in the disposition of the colours, its exquisite designs, and delicate execution. Canton is the great mart for the silks of the South, as Hangchew is for those of Centrul Clina.
wo distinct population with their In many sed fully to Beyond the suth side is one of the uo less than xceptionally merous and n the island

wn, provided Concession" \(s\) of the Pearl c cities. Its fing, dyeing, ing, cabinetusand knickon brought to ssition of the reat mart for

Nearly all the trade of Canton is in the hands of native merehants, the Europeans of Shamin having sunk to the position of mero brokers. Before Lord Amherst's mission of 1815, English commerce was barely tolerated, and at that time there were no capitulations, as with Turkey, nor any treaties as amongst the different European states. But when intercourse was permitted with the West, Canton, already enjoying a monopoly of the foreign exchanges, soon nequired an extraordinary development. The opening of Shanghai and the other treuty ports doubtless reduced it to the second rank amongst the emporiums of the empire, but it seems to be grudually recovering the foremost position. Here was first developed the curious lingua framea known as "Pigeon (Business) English," some expressions from which havo entered into the familiar speech of the English themselves. But the constant relations of limropeans with the natives seen to huve produced a general lowering of the mornl standard. A national proverb warns tho aged from Sechuen and youth from Canton, implying how laborious life is in the western highlands, how corrupt in the great southern capital.

Whamion (Hoang-pu), the outport of Canton on the Pearl River, is also a largo place, stretehing some 3 miles along the islands which enclose its harbour. Notwithstanding its proximity to European structures, Whampoa has preserved all its originality, and is still little more than a vast aggregate of wretehed bambon hoveis overlooked by a lofty pagoda. Building yards, repairing docks, and extensive warehouses cover a large space; but a great portion of the truffic has fallen into the hands of smugglers, who infest the neighbouring ereeks. Old towers rise at intervals along the shore, raised at an unknown dateagainst enemies whose very name has been forgotten.

\section*{Hong Kong.}

Since 1841 the neighbouring island of Hong Kong (IIiong-kong, or Hiangkiang) has belonged to the English, in whose hands it rapidly became one of the most-frequented places in the East. This little granite and basalt island, some 33 square miles in extent, forms a world apart, infinitely varied with hill and dale, woodlands and watercourses, rocky creeks, sandy beaches, groups of reefs, and islets. When first oceupied it had a fishing and agricultural population of about 2,000 souls. Now the large city of Victoria (Kwantaïlu) stretches along the north coast around the roadstead formed by the strait, about \(1 \frac{1}{3}\) miles wide, separating it from the mainland. Large villages have also sprung up at the outlets of all the valleys, while every headland is crowned with country seats or handsome buildings enframed in a dense vegetation of conifers, bananas, and bamboos. A fine roadway winds up to the culminating point of the island, whence a varied prospect is commanded of the busy city of Vietoria, with its spacious quays, and of the broad roadstead crowded with shipping. During the first years of the settlement Vietoria had the reputation of being a very unhealthy place : now it hus become a sanatorium for the English residents in the East. Unfortunately, Hong Kong lies within the range of the typhoons which sweep the Chinese waters. In 1874 one of these
terrific storms blew down over a thousand houses, wrecked thirty-three large vessels, with humdreds of junks, and destroyed several thousud lives.

Forming the outpest of Englund in the Chinese world, Hong Kong presents as great a variety of types as almost any other spot on the globe. The Parsees, tho most respected of all strungers, ure thoroughly domiciled in these waters, whero

their traditional probity has at all times secured them a friendly weleomo. Hindus of every branch, Malays, Burmese, Polynesians, and half-custe Portuguese have also been attracted to the island, while the bulk of the population consists of Chinese from every province in the empire. The exchanges between Canton and England are chiefly effected at Hong Kong, whence also is forwarded mueh of the European merchaudise destined for Shanghai, Hankow, and Tientsin. The
shipping in the roudstead exceeds \(4,000,000\) tons yearly, while the exchanges moment altogether to about \(£ 12,000,000\). Victoria still retains its monopoly in the movement of the precious metals; but much of its general trade has ulvendy passed into the hands of the nutive dealers, those especially of horrhn, on the oppowite side of the strait. At Aberden, known ulso as " Little llong Kong," a small town

Fig. 121.-Huno Kono: Vibw taken from Kowlen.

on the south-west side of the island, several building yards and repuiring docks have been built, and some iarge sugur refineries have also recently been erected here.

\section*{Macao.}

The Portuguese settlement of Macto (the Ngaomen of the Chinese), lying over against Hong Kong on the opposite side of the Pearl River estuary, is not officially detached from Chinu. The Imperial Government has never recognised the absolute sovereignty of Portugal over this peninsula, and has always enforced
payment of the tribute of \(£ 150\) imposed by the Emperor Kang-hi, and collected by a mandarin resident on the spot. Nevertheless Mucao is practically a lortugnese possession, und the European quarter of l'ruya Grunde presents the aspect of a town in listremadarn, with its large red or yellow houses, heavy balustrades, and vust monasteries now converted into burmeks. Its so-called Portuguese inhabitants

are, however, almost exclusively half-castes, and even these are now encroached upon by the natives, who, although forbidden to build houses in this quarter, buy up those of the old Lusitanian owners, replacing the image of the Madonna with their ancestral shrines.

Macao is conveniently situated for trade, occupying a district some 12 square miles in extent at the southern extremity of a large island in the delta, which is
connected with the mainland by a sandy dune formerly fortitied. The roadstend, being sheltered ly hilly islets from the full fury of the typhoons, is uerosible ta large vessels from the sea, us well as to river craft both from the l'oarl River and the wentern estuary of the Si-kiang. For nemery three humbrel vours Mucua enjoyed in monopoly of the Europem trude with China, but the oproning of the treaty ports at last deprived it of its exelusive ndvantuges. Since then its iloulets turned to the traflic in slave labour, und the "barracines" of Macuo berame a depent for the coolies captured or purchased on the seabourd, and farwarded us voluntary hired labourers to Pern und the West Indies. The protests of the Peking Government put an end to this shamefal traflic, and since \(187 / 3\) most of the contructs are

signed at Whampoa, with every guarantee against former abuses. Aud now Macao has turned to gambling and lotteries, its notoriety amongst Eustern cities being chiefly tue to these attractions. The local trade, ulmost exclusively in the hands of native deuiers, consists chiefly in tea, rice, sugar, silks, und indigo, mostly shipped on Chinese junks. The few European vessels that take part in the traffic import salt from Cochin-china. The Municipal Council (Leal Senulo, or Loyul Senate) is elected by universal sulfrage.

Macao is famous in the literary world. Camōens resided for eighteen months, in 1550 and 1560 , in this place, where he is said to have composed a portion of the "Lusiud." A rent rock forming a sort of grotto is still shown, where he is tradi-
timully sinpused to have resided. In the town cemetery is the tomb of Morrison, one of the most distinguiviaed labourers in the fietd of Chinese philologry und gengraphy. Fruncis Xavier, the celdonuted Jesuit missionary, who introducel the Cutholic religion into Japan, diad in 150, on the meighbouring island of St. John (Changchwen, or Simeime). The English of Hong Kong have nequirerl

numerous vilhas near Mucao, to enjoy the seu breeze, which blows regularly on this const.

West of Macao follow a number of seaports on both sides of the peninsula projecting towards Hainan. But here the only treaty port is Pakhoï (Pei-hai), or "White Sea," on a lugoon commmicating ut high water with the Gulf of Touking through the Lienchew estuary. Here the chief staple of the loeal trade is salt fish,
and ulthough no buropeon vessels visitell the place till the yar 1nta, l'akhoil seems destined to a brilliant future. It is the terminus of a highway ruming directly through Lienchree and I'ulin to the fertile districts of the Viu-kiung, whowe produce is at present forwarded by the long and difficult ronte of the Si-kiang to Cunton. Owing to the dangerous sund-banks, vessels are obliged to mehor in the offing neurly a mile from the coast, where they are sheltered at chb by the Along bauk, hat exposed at high water to a heory surf. These waters aro ulso oceasionally. swept by the typhoons, which, however, pans mostly to the somth of the Kwan-tuin hemdand. Beyond this point the inlet between the Gulfs of Liechew and Pakhoi is obstructed in many places by the stoekades of the fishers, rows of which ure sunk even in depths of 50 or 60 feet.

South of Pakhoï the volemic island of Wei-chew raises its blackened wulls in the middle of the gulf. At its southern extromity the crater, which has fullen in, forms a regular cirque, fucing southwards, and nourly 2 miles in diameter from headland to headland. Till the middle of the present century this islumd was exclusively inhabited by pirates, but is now oecupied by a peaceful population of about 3,000 souls, mostly immigronts from the Liechew peninsula, engaged chiefly in agriculture and fishing.

\section*{IUNNAN.}

Tuss province, the richest in mineral wealth and one of the most important in the variety of its produce, is at the same time the least solidly attached to the empire. A portion only of the land, and that the most rugged und thinly peopled, belongs to the Yang-tre basin, while the western half is drained by the two grent rivers of Indo-China, the Salwin and Mekhong, and the southern extremity sends its waters through the Hung-kiang ("Red River") to the Gulf of Tonking. Recently a large part of the province had even become politieally independent, cutting off the communications between the loyal inhabitants und the rest of China. The authorities then turned for assistance beyond the frontier through the Red River. This route thus for a time acquired a vital importance, and the opportunity was turned to account by the explorer Dupuis, who followed the course of the stream, and opened it to trado and seience. But after the suppression of the Panthay rebellion the imperial highways have been reopened, the peasuntry are now returning to their villages, and the gaps made by massucre und famine are being filled up by fresh settlers from Sechuen, Kweichew, and Kwangsi. But although it has thus again become an integral part of the empire, Yuman remuins none the less an outlying region, of difficult access, and far removed from the seat of power. Of all the provinees it has always been the most thinly peopled, and sinee the recent disasters its population has been reduced probably by one-half. Its area is somewhat vaguely estimated at 127,000 square miles, but the frontierline is ill defined towards Tibet, Burma, Siam, and Ammam, where numerous indepeadent hill tribes occupy the border-lands.

Broadly speaking, Yuman may be deseribed as a rugged plateau inclined in
direction from the north-west to the wouth-east. On the Tibetan and Sechuen frontiers the unexplored ranges rise niove the nnow-line, while the central part of the platema has a mean elevation of perhaps 7,000 feet, above which the red sandstone ridges maintain a uniform clevition. Large lukes till the depressions of this tableland, the outer searp of which is furrowed by deep river gorges, while southwarde the Irawali and Red River basius expand into broad plains, seareely more than 600 feet above the sea. livery tramsition of temperature is met between the northern uphands, with their snow-chad runges, und these sonthern lowhunds, which penetrate into the torrid qone. At Yunan-fu, on the intermediate plateau, the naw lies at times for weeks together on the gromed.

A pro-eminently minerul regiom, Yunann exported wrought-metal wares even before the arrival of the Chinese. The aborigines had everywhere mines and workshops, expecially for the treatment of iron, which of ull minerals is here the most abmand. lich eopper ores are also found, and the imperial taxes raised from the mines and metal workers amomated before the rebellion to nearly \(\mathbf{6 , 0 0 0}\) tons of copper yeurly. Gold-wushings are also numerous along the Kinsha-kiang und other watercourses. But far more productive are the silver mines, besides which Yunnum ulso possesses deposits of cinmalnar, zine, lead, and in the Red River basin a rich tin lode, while its conl mensures are both extensive and of excellent quality. With such vast und varied treasures, the province promises to become some day the great mineral mart and metallurgic workshop of the empire. It also ubounds in precious stones, such as rubies, topazes, sapphires, and emerulds, while costly varieties of jade and marble are found in the highlunds. liarts of these highlands are still covered with vast forests, supplying valuable timbers, notably the nummu laurel, which, owing to its extreme hurdness und penetrating perfume, is much employed in temples and paluces. Since the silpmerssion of the Mohammedan insurrection, Yuman has become the chief seat of the opium industry, und notwithstunding the pretended Government ediets, nt least one-third of the cultivated land is now under the poppy. The upland pastures support large flocks of sheep, whose wool is utilised, but whose flesh is never caten.

There are few Asiatic regions where an improved system of communication would be attended by greater results than in Yunnan. Not only does this province require good routes and railways to export its minerals and other produce to China and abroad, but it also offers the most direct line of communication between India and the Yung-tze basin. The Brahmaputra, Irawadi, Salwin, Mekhong, and other rivers diverging from East Tibet and Yuman, point out in a general way the direction of all the routes whose naturul centre is on the Yunnan-fu plateau. A straight line drawn from Culcutta, through the cities of Yumnan to Hankow, may at some future day get rid of the tedious circummavigation of Further India and South China, whereby a suring of 3,600 miles would be effected. Hence the efforts that have in recent times been repeatedly made to establish regular relations between India and China across Yumman. In 1867 the memorable French expedition up the Mekhong threw open the southern frontier of this province, and Yunnan-fu

Was ugain visited by Fruncix Garnier, Wr. Thorel, and othet liuropeuns for the first time since the days of Mareo Iolo. In INtis comper, starting fum the
 ugain failed the next yar to gain the platean from the limhanaputa hasin: while Nhaden, aming at the same goal from the I rawali and its aflluent, the 'laping, hat to retmeo his stops after penctrating beyond Momein, the rhiof city of Vinman went of the Sulwin. In |xïl, after the final werthrow of the I'mathys, Ingustas Margary at last nuccoded in opening the direct route from Hankow to Bhamo, on the I rawndi; but tho victory was dourly bought, the yomug and darimg explorer husing been burbaromsly ussassinated a few werks alterwards within 30 miles of the


Burmese frontier. England was stirred to the heart by the news of his sad end, and a long diplonatic correspondence ensued, resulting in much promise for the future development of international trade. In virtue of the Chefu convention, concluded in 1876, the British Government is entitled to arpoint commercial agents in Tuli-fu or any other city in Yunnan, and to equip a scientific expedition for 'Tibet either through Sechuen or Kansu and the Kuku-nor region. Nitherto no udvantage has been taken of this valualble concession, although several explorers have followed tho footsteps of Margary. Yunnan has been crossed in various directions by Grosvenor, Buber, MacCarthy, Cameron, Gill, Stevenson, Soltau, who have prepared the way for the future estublishment of regular international relations.

But pending free intercourse with India through Bhamo, Yunnan has direct uccess to the foreign murket through the nuvigable Hung-kiang, or Red River, explored for the first timo by Dupuis in 1870. In 1872 he ascended the Song-koi, as this river is called in Tonking, and through this channel penetrated into China as far as Manhao (Manghno), in the neighbourhood of a district abounding beyond all others in metals and preeious stones. By a treaty eoncluded in 1874 between France and Annam, the Red River had been declared open to foreign trade. But this treaty has remained a dead letter, and since the expedition of 1873 no foreign vessel has visited the Song-koi. Nevertheless the advantages of this trade route have been recognised by the Chinese merchants, who might save by this way a détour of 600 miles by the Canton River.

\section*{Iniabitants of Yunnan.}

Although Chinese supremacy has been established for some two thousand years in Yunnan, the population is still far from homogencous. The highland regions continue to be held by unsubdued tribes, such as the Minotze, Mantze, Lutze, Lisu, Lolo, Shan, and Kakhyen. The Miaotzo belong to tho same family as those of Kweichew, the Mantze and Lolo to those of Sechuen. The latter are generally divided into "Black" and "Whito" Lolo, more perhaps from the contrast in their habits than from a difference of complexion. The Black, known also as "Haw" Lolo, mostly occupy the alpine valleys in the north, while the White, called aiso "Cooked" or "Ripe," are sentered in small groups all over Yumnan, and are everywhere subject to the Chinese authorities. Many shave the head and wear the pigtail, emblem of civilisation in tho Middle Kingdom, but they are casily distinguished from the Chinese proper by their muscular development and energy at work. But for the somewhat flat nose and sparse beard, their regular features and symmetrical figures might suggest the European type. Many have even chestnut hair and a white complexion, while the women are much stronger, more cheorful and agreeable than their Chinese sisters. Hence the Chinese often choose their wives amougst these aborigines.

The Lutze-kiang takes its name from the Lutze, or Anong, who dwell on its banks in a region of West Yunnan bordering northwards on the Lolo country. Some Lisu tribes are also scattered in the valley of this Tibeto-Burman river, as well as in that of the Lantze-kiang (Mekhong), which in this part of its course traverses Yunnam. The hills on the right bank over against Weisi-fu are almost exclusively occupied by the Lisu. Those dwelling near the Chinese towns and near their more civilised kinsfolk, the Moso, pay the tribute regularly ; but those residing in the more inaccessible highlands have maintained their independence, and they have a tradition requiring them every twenty or thirty years to make a plundering expedition against the people of the plains. Like certain North American Indians, they never fail first to warn the enemy of their approach. At the stated time they make their appearance at the stated place, and such is the dread of the Chinese settlers that they are generally vanquished by these savages armed with bows and
arrows dipped in aconite. The Lisu earry off the women and children, and sell them to the Burnese. They also scize the silks and jewellery, and consign the houses of their enemies to the flames. Yet the mandarins deny the existence of these dangerous neighbours, and even forbid their names to be pronounced. Their complete destruction having bcen announced to the Centrul Government some generations ago, these tribes have ever since been officially extinet.

In peaceful times the Lisu are very hospitable, and are distinguished amongst the surrounding peoples for their spirit of clanship and solidarity. The land is held in common, every family settling down wherever it pleases, and cultivating the open tracts, or the clearings obtained by firing the forests. They trade with the neighbouring tribes, and thus obtain the cowries (Cyproa moneta) from the Maldive Arehipelago, with which the head-dress of their women is entirely covered. They have rejected the Buddhist missionaries, and still adhere to the Shamanist practices formerly universal throughout the extreme East. Their wizards cast lots to attruet the good spirits, and beat the tom-tom to scare the demons of the springs, roeks, and woodlands.

The Shans, or "White Barbariuns" of the Chinese, are more numerous in Burma than in the Middle Kingdom, where they only occupy the south-west corner of Yuman west of the Salwin or Lu-kiang. All are subject to the mandarins, who appoint the village head-men, making them responsible for the taxes. The Kakhyens (Kachin), or Sing-po (Chingpo), as they call themselves, are one of the most enterprising races in the country, and regard the Shans as an inferior people, good enough to supply them with muleteers and porters. Of small stature, but robust and energetic, they pass much of their time in feasting and attending to the toilet, tattooing arms and legs, and covering their dress with shells and all kinds of ornaments. The women do all the work, even tilling the land and carrying burdens. Hence the wife is chosen, not for her beauty, but for her physical strength, and he is reputed the happiest paterfamilias who possesses the greatest number of daughters, all destined to a life of ccaseless labour. Although surrounded by Buddhist populations, the Kakhyens have retained their old animism, still addressing their prayers to the nats, or protecting genii. \(\Lambda s\) in certain parts of West Europe, they place a piece of silver in the mouth of the dead, to pay their passage over the great river that flows between the two lives.

The Pei (Pai, Payi, Payu), an aboriginal people in the south and south-west of Yunnan, and especially in the Salwin basin, are divided, according to their respective domains, into IIighland and River Pci. At some remote period they traditionally inhabited the banks of the Yang-tze-kiang, whence they were gradually driven south by the advancing tide of Chineso migration. Neighbours of the Lolo, and kinsmen of the Shums, they associate little with them, dwelling in isolated villages, with flatroofed houses like those of the Tibetans and Miaotze. Their complexion is whiter than that of the Chinese, and, like the Lolo, they are also distinguished from them by their physical strength. All insert in the lobe of the ear either a silver eylinder or a bamboo tube, an ornament replaced by the women with a cigar or a tuft of straw. Most of the latter smoke tobacco, while the men have taken to opium. The women
aro very industrions, and are skilled at weaving, und even at the goldsmith's art. In speech, and probably in blood, the Pei are allied to the Laos of Indo-China, while the Lolo speak various more or less mixed dialects of Burmese, Chinese, or Tibetan. The Papé, a tribe related to the P'ci, are the only survivors of a formerly powerful nation, which the ammals tell us were condemned by the Son of Heaven to send him a tribute in objects of gold and silver, rhinoceros horns, and tusks of elephants. The local fama would therefore seem to have undergone a change within the historic period, for all these large mammals have long disappeared. Neither the Pei nor the Papé have any idols, but when they come amongst civilised peoples they freely enter the temples, muke offerings,
 and burn incense, like the ordinury worshippers.

Chinese culture is in other respects gradually prevailing, while the original types are being morlitied by intermixture. Amongst the half-castes sprung of these allianess are several communities which, while speaking Chinese exclusively, still betruy the presence of aboriginal blood in their muscular development, independent spirit, and rude habits. "We are not Chinese," they insist haughtily; "we are Yunnan people" They have more than once sided with the Panthuys or natives against the mandarins. They differ also from the Chinese in their eheerful spirit and love of music. Nearly all the muleteers or carters accompany the pace of their aninuls with their mandolines.

\section*{Tim: Panthay Insurrection.}

The insurrection of 1855 , which for a time raised West Yuman to the rank of an independent state, began with a quarrel between some Buddhist and Mohammedan miners at Shiyang about the source of the Red River. Nowhere elso in China had Islam made so much progress as in Yunnan. Sprung of a fow early Arab immigrants and of some Bokhariot soldiers brought hither by Kubhai Khan in the thirteenth century, the Hoï- \(\mathrm{Hoï}\) of Yunnan camot now be physically distinguished from the surrounding Chinese. But the different rites, and enjecially the clash of interests in the mining districts, fostered mutual hutred and brought about frighiful massacres. At the sume time the most vuried elements were found amongst the rebels, collectively known abroad ly the lBurmese name of Panthay. In the Mohammedan ranks were Buddhist and Tuoist Chinese,
besides Lolo, Pai, Miaotze, and many other tribes. On the other hand, many Mussulmans remained faithful to the Imperial cause, and it was one of these who, after fighting successfully on the rebel side, brought nbout the ultimate triumph of the Chinese. A number of the vanquished Panthays withdrew to the Shan and Kakhyen hill tribes on the frontiers of Siam and Burma. But the gaps thus made have been filled up by immigrants, chiefly from Sechuen. Besides civil war, Yunnan has also recently suffered from the spread of leprosy and of pestilence, which has made great ravages amongst men and unimals. The epidemic seems here always to begin with the rats.

\section*{Topography.}

Momein, or Tengyuch-ting, the only important Chinese town in the Irawadi basin, lies in a vast rice-growing plain enclosed by steep mountains. It is regarderl by the English as the natural gate of South-west China, und its name constantly recurs in all railway projects. Farther east there are no large places in the deep

Fig. 127.- Rocte between Momein and Tali-fu. Scale 1:2,600,000.


The IIeights are decuple of the Distances.
valley of the Lutze-kiang (Lu-kiang, or Salwin). But Yungchany:fil, on one of its affluents, is a busy mart largely inhabited by refugees from Nanking, whenee its title of "Little Nanking." It has been identified with Mareo Polo's Voshan (Vouchan, Voneian), where in 1272 or 1277 Kublai Khan's 12,000 Tatars routel 60,000 Burmese with their 2,000 elephants.

On a tributary of the Upper Lantzan-kiang, flowing between tremendous gorges, Atentze guards the Yunnan frontier towards Tibet. In this district most of the civilised inhabitants are Chinese, but nearly all speak Tibetan better than their mother tongue. Atentze lies in an upland plain over 11,000 feet above sea-level, and is commanded by Buldhist monasteries, whose lamas obey the high priest of Lassa. The Atentze traders sell tea, sugar, and tobacco to the Tibetans in exchange for musk, skins, parchments, and a species of grub highly valued by the Chinese on account of its supposed medicinal properties. South of Atentze rises the snowclad Doker-la, and on the banks of the river farther north are the Yerkalo saline hot springs.

Weisi, on an eastern affluent of the lantzan-kiang, is a garrison town ruined by

\section*{EAST ASIA.}
the civil war, und now mainly peopled by lisu mul half-enstes. Tali-fu also, which occupies a mueh more convenient position on the west side of the vast lake of like name, was still in a ruinous state when risited by Gill in 1877. All the surrounding villages were wasted during the insurrection, and not a tree was left standing in the district. To its strong strategical position Tali.fu was indebted for all its

misfortunes. The plain where it stands terminates north and south in a narrow defile between the hills and the lake, and these two passes have been strengthened by fortifications, which have converted the whole coast of Tali into a vast citadel. In the time of Marco Polo this place, then called Carajan (Karayang), was the "eapital of seven kingdoms," und one of the great eities of Sonth China. Recently
also, which lake of like surrounding ; standing in 1 for all its

lake tail-miew taken from the north.
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it again aequired the rank of a capital, huving been chosen as the residence of the Mohammedan King Tuwhensia, or Sultan Soliman. On the entry of the Imperiulists in 1873 , over half of its 50,000 inhubitants were massacred, and the commander of the forces was uble to send to Yunnan-fu twenty-four large hampers full of humnm ears. The suburbs were fired, and the eity half ruined. But Tali can scarcely fail to recover from its disasters. Besides its administrative importance, it enjoys the advantuge of its fertile plains, mines of salt and the precious metals, marble quarries, besides which it is the natural entrepôt of trade between Bhamo and Ningyuen; that is, between Burma and Sechuen. Lying over 6,500 feet above sea-level, near the tropical zone, it enjoys an excellent climate, without a winter season, although the mountains rising 10,000 feet above tho west side of the lake are snow-clad for eight or nine months in the year.

The lake, better known by the name of Erh-hai, is 30 miles long according to Gill, and develops a creseent stretching north and south, with a mean breadth of about 6 miles. In the deeper parts there is over 300 feet of water, but elsewhere it is much shallower, and in the south studded with a few islands. During the rains its level is sometimes raised 16 or 18 feet, when the torrent is changed to a copious stream, which carries its outflow through the Yanghi-kiang to the Mekhong. Like all its influents, the lake abounds in fish, which the nutives take with the aid of water-fowl trained for the purpose.

Shunning-fu, Yun-cherr, Semao, and the other places in the Mekhong basin south of Tali-fu, also suffered from the consequences of the late outbreak. Menghoa-hien, near the source of the Red River, 30 miles south of the lake, was distinguished beyond ull others for its heroic defence, and when further resistance became impossible, all valuables were hastily eolleeted together and burnt. Poison was then distributed amongst the old men, women, and children, the four corners of the city were fired, and the handful of surviving combatants mostly perished in the attempt to eut their way through the besieging forces.

Likiang-fiu, in the Upper Kinsha-kiang basin north of Tali-fu, has not yet been visited by any European traveller ; but when Gill passed west of it he was told that it had been ruined by the oppressive rule of the mandarins. Other places in the same district had been completely destroyed either by the Panthays or the Imperial forces. In the portion of Yunnan draining to the Yang-tze only three large towns remain intact. One of these is the provincial capital, Yunuan-fin, situated in a plain near the northern extremity of the largest lake in North Yunnan. This lake, known as the "Sea of Tien," from a kingdom of that name formerly comprising the greater portion of the plateau, lies about 6,500 feet above the sea, und sends its superfluous waters through the Pulu-shing emissary northwards to the Yang-tze. The district is productivo in cereals, flax, tobacco, and fruits. But the introduction of the opium industry is said to have ruined that of wax, of which large quantitics were formerly produced. The natives state that the bees, attracted by the poppy flower, all perished from its poisonous effects after the second season. Yunnan-fu, identified by some with Marco Polo's Yashi, is the centre of one of the chief mining regions in the province. It controls the current priec of copper for the whole of China,
and has wome large metallurgic works, including a mint over two humdred yours old, which before the revolt issued coins to the yenty value of unout \(\mathbb{E} t, 000\). A hill towards the morth-wen is erowned by a eopper temple, which was spareel by the remels becouse it commemorated the mational King L'sunkwei, who dared to resist the authority of Kimg-hi. Still further morth another hill on the Sechmen fromier is occupied by a gromp of buildings, inchuding a church und seminury, which the Catholic missiomuries have conserted into a formiduble stronghold nguinst the incursions of the lantre triluw.

The Lramy-shma highlunds, wn the eommon frontier of Kweichew, Sechuen, and Yunnum, wre ocernpied by a penceful pupulation of Buddhists, Mohummedians, und uborigines, who continued to live

Fig. 129.-Y'unan.
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\text { Scale } 1 \cdot 1,000,000
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\(\longrightarrow 15\) Miles. in perfeet lurmony throughout the seventeen years of the late civil wur. Here one of the chicf mineral products is a salt of lend employed in porcelain painting, und exported by the Yaug-tze route as far as Kiungsi. In the eastern section of the province draning to the Sikiang basin are severnl important places, such as Chungchingy-fit and Küloou-fiu. Further south stretehes an extensive lacustrine district, where the fresh-water turns have no visible outlet, although the two large laken, Ching-kiang and Kiungshwen, commmicate through an artificial canal, over a mile long, cut through a guartzose sandstone hill.

The towns in the southern distriet drained by the Red River and its head-waters are chiefly mining centres, although Yuen-kiang, on the left bank of the Hoti-kiang, as the main stream is here called, is also a large entrepôt for agricultural produce. In this rich tropical district the mango, guava, eitron, orange, and other southern fruits flourish by the side of the more hardy peach, apple, pear, walnut, and chestnut. Farther cast the chief places are Liugan-fit and the busy mart of Manhan (Mang-ko), at the head of the navigation of the Red River, the depôt for the teas, cottons, and silks of the whole of South Yuman. The trade of the place has been monopolized by some enterprising merchants from Canton, and at the time of the Frenel Expedition a Cantonese chief had even set up as an independent prince at Laokai, on the frontier of China and Tonking. The custom-house he had established on the river was said ,000. I hill pared by the lared to resist hluen frontior ry , which the 1 ngainst the

Sechum, and munedians, anul inued to live hroughout the the late eivil chief mineral lead employen ; und expertel ute us far as tern section of ng to the Si eral important ayching-fit and south stretehes trine district, ter turns have hough the two g-kiung and nicate through over a mile a guartzose b southern disRed River and chiefly mining Yen-kiang, on led, is also a 1 distriet the y the side of ther east the p), at the hend nd silks of the lized by some , Expedition a on the frontier river was said
to yield him a yearly revenue of \(£ 60,600\). At present the place secms to huse fallen into the hands of an independent Chinese military tribe, which has assumed the title of "Black lamuers."

HAINAN.
Tums large islamb, udministrutively attuched to the province of Kwmintmag, also belongs evidently to the same geological formation as the mainland. The strait

flowing between it and the adjacent peninsula, and commecting the Gulf of Tonking with the China Sea, is only 12 miles wide, and at low wuter seareely 38 feet deep in the centre, with a current rumning at the rate of 3 or 4 miles an hour. The main axis of the chief mountain range stretches south-west and nerth-east, consequently parallel with the general orographic system of China. The central muss, known as the Wushih-shan, or "Five-finger Mountain," throws off five spurs, like the Peloponnesian T vgetus, whence the Chinese poets have compared the island to
a hand, whose fingers "play with the elouds by day, and at night guther the stars of the milky wuy." They ulso speak of snow-elad crests, ulthough in this tropical climate peaks less than 16,000 feet high could not remain covered with snow throughent the year. Even an occusional full of now would imply un elevation of about 6,000 feet. But whatever be their ultitule, these central highlands send down numerons forrents in all directions to the const, which forms an irregular oval 480 miles in extent.

Haman is one of the least-known parts of China. The rivers huve been traced on the mups either from old Chinese documents or from nativo reports, while oven the sealxard has been carefully surveyed only on the north side. It is uncertain whether the Nunkien-kiang, flowing north-west, really ramities into the two mavigable rivers, Peimen-kiang and Kien-kiung, or 'l iung, with a total development of 180 miles. It is even said to throw off a third brunch, also maviguble, direetly to the Gulf of Tonking, forming altogether a disposition of ruming waters in a hilly islund elsewhere unparalleled.

Haimu aboumls in matural resources of ull kinds. Its mountains contuin gold, silver, copper, irm, and other metals; hot springs bubble up, especially in its westem valleys; the hillsides are clothed with dense forests, supplying exeellent building muterial, and still harbouring the tiger, rhinoceros, a spocies of ape resembling the orang-outang, deer, mid wild goats. Lower down flomrish the coco, arecin, and betel-nut palm; while pine-apple hedges line the fields under the sugarcanc, mungo, banana, litchi, indigo, cotton, tobacco, rice, potato, sesame, and tropical fruits. Here is also the Coecus pela insect, which yields the vegetable wax of commerce, and the surrounding waters abound in fish, the turtle, and pearl oyster. Lying in the track of the south-west monsoons, the island is abundantly watered, while the tropical heats are tempered by cool sea breezes from tho north-enst. Although within the zone of the typhoons, Hainan suffers much less than Formosa from these fierce whirlwinds.

When speaking of its inhabitants, Chinese writers compare the island to a circle enclosing two concentric rings. In the centre live the wild aborigines, in the outer zone the Chinese settlers, and between the two the civilised natives. The various tribes that have withdrawn to the valleys of the interior are collectively known by the name of Li, or Loï, and speak a language akin to that of the continental Miaotze. Some of the Song-li, as the more savage tribes are called, go almost naked, dwelling in caves or narrow retreats covered with a straw roof, and split up into numerous hostile septs, with different dress, arms, and customs. The Nuwtong wear the hair guthered in eurls on the forehead, while the Kac Miau plant lits of bamboo like horns on the top of the head. The Shuh, or "Ripe"-that is, settled and civilised-Li have been joined at various times ly Niaotze refugees from Kwungsi and West Kwangtung, whom they resemble in speech und habits. But the dominant race have long been the Chinese, of whom 23,000 families colonised the coast lunds some two thousand years ago. In 1835 they numbered \(1,350,000\) and ure now said to exceed \(2,500,000\). Mostly from Fokien and Kwangtung, they have suffered much from the pirates formerly infesting these waters, but they a this tropical el with snow y un elevation ighluads send an irregular
ve been traced ts, while even It is uncertain into the two with a total brineh, ulso disposition of
contuin gold, pecially in its ying excellent mecies of ape urish the coeo, der the sugare, and tropicul c wax of comI pearl oyster. antly watered, he north-east. than Formosa
and to a circle riginees, in the natives. The ro collectively to that of the are called, go :traw roof, and customs. The the Kac Miau "Ripe"-that e refugees from abits. But the 3 colonised the \(1,350,000\), and angtung, they tters, but they
have never had much to fear from the aborigines, whon they have gradually driven to the interior. The locul truffic is promoted by the mumerons havens romad the eonst, and by the regular trude winds, which the mutive junks tuke advantuge of to visit Tonking, the Philippines, Cochin-chinm, mad even the distant islunds of Juva und Singupore. As on the neighbouring manaland, the Chinewo commanities are divided into hontile Punti and Hukka fuctions, between which the hereditary feuls have oven recently given rise to fieree outbreaks.

Rimuchen, the capital, and the largent eity in the island, maturully lies on the horth sillo over agninst the mainland, at the most convenient point for lunding mad forwarding the local proluce to Hong Kong and Canton. The surromuding district is extremely fertile and densely peopled, mad the city, enclosed by a wall 40 foet high, lien 6 miles from the sea. But its outport of Hoi-how (Hui-liow), ulso by foreigners generally enlled Kiungehew, stunds on a bay on the south side of the strait, and lins been openel to Earopean trade siace 18ijs. Tho ehief experts ure sugar, sesume, Iressed lenther, pigs, poultry, and pigeons for the markete of Maruo and Itong Kong. The harbour is so shallow thut large vessels are obliged to anchor nemrly 3 miles off, under a sund-bunk, which protects them from the surf.

Next to the enpitul the most importunt phees are Tinyan, on the Tu-kiang, the largest mart for ngrientural produce; Linkio and Tanchriv, on the north-went comat, surrounded by sugar plantations; Aiehere, on the south; Winnchere and Lohiui, on the east side.

\section*{FORMOSA.}

Like Iluinan, which it somewhat exceeds in size, and probably in populution, Formosa belongs geologically to the mainland. Close to the east coast the soundingline plunges at once into depths of 7,000 feet, whereas Fokien Strait, on the west side, has a mean depth of scarcely 140 feet, and contracts to a width of 80 miles at its narrowest part. Even about the southern entrance of the strait the sea is studded with tho Pescadores (Panghu) Islands, which are continued westwards and south-westwards by dangerous shallows. Politically and ethnically, also, Formosa is simply an appendage of the neighbouring province of Fokien.

Known to the old geographers by the name of Great Luchew, and now officiully called Tniwan, from the name of its capital, this island presents the form of an elongated oval, some 240 miles long north and south, and traversed throughout its entire length by a regular water-parting, which fulls abruptly eastwards, while sloping gently towards the mainland. This Ta-shan, or "Great Range," as it is called, scarcely exceeds 8,000 feet in the south, but in the centre Mount Morrison attains a height of over 11,000 feet, while the system culminates northwards with Mount Sylvia and other peaks rising to elevations of 12,000 feet and upwards. The Ta-shan consists mainly of carboniferous limestones, with igneous rocks cropping out here and there. Mention is even vaguely made of an active voleano, the Kiai-shan, in the centre of the range, und carthquakes are still frequent in many places. The coast seems even to be rising, whereas the opposite seaboarl

Inetwern Ningpe und Ganton is subsiding. When the Dutch hell Trawnen, on the sonth-went side, a mavigathe strait, necessible th fleets, flowerl between the two citndels. But this chumel is now dry hand, intersected by cumals und romes, which are partly covered during the npring tiden, se that the nhipping now unchors about as milen from the old fort.
'The first Europent mavigators who sighted Taiwn early in the sixterenth century were so struck with its pieturesque uppenrane that they nptly named it

Fig. 131 -Fonmosa and Fionien Stmait.
Henle 1: 4,000,0Mn


Formosa, or "the Beautiful." Probably no other oceanic island has better claims to the title, at least on its east side, fueing the Pacific. The central runge throws off right and left mumerous spurs and side ridges, all varying in height and aspeet. Peaks, erests, rugged crags, rounded domes, follow in endless variety from the interior to the headlands along the coast; while the mountain torrents everywhere break into fomming waterfalls, or rush through dark gorges amidst the bright tints

\section*{Formosa}

Fig, 132,-IIfolland Janbocafr, Fiommons.

of a dense sub-tropical forest vegetation clothing all the surrounding valleys. The native villages are suspected rather than seen, embowered in lamboo and palm
thickets, which flourish down to the vergo of the ocean, and crown the cliffs that are everywhere cut by the beating waves into a thousand fantastic forms.

The extraordinary wealth of the Formosan flom is due partly to the neighbourhood of the continent, partly to the different climatic zones superimposed one above the other along the mountain slopes. The coast lands belong to the tropies, while the hills and mountains rise to the temperate und colder atmospheric regions. There is further a regular succession of monsoons, the wind blowing in summer from the Malay Archipelago, in winter from Japan. With this disposition of the aerrial corresponds that of the occanic currents, which on the cust side set northcastwards in the direction of the Japanese Kuro-siwo, or "Black Stream," but which in the shallow waters along the west coast flow alternately north and south under the action of the shifting trade winds. The island is thus exposed to the varying influences of the northern and southern elimates, whilo also enjoying the advantage of an abundant rainfall. Tho greatest amount of moisture is received, not in summer, as mostly elsewhere in the extreme East, but in winter, during the prevalence of the humid north-cast monsoon, when a rainfull of over 120 inches has been recorded at the Kelung station on the north coast. On the east side the atmospheric currents are occasionally neversed by the typhoons, which rarely penetrate westwards to the Fokien Strait. On the 18th and 19th of August, 1858, the naturalists on board the Norara, en route from Shanghai to the Curolines, observed one of these cyelones, which, while revolving round itself, described a vast curve above the southern limits of the Liu-kiu Archipelago. From hour to hour they were able to follow and record the successive points gained by the hurricane, which reversed the normal direction of these typhoons.

Although Formosa probably possesses no vegetablo or animal species distinct from those of the continent, some forms occur which have not yet been met elsewhere. The prevailing species, corresponding with those of South Japan and Fokien, are often distinguished by their symmetrical and vigorous growth. Nowhere else in the Chinese Empire do the bamboos attain a greater height, being sometimes 100 feet high, with a girth of 24 inches. The large forests of the interior consisted chiefly of the camphor-tree before the ravages committed by the rapacity of modern traders. One of the most common plants on the coast lands is the Aralia papyrifera, a shrub with bare stem terminating in broad leaves, used in the manufacture of " rice paper."

Amongst the thirty-five species of mammals and one hundred and twenty-eight of land birds, there are fourteen and forty-three respectively which are found neither on the mainland nor on the neighbouring islands. This local fauna shows that the islund has long been separated from the continent, althougk not long enough to greatly modify the prevailing types. Thus the tiger, wild hour, deer, antelope, monkeys, insectivora, and various species of ruminants and rodents correspond with those of the mainland, although several of these mammals are more closely related to those of India, Malaysia, and Japan than to those of China. The "rock monkey" recalls some of the Indiun and Burmese varieties rather than those of South China and Hainan; while the beautiful deer discovered by Swinhoe, the
flying squirrels, and the Mncrosechis npe ure allied to those of Malnysin. Moro thun half of the Formosan avifanna is also more neurly related to those of the Himalayas, South India, the Eastern Archipelago, and Jupan than to those of the more adjacent Chinese lands. Amongst the new forms discovered by Swinhoe the most remarkuble uro some gallinaceae and pigeons, a mugnificent pheasant, some tomtits, sparrows, and the white-headed blackbird; but there are no parrots, as in

the central and southern provinces of China. While the continental yellowhammer migrates in vast numbers between India and Manchuria, the Formosan variety never leaves the island, merely passing with the seasons from the plains to the uplands. In the Tamshui River singing fishes are heard, like those of Trincomali Bay, Guayaquil, and San Juan del Norte.

Being visible from the mainland on clear days, Formosa has from the remotest
periods been known to the Chinese. But although the Panghu group had been long oreupied by some fishermen, the island was never visited till the year 605 of the vulgar crat, nor were any settlements made till the fifteenth century, when the norih coast was occupied. An orgamized system of inmigration was at last developeld during the second half of the sevententh century, after the expulsion of the Dutch traders and the destruction of the pirates. Yet within two humdred years the settlers, mostly from Fokien, have ulready occupied all the west side, besides the northern extremity and the north-enstern seaboard. The gradual settlement of these tracts was attended by eonstant struggles with the natives. In these confliets the intrulers have often had recourse rather to opium and brandy than to foree, thus poisoning rather than murdering the race. Swinhoe also tells us that they have imported tigers from Fokien, and let them loose against their troublesome neighbours. Great rivalries prevail even amongst the Chinese themselves, the IIakka and other factions from the mainland eontinuing their dissensions in their new homes. Many have contracted alliances with the natives, adopting their customs, and remaining Chinese only in their dress and practice of wearing the pigtail.

\section*{Inhahtants of Formosi.}

The aborigines are known by various names, nor is it yet possible to classify them necorling to their origin and mutual affinities. The Song-Fan, or "Wild Men," resemble the Malays, to whom they aro usually affiliated. Their dialect certainly belongs to the widespread Malay family. Some varicties closely resemble the Tagal of Luzon, and seventeen tribes in the north even call their language Tayal, while in some districts the tribes take the name of Tungulan. But there are no Sanskrit or Arab words in any of the loeal dinleets, so that the Formosins must have become separated from the Malay family before the introduction of Buddhism into the Eastern Archipelago. Since the dispersion the relations of the islanders have been exelusively with the Middle Kingdom, as slown by the number of Chinese words adopted in a more or less modified form in their dialeets.

In the south-eastern highlands the Butan tribe has made itself formidable both to the other natives and to the colonists. Besides the bow and arrow, they now procure fire-urms from the Europeans, and it was this tribe that the Japanese came to chastise in \(\mathbf{1 8 7 4}\) for the massacre of a shipwrecked crew. To judge from the captives brought on that occasion to Tokio, the Butans resemble the Japanese rather than the Malay type. They mostly wear blue cotton garments, with silver bracelets, and enomous car ornaments of bamboo. According to the native reports, some dwarfish black tribes also dwell in a highland region towards the south. They are mentioned by Valentyn so early as 1726, but although also spoken of by Swinhoe, no truveller has yet visited them. Two skulls stadied by Schetelig are attributed to these Formosan Negritos, survivors of an old race now almost entirely extinet.
oup had been c year 60\% of iry, when the ut last devepulsion of the undred years t side, besides tal settlement In these conramdy than to o tells us that their troublethemselves, dissensions in dlopting their wearing the
ble to classify 'm, or "Wild Their dialect ieties closely ven eall their of Taugalun. ts, so that the ore the introlispersion the Kingdom, us dificd form in
rmidable both ow, they now Tapanese came dge from the the Japanese ts, with silver native reports, ds the south. spoken of by Schetelig are almost entirely
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Most of the unsubdued aborigines are tall, vigorous, and extremely active. Their guit has been compared by Guerin to that of the authropoid upes. But the greatest sariety of features prevails amongst these tribes, the faces of some being that, of others as regalar us those of Luropeans. But mans, with their large prominent eyes and restless glance, have a seared look, as if bereft of their senses. Goitre is common in one tribe, and skin discases very prevalent in the interior. The teeth are often dyed red by the constant use of the betel-nut, and in general much more regard is paid to ornament than to dress. Both sexes wear copper bracelets, coarse glass necklaces and girdles, bone plaques, and tiakling bells. The men pierce the lobe of the ear for tho reception of a bamboo eylinder ornamented with designs, and all the unsubdued tribes still practise tattooing. Leverything is regulated by traditional usuge. Although there is no public worship, the daily actions are largely guided by omens, und all must be buried on the very spot where they die. Head-hunting is still practised, mnd a wooden platform attached to every house is usually adorned with the heads of their Chineso victims. But this pursuit cumot be continued much longer, for the independent natives have already been reduced to about 20,000 altogether, divided into a multitude of clans, which successively fall an casy prey to the ever-advaucing colonists.

The already reduced tribes, collectively called Pepo-hoan, have become largely assimilated to the Chinese. Most of them have ceased to practise tattooing, und now wear the Fokien dress. Anongst them the Catholic and Protestant missionaries have been most successful, and the accounts of tho Formosan people bitherto published by European travellers refer mainly to this l'epo-hoan element.

\section*{Topography.}

Formosa, where Western influences have long been at work, promised at one time to become a European colony. The Dutch had obtained a footing in the Punghu Arehipelago so early as 1621, and soon after set up their factories on the mainland, where the present city of Taiwan-fu is situated. But the young settlement was soon surrounded by hostile Chinese communities, and finally surrendered in 1662 to the pirate Chingehing, better known in Europe by the name of Koxinga. Under his rule the English traded direetly with Formosa; but after the definite establishment of the imperial authority in 1683, all foreign traffic was suspended till the year 1858, when the island was again thrown open to Europeans.

Taivan, the capital, which has given its name to the whole island, is a modern Chinese city lying at some distance from the coast, and enclosed by ramparts 6 miles in circuit, within which are extensive gardens, cultivated lands, and pagodas. It is noted for its filigree-work, and does a considerable trade in sugar, exported chiefly to Australia. Some 24 miles south of Taiwan are the ports of Takov and Tangkang, besides the large town of Pitan, lying about 5 miles inland from the former place. Farther north the city of Sinchow exports rice and wheat through its outport of Hongsang. But a moro important place is Tamshui (Tamsui,

Thingsimi), near the north-west extremity of the iNand, where the buropem traders have made a settloment, motwithstanding its moneulthy climate. Tamshai was formerly the chicf murt for the camphor trate, which has been greatly reduced since the destruction of the neighboming forests. ('auphor is now largely rephecd be tea, the trade in which is rearly increasing in importance, expecially with Amerien. Junks ase me the Tamsini River to the colony of Toututia, residence of the foreign dealers, and loyomd it to Menykin (Momylith, Bankin), commereial

Fig. 13s.- Pimohoan Woman and Chid.

metropolis of the district. Some 7 miles further cast on the route to Kelung there are some sulphur springs, much frequented by invalids.

Kelung, although lying on the north coast about 30 miles east of Tamslui, is regarded as forming with that eity a common port for foreign shipping. According to the natives, they are even comected by an underground passuge, approached at either end by extensive caverns. The staple exports of Kelung are lignites, some of excellent quality, but the petroleum and rich sulphur deposits of the distriet still remain almost untouched. The headlands and islands in the neighbourhood of Kelung assume the most fantustie shapes, the lower and softer strata being enten away by the waves, or hollowed out into picturesque grottoes and areades. Most of
TOPOGRAPIIY.
the ixdands, wom away at the base, have assumed the form of colossal mushromes. On a headland at the cast side of the entrame to the pert are the bins of some old spanish fortificutions.

The Lin-kin Arehipelugo, stretching north from Formosa, seems destined to belong mainly to the Jupmese, who have ulready ocenpied the central und northern

groups, including the principul island and the capital of the whole archipelago. Sun-nan, or Saki-sima-that is, the southern group-represented on old Chinese maps as forming part of Formosa, is in fact connected with it by a number of reefs and islets. At present their only importance for the Chinese consists in their position us un advanced bulwark of Formosa towards Japan. Being of small
extent and viry momatuinous, they are thinly peopled by a few trithes, some of whom, like those of Yomakmi, are still in the savoge state.

Thownds its southern extremity the only geogrophical dependener of Formasi is the hilly island of Botel 'Tohagre Bat in the Fokien Stait, on the west side,
 station and entrepot betwern Formosn nud the muinhume. The inhulitants, estimuted at abont 180,0600 , are oceupied with fishing mad ngricolture. But the yield of rice und millet leing insufficient for their wants, they depend partly in Formowa for their sustemmec. Here the fieree winter gales sometimes blow

Hig. 136.- Gilanh Lu-chew, accohbino to an olb Ciginenk Map.

down or tear up the trees by the roots. The village of Makung is the capital of this group.

\section*{Material and social condition of cilina.}

After the tremendous losses attending the civil wars and other disasters, by which the comintry has been wasted since the middle of the present century, the population has aguin entered on a period of inerease. Celibacy outside the monasteries is ahnost unknown in China, where all marry young, and where the average number of children is greater than elsewhere. "There are three sins against filial piety," says Mengtze, "and of the three the greatest is to leave no posterity." Celibacy is even forbidden, and the mandarins have the right to compel men after their thirtieth, and women after their twentieth, year to get married. The population would double in about twenty years but for the civil wars, mussacres, and famines, and the universal peace now prevailing has certainly already added tens of millions to the population. The inerease is, moreover, largely due to the migrations of the natives of Sechuen, Fokien, and Shansi ; that is, of the most industrious and enterprising citizens of the Middle Kingdom.

The actuul density of the population can only be surmised from old estimates, whose real value has never been elearly determined. Nevertheless it is certain that in this respect China cannot be compared with Western Europe, parts of the

United States, and even of Australia. There are dombtless many large cities, such us Couton, Itankow, Changehew, Fuchew, Singan, Ticotsin, and Poking; but ewon these only take the neeond rank compured with Loman, or aren with baris. White the urban exceols the rural pepmlation in manufacturing comentres, the recorse is the case in Chima, still mainly an agricultural region. Nor cam its, political centralization be compared with that of most Earopran states, the want of

Fig. 137.-Density of tife Cimener lopleation in 1842.
Feale \(1: 50,000\), , max .

communication preventing the great emporiums from developing such \(\boldsymbol{a}\) vast trade as that enjoyed by the leading eities of the West.

\section*{The Chinese Towns.}

Speaking generally, the Chinese towns, of which the ancient Singan-fu may be taken as the type, belong to a different period of evolution from those of Europe. Their quadrangular enclosures of lofty castellated walls still attest the frequent recurrence of civil wars, while the imer city, lying within a second enclosure, recalls the Manchu conquest. On the least alarm the four or eight gates of the eity are closed, and the towers occupied by armed men. The Manchu quarter is in the
same way furnished with every mems of defence, and may in a moment be cut off from the rest of the city. 'Ihis quarter inchades the Yomm" ( Y'anru)-that is, the sent of the ulministration-with its comrts and ofliees, besides garlens and parks, sometimes of consideruble extent. That athough the Chinese quarter is much more animated, the trating clases still prefor the ofrein suburbs beyond the outer walls, where they are free from the police and military regutations, and where areess and egress are permittel throaghout the nigh. These suburbs, often stretching for miles along the rouls and camals, become themedves real towns, and thas is nociad life gratually developed. During the late troubles most of these saburbs completely disinpeared, hat the people soon returned to the otd sites, and many of their environs have already become more important than the eities themselves. The

Fig. 138.-Sinoan-fu. Scale 1: 40,000.

houses-mere frames of light wood and bamboo, with paper adornments-are soon rebuilt; nor are monumental piles anywhere found, such as those met with in European cities. Hence earthquakes aro comparatively harmless, while fires spread rapidly amid these flimsy structures. On this account the southern gate of the eity is usually elosed in summer, " to keep out the fire-god."

The houses of the rich are generally very elean, and often transformed by flowering plants to veritable conservatories; but the towns are, as a rule, indescribably filthy, in this respect forming a striking contrast to the well-kept fields. Sanitary arrangements can scarcely be said to exist. Hence epidemics, and especially small-pox, are far more frequent and fatal than in Europe; while elephantiasis, leprosy, and other endemics, due mainly to unelean halits, commit fearful ravages on the seathoard, in the southern provinces and elsewhere. Pro-
bally nime-tenthe of the whole prpmation are affeeted by chaneme disenses, which are hargely due to the patilential exhalatious from the rive gromuls. Yet the
 readily than others to the extreme varintions of temperature, hamidity, and rincation of the land. I remarknble fact in Chinese ethumraphy is the importanere uttached to family names, which may be suid to constitute close blond relationship.

Fig. 139.-Lhmgating l'emp, Suetio Cilina.


Hence alliances between men and women bearing the same patronymic are strictly forbidden. The whole nation has thus eome to be divided into 150 distinct groups, whieh can intermarry indirectly only through the femule line.

\section*{Agrictliture.}

The fertile soil of China has been under cultivation for thousands of years without showing any signs of exhaustion. It not ouly still suffices to support all
the inhahitants of the empire, but now, yiolds considerable supplies for the export trats. Without the chemiend knowledge and perferted implemente of biaropentis, the Chinese pensant has gradually berome acopainted with the guality of the land


 ruduose if his instrmments with mamal skill. He carehaly weeds the gromal, mad irrigntes it by a thousand different contrivances, all kiads of pumps and

Fig. 140.- Lelativa Impoitance of the Chopa in the C'ineag I'bovinera.
Nente \(1: 30,09 \times, 000\).

hydraulic wheels, worked by the hand, animals, or the wind. The system of tillage thus resembles market gardening rather thun the broad methods of cultivation common in Europe. In the fertile plains, especially about Shanghai, a single uere suffices for the support of seven or eight persons, and before the country was thrown open to foreign trade it yielded sufficient for all the wunts of the people. There are, moreover, vast tracts still uncultivated, and according to the official returns for the beginning of this century, while the land under tillage amounted to \(125,000,000\) acres, Shantung was the only province where more than half of the soil wus actually cultivated.
or the export of liuropeans, Iy of the hand line uecessury c. phomilhates, piciments the + the eromal, if pumps and ghai, a single 1e country was of the people. to the official c amounted to an half of the

Liehig has well pointed out the remarkuble contrast presented by (hinese hasbandry to that of some other combtries, where the soil has ubredy been exhmuterl, l'alestine, now so mid, at one time "thowed with milk and hones:" Contral laty has alvo become impoverished, and how masy other reqione have beron redneed to wildernesses by ignomut and wasteful syatems! Eiven in the United States many formerly prohective tmets are now barren, while linghand, Frunce, and Germung ner ulrendy obliged to import much of their supplies, us well us the gruno und other fortilising substances reguired to restore its productive energy to the exhnusted land. But in Chinn, "purt ultugether from the " Yollow Lamds," which need no munure, the arable regions have mantained their ferendity for over four thousmal years, entirely through the thonght ful eare of the peasumtry in restoring to the soil under another form all that the rops lave taken from it.

At the same time " the plonghing of the Chinese is very poor und unseientilic. They senveely do more thun serateh the surface of the ground; nnd instend of the struight lines so denr to the eye of un English farmer, the ridges und furrows in Chinn are us erookod us serpents. Henee it is difficult to understand how the Chinese have nequired such a high reputation umongst laropeans for scientific furming. The real secret of their suceess lies in the care they take that nothing is wasted. In many distriets they use no other manure than the sewage of the towns, but not one particle of this is lost." (Gill, i. 114.)

Of the crops the most important is rice, which is the stuple food throughout the central und southern provinces, and which occupies at least one-eighth of all the land under cultivation. There are several varieties, one of which is suituble for the higher grounds, where it is grown on terraces along the alopes of the hills. North of the Houng-ho, wheat, millet, and sorgho aro the prevailing cereuls, and to each house is generully attached a kitehen garden, yielding ull the Juropean and other vegetables according to the climate. But the forests have nearly everywhere been sacrificed to tillage to such an extent that the material for coffins has now to be imported from abroad. The only fuel consists of dried herbs, straw, roots, and other yegetable refuse economized with the greatest care. In the eastern plains, especially north of tho Yang-tze, no large growths are met exeept bamboo thickets, orehards, rows of trees between the ficlds, and here and there clumps of trees about the pagodas and cemeteries. The whole country would be covered by these graveyards but for the old practice of ploughing them up at the accession of every new dynasty.

After a careful investigation of the subject in several parts of the country, G. W. Cooke concludes that on the whole Europe has nothing to learn from China in the art of agriculture. It is true that the Chinese havo no summer fallow lands; but, on the other hand, they have no stiff clays. They have no couch-grass; no thistles contending for the full possession of the land, as we sec in many parts of Wales and Ireland; no uninvited poppies; no straggling stalky crops, the poverty-stricken covering of an exhausted soil. At rare intervals wo see a large, richly coloured coxcomb flaunting himself among the eotton. But, generully speaking, there is not a leaf above the ground which does not appertain to the erop
to which the fich is appropriated. In the districts where rice and cotton are the stuple products these crops often extend in unbroken brealth over tracts of thousands of acres. The peas, and whent, and indigo, and turnips, and bringalls lie in patehes round the villages. The gromed is not only elean, but the soil is so exquisitely pulverised that after a week's rain the traveller will sometimes lork about in vain for a clod to throw into a pond to startle the water-fowl.*

Pasture lands are as scarce as the forests in China. The land is too valuable to be devoted to stock-brecding, for a tract required to support a million oxen would yield cereals and vegetables enough for \(12,000,000\) human beings. But for thousands of years both the ox and horse have been domesticated. The mythical Emperor Fo-hi, said to have flourished fifty-three centuries ago, is supposed to have been the first to domesticate the six essentially tame animals-horse, ox, pig, dog, sheep, and fowls. But the larger amimals, including the buffalo, are little used except for curriage. They are carefully tended, protected from the eold with warm cloths, and from the rough roads with straw shoes. Owing to the Buddhist precept and his natural attachment to his companion in labour, the peasant eats the flesh of these animals with great reluctance. The penal code even forbids their slaughter without express permission. Nevertheless, apart from the numerous vegetarian socicties, which also abstain from wine, garlic, and onions, the Chinese add a little meat to their ordinary diet. They are partial especially to the flesh of the hog, of which there are several varieties. On the rivers and reservoirs flocks of three or four thousand dueks are also met, whieh are looked after either by children in boats, or even by cocks, which are taught to keep them together by erowing and flapping their wings. \(\Lambda\) large traffie is done in these water-fowl, which are dried, like botanical specimens, between two boerds, and in this state forwarded to the most distant provinces. In the southern provinees, and especially in Hunan, a particular breed of dogs, and even rats and miee, are prepared in the same way. The loeust, silkworm, and snake enter into the diet of the poor, while sharks' fins and swallows' nests are served on the tables of the rich. Another delicacy consists of dueks' eggs stecped while fresh in a solution of salt and lime. Penctrating through the shell, the lime turns the contents quite blaek, and imparts to the egg a decided flavour. In this state it is encased in clay and baked, after which it will keep for a long time, the white being reduced to the consisteney of a jelly, while the yolk becomes about as firm as a hard-boiled egg. After the death of Commissioner Yeh in Caleutta, where he had been detained a State prisoner, several large boxes of eggs prepared in this way were found amongst his effects.

The Chinese have diseovered a means of increasing the fecundity of their poultry, whercby the relative production of eggs is much greater than in Europe. The hen is prevented from hatching by being taught to bathe, and artifieial incubation has been practised long before the art was known in the West. Pigeons are protected from birds of prey by means of a bamboo whistle no thicker than a sheet of paper inserted between the wings. Marvellous devices have been intro-

> "Chinat in 1857-8," p. 247.
cotton are the ver tructs of and bringalls the soil is so metimes look 1.* is too vuluable million oxen ings. But for The mythical pposed to have , ox, pig, dog, are little used the cold with , the Buddhist e peasant eats n forbids their the numerous us, the Chinese . to the flesh of eservoirs flocks after either by m together by ese water-fowl, nd in this state provinces, and and mice, are into the diet of ples of the rich. tion of salt and uite black, and clay and baked, the consistency gg. After the etained a State ad amongst his
madity of their han in Europe. and artificial West. Pigeons thicker than a ave been intro-
duced for the capture of fish, which are taken without nets or traps, and great skill is displayed in rearing and propagating both salt and fresh-water species. The samli, a kind of shad, is produced almost exchusively by articiul means, and sent in large earthenware vessels, far and wide, in every stute of development.

\section*{Tine Tea Trade}

Of the natural products, tea supplies the largest element in the foreign export trade. The quantity consumed by the inhabitants, certuinly more than in all the rest of the world together, can only be approximately estimated. Yet its use, although introduced some twelve or fifteen centuries ago, is not yet miversal in the empire. In the northern provinees the rich alone can afford to indulge in the tea from the Yang-tze basin, others remaining satisfied with various preparations in which the precious leaf forms but a small part. Even in the tea-growing provinces the poorer classes ure obliged to replace it by infusions of the willow and other leaves gathered in the thickets. In certain districts this industry has even aequired some commercial importance, thanks to the fraudulent practice of the Hankow, Shanghai, and Amoy merchunts, who use these leaves in adulterating the teas destined for the European market.

The so-called "brick tea" is prepared especially for the Tibetan and Mongolian markets. In the Russian factory at Hankow "bricks are made of green and black tea, but always from the commonest and cheapest ; in fact, for the black tea the dust and sweepings of the establishment are used. The tea-dust is first collected, und if it is not in a sufficiently fine powder, it is beaten with wooden sticks on a hot iron plate. It is then sifted through several sieves to separate the fine, medium, and coarse grains. The tea is next steamed over boiling water, after which it is immediately put into the moulds, the fine dust in the centre, and the coarse grains round the edges. These moulds are like those used for making ordinary clay bricks, but very much stronger, and of less depth, so that the cakes of tea, when they come out, are more like large tiles than bricks.
"The people who drink this tea like it black; wherefore about a teaspoonful of soot is put into caeh mould, to give it the depth of colouring and gloss that attracts the Mongolian purchasers. The moulds are now put under a powerfnl press, and the covers wedged tightly down, so that when removed from the press the pressure on the cake is still maintained. After two or three days the wedges are driven out, the bricks are removed from the moulds, and each brick is wrupped up separately in a picce of common white paper. Baskets, which when full weigh 130 lbs ., are carefully packed with the bricks, and are sent to Tientsin, whence they find their way all over Mongolia, and up to the borders of Russia.
"I was told that this tea could be sold retail in St. Petersburg with a fair profit at the rate of twenty copeeks the pound. The green tea is not made of such fine stuff, but of stalks and leaves. The Mongoliuns make their infusion by boiling. In this manner they extract all the strength, and as there is no delicate flavour to lose, they do not injure the taste. The manufacturer here told me that the
tea the Russimes usually drink in their own country is taken direct to Odessa from Hankow by the Suez Canal, and in answer to an inquiry that I made, he ussured me that even before the canal wats opened it never passed through London.
"A better price is given by the Russians in IIankow than the English care to pay. This is the real reason why the tea in Russia is superior to any found in London; for caravan tea is a delicacy even amongst the nobles in St. Petersburg." (Gill, i. 170.)

\section*{Other Agricultural Produce.}

Of the seventy eultivated plants mentioned by explorers, the sugar-cane, cotton, mulherry, wax, tallow, and varnish-tree, bohmeria nettle, and especially the bamboo, are ceonomically of the first importance. In the south, the orange, peach, and mulberry are the most productive fruit trees. Opium, although officially interdieted, is cultivated in nearly all the provinces of the empire, and especially in Hupeh, Sechuen, and Yunnan. During the American War cotton was largely grown in the Lower Yang-tze region, to the detriment of other plants, which have since recovered their ground.

Of all pursuits, agriculture holds in China the foremost place. The Emperor himself is regarded as the first husbandman in the "Great and Pure Empire," and till recently he was bound, towards the end of Mareh, to plough three furrows, dressed as a peasant. The work was continued by the imperial princes, great mandarins, and others invited to the ceremony, and the corn thus grown was presented the following year to the God of Heaven, as the offering of the whole nation. At the same time, the Emperor is in theory only the proprietor of the land, which belongs really to the peasant and his posterity as an absolute freehold.

\section*{Land Tenure-The Chinese Commune.}

Notwithstanding the pretended immutability of the Chinese people, the possession of the soil has undergone almost more frequent changes amongst them than elsewhere. In the first historic period the land was the common property of the " Hundred Families," all able-borlied adults between their twentieth and sixtieth year having a direct right to a share in the soil. Nevertheless the idea of private property was graaually developed, to the advantage of the emperor and grandees, and twelve hundred years before the present era the land was already divided into appanages and fiefs, as happened later on in West Europe. Still the forests, pastures, or open spaces remained undivided for every group of eight families, and the Chinese commune was, on the whole, organized in much the same manner as the modern mir of Great Russin. Some traces of this system still survive, not only in China, but in Korea and some other countries affected by Chinese influences.

Towards tho middle of the fourth century before the vulgar era another ehange took place. Agriculturists were allowed to settle on any vacant spaces, and set up landmarks, regardless of the communal limits. Thus the mir was dissolved about the same time that the feudal system dieappeared, and the peasantry became
proprictors, with the right of selling or bequeathing their possessions. Thus was accomplished a transformation some two thousand years ago in China, which political economists foresee must take place in Russia at no distant date. But the consequences of this dissolution of the communal group soon followed. All those who had been enriched by trade, industry, imperial favour, or other circumstances, bought up the land at the expense of the peasantry; large estates were developed; and the small holders, being gradually dispossessed, became at last, for the most

part, slaves of the wealthy classes. Those considered themselves fortunate who were allowed to continue as farmers, to rent the lands of their forefathers. Misery became widespread, frequent outbreaks took place, the State itself was impoverished, and great difficulty was experienced in collecting the taxes. An incessant struggle took place butween the partisans of the new régime and the old communal system, and for over one thousand years the political history of the empire resolved itself into the history of the agrarian question. In the ninth year of the new era the
minister Wangmang, after seizing the throne, fleclared the whole land henceforth imperial property. "No subject shall keep more than one tsin (ubout twelve acress), or possess more than eight man slaves. The sale of land is forbidden, so that all may keep what yields them bread. All excess of land in the hands of any one reverts to the Crown, and shall be distributed to the communes according to their needs. Whoever questions the wisdom of these measures shall be banished, whoever resists them shall be put to death." Yet a few years later on the magnates had recovered their dommins, and the attempt to reconstitute the old commmal system again failed. "Not Yu or Shun himself," said a contemporary philosopher, "could now restore it. All things change; the streams shift their courses, and what time has effaced disappears for ever."

After many social convulsions and changes of dynasties, the Chinese politieal economists, abandoning the old conception of communal property, attempted to introduce a new system. No similar revolution was ever elsewhere essayed by the governing classes for the transformation of the whole social fabric. Wanganche, having become the friend and adviser of the Emperor Chentsung, boldly set about the destruction of the old order of things. In 1069 he issued a decree abolishing all individual property. The State became sole owner, and undertook to distribute equally the produce of the soil amongst the people. Wealth and poverty were alike suppressed, labour and sustenance being secured to all on an equal footing. The industries were placed under State control, and for a period of five years capitalists were required to hand over their capital to the Government. Notwithstunding the opposition of the mandarins and the old feudatory lords, Wanganche succeeded in peacefully maintaining this imperial communism for fifteen years. But a change of rulers sufficed to overthrow the new régine, which met the views neither of the people nor of the great, and which had, moreover, created a class of inquisitors, who had become the true owners of the land.

Under the Mongol rule propertics changed hands abruptly, and a new feudal system arose, based on the right of conquest. The imperial grandees seized the great ficfs, comprising thousands and \({ }^{4}\). of thousands of acres, and every private soldier received an estate all to himst If. Being at the same time anxious to extend the pasture lands for their horses, the Mongolians conceived the strange idea of converting the land under tillage into grassy steppes, and driving the Chinese peasantry southwards. The cultivation of the plains of Peking was officially forbidden, but the attempt completely failed. Instead of driving the natives beyond the Hoang-ho, the Mongolians themselves were compelled to withdraw, with their families and herds, beyond the Great Wall.

The régime at present prevailing in China is that of small holdings. But under the direction of the elders the land often remains undivided in the hands of all the members of a family, or even of a village. Thus are traces everywhere preserved of the old communal system. Large eapitals are invested chiefly in trade and the industries, while the land in ecrtain provinces remains almost entirely in the hands of the cultivators. Nevertheless there still remain many vast domains rented to small farmers and others, who share the summer crops with the
nd henceforth (about twelve forbidden, so the hands of mes according ll be banished, later on the stitute the old contemporary ms shift their inese political , attempted to essayed by the Wanganche, oldly set about ree abolishing k to distribute poverty were equal footing. of tive years ent. Notwithls, Wanganche fifteen years. met the views cated a class of
d a new feudal dees seized the d every private xious to extend strange idea of g the Chinese was officially ig the natives withdraw, with
heldings. But \(n\) the hands of es everywhere sted chiefly in almost entirely in many vast crops with the
landlord, and keep 'he winter ones for themselves. They supply the live stock, manure, and implements, while the owner pays the land tax, which is not a heavy charge. In the fertile coast lands, where the soil is more divided, an estate of 15 acres is eonsidered a lurge domain, and the holdings do not probubly execed 3 aeres on the averuge. The head of the family may sell or mortguge his property, but he must first ofier it to the next of kin, and so on, according to the order of hood relationship. At his death it must be divided in equal shares amongst all his sons. He is compelled by law to keep it in good condition, land lying fallow for three yeurs being forfeited and assigned to a fresh occupant. Even the head of the commune is made responsible for the state of the arable tracts, being subjeet to twenty blows of a bamboo in ease of neglect or slovenly tillage. The right of settling on waste spaces belongs to all, nothing being required beyond an intimation to the authorities, with a petition for exemption from the impost, which is usually granted for a certain term. The Govermment itself founds military or penal colonies in remote districts, and especially in Kansu and Zungaria. The Crown lands, relatively of small extent, lie mostly beyond China proper, in Mongolia, near the Great Wall, and in Manchuria, home of the reigning dynasty.* The plantations round the temples, lands set apart for educational purposes or bequeathed to hospituls and other public foundations, and lastly, portions of the marshy grounds and the foreshore on the coast and estuaries, are all administered by the commune.

\section*{Indestries.}

The Chinese industries are many centuries older than those of the West, and some of the more important discoveries made in Europe towards the close of the Middle Ages had long been anticipated in the extreme East. Marco Polo and the early European explorers speak with admiration of the woven goods, chased metals, and other products of the "Manzi." But the first trustworthy accounts of the native manufactures was not reeeived in Europe till the close of the seventeenth century. Several manufacturing processes were revealed by :he missionaries, and the work has been completed during the present century by the trunslation of mumerous technieal treatises. The ready wit and manual skill of the Chinese artisans are not merely prerogatives of the race, but are also due to the fact that our minute division of labour has net yet been introduced amongst them. Every artistic object is the work of one artist, who designs, models, and paints it. In many provinces the peasantry themselves are craftsmen, spinning and weaving their cottons and linens. They excel especially in wicker-work, and so closely plaited are their baskets, that they serve, like wooden or metal vessels, to hold all kinds of liquids. The Hoa-hnei, or "embroiderers," have also been at all times renowned for the skill and perfection of their workmanship. "On fabries of
* Crown lands in 183!:-

Appanages of the Imperial Family . . . . . . 750,000 acres.
Lands of the Fight liouners
Lands of the Eight Banners
Lands of Temples, Schoels, and Hespitals
Marshes and Foreshore on the Coast Tutal \(2,152,000\)
327,000 \(1,567,000\) " \(4,7,796,000\)
marvellons texture mad dyed with inimitable shades the Chinese embroider with flat silk fignres of the natural size, compliented seenes, ornaments, birds, and flowers, with unequalled truthfulness, elegmee, and freshness. In the midst of this rich needle pieture rise golden drugons, worked cither in couchure or low reliof, often ornamented with spangles and lama."*

Nevertheless, except in u few cases, the Chinese can boast of no superiority over the "Western Barbarians." They even condescend to imitate European wares, and the implements, ornaments, clocks und watches, and other objects made in Canton and Fuchan, and thence exported to all purts of the empire, aro mostly copied from specimens introduced from the West. Of the old local industries, some have remained ummodified for four thousand years, and these may disappear or be replaced, bui camot now be ehanged. In some cases the very processes have

Fig. 142.--Mines of Shantung.
Scile 1 : 6,000,000.

alroudy been entirely lost, and the best hands now fail to produce inlaid bronzes, pmamels, or porcelnin vases at all comparable to the old specimens preserved in the muscums. In the wt of dring, especinlly from vegetable saps, the Chinese are still our masters, and they pissess seramal colours elsewhere unknown.

\section*{Mineral Resources-Metal Work-Broxzes.}

The country abounds in metals, salt, and coal. Great skill is shown in working the saline springs, and in obtaining the salt, either by solar heat, artificial means,
* Jacquemart's " History of Furniture," p. 154.
or by the gases of the fire-pits, as in Sechuen. But the rudest appliances are still used in coal mining, bumboo tubes und ladders replacing the complieated machinery of laropean engincers. Yet the nmnual output amounts to soveral million tons, and China now takes the sixth place amongst the coal-producing countrics. The Sechuen coal-fields cover un area of at least 100,000 square miles. Thoso of Itman are also very extensive; but the most important, if not in extent, it least in facility of access, ure those of South Shansi. Here railways might easily bo constructed from the plains right into the mines. At the present rute of consumption, South Shansi also might supply sufficient anthracite to the whole world for thousands of years.

Mining operations are still often interfered with for superstitious reasons, and it was reported early in the year 1882 that the coal mines of the province of Pechili had been elosed by the Government on the ground that the works were displeasing to the great earth dragon. The working of these mines was wholly a native enterprise, foreign machinery was imported in large quantities, and for a time all seemed going on well. A canal between the mines and Tientsin was nearly completed, and it was calculated that 250 tons of fine coal could be forwarded daily to the latter port. It was stated that 5,000 tons were ready at the pit's mouth for conveyance as soon as the canal was opened. With proper appliances it was belicved that about 1,000 tons a day could be raised for many years from the present pits, while as many as fifty collieries of equal productiveness might be opened in the Kaïping district. Then came the news that the works had been everywhere suddenly stopped by the Peking authorities. In a memorial presented to the Emperor by the public censor it was complained that the long galleries in the mones and the smoke of the foreign machinery disturbed the repose of the carth dragon, who in his turn disturbed the spirit of the Empress, who had died some months previously, and had been buried about a hundred miles off. The angry spirit of the departed princess took prompt vengeance by afflicting the members of the imperial household with measles, which affliction was thus distinctly traceable to the Kaïping coal mines. Hence the report that the works had been stopped. But later information showed that this report was premature, and that the collieries had never been directly interfered with.*

In Formosa, Pechili, Manchuria, and some other districts, European methods have already been introduced both in the coal and iron mines, and for reducing the iron ores, although in the latter case the local processes differ little from those of foreign metallurgists. The native steel is always preferred even to the English, and great skill is displayed in the preparation of copper, lead, tin, zine, arsenic, and silver and gold alloys. The quality and colour of the bronzes are uririvalled, and the " male" and "female" gongs yield the most exquisitely mod"lated tones. From the technical point of view many of the Chinese bronzes are very remarkable. Enormous figures cast in several picces are put logether by ingenious processes which insure their solidity, while smaller articles are modelled with a perfection
* Nature, June 8th, 1882.

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that has never been surpassed, except perhaps in Japan. Others, again, are chased with a finish worthy of the goldsmith's art, and evidently executed with instruments specially mule for hollowing out the metal and cutting into the intricate folds of the druperies. Amongst the more eurious bronze wares ure the gigantie symbolic birds used as perfume-burners or candelabra, the large tripods with pierced covers surmounted by the imperial dragon or animals of happy omen, and

the many-storied pagodas, their projecting roofs ornamented with bells, and sheltering the household lares.

Thanks to the possession of the raw material, China, like Japan, still maintains its pre-eminence in the production of lacquer-ware as well as of ink, while marvellous skill is betrayed in the carving of wood, ivory, and hard stones. Inventors of paper, the Chinese still prepare several varieties unknown in Europe, although they themselves prefer those of Korea and Japan. In the year 153 of the vulgar era Tsaillun first replaced bamboo tablets by paper made from bark, hemp, old linen rags, and fishing nets. Since that time, bamboo sprouts, seaweed, rattan, the fibre of the Broussonetia papyrifera, silkworm cocoons, and other substances are used in its manufacture.
gain, are chased with instruo the intricate re the gigantic e tripods with tppy omen, and
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, still maintains of ink, while ad hard stones. own in Europe, he year 153 of ade from bark, orouts, seaweed, and other sub-


\section*{Printing.}

The Chinese also anticipated Europeans in the invention of printing. Towards the end of the sixth century the art is spoken of as already long pructised, und if the Persian historims had been studiel in the West, it would have been known here a lumdred and fifty yeurs sooner, for it is cleurly explained in a work by Rashid-ed-dinn, composed about the yeur 1310. Not only were they nequainted with the process of printing from wooden blocks, but they ulso practised stone and copper engraving, and towards the middle of the eleventh century movable terracotta typer were invented by a blacksmith. But the immense number of characters required in Chinese writing has hitherto prevented the adoption of this method, except for popular works and journals, for which a limited number of signs suffices. Hence blocks of pear-wood, carved with the graver in intaglio, or copper plates in relief, still continue to be employed. Nevertheless admirable editions huve been publishel from movable types. Such is the collection of 6,000 old works edited by the Emperor Kang-hi, and for which 250,000 movable copper types had to be cut; such are also the works issued 1 , the Imperial Library, the elegant characters of which are known as the "coll . pearls."

\section*{Tie Labour Market.}

The Chinese artisans are in general paid at a much lower rate than those of Europe and the New World. In Peking, Shanghai, Canton, and Hankow it varies from 5d. to 10 d . a day; so that, notwithstanding the cheaper price of food, few except the silk-weavers, who are better paid, have even a sufficient diet, living mostly on boiled rice, cabbage, and occasionally a little fish. Yet these pale-faced, feeble-looking labourers have really great muscular strength, and in the central and southern provinces they transport nearly all the merchandise not forwarded by water. Like the other sociul classes, they have organized extensive unions, which often arrange strikes, as in Europe, to keep up the price of labour, and which have even founded co-operative societies. Thanks to their spirit of solidarity and admirable discipline, they nearly always get the better of the capitalists, and so fully recognised is their power, that in many places the employers even decline the struggle. At the beginning of every industrial season the workmen themselves fix the rate of pay, which is generally faithfully adhered to on both sides. They might easily get possession of the whole industrial plant of the country, but for the fact that the trades unions form so many independent and rival societies. These associations subject apprentices to two or three years of downright slavery; they constitute a sort of aristocracy of labour, weighing heavily on all outsiders, the most fortunate of whom in ordinary times are the professional mendicants. Like the traders and artisans, these mendicants have their recognised unions, with statutes, feasts, and assemblies.
G. W. Cook dwells in forcible language on the evils of co-operation amongst the Chinese, whom he describes as a people essentially addicted to co-operative
habits. They even combine together for the purpose of robbing, or resisting robbery, and for all mamer of fanciful objects. "But thene secieties have all one tendency-to squero the nom-members. From the 'finad Society, which was at the luittom of the late rebellion, to the 'Tuilors' Union at Hong Kong, the rules mad regulations of which have been published in the North Chinn Herall, all have the same practical object in view. The 'Tinte Brotherhooll', the 'Triuds,' the 'Heaven and Barth Saciety;' the ' Queen of Heaven's Compuny;' the 'Plood Family,' the 'Pure 'lea Set,' are all obnoxious to the general deseription given in a memorial published in the P'rking Giazette containing the following sprecitic charges:"They carry off persons in order to extort ransoms for them; they falsely assume the charucters of police ofticers; they build fulse boats professedly to graard the grain-lields, and into these they put from ten to twenty men, who cruise along the

Fig. 14.- Pohtaor in Cimekiano.

rivers, violently plundering the bonts of travellers, or forcibly carrying off the wives and daughters of the tanka boat people. The inhabitants of the villages and hamlets fear these robbers as they would tigers, and do not offer them any resistance. The husbandman must pay these robbers a charge, else as soon as his crop is ripe it is plundered, and the whole field laid bare. In the precincts of the metropolis they set fire to places during the night, that under pretence of saving and defending, they may plunder and carry off." *

\section*{Inland and Foreign Trade.}

The value of the commerco of China can scarcely be even approximately estimated, except perhaps for salt and the other produce burdened by Government
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\text { Op. cit. p. } 191 .
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monopolies. In the neighbourhood of tho great cities the rivers and camals are covered with interminable lines of junks, while many of the more frequented portages and mountain passes at certain periods resemble busy market towns. The boatmen and porters engaged in the inland traffic must certainly amount to several milhons.

Thanks to the great variety and abundance of its products, China has hitherto scarcely felt the need of a foreign trade. But so far from refusing to deal with strangers, sho formerly gavo freo access to the Arabs, Mahys, Annamese, Siamese, and even the Portuguese, who wero well received when they first appeared in tho Canton River in 1516. Soon, however, the Europeuns began to assume the air of conquerors, and scarcely a year passed without scenes of bloodshed, fully justifying the title of "Foreign Barbarians" applied by the natives to the new arrivals. They also began to quarrel among themselves, and looking upon all of them as members of one nation, the Chinese asked in amazement why they thus plundered and murdered each other. At last the seuports wero elosed against them, or opened only on humiliating and burdensome conditions. "The barbarians are like beasts, and are not to be governed by the same principles as civilised beings." Such was the language of a contemporary official document. "To attempt to guide them by the great maxims of reason could only end in disorder. The arbitrary plan is the only true method, and best means of governing the barbarians."

\section*{The Opiem Question}

Then followed the opium trade, swelling the list of complaints against the foreigner. The use of this drug did not begin to spread till the elose of the last century, when it was still imported as a simple medicinc. In 1800 an imperial edict forbade the peoplo to exchange their money for the " vile stuff ;" but it was too late, and the poison continued to spread rapidly. The East India Company soon found millions of accomplices in the opium smokers, and amongst them were most of the mandarins officially charged to put an end to the traffic. The contraband trade increased from year to year, to the serious loss of the imperial treasury, and as the exports of tea and silk remained greatly inferior to the importation of opium, the country began to be drained of its specie, "swallowed up in the insatiable abysses of the lands beyond the seas." At last the Government had recourse to force. All strangers settled in Canton, 275 ultogether, were imprisoned, and the British Commissioner had to purchase his liberty and that of his fellow-countrymen by the surrender of over 20,000 chests of opium, valued at about \(£ 2,000,000\), and consigned to destruction by the Viceroy Lin. This was the signul for the "Opium War" of 1841-2, during which the English successively seized the Chusan Archipelago, the Canton River forts, Ningpo, and Ching-kiang. Under the very walls of Nunking a treaty was dictated to China, abolishing the monopoly of the twelve houg, ceding to Great Britain the island of Hong Kong, besides a heavy war indemnity, and throwing open to foreign trade the five ports of Canton, Amoy, Fuchew, Ningpo, and Shanghai.

But the hard conditions of this treaty were not observed. Strangers were again excluded from Canton, and certain monopolies were re-established, while the English, French, and Americans clamoured on their part for fresh concessions. A second war broko out in 1857, in which the French joined the English. Canton

Fig. 145.-Chinese Treaty Pohts.
Scale 1 : \(20,000,000\).

_ 15 Miles.
was again taken, and the European fleets entered the Peï-ho River, when peace was hastily concluded in 1858 at Tientsin. But hostilities again broke out the next year. The allied forces stormed the forts of Takow, defeated the Chinese army in a pitched battle, and encamped under the walls of Peking. In virtue of the treaty of 1860 new ports were thrown open, and in 1878 their number was increased,
as an expiation for the murder of Margary. At present there ure as many as nineteen treaty ports, besides concessions granted "for ninety-nine years" to foreigners, as sites for warehouses and residences. In the north and north-west Russia also has her consuls and entrepôts at Chuguchak, Kobdo, Uliasutai, and Urga, with the free use of the postal route from Kiakhta, through Kalgan and Tungehew, to Tientsin.

\section*{The Treaty Ports and Foreign Exchanges.}

The treaty ports are situated at intervals along the seaboard from Pakhoï, on the Gulf of Tonking, to Ying-tze, at the mouth of the Liao-he. There are also European settlements in Hainan and Formosa, so that from the frontiers of IndoChina to Korea the produce of the empire may now be directly exported to all the European markets. Amongst these ports, Canton, lying nearest to India and Europe, has naturally retained a considerable share of the foreign exchanges. Tientsin also, situated at the northern extremity of the empire, has aequired exceptional importance. But the two chief marts occupy more central positionsShanghai, near the Yang-tze estuary, and Hankow, on the great river itself.

The foreign exchanges of China have increased tenfold since the opening of the treaty ports, and according to the official returns they now exceed \(£ 46,000,000\). With the local and coasting trade, the full value of the trade of the empire is estimated at over \(£ 120,000,000\), or some 6 s . or 7 s . a head, an insignificant sum compared with that of some other countries. The shipping has kept pace with the increase of traffic, only sailing vessels have now been almost entirely superseded by stcamers. Regular lines of steamers ply from port to port along the seaboard, and in the Yang-tze, as far as Ichang, below the rapids.

Till recently nearly the whole of the foreign trade was carried under foreign flags, and fully three-fourths still fall to the share of Great Britain and her colonies. But while the Americans, French, and Germans are retiring from the field, the natives are yearly taking a greater part in the carrying trade. More frugal and cautious than their Western rivals, animated by a greater spirit of clanship, possessing agents in most foreign countries, accustomed to the language of trade from their infancy, initiated into the secrets of the money market, the Chinese have already monopolized the trade of several treaty ports. The national flag has even begun to appear in distant waters, and a large Chinese steamer entered the port of London for the first time in 1881, with a cargo of tea from Canton.

\section*{Staples of Trade-Silk-Tea-Rice-Opiem.}

Silk and tea are the great staples of the foreign export trade. Before the year 1844 the annual amount of silk exported scarcely exceeded \(2,500 \mathrm{lbs}\); now it is five or six times greater, while tea was shipped in 1878 to the value of about \(£ 9,400,000\). Rice is the chief item in the import trade, and thousands of junks are yearly employed in this traffic, which is entirely in the hands of the natives.

Rice is brought chiefly from Siam, French Cochin-China, and Annam. Next to rice, the most important imports are opium and cotton, whieh were received in 1879 to the value of no less than \(£ 11,000,000\) and \(£ 6,200,000\) respectively. Under the present Indian administration, which has inherited this traffic from the East India Company, the sale of opium has inereased tenfold in about twenty years. In return for advances made to the Bengal poppy-growers, the Government takes the chest at a fixed price, and sells it at an average profit of about \(£ 90\), which yields from \(£ 6,000,000\) to \(£ 8,000,000\) yearly to the Indian revenue. Hence there is some ground for the charge brought against the British Government of speculating in the vices of the Chincse. At the same time there is scarcely a Government in the world against which a similar charge may not be brought. Which of them is free from the imputation of having eneouraged the traffic in tobacco, aleoholic spirits, or other poisons, for financial purposes? The Chineso Government itself raises large sums from the import duty on opium, and tacitly connives at its cultivation in most of the provinces, where the traders and mandarins share between them the profits on the yearly erops of the officially prohibited drug.

At the same time the baneful effects of the use of this nareotic have been strangely exaggerated. Most of the lettered classes use it in moderation without any upparent weakening of their intellect. Those who indulge to excess no doubt yield at last, like drunkards, to convulsive attacks and paralytic strokes. But they are few in number, and seldom found amongst the peasant and labouring elasses, who form the heart of the nation.* Most opium smokers are satisfied with a few harmless whiffs in the intervals between their work, and it is noteworthy that the people of Sechuen, who are most addicted to the practice, are specially distinguished by their energy and intelligence. On the whole, opium is probably not a whit more injurious than tobaeeo, which is far more prevalent in the seaboard and northern provinces. On the other hand, the European vice of drunkenness is almost unknown in China, where you may travel for years without meeting a single intoxicated person.

In "The Truth about Opium" (1882), Mr. W. H. Brereton of Hong Kong, who has made a speeial study of this question, considers that tobaeeo is on the whole more injurious than opium smoking. He describes the Chinese as, generally speaking, a strong, healthy, and intelligent people, and says that he has known among them young men, middle-aged men, and men of advanced years who have been opium smokers all their lives, some of them probably excessive smokers. Yet ho never observed any symptoms of premature decay in any of them. One old man whom he knew for fifteen years, he deseribes as a keen man of business, strong in body and mind, who betrayed the practice only in the discoloration of his teeth. That few in any case smoke to excess seems probable from the generally white state of their teeth, of which they are very proud, and which they brush

\footnotetext{
* According to an official note issued early in 1882 by Mr. Hart, Inspector-General of Chinese Customs, considerably less than one per cent. of the population is addicted to opium smoking, while those who smoke to excess aro extremely rare.
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Next to eccived in y. Under the Kast years. In takes the aich yields :e there is of specua Governt. Which n tobacco, se Governacitly conmandarins prohibited

\section*{have been} on without ss no doubt But they ng elasses, with a few hy that the stinguished not a whit aboard and lkenncss is ng a single ong Kong, \(o\) is on the s, generally has known who have okers. Yet them. One of business, oloration of e gencrally they brush gg , while those
two or three times a day. Mr. Brereton, who speaks with kindness and respect of the English missionaries, considers that on the question of opium smoking "tho zeal of their house hath eaten them up."

\section*{Highways of Communication-Rallway Prospects-Telegraphs.}

Thanks to steam, the relations of the coast lands with the rest of the world have become much casier and more frequent than formerly. But tho inland routes and canals are probably in a worse state than during the Ming dynasty, some three hundred or four hundred years ago. Except in Shantung, Kansu, Sechuen, parts of Honan, and in the neighbourhood of the treaty ports, the old roads are everywhere out of repair, and the bridges in ruins, while in many places mere tracks follow the line of the former highways. In the rice grounds, which cover such a large extent of land, inost of the routes consist merely of blocks 2 feet broad, and raised at most 3 or 4 feet above the water. Such of the twentyone imperial highways as are still in good condition attest the high degree of civilisation reached by the nation during medixval times, and enable us to understand the admiration with which Marco Polo and other early travellers speak of that epoch. These highways are cut through the spurs of the mountains, which are sometimos even tunnelled, and they are carried over mounds and embankments across the low-lying grounds. Some 70 or. 80 feet broad in the plains, and paved with granite blocks, they are mostly lined with rows of trees like the avenues in Europe. Signal towers occur at intervals of 3 miles, and ims, troughs, regular stages, and military posts for the protection of travellers are also met all along the line. Everything is provided for on these model routes except an efficient postal service, which is left to an association of merchants. Dispatehes, however, are seldom lost, even when forwarded from one end to the other of the empire. But outside of such places as Shanghai, the only service organized on the European model is that of the Russian couriers, who reach Peking from Kiakhta through Kalgan in twelve days.
"China proper is intersected in every direction by two thousand imperial highways, which with the great number of navigable streams, and the extensive system of canalisation, renders the country one of the richest in the means of communication in the whole world. Unfortunately the State has neglected to keep either roads or canals in repair, or protect them from the wear and tear of timo and weather, so that they are now partly impracticable. Morrison gives a deplorable account of the present condition of the Grand Canal, on which Peking largely depends for its supplies. In 1880 some parts were in such a ruinous state that the boats could not pass through, and portages were formed at the sides for discharging and re-shipping farther on.
"The most direet trade route between Chinn and Europe runs from Hankow through North Kansu and across the Gobi desert to Hami, and thence by the Pe-lu route through the Zungarian depression, or the alternative Irtish valley, to Orenburg. The Russians are beginning to see that the future trade route must
follow this line, which is practicuble for earriages throughout the whole distance of \(2,5 x 0\) miles from Zaisum to llankow except a section of 160 miles, which presents no difficulty to pack mimuls. It can be traversed in 140 days, whereas by the fur more difficult Kiukhta roud, which is 1,800 miles longer, it takes 202 days to rench I'eking. The whole of the route between Hankow and Zaisan was traversed by Sonnorski in the yeur 1881."*

Hitherto the construction of ruilways has not been sanctioned by the Imperial Government. Exeept in the neighbourhood of the coul mines and dockyards, there

Fig. 140.-Grneral View of Nanxing.

are not even any tramways in the empire. Yet the success of the short line between Shanghai and Wusung, tolerated for a few months by the authorities, shows that the locomotive would soon become as popular in the extreme East as elsewhere. The plans of the main lines from Tientsin to Peking, Shanghai to Fuchew and Hangchew-fa, Canton to Nanking, have already been prepared by the English engineers, and abundant capital would be forthcoming for their
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\text { - A. H. Keane's "Asia," } 1882 .
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stance of presents ; the fur to reuch ersed by Imperiul ds, there
hort line uthorities, reme East langhai to prepared for their
construction, if once authorised by the udministration. The objections udvanced by the mandarins were equally upplicable to the introduction of steamers. They pretend to plead on behalf of the millions of porters and boatmen at present enguged in the transport traffic; they ulso appeal to the feng-shui, as they did

Fig hi.-Rouika, Trleghaph, and Linge of Stram Navigation in China
Boale 1: \(20,000,000\).

when they opposed the crection of lofty buildings on the Furopean "concessions." But the graves might easily be removed by practising the suitable rites, while the Emperor, "master of the spirits," might indicate to them the proper route to take, and reassure his subjects by informing them of the orders he has given to the
circumambient genii. But the true reuson of the opposition is the fear that a developed ruilway system might increase foreign influences, a feur which is not perhups altogether groundless. Hence it is matural that Chim should place itself in a state of defence before throwing open the comntry to the projects of Europeun engineers. "Chinu for the Chineso" is the universul watchword in the empire. Exen most of the iron and conl mines are allowed to be worked only on the express condition of not employing Europem hands. Besides this fear of the struger, the provincinl governors have unother motivo for opposing the railway projects. At present the difficulty of communicating with the capital makes them almost independent of the central nuthority in their local administration. But more rapid means of locomotion would have the iumediate effect of bringing them more under control, and checking their systematio misgovernment of the provinces. Hence their hostility to the inconvenient invention of the " Western Burburians." But it is not likely that their resistance can mueh longer avail, and a recent number of the London and China Telegraph informs us that a railway 6 miles long was actually constructed early in the year 1882, in connection with the Kaïping collieries in the north.*

The telegraphie system is also rapidly sprending. All the treaty ports are already comnected by submarine cable with Singapore, Japan, Vladivostok, and the rest of the world. After much opposition, a double line of wires was completed towards the end of the year 1881 by a Danish company between Peking and Shanghai, and other projects are now under consideration. The old tuentai, or "atmospheric" telegraphs, have already fallen into abeyance. They consisted simply of coneshaped towers resting on square piles of masoury, on which bonfires were kindled, and the signals thus rapidly transmitted to great distances. But such rude contrivances could scarcely do more than warn the Government of outbreaks and other troubles in the remote provinces.

\section*{Foreignens in China-Chinese Emigration.}

The handful of foreigners settled in China is out of all proportion to the great influence exercised by them, both politically and socially. In 1879 their commercial houses numbered altogether 451 , with 3,985 European merchants and employés. Even including the missionaries and travellers, there cannot be more than 5,000 actually domiciled in the country. Yct, few as they are, they have already modified the trade, industry, customs, and thought of the nation to a far greater extent than the Chinese are themselves aware. Along the seaboard a sort of lingua franca, the alrendy mentioned "Pigeon English," has been developed, which has nequired some literary standing, and is even current among the ratives speaking different dialects. Many colloquial terms have entered into this jargon, but most of the expressions are so changed that they can no longer be rocognised either by Chinese or foreigners under their new forms. Its substratum is rather Portuguese than English, and its true origin must be sought, not in
* The locomotive was made on the spot by native workmen, and is said to be very creditably done. -Nature, March 23, 1882.
fear that ich is not uld phace rojects of ord in the d only on is fear of osing the he capitul adminisiato effect nisgovernvention of can much ,h informs ycar 1882, are already the rest of ed towards inghai, and ospheric " \(y\) of conero kindled, such rude breaks and

\section*{ion to the} 1879 their chants and ot be more they have ation to a seaboard a been deveamong the d into this o longer be substrntum ght, not in editably done.

Canton, but in Gon, on the west const of Indin. 'Ihns the worl jows, upplied to tho statues of Buddha, to the gools and mints, is a corruption of the Portugnese Dios.

Chinese emigrat; \(n\) is yearly acquiring increased importance, ulthongh ntill fur inferior to the movement going on towards the northern regions of the empire. 'I'he Chinese already nettled beyond the Grent Wall in Mongolin, Manchurin, und Onter Kunsin ure estimuted at no less thun \(13,000,000\), whereas there are probubly not more than \(3,000,000\) ultogether in forcign comntries. It will thus be seen that the purt played by Chinese emigration in the genernl movement of the humun ruce

Fig. 148.-Slonal Towahs.

has been greatly exaggerated. At least, the anticipation of formidable struggles between the rival Mongoloid and white peoples is somewhut premature.

The distinctive feature of Chinese migration lies in the fact that it consists almost exclusively of male adults. Hitherto no women have been seen in America or Australia beyond the few that have been specially contracted for. None of them have crossed the seas voluntarily, and their number is of no account in the general movement, except in such places as Singapore and Penang, which, from the ethnical point of view, may be regarded as Chinese territory. Hence the increase of infanticide in many of the scaboard villages, where the girls are often sacrificed by their parents, in despair of finding them suitable husbunds. Being neither free nor entitled to hold property, the Chinese woman cannot leavo the paternal home without express permission, and even in the interior this permission
is seldom grunted. Wixeept the higher officinls, the natives moving from place to place ure rurely necompunied by their fumilies, preferring to set up new and temporary establishments in the remote districts, where they make periodical or protructed visits.

Male emigration, enpecially among the Hakku of Fokien and Kwang-tung, has aequired considerable proportions, and is now regulated by treaty arrangement between the Imperial Government nad foreign powers. The immigrants already form an important element of the population in some places, where their extremely frugul nad industrious habits, their perseverunce, versatility, and spirit of solidurity, enable them to found Hourishing communities where others fail. In the struggle for existence they have the advantage of easily acquiring the language of the country, and whatever be the nationality of the mother, whether Siamese, Tagal, or Juvanese, the new family always becomes Chinese, even in physical type. The regions where the race lus been most solidly established aro the basins of the

rivers flowing from Yunnun and Sechuen to Further India. Here, as in Manchuria and Inner Mongolia, at the other extremity of the empire, they have gradually appropriated the land by trade, agriculture, and the civilisation of the aboriginal tribes. By following the course of the rivers, the colonists advancing from the interior must sooner or later join hands with their fellow-countrymen who have reached Siam by the sea route.

In the neighbouring Eastern Archipelago, whero they have been long established, the Chinese settlers enjoy a high reputation for thrift, industry, and intelligenee. John Chinaman's motto is "small profits and quick returns," and goods of every sort can be bought eheaper in the Chinese than in the European or native establishments. "But in money-lending transactions John Chinaman never charges less than twenty-four per cent. interest, and always insists on good security. He is polite to a degree. If a chance customer, or any one merely lookir; about, enters the shop, John asks him to sit down, and offers him a cup of tea, or if a new and iodicul or ungoment ts alreudy extremely solidurity, e struggle ge of the se, Tagal, sical type. sins of the
 e gradually aboriginal ng from the on who have
established, intelligence. d goods of in or native aman never ood security. bkir; about, tea, or if a

Europeun a glass of beer. He is open to burter, aud if you don't open your eyes you must open your purse, for the whole aim of the Chinese is to necumatate a fortuae.
"The Chinese truders ure, however, a good puttern for the Mulays, who have been greatly influenced by them. Besides being good shop-keepers they are very industrious; many ure urtisans, excellent curpenters, good tuilors, shoemukers, und jewellers. But their curse is their taste for gumbling. In the evening, when business is over, they will sit with a friend or two under the verumblal, lighted, up with a grotesque Chinese lantern suspended from the ceiling, smoke the indinpensable opium pipe, and have a gune of curds, over which the betting is fast and furious. When it happens that John is entirely ruined by carrl-playing, his gold buttons and everything conceivable gone, he will proceed to the gold and diamond mines, and try to repuir his lost fortune." *

In the countries where they do not compete with the dominant race the Chinese immigrunts soon become indispensable. Thus they have ereated the prosperity of Singapore, where, but for them, all industrial and commercial aetivity would soon be arrested. But elsewhere they often come into collision with competitors in the labour market. Thus, while the thinly peopled colony of West Australia gladly welcomes Chinese settlers to tend the herds and develop a few local industries, the more prosperous states of Queensland, New South Wales, and Vietoria, in East Australia, resent the presence of this frugul, thrifty, und laborious element, which has too deeided an advantage in the competition with the European lubouring classes. They are reproached with gradually monopolizing certain industries, such as mining, and the more feminine oceupations of washing and domestic service. Such is their thrift that they contrive to grow rich where others starve. But the poll taxes imposed in spite of the treaties, the vexatious measures of all sorts, and in many cases open violenee and massacres, have greatly reduced their numbers, and even diverted the stream of migration altogether from some parts of Australia and California. The Imperiul Government has consented to sign a treaty with the United States, limiting the right of its subjects to settle in the republic. The authorities in the Philippines and Dutch East Indies also oppose every obstacle to their intrusion, restricting them to certuin districts, excluding them from various professions, burdening them with special taxes, and subjecting them to all kinds of obnoxious police regulations. But the movement can no longer be permanently arrested. The Chinese Mohammedans have even begun to take part in the pilgrimages to Mecca and Medina, and some of these have already settled in the Arabian Peninsula. Thus the relations of the white and yellow peoples become constantly more frequent, and at a thousand:.different points we are brought fuce to face with the urgent question how best to reconcile the conflicting interests of the two races, differing so profoundly in character, traditions, habits, and ideas.

\footnotetext{
- Carl Rock's " Head Hunters of Borneo," 1882, pp. 169, 170.
}

\section*{The New Ideas-Sociai Progress.}

The residence of so many Chincse abroad tends quite as much as the presence of forcigners in China to bring about the inevitable renovation of the land. Careful observers, the Chinese preserve in their memory all the lessons taught them by the hard struggle for existence. They thus learn to adapt themselves to the new conditions, modifying their methods and adopting foreign arts, not with the youthful enthusiasm of the Japanese, but with determination and indomitable perseverance. Proud of their ancient culture, and fully conscious of the superiority of some of their processes, they are never tempted blindly to accept foreign ideas and fashions. Unlike the Japanese, they refuse to conform in dress to the "Redhaired Barbarians," but they are fully alive to the advantages to be derived from Western inventions. Apart from the mandarins, who have privileges to safeguard, and who are consequently wedded to the old ways, the bulk of the people perfectly understand how much they have to learn from Europeans. Patients crowd the English and French hospitals in Tientsin, Shanghai, Amoy, and other places, and the fanciful native pharmacopeeia, in which magic played such a large part, is thus being gradually assimilated to that of the West. Vaccination has already replaced the dangorous method of inoculation by the nostrils ; and enlightened practitioners, with a knowledge of anatomy, physiology, and hygienics, begin to make their appearance here and there amid the countless tribe of quacks and charlatans. European schools have been opened in the treaty ports, where the students have readily followed all the instructions of their foreign teachers. They have even learned the music of the "Barbarians," to which they were formerly supposed to be absolutely insensible. In spite of the great difficulties presented by works translated from such totally different languages, thousands of scientific books have already been published and largely circulated. The native journals issued by foreigners in the treaty ports are eagerly read, and amongst others the Shunpuo, a daily paper published in Shanghai, had recently os many as 8,000 native subscribers.

Yielding to the pressure of public opinion, the Government itself established in 1868 a bureau in the arsenal of Kiangnan, for the purpose of publishing Chinese editions of the chief Europear scientific works. It has also founded in Peking the Tungıen Kican, an administrative college, where English, French, Russian, and German are taught, and where physics, chemistry, medicine, physiology, astronomy, and other branches are intrusted to foreign professors, assisted by native tutors. Most of the courses are conducted in English, and this college, which had about 100 students in 1876, now supplies a portion of the officials engaged in the administration of the empire. On the other hand, the Government establishment hitherto maintained at Hartford, in Connecticut, was suppressed in 1881, in consequence of the dangerous influence of American customs and ideas on the students.

\section*{Public Instruction-The Literati.}

In Chinese the word kiao is applied equally to instruction and to religion, and study is, in fact, regarded as a religious cult. For thousands of years the obliga-
tion of parents to instruct their male offspring has been universally recognised. All towns and villages must be provided with schools, whose teachers are supported by the commune, and freely chosen on the recommendation of the householders. Wealthy families generally keep one or two tutors, and in the large towns there are evening elasses for the convenience of those engaged at work during the day. Thus has been developed a deep-rooted respect for learning amongst all elasses. \(\boldsymbol{\Lambda}\) sort of reverence is inspired by the inscriptions and sentences of the aneient sages, which adorn the houses and publie buildings, and which convert the whole country into a vast library. The very paper is revered, as if the words covering it were the essence of all knowledge.
" After reading and writing the whole education of the Chinese consists in the knowledge of the ancient classics, which in themselves contain many excellent doctrines, but are hardly sufficient to form the beginning, middle, and end of a man's education. Moreover, in these ancient classies there are many exceedingly difficult and obscure passages; a certain fixed interpretation of these is prescribed by law, and woe betide the unfortunate candidate at an examination who should venture to think for himself, suggest any new meaning, or cast

Fig. 150.-M. Yang, Attacue of the Chinebe legoation in Pahis.
 addicional light on that whieh has once been explained by the sages in a certain way, and of which in consequence any further illumination would be profane.
"Can it be possible for any nation to devise a system which would more effeetually crush out all germs of originality or thought from the mind of the people? "*

Yet the superstitious respect for this system has been transferred to the literati, and to the Government which they represent. Men who have had the good fortune to penetrate into the mysteries of writing seemed almost like demigods. But recent events cannot but tend to diminish the traditional veneration of the masses for the literati. The hollowness of their vannted science has been revealed, and it was discovered that, without having stadied the "five classics," foreigners have succeeded in making discoveries immeasurably more important than the dry-as-dust commentaries on the words of Confucius. Here are already the germs of a moral revolution, which cannot fail to have its political consequences. The prestige of authority is on the wane, and no efforts of the mandarins will
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\text { Gill, op. cit. i. p. } 307 .
\]
succeed in again reviving it. The peasantry and labouring classes, a great part of whose existence has not been spent in the study of the written language, perceive how much reduced has been the distance separating them from the literati. The centre of gravity in the empire is being displaced, to the advantage of the people and at the expense of the authorities, and political revolutions are the inevitable consequence of the intellectual evolution now taking place.

\section*{Pending Changes in the Soclal System.}

To speak, as many do, of the immobility of the Chinese Empire, is altogether unjust, for nowhere else have more revolutions been accomplished, or more varied systems of government been essayed. "To improve, renew yourself daily," said one of the ancient sages quoted by Confucius. But it is not difficult to understand why great changes are now slower in China than elsewhere. The people have the consciousness of their ancient culture, and they may have well believed for centuries that they were the only civilised nation, surrounded as they were either by barbarians or by populations whose teachers they had been. Suddenly from beyond the seas and over the platcaux and deserts they behold other nations advancing, who with a more recent history outstrip them in knowledge and industry. The world becomes enlarged and peopled around them, and those outer spaces, to which they attached such little importance, are discovered to be ten times larger and twice as populous as China itself. Their assumed superiority thus disappears for ever. Assuredly such a proud people could not without bitterness contemplate the relative diminution of their importance in the world, and it must have cost them many a pang to have to learn new lessons of wisdom in the school of the stranger. Nevertheless these lessons they are prepared to learn, without, however, losing their self-respect. They study the European sciences and industries, not as pupils, but rather ns rivals, anxious to turn their opponents' resources against themselves.

It was high time that this outward impulse should come and quicken the nation into a new life. Science had been reduced in China to the art of skilfully handling the pencil in the reproduction of empty classic formulas. Proud of possessing in their ideographic signs a really universal language, the literati, who are also the rulers of the people, had come to regard reading and writing-that is, the instruments of science-as science itself. Hence they were content to pass their life in learning to read. The measure of their reputation was filled when, after a long course of studies, they had mastered all the mysteries of their written language. Short indeed was life for this long art, which left them no time for independent studies. Ignorant of the present, indifferent to the future, they have hitherto lived only in the past. Everything must be judged by tradition und the precedents found in the classics, where must also be sought the rules of government. To write and understand the official dispatches, to discover the formulas of the rites accompanying all important social and political acts, constituted, in fact, the distinctive functions of the mandarin, the foundation of his prestige, his only claim to the obedience of his subjects.
s, a great language, the literati. vantage of ons are the
altogether d, or more reelf daily," difficult to here. The y have well surrounded y had been. they behold ip them in round them, ortance, are self. Their roud people their imporave to learn these lessons pect. They er as rivals,
quicken the of skilfully Proud of literati, who ing-that is, tent to pass filled when, their written hem no time future, they by tradition ht the rules discover the acts, constilation of his

\section*{GOVERNMENT AND ADMINISTRATION.}

Theoretically the State is a large family. The Emperor is ut once "Father and Mother" of his children, and the affection due by them to him is that of a twofold filial piety. If he commands, all hasten to obey; if he requires the life or property of a citizen, both must be surrendered with a sense of thankfulness. He may even control land, water, and the air, for the invisible genii all exceute his mandates. He is the "Son of Heaven," the Sovereign of the "Four Seas" and of the "Ten Thousand Peoples." He alone has the privilege of sacrificing to heaven and earth as the High Priest and Head of the great Chineso family. He speaks of himself in lowly language, as an "imperfect man," and is even distinguished amongst the grandecs of his court by his modest garb; but ho accepts the most extravagant expressions of worship. Present or absent, he receives from his subjects divine honours, and the highest dignitaries fall prostrate before his empty throne, or before his yellow silk umbrella adorned with the five-clawed dragon and the turtle, emblems respectively of good fortune and power. In the provinces the mandarins burn incense on the receipt of an imperial dispateh, and strike the ground with their head turned towards Peking. S, hallowed is his name, that the signs used in writing it can no longer be employed for other words without being modified by a diacritical mark. "Tremble and obey!" is the formula invariably terminating all his proclamations. Under him all are slaves, and his representative in Tibet during the expedition of Huc and Gabet wore the chains of a criminal in the form of a gold necklace concealed under his robes, in token of the imperial displeasure.

\section*{Filiaic Devotion to the Head of the Family and of the State.}

The veneration of the people for their "Father and Mother" is not merely a political fiction. All the national institutions are so constituted as to establish a perfect parallelism between the duties of the son and those of the subject. From his childhood upwards the Chinese learns that the paternal authority belongs to the head of the great family, as well as to the head of the smaller family of which he is a member. Even in the school a coffin inscribed with the word "happiness" reminds him that his first duty will be to appease the manes of his parents. "Unruly conduct implies a lack of filial duty, as do also treason to the sovereign, negligence in the exercise of the magisterial functions, insincerity towards our friends, cowardice under arms." The father is always regarded in the family as representing the emperor ; hence domestic revolt is punished in the same way as high treason. The national annals are full of incidents which bear witness to the care taken by the Government to uphold this fundamental principle of the empire. Sons guilty of crimes against their parents are put to death, and their houses demolished; the magistrates of the district lose their office, and the examination halls are closed. The spot where the crime took place remains accursed, and whole communities have even been displaced, as was the city of

Luchew, on the Upper Yitng-tze, in consequenco of a parricide. According to law, old men after their soventieth year must be regarded as ancestors, and the honours accorded to them increase with their years. At any cost the empire must remain "filial," as the imperial ediets express it. Of the sixteen publie lectures delivered periodically to the people on the subject of their duties, the first deals with filial love. The very official designations of the cities, palaees, streets, und public places form, so to say, a complete moral course inspired by the domestic virtues. Amongst the twelve temples required by the law to he erected in

Fig. 1ati. - Chinese Quakten, Shanohal.

1. Magistrates' House.
2. University.
3. Revidence of the Military Com. Mander.
5. Depôt of liief for Peking.
6. Literary Institute.
7. Temple of the Defender of the City.
8. Temple of the God ot War.
9. Temple of the Protector of Earthly
10. Temple of Blensings. 11. Government Palace. 12. Tower of the Godidess Kwan Yin 12. Tower of the Godiess K wan Yin ,
14. Foundliog Asyium.
15. Founase of all the Virtues
15. Moune of all the Virtues.
16. Tomple of the Fire Geoius.
16. Tomple of the Fire Geoius.
17. Palace of the Heavenly
18. Hall of the Blue Mist.
20. Mound of the litlle opaque Sun.
21. Peace 8 Street.
21. Peace Strect.
22. Street of the Hearenly Eminences.
23. Street of the House of Eloquence.
24. Street of the Hesd looking beckwards. 24. Street of the Hesd looking backw
25. Street of the A pproving Hesd. 25. Street of the Approving He
28. Street of the Yellow Head. 26. Street of the Yollow Head.
27. Canal of Excellence of the StartingCaoal of
point.
28. Serene Banotuary of the Ancestora 29. Bridge of the Thousand Agee.
every town, one is always consecrated to ancestry. Not a shop nor a wayside inn but its signboard has some reference to virtue and justice and the "harmonies of heaven and earth."

The natural relations of father and son are thus confounded with those of emperor and subject, und this has been the mainstay of the State in the midst of countless internal revolutions, forcign invasions, and dynastic changes. The revolutionists do not seem to have ever aimed at the subversion of this fundamental principle of government. Even the most advanced socialists have always accepted the sacred choracter of the Emperor as at once the "Father and Mother"
cording to law, nd the honours re must remain tures delivered irst deals with s, streets, and \(y\) the domestic he erected in
eavenly Eminences. use of Eloquence. ad looking backwards. ad looking back
pproving Head. sproving H
How Head.
llow Head.
ry of the Ancestors. housand Ages.
nor a wayside he " harmonies
with those of : in the midst changes. The is fundamental have always \(r\) and Mother"

M. TSENG-chinese minister in Paris.
of his people. In recent times only the Chinese freethinkers, acting undor the influence of foreign ideas, and probably unconscious of the ultimate consequences of their revolt, have for tho first time attempted to throw ridicule on the supreme ruler, scrawling ribald sentences on the walls, which passers-by read with amazement. According to the old theory, the sovercign, ascending the throne in the name of Heaven, was none the less to be worshipped, whatever might be his personal virtues or vices. "However old the cap, we put it on our head; however clean the shoes, we put them on our fect. Kié and Chew were vile wretches, but they were kings; Ching-thang and Wu-wang were great and holy persons, but they were subjects," writes Confucius in the Shuking.

\section*{Limitations of the Imperial Authority-The Emperor's Household.}

Yet although absolute in principle, since it is of the divine essence, the sovereign power is practically limited. All the provinces enjoy certain traditional rights, which have the sanction of ages, and which the Government always respects. Public opinion also, however submissive, is none the less intelligent, and in its eyes "the emperor and the subject who violate the laws are both equally guilty." "Secure the affection of the people, and you will secure the empire, lose the affection of the people, and you will lose the empire," says a popular proverb. The law is laid down for the sovereign himself; it is summed up in the " nine rules" of Confucius, which recommend to the Emperor moral perfection, respect for the sages and parents as well as for officials and magistrates, paternal love of the subject, encouragement of learning and the arts, hospitality towards stiangers, consideration for his allies. Guided by the Censors, whose duty it is ever to remind him of these precepts; bound on all sides by the rigorous rules of a ceremonial filling two hundred volumes; attended by two-and-twenty historiographers, who daily record for posterity all his sayings, doings, and commands, the Emperor almost necessarily loses all individuality, all personal impulse, and becomes a mere instrument in the hands of a minister or a faction. He ceases to be responsible fer his own acts, although by a State fiction held none the less responsible for the happiness and misfortunes of his subjects. In this respect the theory of the imperial power is more legical in China than in other monarchical states. Sovereigns are usually inclined to take credit to themselves for the prosperity, but seldom for the calamities, of their people. The moral code of the Chinese emperors is more consistent. "Are my subjects cold ?" said the Emperor Yao. "I' am to blame. Are they hungry? It is my fault. Have they met with any disaster? I take the responsibility." Yao also charged himself with the national calamities. "During the reigns of Yae and of Shun, all felt it a duty to follow the example of their virtues. I must needs be far from resembling them, seeing how many criminals now exist." "I alone am guilty," said Ching-thang when speaking of the woes of his people; "I alone must be immolated." Responsibility thus increasing with power, Mengtze goes the length of sanctioning regicide when the
sovereign outruges justice. "There is no difference," he said, " between murder by the sword or by maludininistration."

The Government being modelled on tho family, both the mother and consort of the Emperor are entitled to the highest honours. Like him, the reigning limpress has the golden seals and jade stone, symbols of supreme power, and to her poetry has consecrated the fong, a fabulous animal analogous to the phonix. She receives the homage of the Emperor himself, who every five days pays her an official visit und bends the knce in her presence. The three other legitimate wives yield her implicit obedience, as do all the other members of the harem, who are limited by the book

Fig. 152.-Acmmei Palace--Bhonzr Llong, Fmblems of thf Imprial Power.

of ceremonies to one hundred and thirty. A special minister takes eharge of the imperial household, and directs the education of the prinees, who have mostly no rank except in the Manchu armies. From their number the Emperor chooses his heir, who is nearly always one of the Empress's children. At the death of the sovereign all sociul life is suspended. The grandees put on white, the colour of mourning, for a twelvemonth, the others for one hundred days, during which period no feasts or weddings can be celebrated. Bright-coloured garments are laid aside, all leave their hair unshaven, and the barbers, whose office is interdicted, become for the time State pensioners.
"Lost in his greatness," the Son of Meaven, called also the " Man of Solitude,"
probably because no one has the right to be his friend, delegates his functions to the Neiko, a Cabinct composed of Manchus and Chinese ineequal numbers, which draws up the laws, issues decrees, and sees to their exccution. In virtue of the principle by which instruction and the public examinations are the source of all honours, the two presidents of the Neiko-that is, the two Imperial Chancellors-are the directors of the Academy of the Manlin. Their office is to propose the laws in the supreme council, to determine the form of public mandates, to submit official documents to the Emperor for his signature with the vermilion pencil, and to publish all decrees in tho Kiugpao, or officiul journal, known in Europe as the Pehiug Gazette. Before being presented to the Council of the Neïko, all State questions are submitted either to the tribunal of the Censors. the High Court of Justice, or the Lut-pu, which comprises the six Ministries of Finance, Civil Service, Board of Works, War, Rites, and Penalties. Besides these, another department has charge of the Colonies; that is, of the imperial possessions beyond the eighteen provinces of China proper. But the Tyingli-y/ninen, or Foreign Office, constituted in 1861, and now the most importunt of all, has no official existence, being composed of the members of the other departments.

The Emperor may, if he pleases, suppress all discussion, in whinh case be addresses himself to his private Cabinet, which deliberates in secret. His acts may doubtless be controlled by the tribunal of Censors, who have the right of remonstrating, while petitioning to bo beheaded or torn to pieces if their warnings be not justified or their statements revealed. But this tribunal usually confines itself to watching over the public and private conduct of the mandarins and their subjects by an organized system of espionage. The result of this is that their lucrative posts easily enable the mandarins to come to an understanding with the Censors, and thus continue the work of extortion to their mutual benefit.

Hence it is not surprising to find that instances of extortion and oppression of all sorts are so universal as scarcely to excite any surprise amongst the people. Meadows mentions the case of a military mandurin of low rank stationed some years ago neur Whampoa, who in the course of his exactions demanded moncy from the head boatman of a watch-boat, employed by the inhabitants of the district for the prevention of night robberics on the river below Canton. The boatman, relying on the support of his employers, among whom were several literati, refused to give anything. The mandarin thercupon induced a man, taken for some trifling offence, to make such declarations in his depositions as went directly to prove that the boatman had been guilty of robbery, and then issued a warrant for his apprehension. The inhabitants of Whampoa, represented by a literary graduate named Fung, would not, however, permit the man's being seized; but knowing him to be innocent, said he should himself go to Canton and demand a trial. This he accordingly did, the graduate Fung at the same time petitioning the GovernorGeneral on his behalf. But the mandarin had alreudy reported the case to his chief, the admiral at the llogue, and the latter had written to Canton about it. In addition to this, the mandarins are at all times loath, from a kind of esprit de corps, and a feeling of the necessity of mutual support in their extortions, to aid the people
when in opposition to a member of their own class, and were, moreover, at that time, ns now, doing all they could to reguin the power over the people, which they had lost through the weukness displayed during the wars with the English. The consequence was that, for these various reasons, the death of the unfortunate man was determined on. He was accordingly beaten and otherwise tortured till he confessed himself guilty of the charge brought against him, and soon after executed, with several other equally innocent people who had been implicated in the same manner by the Whampoa mandarin. The graduate Fung had his degree taken from him for having interested himself in behalf of a robber.*

\section*{Education-Puilic Examinations.}

There is no special board of education, because the whole machinery of the administration is assumed to have no other object except the instruction of the people. Students able to read the five King and the other classics may already look forward to a brilliant career, one of the fundamental principles of government being that place is the reward of merit attested by the public competitive examinations. "Here is taught the art of government," says an inscription over the gate of the Peking Academy. Promotion to higher posts is still obtained by fresh examinations, so that the whole administration may be regarded as a vast scholastic hierarchy. When the coffers are empty, the Government no doubt often departs from the rule, conferring honours for "presents," or bribes; but the people do not forget the origin of these functionaries, and will even taunt them with having obtained promotion by money instead of merit. Many of the Manchu military mandarins also owe their appointment to their nationality, and they are consequently held in less esteem than the civil functionaries. At the annual feasts the learned mandarins take the east side, which is the post of honour, whilo in the temples of Confucius the military officers are excluded altogether from the ceremonies in honour of heaven and earth.

In all the large cities one of the chief buildings is the public examination hall, which consists of a multitude of rooms and courts, surrounded by cells for the candidates, who are supplied with nothing but white paper, pencils, and inkstand, and guarded by sentinels from all communication with each other. Sometimes as many as 10,000 or 12,000 present themselves, remaining for several days iuprisoned, writing moral and political essays, commenting on selected texts of the sacred books, composing sentences and maxims in prose and verse. Candidates have been known to die of exhaustion in their cells, in which case the outer wall is pierced, and the body secretly removed. Except certain despised classes, police agents, actors, barbers, palanquin bearers, boatmen, mendicants, descendants of rebels, all are allowed to compete, and the examiners will even shut their eyes to the statas of the candidates, provided they have a fixed domicile. There is no limit as to age, old men and precocious youths often presenting themselves; but such is the severity of the tests, that, on an average, less than a tenth of the
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\text { *"Chinese Notes," p. } 176
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competitors obtain the siutsati, a rank corresponding with our B.A. Those who have passed, even before obtaining ant appointment, become alnost indepentent of tho communnl authorities, and constituto a special and numerous elass in the State. Amongst them are found the most enlightened members of the community, the most during innovators, by whom the work of socinl reform is being most actively promoted.

Every year the Chancollor, delegated by tho Academy of tho Hanlin (" Plumago of the Red Phonix "), inquires into tho condition of the licentiates of the previous year, classifying them in the order of merit, and oven occasionally degrading them. But the examinations for the Kiu-jen, or higher degree of "promoted men," take pluce every three yeurs only in tho provincial capitals, under the presidency of two members of the Hanlin. The succossful competitors, seareely more thun 1,300 for the whole empiro, receive the congratulations of the magistrates, and public rejoicings take place in their honour. Three years afterwards they may present themselves in Peking, to undergo the examination for the rank of tsinge, or "full doctor," entitling them to a special dress, precedence at the ceremonies, and a high post in tho Government. Other examinations admitting to the Academy of the Hanlin take place in the Imperial Palace, under the very oyes of the Emperor, or at least of the highest court dignitaries, amongst whom they intrigue for promotion.

For the reality is far from corresponding with the brilliant pieture often drawn of this system. Even supposing that appointments always depended on tho results of the examinations, it may be asked how a good memory and a profound knowledge of the elassics can be any guarantee of political intelligence and capacity. Is it not rather to be feared that by being restricted to antiquated studies, over twenty centuries behind the age, the future statesman will become a victim of arrested development, and thereby rendered incapable of understanding the present conditions? However perfect his penmanship, the magistrate is none the less exposed to the temptations of venality and peculation. The unanimous testimony of truvellers, as well as the popular comedies, ballads, and political squibs, accordingly show that the lettered functionaries are by no means inferior to the ignorant Manchus in the arts of oppression and maladministrution. As a rule, the people are less afraid of the mandarins who have purchused their office than of those appointed by competition. Being richer, they are less avaricions, and although less familiar with fine maxims, they are more upright and less enslaved to official "red-tapeism."

Nevertheless there can be no doubt that the surprising stability of the Chinese political system in the midst of countless foreign invasions and internal convulsions is in a large measure due to these public examinations, which are conducted with great impartiality, and which render the highest offices of the Government accessible to the meanest citizen. A great number of the only class of individuals whose abilities would enable them, if subjected to continual oppression, speedily to overturn the Government, are by the existing system of public examinations continually raised above all oppression, and become, in fact, the parties who commit
it. A still grenter number hope to raise themselves to the same position, and are, together with their relations, thus induced to endure such evils patiently rather than seek to overthrow a Government, the characteristic feature of which is u system they hope eventually to derive more personal udvantages from than would be sufficient to compensate them for what they suffer. With this latter body of literati, rising seholurs and their near relations, the actual holders of office are, moreover, nlways obliged to be somewhat more scrupulous and tender in their dealings. Hence the only class which the mandarins have to repress and overcome by force is composed of persons who have either no natural ability, or are too poor to procure an oducation-persons who, with a moderate proportion of talented and educated leaders, would from their number and their desperation be truly formidable, but, left as they are to themselves, only break out into tumults and insurrections, which, like the Jaequeric in France, and the insurrection of the common people in the minority of Richard II. in Englund, and those that prevailed in the south of Germany and in Hungary during the end of the fifteenth and the first quarter of the sixteenth centuries, aro ultimately put down with terrible loss to themselves, after some well-deserved punishments have been inflicted and some ravages committed by them at the first outbreak.

In China, in addition to the absence of talent and knowledge on the side of the insurrectionists, it so happens that the education, which the promotion of talent and ability only to the honour and wealth conferred by office diffuses so extensively, is of \(a\) nuture which tends materially to prevent ideas of resistance spreading among the people. Every man is induced to learn himself, and infuse anxiously into the minds of his children from their carliest infancy, a set of doctrines all inculeating the duty of patient endurance, the necessity of subordination, and the beauty of a quiet, orderly life. Tho feelings with which the people are thus imbued would not, of course, be sufficient of themselves to prevent a successful rise against the cruel oppressions actually existing. But they help to do so, and in every ease they give a speedier effect to the power, moral and physical, which is put in motion to suppress commotion. For it is only very strong, and therefore very rare, minds that are able to offer a continued practical resistance to the deep impressions of carly youth.*

\section*{The Mandarins.}

All the civil and military officials, often grouped under the collective designation of Pé-kwan ("Hundred Functions"), bear the generic name of Kerang-f", translated in European languages by the term "mandurin," which was originally the Portuguese pronunciation of the Hindu title of the native magistrates in Goa.t They are divided into nine orders, outwardly distinguished by the colour and material of the "button," or knob, about the size of a pigeon's egg, which is attached to the official cap of straw, felt, or silk, either

\footnotetext{
- Th. Meadows, op. cit. p. 190.
\(\dagger\) Col. Yule's "Book of Ser Marco Polo."
}
conic in shape, or with upturned brim. Their title are not transmitted to their offspring, and even when ennobled, the honour is retrospective only, affecting not their posterity, but their ancestry. The civil mandarin is even forbidden to take his father with him to his government, lest, in case they differed in opinion, the mon might be placed between two equally imperious duties, obedience and filiul piety. Hereditary titles are reserved for the dencendants of Confucius and the emperors, but even the latter are subjected to the regular examinations for public offices. The only privileges of the members of the imperial fumily consint in a modest pension, the right to wear a red or yellow girlle or a peacock's feather in their cap, and to be carried by a team of eight or twolve palanquin bearers. In the administration they count for nothing, and special mandarins are appointed to keep them in due subjection, and even to apply the rod in ease of insubortinution.

Like the Emperor, every mandarin is at once "father and mother" in his reapective jurisliction. They were formerly spoken of as "elouds," because they were supposed to "shed the healing showers on the thirsty soil," All loeal functions are centred in their hands. They levy the taxes, build roads, organize the militia, and are, in fact, little potentates in their severul districts, but with the threat of deposition always hanging over them. As the father is responsible for the faults of his children, the mandarin may be denounced for all the crimes murders, and outbreaks that may take place in his jurisdiction. Hence, although bound to make a yearly report of his errors in a special menoir addressed to the Emperor, he generally omits to mention the disorders that have occurred in the district. Formerly the mandarins were frequently condemned to eapital puuishment, but now tho usual sentence is banishment to Manchuria, Zungariu, Formosa, or other outlying regions. Recently the foreign powers have unwittingly aimed a great blow at their power, and tended in no small degree to promoto the political centralization of the empire, by refusing to treat directly with the provincial governors and viceroys, and by always addressing themselves to the court of Peking.

One of the most serious defects in the existing administrative system is the totally inadequate pay given to the lower officors, and the low rate at which the salaries of the higher mandarins are fixed-low especially when the wealth and extent of the territories over which they rule are taken into consideration. The mandarins are, in consequence, obliged to gain their incomes by means of extortion, bribery, and illegal fees levied by their underlings. These retain a certain portion themselves, but the greater part goes in different ways to the purses of the mandarins.

Perhaps the total amount of revenue, public and secret, derived by the actual governing power in China is not larger in proportion than that obtained in England. The great evil is that by far the larger part of it is levied in a very unequal manner, that at once demoralises the nation and damps its energies.

The people, knowing that the mandarins cannot possibly live on their salaries, excuse and acquiesce in the imposition of certain generally understood irregular fees, which every one who applies to the courts must pay. On the other hand, the
mandarins as a natural consequence tuke advantage of a system thus endured as a necessary evil, to enforce arbitrary extortions, and oblige people to offer bribes. Hence in the whole country corruption and injustice are rife. In fact, all mandarins without exception tuke money over and above their salary, and even beyond their anti-extortion allowances. The great difference between what the Chinese call the "good" and the "bad" mandarin is, that while the former makes people pay, for justice, as indeed is largely the case everywhere, tho latter sells justice to the highest bidder.

This irregular state of things, moreover, renders the mandarins themselves dependent on their elerks and police officers, and obliges them to wink at infringements of the law by which they personally gain nothing. Thus some of the lower functionaries continue to serve after the legal period of five years, and in fuct maintain permanent possession of their posts, merely by changing their names, although the mandarin is liable to a heavy punishment for permitting it. Were ke to attempt to enforce the luw, these officers would resist in a body; and as it requires great experience and tact to levy the illegal fees without getting into trouble, the new functionaries would find it very difficult to transact public business and raise the irregular revenue, which is, of course, the main object of the mandarins. A case occurred some time ago in Canton, in which a new superintendent of finances, who had at a previous period held a lower post and then been insulted by the underlings, in revengo immediately forced them to leave on being made superintendent himself. But he was eventually obliged to receive them all back again after putting himself to much trouble, and making what practically amounted to an upology.*

At once military commanders, administrators, and judges, it is in the latter capacity that the mandarins are most dreaded by their subjects. Notwithstanding the stringent measures taken against venality, the bribes of suitors still continue to compensate for the low rate of their salaries, originally fixed according to the income they might earn as artisans. The old edicts decree the penalty of death against unrighteous judges, but there is practically no appeal from their sentences. " It is well," said the Emperor Kang-hi," that all men should have a wholesome fear of the tribunals. I desire that all having recourse to the magistrates be treated mercilessly, so that all may dread to appear before them. Let good citizens settle their disputes like brothers, submitting to the arbitration of the elders and mayors of the communes. Let all obstinate and incorrigible litigants be crushed by the judges, for such is their desert." In many places differences are still settled by the heads of families according to the unwritten code, and the lex taliouis is everywhere respected. Private vengeance is also often carried out by suicide. Debtors pursued by their creditors, farmers oppressed by their landlords, the artisan injured by his employer, the wife harassed by her mother-in-law, can nlways adopt the expedient of hanging themselves in order to obtain redress. The whole community then takes up their cause and avenges them-symbolically. A broom is placed in the hand of the victim, and this broom, being moved to the

\footnotetext{
* Meadows, op. cil. p. 168, 169.
}
as endured as o offer bribes. In fact, all lary, and even reen what the former makes he latter sells ins themselves n to wink at Thus some of five years, and hanging their permitting it. n a body; and ut getting into ransact public n object of the a new superpost and then em to leave on ged to receive making what
\(s\) in the latter otwithstanding till continue to cording to the snalty of death heir sentences. re a wholesome magistrates be m. Let good itration of the ble litigants be differences are code, and the carried out by their landlords, her-in-law, can a redress. The mbolically. A 5 moved to the

Fig. 158.-Vagrant Convicts.

right and to the left, sweeps away the fortunes, the prosperity, the whole household of the tyrant.

\section*{EAST ASIA.}

\section*{Pexal Cone.}

The penal code is clear, precise, and logical, but extremely harsh. Most sentences are passed after a simple examination made in public. There are no recognised advocates, and if the mundarin allows friends or relatives to plead for the accused, it is entirely an act of condescension on his part. Being relatively far less numerous than in Europe, the magistrates decide cases in a much more summary maner. Still armed with the right of inflicting torture, they exercise it with the same severity as was practised in the West until recent times. Scourging, tearing out the mails, crushing the ankles or fingers, hanging by the armpits, and a hundred other excruciating torments are inflicted for the purpose of extracting confessions or revelations of accomplices. Atrocious sentences are daily inflicted, and besides the three ordianry methods of putting to death, by beheading, strangling, and garotting, the code provides for the punishment of " slow death." Formerly flaying alive was protracted for days together, but at present a few gashes on the face and hands are substituted, after which decapitation puts an end to the vietin's sufferings. Fortunately the nervous system of the Chinese is far less sensitive than that of Europeans. The doctors attached to the hospitals in Hong Kong and Shanghai all speak with astonishment of the indifference of the patients under the severest operations.

For lighter offences the usual punishments are the rod and the cangue, a wooden collar weighing about 75 lbs . The convict condemned to wear this horrible instrument of torture, finding no rest asleep or awake, and exposed night and day to all the inslemencies of the weather, breaks down under the pitiless burden, and implores wayfarers to put an end to his intolerable sufferings by death. The prisons are loathsome dens, where the condemned are huddled together, and exposed to the brutality of gaolers, often ehosen from the criminals themselves. Those who are unaided by their relatives or the charitable societics run the risk of being starved to death. Women are seldom punished with severity, their husbands or sons being considered responsible for their faults. The principle of substitution is fully recognised, not only in the case of a son presenting himself instead of his father, but even when a stranger offers, "for a consideration," to undergo the sentence. As long as the debt is discharged, justice is satisfied, whoever be the vietim. Even in the case of torture and death, suppliants are found willing to endure everything in order to secure some advantage for their families. During the Anglo-French invasion of Pechili, some Chinese assassins having been sentenced to death, substitutes presented themselves, and loudly denounced the injustice which refused to ullow them to take the place of the eriminals. Those sentenced to the rod casily find crowds of ready volunteers, whence the remark that "in China there are thousands who live by blows."

In some districts a substitute may be procured to confess himself guilty of a felony, and suffer certain death for about fifty taels of silver, a sum equivalent to \(£ 17\) sterling, but worth in China perhaps as much as \(£ 100\), regard being had to the relative price of provisions and other necessaries. Hence it is that the
murder of mandarins and riots are so frequent in those distriets. When any of the richer classes are dissatisfied with the conduct of a mandarin, they are never prevented from instigating the lower classes to make disturbances by the fear of personal punishment. Some years ago a magistrate having been killed during an outbreak in the east of Kwangtung, the provincial judge was sent from Canton with a strong force to seize and punish the eriminals. On his arrival, however, he found a large borly of men assembled in arms to oppose him, and the matter was disposed of by a secret compromise, as so frequently happens in such enses in China. The wealthy members of the community, who had instigated the murder of the district magistrate, awed by the force brought against them, bought about twenty substitutes ready to personate the true criminals. They then bribed the son of the murdered man with a large sum to allow these men to cull themselves the instigators, principals, and accomplices. The judge, on the other hand, being obliged by the code of the Board of Civil Office to execute somebody, or see himself involved in punishment, knowing also that if he attempted to bring the real offenders to justice they would employ all their means of resistance, ending possibly in the defeat of his force and his own death, gave way to these considerations, supported as they were by a bribe, and ordered the twenty innocent substitutes to be put to death. This is one of the many instances in which the pernicious effects of the practice of personating criminals make themselves apparent. \(\Lambda\) system of falsehood and corruption has been engendered by it that is perfectly appalling, and, as in this case, lends frequently to results which cannot be contemplated without a feeling of horror.*

All capital sentences are submitted to the Emperor, and delayed till autumn, when the final decision is made, and the names of tho reprieved encircled by a stroke of the vermilion pencil. But in times of disorder or political revolutions the provincial governors are armed with absolute power, and move about attended by bands of executioners, who are kept busily engaged at their sanguinary work. When the English attacked Canton in 1855, the Viceroy boasted that he had dispatched 70,000 of his subjects in seven months, about 330 a day. At present the native tribunals in the European concessions at Shanghai and the other treaty ports are assisted by foreign residents, whence the expression " mixed courts," by which they are usually known. In these tribunals torture is never applied, at least in the presence of the European judges, and in Hong Kong the English have also abolished torture. There is even some hope that it may ere long disappear from the penal code of the empire.

An interesting social feature of Shanghai are these Mixed Courts, where "offences are tried before two judges, one Chinese and one foreign. One of the English judges took me with him one day, and I sat on the bench next to the Chinese official, who had the rank of Chih-Fu.
"The room was fairly large, and the judges' table raised on a low platform. The space in front was divided into three portions by railings; the policemen, writnesses, \&c., were on the right, and the prisoner was brought in to the centre

\footnotetext{
- Meadows, op. cit. pp. 173, 174.
}
division, led by his plait. He was obliged to remain on his knees during the trial.
"This man had pretended that he was a broker, and had gone to the different European firms, from each of which he had obtained a sample of sugar, which he afterwards sold retail. Ho was convicted und sentenced to two months' imprisonment.
" The Chinese official at this stage of the proceedings offered me a cigar, and tea was brought in ; after which refection another prisoner was arraigned for driving a jinnyrickshaw without a license, and for which he received twenty blows with a stick.
"The next had stolen a wateh; and the last in a crowded thoroughfare had refused to 'move on.' It was a very amusing sight, and strangely like 'orderly room' in an English barrack." (Gill, i. p. 170.)

Meantime the nutives enjoy many traditional libertics unknown in some Europeum states. They may combine to dismiss an unpopular mandarin, politely escorting him out of the district, with much parade and congratulations on his happy release from the burdens of office. They may move about freely in all parts of the empire without being ehallenged by the gendarmes to show their papers. They follow whatever profession they please without permits or diplomas of any sort. The right of publication through the press or by posters is generally respected, and public meetings are held without giving notice to the police. Even in the restless city of Canton the Government has never attempted to close the doors of the Ming-lun-tang, or Palace of Free Discussion, although it does not forget to send orators who take part in the debates, and endoavour to give them a turn favourable to the interests of the mandarins.

The fundamental principle that society rests on the family has for ages maintained the old communal autonomy. In the villages all the heads of families take part in the clection of their representatives, who are chosen mostly from the agricultural class. These rural officials fulfil the functions of mayors, notaries, registrars, tax-gatherers, justices of the peace, arbitrators in family differences, ministers of agriculture, and even masters of ceremonies. No stipends are attached to the office, but they are assisted by other employés, such as foresters, surveyors, writers, also appointed by the community. In the towns all the kiachang, or householders, of each quarter, numbering from sixty to one hundred, form a Municipal Council, which elects its own paoching (mayor), as well as all the other municipal officers. The mayors of the several Chinese quarters elect district magistrates to look after the common interests, but the Manchu quarter depends directly on the Central Government.

\section*{Army and Nayy.}

Although the military forces are being gradually reorganized on the European model, public opinion is still unfavourable to large standing armics. The people have constantly in their mouth the saying of Confucius, that "for every man who does no work there is another who lacks bread;" and the little esteem entertained for the military is illustrated by another popular saying, to the effect that " good
men are not required to make soldiers, or good iron nails." Hitherto the reeent changes have only affected two army corps-that of Tientsin on the Lower Peï-ho, and the 50,000 men who, since the reduction of the Dungan rebels, occupy the western regions of the empire on the Russian frontier. Apart from these, the various armed bodies are littlo better than those dispersed in 1860 by the Allies near Peking. The army of the "Eight Banners," which was formerly the mainstay of the dynasty, has retained its old organization. It consists almost exclusively of Manehus and Mongols, all married, and each with a plot of ground or a garden, so that they aro rather military colonists than soldiers. Numbering about 230,000 , they are probably more dangerous than useful, cheir presence in the

Fig. 154.-Defences of thr Mouth of the Pei-ho. Scale 1: 133,000.


Manchu quarters constantly reminding the nation of its defeat, and thus keeping alive a spirit of rebellion against the Manchu power. The only efficient Manchu corps is the Hiaokiying, which occupies the Peking district, and is said to comprise 36,000 men and 26,000 military students. The highest military title, that of Siangkiun, answering to the Japanese Shogun, can be held only by a Manchu.

The Lutying, or "Army of the Green Banner," divided into eighteen corps, corresponding with the eighteen provinces, is composed of 600,000 volunteers, all of Chinese nationality. This militia is chiefly employed in the police, in forwarding cereals, in maintaining the embankments, and repairing the highways. The men serve only within the limits of their respective provinces, beyond which they can seldom be induced to march, even in urgent cases. The futai, or general, is always a
civilian, on the principle universally accepted in China that arms must yield to the peaceful arts. Bodies of militia are also raised in the various departments at the expense of the communes, and in time of war the Government has the power of enrolling all able-bodied men. But such levies, without any previous training, are found to be worthless in the presence of disciplined troops.

Military exereises are almost always carried on in the imperial hunting park, which is an immense tract of country surrounded by a wall, access to which is jealously forbidden to foreigners. In addition to the land service, the Lutying mans the navy of the seaboard provinces, and has a distinct organization of divisions and garrisons, each under its own general. The strength of these provincial armies varies with the size of the province and with the duties they have to perform. But the average for each province may be about 35,000 men and 640 officers.

Properly led, the Chinese " would make magnificent troops, for by nature they are singularly obedient to authority, and would not question the demands of those who once established an influence over them. In this they are like other Easterns, but more than others their national characteristic renders them particularly ineapable of military combinations. A Chinaman can learn anything, but he can conceive nothing. He may readily be taught any number of the most complicated military mancuvres, but place him in a position slightly different from that in which he has learnt, and he will be found utterly incapable of conceiving any modification to suit the altered circumstances. This national characteristic is the growth of centuries of a narrow education; its roots are deeply seated, and lie in the insane reverence for antiquity, which is almost the beginning and end of a Chinaman's belief. Prompt action, readiness of resource, ability to seize on the smallest advantage, or to neutralise a misfortune, and the power to evolve rapidly fresh combinations-these are the qualities that make a soldier, and these are the very qualities that cannot co-exist with the Chinese want of originality. This is no unimportant matter, for it proves that, as they are, the Chinese cannot be feared as a military nation, but that with a large number of European officers, their almost unlimited numbers, their obedience to authority, and personal bravery, when properly led, would make them almost irresistible.
" Further, there is in the Chinese mind a great dread of Europeans. Supernatural powers are popularly attributed to foreigners, and, although they profess to hold the barbarians in contempt, in reality the feeling of fear predominates in their mind, although, perhaps, they would not own it even to themselves. But with good and skilled European officers, they would, as they have done before, make magnificent soldiers."*

The naval are relatively more important than the land forces, and are also more needed for the defence of the empirc. In 1880 the navy consisted of 40 steamers, of nearly 20,000 tons burden, and carrying 258 guns. The crews, mostly from Kwangtung and Fokien, are generally skilful sailoro, aid on many occasions have given proof of signal courage. Fortifications have been erected at the entry of the Canton, Fuchew, Shanghai, and Tientsin Rivers, and for these

> Gill, op. cit. i. p. 154-6.
st yield to the rtments at the \(s\) the power of \(s\) training, are
hunting park, 3s to which is 3, the Iutying ion of divisions ovincial armics ve to perform. 0 officers. by nature they mands of those other Easterns, m particularly ing, but he can ost complicated it from that in conceiving' any cacteristic is the eated, and lie in g and end of a to seize on the o evolve rapidly hd these are the inality. This is inese cannot be pan officers, their al bravery, when
8. Supernatural profess to hold pminates in their elves. But with one before, make
ces, and are also consisted of 40 ns. The crews, a, aid on many e been erected at rs , and for these
and other defensive works over 400 Krupp guns had already been supplied down to the end of the year 1879 . A vast amount of war materials is also being produced in the Government arsenals, over half of the revenue, estimated at \(£ 25,000,000\), being employed in theso military preparations. The foreign loans contracted at various dates since 1874 are also devoted to the construction of forts and ironclads. The eleven wooden ships built at Neweastle for the Government, and almost unrivalled for speed and weight of metal, form an efficient flect, admirably suited to the defence of the seaboard.

The Chinese make excellent sailors, and an experienced American skipper assured Captain Gill that he preferred them to Europeans or Americans. "They never give any trouble, never drink or quarrel; and although, in cases of danger, he admitted that at first they slightly lost their heads, yet he declared thut, with proper leaders, this lasted a very short time, that then they really had no fear, and would work as quietly and as well as under the most ordinary circumstances."*

\section*{The Revenue.}

The chief source of rovenue is the customs, which have been reorganized by Europeans, of whom nearly five hundred are employed in this important service, the official language of which is English. But this branch has charge only of the foreign exchanges, and is replaced in the interior by the likin, which is in the hands of native officers, and which doubles, trebles, and increases even tenfold the value of commodities according to the rapacity of the mandarins. By the terms of the treaties a tax of \(2 \frac{1}{3}\) per cent., added to the import duty of 5 per cent., ought to exempt merchandise from all supplementary dues. But, besides these, tolls are levied at the octroi of the large towns, on the highways, canals, and bridges, and there are many other vexatious charges which greatly hamper the trade of the interior.

But " give us free access to China; protect us in the exercise of our privileges, until the Chinese are accustomed to us and understand us, and fix our duty payments firmly and explicitly, and everything else will follow. The custom-house bugbear will disappear, for the goods will be put down at the door of the customer. Teas and silks will be bought cheaper, for different districts will be made to compete when we buy direct from the producer ; and European manufacturers, with moderate energy and enterprise, will make a fair start." \(\dagger\)

\section*{The Currenct.}

The want of a convenient currency is also a serious obstacle to traffic. The old monetary system, consisting of gold, silver, and bronze, was abolished in consequence of its depreciation by Government falsifications of all sorts. Nothing is now issued except the chen, or sapeks, an alloy of copper and tin in the form of discs, and strung together by means of a hole in the centre. A thousand of these,
- Op. cit. p. 17.
† G. W. Cooke, op. cit. p. 208.
weighing over 10 lbs ., form the tict, or monetary unit, valued at about 4 s. But numbers have no precise meaning, and change with every district, so that in Tientsin, for instance, the tiao is worth only 333 sapeks. The tael, or lan, supposed to weigh an ounce of silver, at a mean value of about 1,500 sapeks, is a fictitious coin, varying in valuo in the different marts. The foreign customs are regulated by the hai kivan tael, whose official value is about 6s., but the dues must be paid in saisi, or silver ingots hall marked. The most common coin is the Mexican piastre, specially minted for the Chinese market. There is no

Fig. 15o.-Phovincial Chief Towng, Fu and Chew, in China.
Scale 1 : 3,000,000.

gold coinage, but paper money, formerly called " winged gold," or "flying money," has been in general use for fully a thousand years.

In every part of the empire exchange is a constant source of endless trouble. "The tael is, properly speaking, a weight of about \(1 \frac{1}{3}\) ozs. avoirdupois. The term 'tael' is a foreign one, the Chinese word being 'liang.' Almost every province, and often every important city in a province, has its own tael. Thus a piece of silver that weighs a tael at Kung-king will weigh less than a tael at Keng-tu; and as all payments are made by weight, it is necessary to have a balance for each place. Then the quality of the silver varies; and besides this, in making small payments there is the further complication of the number of cash, or 'chen,' to the tael, which is, of course, unavoidable.
"It costs less to carry a pound of silver 100 miles than it does to carry the equivalent value of brass, and at places far removed from centres of civilisation, the tendency is, naturally, to bring more to an equality the value of the two metals, just as the values of all goods tend to equulise themselves, relatively, the greater distunce they are carried. But however unavoidable, the difficulty is none the less troublesome to a traveller, who has thus three things look to-first, the quality of the silver; secondly, the weight of the tael ; and thirdly, the number of cash to the tael."

\section*{Administrative Divisions.}

China proper comprises eighteen provinces, nincteen with Shinking (Liaotung), or South Manchuria, grouped in eight viceroyulties or general governments. Each province is divided into departments, or , \(m\), which are again subdivided into cher, or circles, and hien, or districts. These terms are usually added to the names of the towns that have been chosen as the capituls of the respective divisions. The puo (tu), or communes properly so called, average from fifty to seventy in every hien, besides which thero are a number of so-called chili-chew, which depend dircetly on the central administration of the province. In the regions inhabited by mixed populations the ting, or military prefectures, are numerous, and take the name of chili-ting when they are attached directly to the central administration. Some of the subjugated aboriginal tribes have also their distinct communes divided into tu, fu, theche, and tuse. Peking is under a special military administration, whose jurisdiction extends for some miles beyond the environs. The supreme command is vested in the trongtu for the viceroyalties, in the futai for the provinces, in the futsun and tootai for the circles, while the special commissioners take the title of Kinchai.

For a tabulated scheme of the nineteen provinces, with other statistical matter, the reader is roferred to the end of this volume.
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\text { Gill, op. cil. p. } 272 .
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\section*{CHAPTER VI.}

\section*{KOREA.}


HE peninsula which projects between the Japanese and Yellow Seas southwards in the direction of the southern islands of Nippon is completely limited landwards. Like Italy, with which it may be compared in extent, and even to some degree in its orographic configuration, it is separated from the mainland by the Alpine Taipeishan, or "Great Whito Mountains," of Manchuria. It has also its Apennines stretching north and south, und forming the backbone of the peninstili. As in Italy, the western slope of the highlands forms, throughout their cantral and southern sections, the vital portion of the peninsula. Here is developed the course of the Han-kiang, the Korean Tiber, and here is situated the city of Seul, present capital of the kingdom. In Korea, as in Italy, the eastern seaboard is uniform, and almost destitute of inlets, whilo the west side is deeply indented by gulfs and bays, rich in islands and small archipelagos.

Nevertheless these genoral resemblances do not descond tu minor details. The north-east frontier, towards Russian Manchuria, is very mountainous and of difficult access, whereas the plains of the Yalu-kiang valley present towards the northwest an easy natural passuge from the interior of the peninsula to the Chinese province of Liaotung. In this direction the two frontier states thought it necessary to create a sort of "marca," or neutral zone, as a line of reciprocal defence, by leaving a broad tract uninhabited and uncultivated on the north-west side of the Yalu-kiang. Till recently peaceful settlers in this region were liable to capital punishment, although banditti made it their camping ground, endangering the trade route running to the "Gate of Korea," near the city of Fungwang-shan (Fenghoang-cheng), or "Castle of the Yellow Wind." But according to the latest accounts the neutral zone, which has an area of about 5,600 square miles, is beginning to be brought under cultivation. Chinese settlers are gradually encroaching and reclaiming the land, while some Koreans have on their side already formed settlements beyond the frontier.

Like most regions of the extreme East, Korea is known to foreigners by a name which has little currency in the country itself. This term, belonging formerly to the petty state of Korié, has been extended by the Chinese and Japanese to the
whole peninsula, under the forms of Kaokiuli, K rai, atad Kunl, When all the principalities were fused in one monarchy, towards we close of we fourteenth eentury, the country, at that time subject to China, tom the officis title of "hmasien (Tsiosen)-that is, "Screnity of the Morning "—in allusion to its geograp" al position east of the empirc. Thus it is now designated by a poetical exprese which exactly indicates its position between China and Jupun. While for the people of

Fig. 156.-Gunaral View of Kano-hod, Loweh Hano-xiano.

the continent Japan is the land of the Rising Sun, Korea is the "Serene" land, illumined by the morning rays.

Although washed by two much-frequented seas, and yearly sighted by thousands of seafarers, Korea is one of the least known Asiatic regions. Even the seaboard, which presents so many dangers to navigation, has been so imperfectly surveyed that its contour, as laid down on the charts, is still largely hypothetical. Before the seventeenth century European geographers supposed that Korea was an island,
und it is so figured on the maps of Mereator, Ortelius, and Sunson. But its peninsular charucter was revealed by the map sent by the missionaries from Peking, and reprolueal by D'Anville. The first necurate observations dute only from the eightemith century, und it was not till 1787 that La Pérouse detemuined the position of the large island of Quelpuert (the Tungle of the Chinese, and Tumuro of the Jupunese), und surveyed the Strait of Koreu between the two iulund sens. Ten years ufterwards broughton cousted the southern extremity, passing through the struit which bears his nane, and which flows between the mainland and the double

Fig. 157.-Korza Sthalt.
Beale 1:2,800,000.

island of Tsu-sima. Later on Krusenstern oxtended our knowledge of the coast north from the island of Kiu-siu, and the work of exploration was continued during tho present century by Maxwell, Basil Hall, and others of various nationalities. At present the seaboard is being most carefully studied by the Japanese navigators, who have already taken extensive soundings throughout the thousand ehannels of the islets, and dangerous reefs fringing the south-west coast, and figuring on the Chinese maps as part of the mainland. Thanks to all these surveys and discoveries, the area of the peninsula may be approximately set down at about 95,000 square miles, or nearly half that of France.

Progress of Dimovery-Forkigi Relations.
The interior of the peninsula cannot be said to be altogether unknown, since its mountains are visible from the const, whence even many plains mad valloys may

Fig. 108. - Explohationn of Kohra and buhoundina Wataua. Scale 1 : 700,000.

be recognised. But although D'Anville's map, of which most others are a mere reproduction, is based on native documents, the direction of the ranges, the river valleys, and the sites of the cities are figured on it without any attempt at accuracy; nor have previous labours hitherto been checked or rectified by any explorer
worthy of the name. In 1653 the Duteh writer Hamel having been shipwrecked, with thirty-five companions, on Quelpaert Island, he was brought captive to the capital, and during the thirteen years of his captivity devoted himself to the study of Korean mamers and customs. But he had no opportunity of exploriag the land, and his itincrary is confined to the west coast. The western slopes have also been traversed in almost every direction by the Catholic missionaries, who have penetrated into the country since 1835 either from Manchuria or by sea from Shantung. But although obliged to travel in disguise, generally by night and along unbeaten traeks, to their reports we are mainly indebted for our most trustworthy information regarding the geographical features of the land.

From its very position between China and Japan, Korea could not fail to have been a subject of contention for its powerful neighbours. Before its fusion in one state it comprised several distinct principalities, whose limits were subject to fre-

Fig. 159.-Souti-wegt Archipelago of Korba.
Scale 1:1,300,000.

quent changes. These were, in the north, Kaokiuli (Kaoli), or Korea proper; in the centre, Chaosien and the seventy-eight so-called "kingdoms" of Chinese foundation, usually known as the San Kan (San Han), or "Three Han;" in the south, Petsi, or Hiaksaï (Kudara), the Sinlo of the Chinese, or Siragi of the Japanese; besides the petty state of Kara, Zinna, or Mimana, in the south-east, round about the Bay of Tsiosan. The northern regions naturally gravitated towards China, whose rulers repeatedly interfered in the internal affairs of the country. But the inhubitants of the south, known in history by the Japanese name of Kmaso, or "Herd of Bears," were long subject to Japan, while at other times they made frequent incursions into Kiu-siu and Hondo, and even formed settlements on those islands. The first conquest of the country was made by the forces of the Queen Regent Zingu in the third century. Towards the end of the sixteenth the cele-
brated Japanese dietator and usurper Taïkosama, having conceived the project of conquering China, began with that of Korea, under the pretext of old Japanese rights over the country of the Kmaso. After wasting the land he compelled the King to become his tributary, and left a permanent garrison in the peninsula. A fresh expedition, although interrupted by the death of Taikosama, was equally successful. Tsu-sima remained in the hands of the Japanese, and from that time till the middle of the present century Korea continued in a state of vassalage, sending every year presents and tribute to Nippon. Aecording to the missionaries, thirty human skins at first formed part of this tribute, but were afterwards replaced by silver, rice, linen fabrics, and medicinal plants.

Thanks to the aid sent by the Ming dynasty to Korea, in its victorious struggle with the other petty states of the peninsula, and in its resistance to Japan, its relations with China continued to be of the most friendly character. Admirers of Chinese culture, the native rulers felt honoured by the investiture granted them by the "Son of Heaven." But after the Manchu conquest of the Middle Kingdom, Korea remainin \({ }_{b}\) faithful to the cause of the Mings, the new masters of the empire invaded the peninsula, and in 1637 dictated a treaty, imposing on the Koreans a yearly tribute of 100 ounces of gold, 1,000 ounces of silver, and a certain quantity of furs, roots, textile fabrics, and other natural and industrial products of the land. But although since that time the native ruler takes the ditle of "Subject," China exercises no real sovereign rights in Korea. No Chinese emigrants are allowed to settle in the peninsula, and even the envoys from Peking are obliged to leave their suites outside the walls of the capital, where during their stay they remain confined to the palace, more like honoured captives than the representatives of a master. Thus, although for over two hundred years a vassal to both of its powerful neighbours, the peninsula has practically retained its autonomy.

A third empire, having become conterminous with Korea, has begun to make itself felt. Conflicts have already taken place between Russians and Koreans, and the Government of St. Petersburg has more than once assumed an aggressive attitude. A well-sheltered harbour on the south coast of the peninsula would certainly be of the greatest advantage, both commercially and strategically, to Russia. From such a station she might command at once both the Chinese and Japanese waters, and thus become supreme in the Eastern seas. But a reasonable pretext for attacking the feeble kingdom of Korea has not yet been discovered, and meantime the influence of Japan has recently been mest active in the peninsula, where she has secured certain concessions and commercial privileges still denied to all other foreign powers except the United States of North America.

\section*{Physicai Features-Orographic System.}

According to Dallet the chief mountain range of Korea branches off from the Tai-pei-shan at the Paiktu-san, whose crest forms the parting-line between the waters flowing north-east to Tiumen-ola, and south-west to the Yalu-kiang. South-east of these highlands, which are still held by independent tribes, an
extensive depression is filled by the Tai-ti, the only large lake in Korea, stretehing apparently some 24 miles east and west. Several peaks rising above the main ridgo bear the name of Paik-san, or "White Mountain," so that this term might be extended to the whole range from the frontier of Manchuria to Broughton Bay. The summits seem to be here very lofty, but none of them have yet been visited, and elevations have been taken only for the peaks on the coast visible from the sea. The Hien-fung, near the north side of Broughton Bay, has an altitude of 8,200 feet, while several others rise to a height of 6,500 feet and upwards.

There can be no reasonable doubt as to the generally mountainous character of the interior. In every direction the view is broken by hills, some denuded, others covered with dense forests, bounding the horizon with their peaks, cones, sharp summits, and rugged crags. The valleys are everywhere narrow and connected by savage gorges, so that no plains of any extent are developed except near the seaboard. The surface of the land presents the general aspect of an inclined plane fulling abruptly eastwards to the deep Sea of Japan, and sloping westwards far more gently towards the shallow waters of the Yellow Sea.

As far as can be judged from the available data, the complex orographic system would seem to be produced by the intersection of the main axis, running in the line of the meridian along the east coast, with transverse ridges belonging to the Chinese system. The very form of the inlets on the west coast seems to show that the elevations follow in Korea the same direction as on the neighbouring mainland. A tongue of land projects far into the Yellow Sea towards the Shantung peninsula, thus enclosing the Gulf of Pechili from the outer waters. In the same way the southwest extremity seems to be continued between the Yellow and Eastern Seas by quite an archipelago of islands, forming a pendant to the Chusan and Ningpo groups on the Chinese coast. Two at least of the Korean ranges also run south-west and north-east, parallel with the highlands of Manchuria, Mongolia, Pechili, and Shansi. One of these, forming a continuation of the Shantung system beyond the Yellow Sea, intersects the Paiksan chain, east of which it skirts the Korean seaboard as far as Possiet Bay. The other, beginning at the southernmost extremity of the peninsula, gradually merges in the eastern uplands on the couvex east coast commanded by the Tsiongyan-san, or Mount Popov of the Russians. The islets attached to this ridge rise abruptly from the water to heights of \(1,500,2,000\), and even 2,200 fect. The island of Quelpaert itself, now a Korean conviet station, forms a small chain running in the same south-west and north-east direction, and culminating with the white cliffs of the Aula, or Hanka-san, the Auckland of the English surveyors, which attains an elevation of 6,700 feet.

\section*{The Korean Archipelagos.}

The west coast is fringed by numerous islands and small archipelagos, which have not yet been accurately surveyed, and the extent of which was a constant source of surprise to the early navigators. "We threaded our way," writes Basil Hall, "for upwards of a hundred miles amongst islands, which lie in
ca, stretching rove the main is term might roughton Bay. t been visited, isible from the an altitudo of wards.
us character of lenuded, others s, cones, sharp d connected by xcept near the 1 inclined plane twards far more
ographic system running in the elonging to the ms to show that ng mainland. A \(r\) peninsula, thus way the southEastern Seas by 1 Ningpo groups south-west and ia, Pechili, and stem beyond the irts the Korean he southernmost ds on the convex o Russians. The of \(1,500,2,000\), n convict station, st direction, and Auckland of the
all archipelagos, of which was a readed our way," ands, which lie in
immense clusters in every direction. At first we thought of counting them, and even attempted to note their places on the charts which we were making of this coast, but their great number completely baffled these endeavours. They vary in size from a few hundred yards in length to five or six miles, and are of all shapes. From the mast-head other groups were perecived lying one behind the other to the east and south as far as the eye could reach. Frequently above a hundred islands were in sight from deck at one moment. The sea being quite smooth, the weather fine, and many of the islands wooded and cultivated in tho valleys, the scene was at all times lively, and was rendered still more interesting by our rapid passage along the coast, by which the appearances about us were perpetually changing.
"Of this coast we had no charts possessing the slightest pretensions to accuracy, none of the places at which we touched being laid down within sixty miles of their proper places. Only a few islands are noticed in any map, whereas the coast for near two hundred miles is completely studded with them, to the distance of fifteen or twenty leagues from the mainland. . . . Farther on we passed for a distance of five miles amongst islands, all except the very smallest inhabited. The villages are built in the valleys, where the houses are nearly hid by trees and hedges. The sides of the bills are cultivated with millet and a species of bean; and in the numerous small gardens near the villages we saw a great variety of plants.
"As the peaked island which we had undertaken to climb was steep, and covered with a long coarse grass, it cost us a tircsome scramble to gain the top, which was about 600 feet above the level of the sea. The mainland of Korea is just discernible in the north-east and east from this elevation. But it commands a splendid view of the islands, lying in thick clusters as far as the eye can reach, from north-west quite round by east to south. We endeavoured to count them. One person, by reckoning only such as were obviously separate islands, made their number one hundred and twenty. Two other gentlemen, by estimating the numbers in each connected cluster, made severally one hundred and thirty-six and one hundred and seventy, a difference which at once shows the difficulty of speaking with precision on this subject. But when it is considered that from one spot which, though considerably elevated, was not concentrical, one hundred and twenty islands could be counted, and that our course for upwards of one hundred miles had been amongst islands no less crowded than these, some idea may be formed of this great archipelago."*

\section*{Mineral Wealth-Flora and Fauna-Climate.}

Amongst the volcanic islands on the coast, Ollonto, the Japanese Matsu-sima, and the Dagelet of European geographers, forms a cone over 4,000 feet high, while its spurs plunge into depths of 4,500 feet and upwards. But the reports of the missionaries throw no light on the geological formation of the highlands on
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\text { * " Voyage to Korea," \&c. p. } 42 \text { et seq. }
\]
the mainland. Gold, however, is stated to be abundant in several places; but mining operations, both for it and for silver, are forbidden under severe penalties, for fear of exciting the cupidity of the neighbouring peoples. Korea also possesses deposits of lead and copper, although copper and bronze ware are imported from Japan. There are said to be whole mountains of iron ores, which are washed down by the rains in quantities sufficient to supply the smelting works. The forests consist of the elm, willow, birch, pine, spruce, and other Mauchurian species, besides some cryptomerix and the Rhus vernicifera, or lacquer-tree of Japan. But

Fig. 160.-Entrance to the Guly of Pechili.
Scale 1: 4,750,000.

the becch and oak are absent. Most of the timber employed in Peking and North China comes from Korea.

Of great economic importance is the ginseng plant, which is extensively cultivated for the market of China. It is raised from the seed under sheds covered with pine bark, the roots arriving at maturity in about five years, when they are collected, dried, and exported in considerable quantities to Peking. Here the Korean variety, although less esteemed than that of Manchuria, nevertheless commands high prices, ranging from 60 s . to 80 s . per lb .

The wild fauna includes the bear, tiger, panther, wild boar, and fox, whose skins and furs form the staple exports of the country. In some districts the man-
eating tigers enter the villages, prowl about the houses, and even penetrate through the thatch roofs for their human prey. They are hunted chiefly in winter, when they are often overtaken floundering in the half-frozen masses of snow, and easily dispatched with spears and knives. The Korean horses, imported especially from the island of Quelpaert, are very small, like Shetland ponies; but the oxen, used as mounts, are powerful beasts. Pigs and dogs aro very numerous; but the latter are cowardly curs, useless for the hunt, and chiefly bred for their flesh, which is largely cousumed, and regarded as a great delicacy. The surrounding waters

Fig. 161.-Island of Quelpazrt.
Feale 1:000,000.

abound in animal life, and here is taken the species of skate whose skin is used in the manufacture of sheaths.

Although washed by marine waters, the climate of Korea resembles that of China and Manchuria. This is due to the shallowness of the Yellow Sea and Gulf of Pechili, which are rapidly heated and cooled according to the seasons, and which have consequently but a slight influence in regulating the yearly temperature. As on the mainland, the isothermals corresponding with those of Europe are deflected in Korea several degrees south of the latitudes which they cross on the Atlantic seaboard. Thus the mean temperature of France will be found in the south of the peninsula under the same parallels as Gibraltar and Moroceo. But while the mean temperature is lower, the extremes are much greater than in Europe, a fact due to the prevalence of cold north-east winds in winter, followed by the warm south-west monsoons in summer. Even in the southern provinces the glass falls
in the cold season several degrees below freezing point, and in the central region a temperature of \(-7^{\circ}\) Fahr. has been recorded. Thanks to the moist monsoons, there is an abundant rainfall, and every upland valley and lowland plain has its perennial stream. But the peninsula, being divided into two areas of drainage, is too narrow to develop large navigable watercourses, and most of the narrow rapid rivers, being obstructed by reefs, are navigable even for small craft only in their estuaries. The largest are the Yalu-kiang (Amno-kang), or river of the "Yellow Duck," and the Tiumen-ula (Tuman-kang, Mi-kiang), serving for part of their course as frontierlines towards Manchuria and Russia respectively. Sea-going junks ascend the former for 30 miles, beyond which it is navigablo by boats for about 120 miles. The tides are very strong all along the west coast, rising in the Han, or river of Seul, nearly 35 feet, and falling at the turn with surprising rapidity. Even at Fusan, on the south-cast side, there is a rise of some 20 feet.

\section*{Inimaitants-Language.}

According to the census of 1793, Korea contained \(1,737,325\) houses and \(7,140,361\) inhubitants, of whom \(3,396,880\) were males and \(3,743,481\) females. More recent official returus give about the same numbers, although the unanimous testimony of the natives declares these estimates to be far below the truth, the people having a direct interest in avoiding registration in order to escape the taxes. Dallet thinks the peninsula may have a population of \(10,000,000\), while Oppert estimates it as high as \(15,000,000\) or \(16,000,000\), but very unequally distributed. The northern highlands are almost uninhabited, whereas the fertile and well-cultivated riee-growing districts of the south and west are often densely peopled. In most provinces new villages are springing up, the waste spaces are being constantly recluined, the woodlands cleared, and the wild beasts driven to the inaccessible uplands before the ever-advancing colonists. Even on the bleak and rocky east coast the population is often very dense, the villages in some places approaching so close as to form alinost continuous towns. Yet the rate of mortality is very high, and many agricultural distriets suffer much, especially from the suito and other disorders produced by insufficient diet. Small-pox makes even greater ravages than in China, carrying off probably more than one-half of the children, while the natural increase is still further reduced by the almost universal practice of abortion.

The Koreans are in general rather taller than the Chinese and Japanese. Robust and extremely laborious, they are considered excellent workmen in the ports open to Japanese trade, and in the agricultural settlements of Russian Manchuria. The accounts of missionaries and travellers are so contradictory that it seems impossible to form any precise idea of their main physical characteristics. They certainly offer a great variety of types, extending from that usually described as Mongolian to those of Europeans and Malays. One of the extremes, which may be called the continental Asiatic, is distinguished by broad features, prominent cheek bones, oblique eyes, small nose, lost as it were in the fulness of the cheeks,
central region a monsoons, there has its perennial ge, is too narrow pid rivers, being ir estuaries. The Duck," and the ourse as frontierjunks ascend the about 120 miles. Han, or river of pidity. Even at

7,325 houses and 31 females. More unanimous testitruth, the people escape the taxes. 000 , while Oppert qually distributed. ile and well-cultiasely peopled. In e being constantly naccessible uplands ocky east coast the oaching so close as is very high, and ito and other diseater ravages than hildren, while the versal practice of
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korean mandarins.

thick lips, scunt beard, coppery complexion. Another, which may be called the "insulur" type, and of which nutives of the Lin-kiu Arehipelago would seem to be the purest representatives, is characterized by oval fentures, prominent nose, protruding teeth ulways visible between the half-open lips, tolerably well-furnished benrd, and delicute skin, appronching in complexion to the almost greenish Malay tint. Many are noted for their light chestnut huir and blue eyes, a truit nowhere else observed in the extreme Last, except perhups amongst the aborigines of the Nan-shan uplands in South Chinu. But for the speech and costume, ono might often fancy one's self surrounded by Europeans. The women never mutilate the feet, as in China; but one of the Han tribes was formerly accustomed to flatten the heads of the children, while sol:ce of the coast people had adopted the practice of tattooing from the Jupunese.

These various races, which have become more or less completely fused in the common Korenn nationality, ure affiliated by Klaproth to the Tungus stock of East Siberia. But the Chinese clement is also strongly represented, for the "Three Han," who gave their name to a great part of the peninsula, wero descended from natives of Pechili and Shantung, who migrated to Korea in the fourth and fifth centuries of the vulgar era. The various local dialeets present very slight differences, from which it would seem that tho different ethnical elements havo long been fused in ono nation. This common speeeh differs essentially both from Chinese and Japanese. It is a polysyllabic and agglutinating language, with a varied phonetic system, including as many as fourteen vowels and several gutturals and aspirates. In structure it approaches the Ural-Altaic type, while the verbal inflection resembles the Basque in modifying the endings according to the sex and condition of the speakers. The alphabet, suid to be over two thousand years old, is at once syllabic and purely phonetic, with altogether rather more than two hundred letters, much simpler than the Chinese ideographs. But the lettered classes despise this orthographic system. The grammars and dietionaries prepared by the missionarics having been burnt during the persecutions, there have hitherto been no available means for the study of this language. But one of the priests, who escaped from the massacres, has recently published a large KoreanFrench dictionary, and a Korean grammar in French nppeared in Tokio in 1881.

The preference given by the lettered classes to the Chinese ideographic system is partly due to its greater convenience for holding communication with the neighbouring nations amongst whom that system is current. "In China, Japan, Korea, and the islands in the adjacent seas the spoken languages are different from ono another; the written language, on the contrary, is the same in all. Thus a native of China is unintelligible to a Korean or Japanese while he is speaking, but they mutually understand one another when their thoughts are expressed in writing. The cause of this may be thus explained. We in Europe form an idea in the mind, and this we oxpress by certain sounds, which differ in different countries; these sounds are committed to writing by means of the letters of the alphabet, which are only symbols of sound, and consequently a writing in Europe is
unintelligible to every one who is ignorant of the spoken language in which it happens to be written.
"The Chinese and tie other nutives in these sens have, on the contrary, no alphabet-no symbols of sound [in general use]. Their ideas are committed to writing at onee withoui the intervention of sound, and their characters may therefore be culled symbols of idens [ideogruphs]. Now, as the same characters are ndopted in ull these countrien to express the same idens, it is clear that their writings will be perfectly intelligible to euch other, although their spoken languages may be quite incomprehensible.
"The case of the Arabic numerals in Europe furnishes a ready illustration of this symbolical language. There is nothing in the symbols \(1,2,3, \& e\)., by which their pronunciation can be ascertained when presented to the oye. Yot they communicate meaning independent of sound, and are respectively intelligible to the inhabitonts of the different countries of Europe, while at the same time the sounds by wh'eh a native of one country distinguishes the written symbols \(1,2,3\), \&e., are uninte!ligible to all the rest." "

The introduction of numerous foreign words, Chinese in the north, Japanese in the south, has given rise to certain jurgons current in the trading-places. The Japunese variety is widely spoken in the southern seaports. But the language of culture is Chinese, which all the lettered classes are bound to know. But as spoken in Korea it is as unintelligible to the natives of China us Latin in the mouth of an Englishman would be to the aneient Romans. Every place, person, and object has two names, one a more or less modified Chinese, the other Korean. and these two elements are c.iversely intermingled in the speech of the different classes. Chinese prevails in the official style, while the national language has been preserved especially in the religious services. The mass of the people use both, in accordance with their various degrees of instruction and social position. According to the missionary Daveluy, the current form in many places consists almost exclusively of Chinese words provided with Korean inflections.

\section*{Social Condition-Religion.}

Chinese influences altogether preponderate in the Korean civilisation. The administration and usages of the official world are servile imitations of those of the Middle Kingdom, to which Korea is tributary in on intellectual far more than in a politicul sense. Neverthei ss the people have preserved their national customs, which often present a striking contrast to those of the Fiowery Land. While in the empire the whole people are regarded as forming but one family, the various sections of the Korean nation constitute real castes. Under the King and his family, the nobles descended from the old tribal chiefs enjoy the privileges of fortune and power in various degrees, according to the class to which they belong. The civil aristocracy, more instructed in Chincse science and letters, monopolizes the higher functions. Next comes the military aristocracy, which takes precedence

\footnotetext{
- Basil Hall, op. cit. p. 17.
}
of all the nobility of more recent creation. Such is the respect in which the nobles are held, that plebeinas must dismount in their presence, scareely daring to look at, much less uldress, them. They are exempt both from taxation und militury service, und their dwellings serve, like the mediaval sanctuaries, us phaces of refuge for all their retainers. A class of "half nobles," including the secretaries, trunslators, interpreters, and other secondary officials, serves us a transition from the full aristocrucy to the burgesses, who comprise merchants, dealers, and most of the artisans. Another quite distinct custe is that of the peasuintry, pastors, hunters, and fishers, comprising the great bulk of the mation. Then eome the "despised" enstes, subdivided into several groups, which holl aloof from euch other, aud which include the buthers, tumuers, smiths, und bonzes. Below all is the sociul substrutum of the serfs, belonging, some to the Crown, others to the nobles und burgesses. They have the right of purchasing their freedom, and many marry free women, in which case their offspring belongs to the eluss of freedmen. They ure in other respects treated with kindness, and are in practice scarcely to be distinguished from the ordinary workmen.

Buddhism, which is the official religion, was intreduced towards the end of the fourth century of the vulgar era. Rationalism of the Chinese type is professed by the literati, nor hus the old unimism yet disappeured; while truces are even found of a fire worship, which connects the inhabitants of the peninsula with the Siberian wild tribes. In all the houses the embers are kept alive under the ashes, for were they to be extinguished, the fortunes of the family would be extinguished with them. At the change of the seusons, and at other important periods, the fire must be rekindled from a flame obtained by the friction of two pieces of wood. The official ceremonies associated with the worship of Fo (Buddha) are almost entirely neglected, and the contempt in which the bonzes ure held has been extended to the religion professed by them. In many towns and villages there are no temples, nor even any domestic shrines. The statues of the gods and saints are mere blocks of wood set up by the wayside, and as works of art far inferior to the idols of the Polynesiuns. When one of these gods rots away or gets blown down by the wind, the children amuse themselves with rolling it about, umid the laughter of the passers-by.

Christianity has some adherents in the country. At the time of Taïkosama's conquest the first army corps was commaided by a Catholic prince, with the incongruous title of Dom Austin Konisi Yukisaga. Sinee then many of the natives have from time to time embraced the foreign religion, and during the present century new communities have been founded by French priests penetrating secretly into the land. At one time the congregations were estimated at about 100,000 , including even some members of the royal family. But several fierce persecutions broke out, and in 1866 as many as nine missionaries, together with 10,000 native Christians, were massacred. The French expedition, sent to demand satisfaction, failed to obtain any concessions from the King, and the practice of the foreign religion still remains legally an act of high treason.

\section*{Mahits and Centome-Trade-Industries.}

As in China, polygumy is permitted, although the mass of the pmple have rarely moro than one wife. Marringe is unattended by any long symbolical ceremonies, us in China. On payment of the purchase money the husband carries off his "property," and henceforth treats her as he pleases, for the Korean wife has neither a name nor even a legal existence. lleing without responsibilities, she can be neither judgel nor punished except in time of rebellion. Although seldom budly treatel, the women enjoy still less liberty than in China. Those of the upper classes are contined to an apartment inviolable even to the poliec, and they are never scen abroud during the day. But in the evening the streets are given up to the women. The men still lingering behind hasten to return home, und should they meet any ladies on the way, they must eross to the other side, and hide their fuee in a fan. To aet otherwise would betray a lamentable want of propriety. Dallet mentions instances of Korean women who committed suicide becanse strungers had touehed them with the tip of their finger. They are said to be distinguished for pretty features and a eharming expression.

Funerals are, ua a rule, scarcely more solemnly conducted than weddings. In ordinary eases the body is simply placed on a bier, or merely wrapped in a shroud, and buried without any pomp. But the rieh and nobles still often conform to the ritual of the Chew, which, owing to its extrome rigour, has fallen into abeyance in China itself. Mourning for parents lasts three years, during which the son must regard himself as dead to the world, renouncing all his functions and ordinary pursuits. Robed in white, he hides his face under a large hat, and weurs a long veil or a fan, a custom of which the French missionaries frequently took advantage to move about in disguise. Sons in mourning must also burst out into sobs and groans at a fixed hour three times a day.

While lacking the cunning of the Chinese, the Koreans excel them in courage and in hospitality, to which there are no limits. Honest, simple, and good-natured, they easily form friendships, but keenly resent injuries. Scrious and reserved in the presence of strangers, they readily unbend amongst acquaintances, indulging oven in dancing and other "frivolities," which the Chinese would regard as worthy only of savages. Theatrical representations, so popular in China and Japan, are unknown in Korea; but the people are very fond of music, and especially of stringed instruments and European airs, which the Chinese, ignorant of harmony, are so slow to appreciate.

An instructive and entertaining account of his first interview with the natives of the islands on the west coast is given by Captain Basil Hall in his "Voyage to Korea." "Shortly after anchoring, a boat came from the shore with five or six natives, who stopped when within 50 yards of the brig, and looking at us with an air of curiosity and distrust, paid no attention to the signs which we made to induce them to come alongside. They expressed no alarm when we went to them in our boat, and on our rowing to the shore, followed us till we landed near a village. The inhabitants came in a body to meet us, forming an odd assembly, different in
many respects from anything we had seen. Their colour wis a deep copper, and their appearumen forbidding and somewhat anvage.
"Some men, who uppearel to be superior to the rest, were distinguished by a hat, the brim of which was neurly 3 feet in diameter, and the crown, which was about 9 inches high, and seareely large enough to admit the top of the hend, was shuped like a sugnr-lonf with the end cut off. The texture of this strange hat is of utine, open work, like the dragon-fly's wiag. It uppears to be made of horse-hair varnished over, and is fastened under the chin by a band strung with large beads, mostly black and white, but oceasionally red and yellow. Some of the elderly men wore stiff gauze caps over their hair, which was formed into a high conical knot on the top of the head. Their dress consisted of loose wide trowsers, and a sort of frock reaching nearly to the knee, made of a coarse, open gruse cloth, and on their feet neat struw sunduls. They were of the middle size, remarkably well-made nad robust-looking.
" At first they expressed some surprise on examining our clothes, but afterwards took very little interest in anything belonging to us. Their chief unxiety was to get rid of us as soon as possible. This they expressed in a manner too obvious to be mistaken; for, on our wishing to enter the village, they first mude motions for us to go the other way; and when we persevered they took us rudely by the arms and pushed us off. Being very desirous to coneiliate them, we showed no impatience at this treatment; but our forbearance had no effect, and ufter a number of vain attempts to make ourselves understood, we went away, not much pleased at their behaviour.
"On leaving these unsociable villagers, we went to the top of the highest peak on the island, whence we were able to look down on the village without ourselves being observed by the natives. The women, who had deserted the place on our landing, had now returned. Most of them were beating rice in wooden morturs, and they had all children on their backs. The village cousists of forty houses, rudely constructed of reeds plastered with mud; the roofs are of all shapes, and badly thatched with reeds and straw, tied down by straw ropes. These huts are not disposed in streets, but are seattered about without order, and without any neatness or cleanliness, and the spaces between them are occupied by piles of dirt and pools of muddy water. The valley in which this comfortless village is situated is, however, pretty enough, though not wooded. The hills forming the valley are of an irregular shape, and covered at the top with grass und sweet-scented flowers; the lower parts are cultivated with millet, buckwheat, a kind of French bean, and tobaceo, which last grows in great quantities.
"We saw bullocks and poultry; but the natives would not exchange them for our money, or for anything we had to offer. They refused dollars when offered as a present; and, indeed, appeared to set no value upon anything we showed them, except wine glasses ; but even these they were unwilling to receive. These people have a proud carriage, with an air of composure and indifference about them, and an absence of curiosity, which struck us as being very remarkable. Sometimes when we succeeded, by dint of signs and drawings, in expressing the nature of a
question, they treated it with derision and insolence. On one occasion, being anxious to buy a clumsy sort of rake made of reeds, I succeeded in explaining my wisn to the owner, one of the lowest class of villagers. He laughed at first goodhumouredly, but immediately afterwards seized the rake, which was in my hand, and gave it a rude push towards me, with a disdainful fling of the arm, accompanying this gesticulation by words, which seemed to imply a desire to give anything upon condition of our going away. One man expressed the general wish for our departure by holding up a piece of paper like a sail, and then blowing upon it in the direction of the wind, at the same time pointing to the ships, thereby denoting that the wind was fair, aud that we had only to set sail and leave the island."*

Being almost closed to foreign markets, the country produces little beyond what is needed for the local demands. As in China, the staple food is rice, besides which wheat, millet, maize, and all sorts of fruits and vegetables are cultivated. But the watery climate deprives the fruits of their flavour, as it does the flowers of their perfume. Cotton, introduced about five hundred years ago, is widely cultivated, and ginseng forms an important item in the contraband trade across the border. Tea grows wild in the south, but is little cultivated; this beverage being almost restricted to the upper classes. The vine also yields choice grapes, from which no wine is made; but tobacco is largely grown on the uplands, which also produce millet and hemp.

Two thousand years ago masters of the Japanese in most arts, the Koreans now excel only in the manufacture of certain arms, and of paper prepared from the pulp of the Brussonetia papyrifera. They weave and dye linens and cottons, but not woollen stuffs, which would be so useful in the cold season. Silks are imported from China; but the superb conic head-dresses, with upturned brims about a yard broad, are chiefly produced in the island of Quelpaert, from bamboo fibre dyed yellow or black-lacquered. The native houses are mostly mere mud hovels raised on piles and thatched with rice straw. In the towns the finest buildings resemble those of Japan in their structure and fittings. Work being held in dishonour, misery is very general. For the upper classes, usury and legalised piunder of all sorts are almost the sole means of existence.
"From these and other causes, the Koreans are often reduced to such distress that they are driven to cross the frontiers into Russian territory, where the characteristics of the race may be more conveniently studied than in the country itself. The extensive floods and famine of the year 1869 compelled so many to take refuge in the neighbouring lands that their further immigration was prohibited by the Russian Government. Some of the unfortunate fugitives were escorted back to Korea, where they were decapitated, the sentence of death being the penalty attached to all leaving the country without permission.
"Those who are settled in Vladivostok are described as very industrious. They dress in white, and tie up their hair in the shape of a horn. Their summer-hats resemble those of the Gilyaks, except that they are hexagonal instead of circular. I went into some of their houses, the walls of which were of mud plastered on a

> Op. cit. p. 2, et seq.
framework of straw. The floor was of beaten earth, with a mud fireplace in the centre, and a divan round the walls. In the best houses the wife had a separate apartment. Fire burns in the eentre by day, and the flues under the divan are heated morning and evening. The people live on millet and rice, and use a spoon of bronze with a nearly circular flat bowl. Taking one from a man who was eating, I presented the spoon in one hand and a silver coin in the other, intimating that I wished to buy; and when he had taken the coin the master of the house came up, and, receiving from me the spoon and from the man the coin, he graciously returned them both, implying that he gave me what I desired."*

Till quite recently most of the foreign trade was carried on by smuggling; but in 1876 the Japanese succeeded in obtaining the right of residence in their old factory of Fusan on the south coast, which has since grown into a respectable town, with some 3,000 inhabitants in 1878, and, amongst other public buildings, a temple raised to the honour of the old Japanese conquerors of the land. Its exports consist mainly in rice and raw silks, and its trade has increased nearly eightfold in three years. It is now connected by a fortnightly steam service with Nagasaki. Another concession was made to Japanese diplomacy in 1880, when the port of Gensan, 12 miles south of Lazarev, was thrown open to their trade. Its harbour is deeper and better sheltered than that of Fusan, and it has already begun to do a brisk traffic in peltries, tobacco, gold dust, and "sea cabbage." Encouraged by these successes Japan has become more importunate in her demands, but all efforts of other powers to obtain a footing in the country have hitherto failed.

\section*{Government-Administration.}

In Korea, the Sovereign is absolute master of his subjects, who render him almost divine honours. It is high treason to utter his name or to touch his person, while to be touched by him is regarded as a priceless honour ; those who have been so privileged adorn with a red ribbon the part of their dress sanctified by the royal finger. A mere movement of this finger suffices for a disgraced minister to drink the poisoned cup. Although, as in China, the King is attended by an official censor, the chief duty of this functionary is to sing the praises of his Majesty. In the capital, a school of design is exclusively devoted to training artists occupied in reproducing his sacred features. Yet all this absolute power, unlimited by the laws, is a pure fiction, for the nobles, like the Japanese daimios of old, are the real rulers of the land. For fear of seeing them all combine against the throne, the Sovereign dare not aim a blow at any of their privileges.

Officially the administration is a copy of that of China; and Seul, the capital, is still inspired from Peking. On the anniversary of the Emperor's birth, as well as on the new year and at the equinoxes, the King of Korea, surrounded by his family and courtiers, prostrates himself publicly in the direction of Peking. When be sends an envoy to the Imperial Court, he kneels four times and burns incense;
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\text { " H. Lansdell's "'Through Siberia," 1882, ii. p. } 339 .
\]
and his letter of homage is borne in a palanquin of honour draped with yellow curtains. He also receives the Imperial ambassador in the attitude of an inferior, whilo his consort receives from P'eking the official permission to assume the title of Queen. At the King's death social life is suspended for twenty-seven months, during which period sacrifices, marriages, and burials are interdicted, the course of justico is arrested, and ull human and animal life must be respected.

Next to the King, the most important person is the "favourite," chosen from the nobles or ministers. Through him all favours and penalties are dispensed, and without his advice nothing of moment is transacted. The Supreme Council of State consists of nine members, three of the first order, the "Chief of the Just Government," the "Just Governor of the Left," and the " Just Governor of the

Fig. 162.-Han-kang, or Skul River. Soale 1 : \(\mathbf{6 0 0 , 0 0 0}\).


Right;" six of the second order: the ministers of ranks and degrees, of finance, rites, war, justice, and public works. According to the regulations all the mandarins ought to belong to the lettered class, receiving their promotion, as in the Middle Kingdom, by a series of three competitive examinations conducted in the Chinese language. But these regulations have long been a dead letter, and functions are now openly sold to the highest bidder. The penal code, also modelled on that of China, has fortunately been considerably modified, thanks to the natural gentleness of the people. Prisoners are often temporarily released to take part in the feasts of the family or of the new year. Great honours are rendered to old age, and at certain times septuagenarians are entertained by the King; while the Queen gives a private reception to a deputation of virtuous wives and daughters. But
notwithstanding all this, and in spite of many beneficent provisions for the protection of the people, they continue none the less to be oppressed, erushed by taxes, and exposed to famine and misery. The famine of \(187 \sigma-8\) is suid to have carried off a million of Koreans, or about one-eighth of the whole population.

The army, theoretically conprising ull able-boried men, or about a million altogether, consists in reality of a very small number of combatants. Before the opening of Fusan to Japunese trade the only weapons were spears, swords, and matehlocks of the sixteenth century
type. At present the Government imports rifles from Nippon, and manufactures others on tho same model. The guardsmen of Seul are drilled by Japanese officers, and gunboats of the latest description havo been purehased in Japan. On critical occasions the tigerhunters are called out, and these were the men pitted against the French in 1866. Till recently the guard wore conts lined with thick wadding, and said to have been proof against musket shots and sword cuts. But this uniform was so cumbrous that it greatly impeded the free and rapid movement of the men. A considerable force of native troops, equipped in this way, would have been almost at the mercy of a handful of wellarmed, and efficiently commanded European soldiers.

\section*{Topography.}

Hanyang, or Hanchung:fu,
Fig. 163.-Abministiative Divibions of Korga.
Scale 1 : 10,000,000.
 better known by the name of Seul, or "Capital," is the sent of the Administration and the royal residence. It is a large city, built on no particular plan, and surrounded by a wall nearly 6 miles in circumference. According to the census of 1793 it had a population of 190,000 , but modern writers estimate it at \(\mathbf{1 0 0 , 0 0 0}\) or \(\mathbf{1 5 0 , 0 0 0}\). Well situated at the southern foot: of the Hoa-shan and west of the Kwan-ling ehain, which shelters it from the cold north-east winds, it is enclosed southwurds by a bend of the Han-kang river, which
is here crossed by a stone bridge. Towards the north-west the river gradually develops the estuary of the Po-haï on the Gulf of Pechili, with which it communicates through two channels north and south of the large island of Kanghoa. But they are accessible only at high water, and according to the pilots all craft have to anchor 12 miles below Scul. The capital contains no conspicuous buildings except the vast royal palace and the academy, which is attended by five hundred students.

The approaches of Seul are defended by four strongholds, including Kanghoa, which has a population of 15,000 or 20,000 . In the neighbourhood is the royal borough of Sou, at once the Windsor and Westminster of Korea, where the kings are reported to be buried in "golden coffins." In 1868 some Amorican and German adventurers entered the country secretly, for the purpose of carrying off the treasures of this necropolis, but being discovered in time they were driven off by the peasantry.

Sunto (Siongto, Kuïseng, Kacchang), the ancient capital, destroyed by the Japanese towards the end of the sixteenth century, has again acquired great importance as a trading place. Lying nearer to the coast than Seul, it is more aecessible to foreign shipping. A still more ancient capital was Piuyan (Piengan), one of the chicf eitics of the north-west province. Like its neighbour, Ichu, near the mouth of the Yalu-kiang, it enjoys a considerable local traffic. In the extreme south the chief emporium is Tuiliu (Daikio), where are held two large annual fairs, at which the imports from Japan are distributed.

According to an officinl geography, partly translated by Dallet, there are altogether one hundred and six walled towns in the kingdom.

Korca is divided into eight provinces, all bearing Chinese names, and each ugain subdivided into circuits and districts. Communal interests are intrusted to the Council of Elders, who, in the more remote villages, enjoy a certain degree of independence.

At the end of the volume will be found a table of the eight provinces, or to (" routes"), as they are called, with their chief towns.

Since these sheets were passed through the press, news has reached Europe that Korea has at last been induced to remove the barriere of exclusiveness by which she has hitherto been shut out from the rest of the world. In the month of June, 1882, the Governms.at of Seul concluded commercial treaties both with the United States and England, granting to these States equal privileges and "all the advantages of the most favoured nations." By one of the clauses of the treaty with England, the importation of opium is expressly forbidden.
the river gradually h which it communid of Kanghoa. But ilots all eraft have to ous buildings except ve hundred students. , including Kanghoa, ourhood is the royal , where the kings are in and German adveng off the treasures of off by the peasantry. l, destroyed by the again acquired great than Seul, it is more ,as Pinyan (Piengan), neighbour, Iehu, near affic. In the extreme wo large annual fairs, oy Dallet, there are ese names, and each aterests are intrusted oy a certain degree of eight provinces, or to
\(s\) reached Europe that xclusiveness by which d. In the month of treaties both with the rivileges and " all the uses of the treaty with

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of the Pacifie and Russia, the Empire of the "Rising Sun" completes the zone of lands brought within the sphere of Western ideus in the northern hemisphere. It enubles East and West to join humls, while by sea it communds all the highways leoding towards Malaysia, Australin, Indo-China, mod the lands borlering on the Indian Ocenn and I'neific seaboards. Its population is, moreover, sufficiently large and industrious to enable it rapidly to aequire an important position in the general movement of commerce and modern history. Nippon is already familiarly spoken of as the "Great Britain" of the extreme East.

Form-Extent-Name.
The Japunese Archipelago forms a perfectly limited geographical whole, at least if in it be still included the island of Sakhalin, taken by Russin in 1875 in exchunge for the Kurile group; for Sakhulin obviously constitutes the northern section of along chain of elevaied lands continued through Yeso und half of Hondo south-eastwards to the \({ }^{\circ}\) Ogasavara (18enin) Archipelago. Towards the north-east this axis, which stretehes for about 1,800 miles nearly in a line with the meridian, throws off the gently eurved group of the Kuriles, connecting the voleanic area of Yeso with that of Kamehatka. But in the extreme Last all lands, the continental coastlines no less than the insular groups, uniformly affect this curvilinear disposition. Hondo itself, the chief island in Japan, describes a curve whose convex side, liko that of the Kuriles, faces scawards. Further south the Liu-Kiu (Riu-kieu) Archipelago is traced in the same way between Kiu-siu and Formosa. Jupan thus consists altogether of a longitudinal axis and of three ares following suceessively in the direction from the north-east to the south-west. The south side of Yeso about Volcano Bay, the Nik-ko highlunds in the main island, and the central uplands in Kiu-siu, form so many nuclei at the intersection of these various lines, and it is preeisely at theso points of intersection that the most active centres of the igneous forces are found.

The three curves of the Kuriles, Hondo, and Liu-Kiu rise above tho deepest known oceanic waters. But on their west side they are separated from the mainland only by superficial cavities. Through Sakhalin, Japan, so to say, touches the continent; while through Kiu-siu and the intermediate island of Tsu-sima it approaches Korea in waters nowhere more than 400 feet deep. A profound trough is developed only between the Gulf of Tartary and the two straits of Tsu-sima, where the sounding line has recorded 1,500 fathoms near Cape Kozakov on the north-east coast of Korea. Towards the middle of the Sea of Japan still greater depths probably occur.

Independently of the Kurile and Liu-Kiu groups, Japan proper consists of four large ishands: Yeso or "Land of the Barbarians," Hondo, Sikok or the "Four Provinces," and Kiu-siu or the "Nine Districts;" besides countless islunds and islets, some attached to the adjacent coast by submarine banks, some rising as volcanoes above deep waters. The native geogruphers often speak of 3,850 islands, but even this number does not include all the reefs and rocks fringing the coasts.

One of the native names of the archipelago is Ohn-ya-sima, or " Bight Large Islunds;" Sulo, Trul-sima, Oki and Iki in the Sea of Jupan, und Avidai in the Inland Sen, being also ineluded nmongst the main islands. On the other hand, Yeso is not reckoned, being till recently regurded as a foreign lumd. The main island of Hondo, or Hontsi, that is, "Chief land," cullerl ulso 'Tsiudo or "Centrul Land," and Naïtsi or "Interior Land," is more commonly designuted in Einrope,

Fig. 104.-Cemyen of thr Japanker Architrlago.
sento 1 : \(30,000,000\).

by the name of Nip-pon, or Ni-hon. But this term, meaning the "Rising Sun," in reference to the position of Japan east of China, belongs properly to the whole archipelago, and is always so used by the natives. It is the Ji-pön-kweh of the Chinese, whence Marco Polo's Zipangu, or Zipang, transformed by the Mulays into Zipang and by Europeans into Japon, Japan.

The history of this word Japan is extremely curious and interesting. It is not merely synonymous, but absolutely identical with the corresponding native term

Nip-pon. "The original Chinese form was Nit-poin, menning the Land of the Rising Sun, the Orient, from nit, sun, and pon, origin. The word was in this form adopted alont the seventh century of the Chistian era by the Jupanese, who soon assimilated the \(t\) to the \(p\), whence Nip-pon, Nip-hom, and even Nif-hom. But in China the \(t\) was first dropped, whence \(\operatorname{Ni} \cdot\) pion, or Ni-pen, and the initial \(N\) through Mongolic influence, " ufterwards changed to \(J\), whence \(J i-p e n\), the form current in the time of Mareo Polo, whose Venctimn Zipanga derives directly from it, and is the parent of all the European varieties of the word Japmen. This word was, as stated, from the first applied to the whole archipelugo, and not exelusively to the large island, for which the Japmese had no generul name till that of Hondo, that is, Original, or Main Division, was introduced some six years ago. Hence in our maps Nip-pon ought to te either altogether suppressed or extended to the whole group-that is, made synonymous with Japan, both being varieties of the common protutype Nit-pon." \(\dagger\)

\section*{Progress of Discovery.}

Japan was first reached in 1543 by the Porturguese navigators Mendez Pinto, Dicgo Zamaito, and Borrallo, driven by stress of veather to the island of Tunega, south of Kiu-siu. They were well received, commercial relations were established between Japun and Malacea, and marriages were even contracted between the strangers and some wealthy native women. But the missionaries soon made their appearmee, and religions wars had already broken out before the close of the sixteenth century. The Christims were ultimately expelled or massacred, and the country elosed to all Europeans exeept the Duteh, who were allowed to retain their factory of De-sima, near Nagasaki, on the condition of spitting or trampling on the cross. Confined to this remote corner of the archipelago, the Dutch found opportunities to study the natural history of the country and the manners of its inhubitants, and the great works of Kimpfer aud Siebold still rank amongst the most valuable documents we possess on the Empire of the Rising Sun.

Even the geographical works published by the natives themselves during the eighteenth century bear evident traces of European influences. On a general survey of the land, begun in 1778 and concluded in 1807, the learned Yino prepared : map of the islands on a scale of \(1: 500,000\), in which he endeavoured to reconcile the observations of the natives with the contour of the seaboard as traced on the Dutch charts. Towards the end of the eighteenth century Mogami Tokoudaï had already explored and described the Kuriles, and the islands off the south-west coast of Japan had been visited by the two brothers, Simo-dani. Lastly, Mamiya Rinzo surveyed the coast of Manchuria, and by sailing through the strait between Sakhalin and Siberia, which now bears his name, proved Sakhalin to be an island, thus solving a problem which had successively baffled La Pérouse, Broughton, and

\footnotetext{
- During the Yen, or Mongol dynasty (1260-1366), the Mandarin or court language was greatly influenced by the Mongol phonetic ayatem.
† A. H. Keane's "Asin," p. 609.
}

Krusenstern. "The Japanese have vauquished me," exelaimed Krusenstern, on hearing the news of Mamiyn Rinzo's nuceess. In 1811, when the Russian traveller Golovnin was detuined a enptive by the Japunese Government, Riazo und other

savants, who were already familiar with the ordinary methods of determining latitudes and longitudes, acquired from him the art of calculating longitudes directly by observation of the stars, and solar and lunar distances.

Since the recent changes foreigers and natives are working harmoniously together in the exploration of the eountry. On the seaboard the Japanese navy, jointly with those of other powers, takes part in the preparation of special eharts, while geologists and mining engineers study the relief of the land and the character of the rocks. Several maps of Nip -pon have thus been already prepared, which ure superior in aecuracy to those of Albania, Macedonia, and other parts of Europe. Altogether the people display a surprising love of geographical studies. Traders, excursionists, and artisans seldom make a trip without taking a map of the district

with them, and guide-books to the large cities and famous sights of the land are both more ancient and far more numerous than in Europe.

\section*{The Kurile Archipelago.}

The chain of partially submerged mountains forming the Kurile Islands develops a curve of almost mathematical precision some 400 miles in extent. Separated from Kamehatka by a strait searcely 8 miles wide and 60 feot deep, the "Thousand Islands" (Tsi-sima), as the Japanese call the group, begin with the voleanic Sumchu, followed by the long and mountainous island of Paramushir, which forms
geographically the truc termination of Kamchatka. But south of Paramushir a

broad strait, connecting the Pacific with tho Sea of Okhotsk, completely cuts off Onnekotan, Haramukotan, Siaskotan, Matua, Rashua, Simusir, and other smaller 50
islets, which are the upheaved cones of mountains rooted in the depths of the ocean. Bcyond these a continuous chain, broken only by narrow channels, is formed by the remaining islands of Urup, Yeturup, the largest of all, being nearly half the size of ti:e whole archipelago,* and Kunasiro, also a considerable island, projecting far into the bay at the northern extremity of Yeso. The two last named, together with the neighbouring Sikotan, belonged politically to Japan, even before the treaty by which she aequired the whole group, and here is consequently the hamlet or "station" of Tomari, administrative capital of this almost uninhabited and little known archipelago. Such is the uncertainty of its nomenclature, that it is impossible to gather from the confused accounts of explorers the number of its active voleanoes. Milne reckons as many as fifty-two, of which the highest is the snowy Alaïd (Araïdo), on the north-west side of Paramushir, variously cstimated from 12,000 to 15,000 feet. There appear to be two on Yeturup, and three on Onnekotan; and earthquakes are also frequent, causing shipping disasters in its

Fig. 168.-Section of the Sea of Okhotsk.
Scale 1 : 20,000,000.

surrounding waters, or drying up the springs on the islands. Immediately east of the archipelago the Pacific attains depths of \(8,000,10,000\), and even 15,000 and 20,000 feet, while on the west side the Sea of Okhotsk nowhere exceeds 2,600 feet. The Kuriles would thus seem to form a sort of advanced scarp of the mainland towards the great depression of the Pacific Oceun.

\section*{The Island of Yeso.}

The surface of Yeso is characterized by numerous irregularities in its general relicf. The main axes, continuing to Sakhalin southwards and the Kuriles southwestwards, are fused together in the square mass of Yeso, where they break into irregular ridges, everywhere eroded by running waters, and presenting much uncertainty in their general direction. The most regular chain is developed

\footnotetext{
- Area of the Kuriles : \(5,930 \mathrm{sq}\). miles ; of Yeturup: \(2,750 \mathrm{sq}\). miles.
}
parallel with the southernmost of the Kuriles, terminating in Cape Siretoko at the extremity of the long peninsula, which has an absolute elevation of 5,480 feet. Further south the Solfatara of Itasibe, or Devil's Mountain, rises somo 3,000 feet higher, while the range falls gradually towards the interior. But the Tokatsi-take and other culminating points of the island towards the south-east, within 30 mile sion the Sea of Okhotsk, have an altitude of over 8,300 feet.

Fig. 169.-Tbugar Strait, hetwern Yego and Hondo.
Scale 1:750,000.


From this district the largest rivers, the Tesiho, Naka-gava, Isikari, and Tokatsi, diverge towards the north-west, the south-west, and south.

Yeso is evidently one of the oldest upheaved lands on the globe. It is every. where deeply furrowed by the action of running waters, and nearly all the lacustrine cavities have had time to be drained except near the coast, where a few more recent lakes have been formed near the volcanoes, by which the primitive
relief of the land has been diversely modified. These lakes lie altogether in the east und amid the uphunds, stretching, like a vast anphitheatre, around Volcano Buy, it the south-west eorner of the islund. The relief has ulso been modified by considerable upheavals due probably to igneous forces. Some of the highest mountuins are volcanoes, conspicuous amongst which is Risiri, or Delangle Peak, rising near the north-west ungle to a height of 6,000 fect. The voleanoes run mainly north-cast and south-west, in continuation of the muin axis of the Kuriles, and here the igneous rocks consist chiefly of trachytes, basalts, and more recent, lavas. The most recent eruptions that have oceurred in Yeso were those of Komaga in 1852 and 1856 , and Tarumaï in 1867 and 1874 . Komaga is said to have been much higher before the outbreak of 1852, when the upper cone fell in, and the ashes were wafted by the winds to the Kuriles, the nearest of which lies 260 miles to the north-east.*

Notwithstanding its proximity to Nip-pon, Yeso does not appear to have been connected with the southern island, during recent geological epochs. The shortest distanee between them is only about 11 miles and the grentest depth seareely more than 120 fathoms. Yet no soundings seem to point at the former existence of a connecting barrier, while a comparison of the flora and fauna on the opposite sides of the intervening Tsugar Strait shows that they must have been separated for a vast period of time. In the southern portions of Yeso, the woods are almost wholly composed of hard wood, whilst in Nip-pon conifers are abundant. In Nip-pon we find a sheep-faced antelope or goat, a monkey, and a black bear, none of which exist in Yeso. The avifauna of the two islands also present several striking points of contrast. Thus the jays and woodpeekers are of different species, and in Yeso there is a birch grouse which is not to be found in Nip-pon, while ptarmigan and pheasants are confined to the southern island. Hence Milne coneludes that the two lands have not been connected for many ages. \({ }^{+}\)

\section*{The Mainland of Hondo.}

In the main island of Hondo, which is separated from Yeso by the narrow Tsugar or Matsmayo Strait, most of the ranges run parallel to each other in the direction from the north-north-east to the south-south-west, and are here and there blended together by side branches, transverse ridges, and lincs of volcanie eruption. Nearly all the peaks over 6,500 feet in height are volcanoes, whose lava streams have been at different epoehs diffused over the granites and schists eonstituting the backbone of the archipelago. The ashes ejected by the craters, and carried by the winds to every part of Hondo, have contributed, with the alluvia, to form the soil of the limited low-lying tracts. For most of the land is

everywhere broken by a succession of hills and dales, so that the combined area of all the plains scarcely exceeds one-eighth of the whole surface. The mountains, however, are generally rounded off and of easy access, seldom presenting those rugged crags and precipitous heights characteristic of most Alpine regions. The almost total absence of sandstones and limestones, which tend to become broken into vertical masses, the copious rainfall, and the natural richness of the vegetation, have given to the Japanese landscapes a preponderance of gently undulating lines, and moderately sloping valleys watered by rapid but winding streams. Here and

Fig. 170.-Mol'ths of the Tonegava. Bcale 1:840,000.

there the higher crests are streaked with lines of perennial snow, which, according to Milne, in some places develop miniature glaciers.

In the north-west a low schistose range, separated from the rest of Hondo by the deep valley of the Kitakami River, runs parallel with the main axis of the island. This outer chain, as it may be called, runs northwards to Sendai Bay, whose shallow waters are studded with the "eight hundred islands" of Matsusima; mostly covered with shrubs and cryptomeriæ, and forming an aquatic garden, which the Japanese regard as one of the "three wonders" of their country. The base of the islands has been worn by the water into natural caves and galleries, while grottocs have been artificially excavated on the steeper slopes. One of the peaks has also been carved into the form of a colossal Buddha.

South of the Sendai Plain the range resumes its former direction, but still remains completely isolated by broad valleys from the highlands of the interior. Formerly it terminated southwards, also in a gulf. But this inlet has been filled up by the alluvia of the Tone-gava, which, after watering the plain with its
innumerable channels, winds round the hilly district, stretehing east of Yedo (Tokio) Bay. The sedimentary matter brought down by this river, encroaching simultaneously on both sides, has completely effaced the old marine inlet, so that the island is now connected with the mainland by marshy plains, which have become gradually solidified. But although thus now rooted in the mainland, the three

Fig. 171.-Oga-sima Imland, and Ohokata-hatbiho Sea.
Scalo 1 : \(\mathbf{5 0 0 , 0 0 0}\).

sections of the eastern coast range are distinguished from all the others by the total absence of volcanoes. Yet along the base of these schistoso hills the most unequivocal evidences have been discovered of the upheaval of the land. The little port of Kisenuma, lying north of Sendai Bay, was still much frequented till the middle of the present century, but is now abandoned, in consequence of the
gradual shoaling of the channel. Yet here there is no river to wash down detritus, nor have the tides formed any bar across the harbour. During the present generation the coast near Kisenuma seems to have been upheaved altogether as much as 5 feet. The drying up of the Tokio plains and neighbouring inlet, now watered by the Tone-gava, would thus appear not to be due so much to the alluvia washed down as to the upheaval of the land.

On the west side another coast range runs parallel with the main axis of Hondo, but being mostly submerged, this chain ean only be traced by isolated masses throughout the greater part of its course. The first of these forms a peninsula at the northern extremity of the island, beyond which follow the Ivaki-yama and the Oga-sima, or "Stag Island," connected with the mainland by a long strip of sand, and culminating with Samukaze-yama, 2,550 feet high. Thus is formed the landlocked inlet, or "great lake" of Ohokata Hatsiro-gata, which communicates with the sea through the Funa-gava channel, navigable by vessels drawing 16 feet. Further south follow the Tobi-sima, Avo-sima, Sado, and the peninsula of the Noto, by which Toyama Bay is enclosed on the west. To the same western coast range, perhaps, also belong the Oki Islands, lying 180 miles farther south, some of whose peaks are of igneous origin.

The main range itself begins with the magnificent Osore-san voleano, which rises to a height of 5,250 feet between Tsugar Strait and Avomori Bay, over against Yeso. Beyond the bay the chain is continued uninterruptedly to the centre of the island at a mean elevation of 2,000 to 3,000 feet, above which the summits, mostly extinct voleanoes, rise to an average height of 5,000 feet. But the central ridge is flanked right and left by still more imposing igneous cones, amongst which some of the most conspicuous are the Tiokai-san ( 8,000 feet), snowclad for nine months in the year, and the Bantai-san ( 6,100 feet), which reflects its wooded slopes in the neighbouring lake, Inavasiro, and from the summit of which a superb view is afforded of the surrounding plains and highlands.

\section*{The Nikro Highlands-A Buddhist Legend.}

In this section the central range is deflected westwards to another parallel ridge, which in its turn forms the water-parting between the Tone-gava and Tenriu on the east; and the Tzikuma, or Sinano-gava, on the west. Here is the magnificent group of the Nikko-san Highlands, renowned throughout the empire for their snowy peaks, wooded slopes, sparkling streams, and romantic beauties of every sort. The Nantai-san, towering to a height of 8,450 feet above the sea, close to the picturesque lake Tsiusenzi, is one of the sacred mountains of Japan, and the glorious avenues of this region are probably unrivalled in the whole world. "Speak not of beauty till you have seen Nikko," says the local proverb. Owing to its proximity to Tokio, this place is visited by multitudes of sightseers during the summer months.

At Nikko there is an ancient Buddhist temple said to have been erected by the famous saint Sho-do Sho-nin, concerning whom a curious legend has been preserved.

Fig. 172.-Nikko- Portico of the Temple of the Fock Dragons.


From his carliest years this saint devoted himself to the worship of the gods, and passed his time in raising toy pagodas of earth and stone in their honour, thereby
earning from his playmates the title of "temple builder." When twenty years of age he secretly left his home, and retired to the cuve of the Thousand-Manded Kwan-non at Idzaru. Here he had a dremm in midwinter of a great mountuin to the north, on the summit of which lay a sword over three feet in length. On awaking he set out for the indicuted spot, and notwithstunding the deep snow, at last beheld the object of his vision. Ascending the monntain he continued to live an austere life for three years, during which he was fed on fruits brought to him by supernatural agency. He then returned to Idzaru and remained for five years as a novice in a temple administered by Chinese priests. Returning to the mountain now called Kobu-ga-hara, he beheld from its summit four miraculous clouds of different colours rising struight up into the sky, and he at once set off to reach them, carrying his prayer-books und images in a bundle on his back. But his advanco being barred by a broad impetuous river, he fell upon his knees in prayer, when there appeared on the opposite bank a gigantic being with skulls strung round his neck, who promised to help him as be had once helped the pilgrim I'wen Tsang over the river of Golden Sand. Saying which he flung across a puir of green and blue snakes, whereupon the waters were spanned by a long bridge, like a rainbow, over which the saint crossed to the other side. Then he had a vision informing him that the hill to the north was the "Mount of the Four Gods," the abode of the Azure Dragon, the Vermilion Birl, the White Tiger, and the Gloomy Warrior. On reaching the summit he found that this was the goal of his journey, for there were the four clouds rising up before him Here, therefore, he built a shrine for the image of the Thousand-Handed Kwan-non, and named it the "Monastery of the Four Dragons." Sho-do Sho-nin died in A.d. 817.

\section*{Asama-yama and Fuzi-san.}

The water-parting skirting the east side of the Sinano Valloy is also crowned by many volcanic peaks, conspicuous amongst which are Sirane-yama and Adzmayama, the former of which was the scene of a violent eruption in 1871. In the neighbourhood are some petroleum wells, one of which has been sunk to a depth of 740 feet. Farther south the main range is intersected by a chain of voleanoes running north-north-west and south-south-east, amongst which the most famous are the Asama-yama and Fuzi-san. The former, which attains an elevation of 8,400 feet, is one of the highest and most active in the archipelago. The memory still survives of the tremendous eruption of 1783 , when the surrounding country was covered by lava streams and pumice, when forty-eight villages were destroyed, and many thousand lives lost.

A vast river of molten rock utterly ruined a famous primeval forest of considerable extent besides a large number of hamlets on the north side. Red hot masses of stone were hurled in this direction as well as towards the east and southeast, while a dense shower of ashes turned the day into night. The neighbourhood of the Nake-sen-do between Oiwake and the Usui-toge, which had formerly been highly cultivated, was suddenly converted into a wilderness, and a large number of

EAST ASIA.
villages in this district and in the Agatsuma department of the province of Kodzake were swept away with all their inhahitunts. Monkeys, deer, dogs and other animals were buried under the showers of red hot stones and ashes, while those that had escuped immediate destruction perished of hunger. For the fulling rock, lavi and ashes had covered the gromud to a depth of from two to five feet for many miles round about, and had completely destroyed the vegetution. Another eruption, but of a much less formidable character, took place, in the year 1870, when the ashes ejected from the cruter formed a layer severul inches in thickness on the roofs of the neighbouring houses

The crater of Asama-yamu is circulur, und nearly a mile in cireumference, with vertical honeycombed and charred sides, usually full of sulphurous vapours welling from the bottom und from all the creviees in its rocky walls. On the south side of the volcano are two precipitous rocks, one outside the other, separated by a considerable intervening space. These rocks, one of which is nearly covered with vegetution, look liko the remains of two successive coneentric craters, the present eone being the thirl and most recent. Unfathomable crevasses extend the greater part of tho way down to its base, and from the summit, which may be reached in less than six hours, un extensive view is obtained of the surrounding highlands.

But the typical volcano of the archipelago is the sacred (Fuzi-san Fusi-yama), guardian of the land, and the most hallowed object in the empire. Formerly worshipped by the Yama-buzi Buidhist sect, this mountain, which takes its name from the flowering Fuzi ( Wyster:a Japonensix) covering its slopes, is the everlasting theme of poetry and art, and is reproduced often in a somewhat conventional manner on lacquer-ware, porcelain, woven fabrics, earthenware, fans, books, furniture, and artistic articles of every kind. To give it a greater appearance of height, it is usually represented with steep sides and pointed peak, whereas in reality the slope is very gentle, yet still high enough to dominate all the surrounding lands, and display every transition of elimate, from the rieh semi-tropical plains at its base, to the snows of an almost Aretic region on its rounded crest. Covered with snow for ten months in the year, and glittering in the bright solar rays against the azure or hazy sky, it often mergee imperceptibly in the circumambient aerial spaces. It exceeds by some 3,000 feet most of the other Japanese voleanoes, and completely dwarfs all eminences within the horizon. Almost round in form, its base has a circumference of no less than 90 miles, and according to the local legend its huge mass was upheaved in a single night during a terrific eruption in the year 285 of the old era, when lake Biva was also formed. At present eruptions take place only at long intervals, not more than six having been recorded since the year 799. The last, whieh oceurred in 1707, continued for a space of two months, during which the secondary cone of Hoyei-san ( 9,500 feet) was formed above a erevasse on the south slope. The neighbouring plains were buried in ashes to a depth of 10 feet, whole villages disappeared, the sky was darkened above Yedo, 60 miles off, and bluck clouds of dust were borne seawards beyond the bay. Since then the towns and villages have reappeared, and the 15,000 or 20,000 yearly pilgrims have resumed their visits to the holy mount. Those who make the ascent are clothed

\section*{Kodzuke} r auimuls that had lava and my miles ption, but the ashes e roofs of nee, with welling outh side by a conred with e present 10 greater cached in lands. si-yama), erly worits namo verlasting mal manfurniture, height, it cality the ng lands, t its base, vith snow the azure jaces. It ompletely jase has a its huge ar 285 of ake place year 799. s, during crevasse depth of miles off, then the ims have e clothed
in white, and on reaching the crater drink first of the "golden spring" and then of the "silver spring," after which, at "given sigual, they ring their bells and fall prostrate in honour of the sun. Returning to the buse, they get their white robes stamped by the priest of a temple, bequeathing them as a precions heirloom from father to son. Sir Rutherford Alcock was the first Europenn to aseend Fuzi in 1860, since when tho not very diflicult feat has been performed by hundreds of travellers. The cruter, about 900 yards in diameter, contuins two distinet funnels, which muy bo descended by means of projecting ledges.

\section*{The Higilanin or South Hondo.}

The system to which Fuzi belongs is continued southwards to form the long volcanic peninsula of Idzu, at the neck of which is the picturesque distriet

Fig. 173.-Guly of Simoda and Oho-bima. Sente \(1: 1,200,000\).

of Sagami. Here several watering-places have sprung up near the hot springs, and the town of Hakone, on the charming lake Asino-umi, has becone a favourite summer retreat. East of this place the route between Tokio and Kioto crosses the range by the Hakone pass ( 2,800 feet), which was formerly defended by a fortified Kıan or gate, forming the central barrier of Nip-pon, whence the terms Kwan-to and Kwan-sai ("East of the Gate," and "West of thw Gate") applied to the two divisions of Hondo lying east and west of the meridian of Hakone. The Idzu peninsula terminates southwards with a lofty bluff overlooking the town and bay of Simoda, where the islet of Mikomoto (Rock Island), memorable for the shipwreck of the Nile in 1867, is now surmounted by a lighthouse. Simoda Bay was also the scene of a remarkable submarine earthquake in 1854, when all the shipping in the harbour was destroyed, and the Russian vessel the Diana rolled over and over forty-three times in thirty minutes.

East of Simoda lies the island of Oho-sima, called the Vries Volcano by

Europeans, which is the most active on tnis seaboard. It was in a state of eruption when visited by Broughton in 1757, and broke out again in 1870, when an islet was upheaved between \(31^{\circ}\) and \(32^{\circ} \mathrm{N}\). latitude.

South of the granitic chain running north-west of Fuzi-san, Hondo is crossed from sea to sea by a transverse depression, in which is situated the charming lake Suva. Inmediately beyond this depression the land again rises to a high range, running north-east and south-west between the basins of the Tenriu and Kiso Rivers. Parallel to this is the Hida chain, which falls from the coast gradually down to the valley of the Kiso-gava, and which is the most rugged and wildest of all the Hondo mountains. Being snow-clad for a longer period than any other in the island, Rein gives it the name of the "Snowy Range," and it is crossed from east to west by the Harinoki and Hida passcs, both 8,000 feet high. It is crowned by the Tate-yama, On-take, and Mi-lake, attaining elevations of 9,500 and 10,000 feet, besides eight large craters, some now filled by highland lakelets. Thousands of pilgrims yearly visit this romantic region, to worship the idols of Isanagi and Isanami, divine ancestors of the Mikado's family. European explorers describe in enthusiastic language the glorious prospect commanded from these volcanic heights, whence the eye sweeps over all the land and surrounding seas. Although there has been no eruption during the historic period, sulphurous vapours are still emitted from the ground in many places, while another chain of igneous crests runs north of the Snowy Range parallel with the coast. Here the chief cone is the Yake-yama, which has been ascended by the geologist Von Drasche.

The remarkable solfataras of Tate-yama have recently been visited and described by Mr. W. G. Dixon. "Traversing through the mist one or two ridges, and passing between two little tarns-that on the left of an intensely green colour-we descended into a wide bleak hollow with jagged sides, from which a thunderous noise was arising. The air cleared of its vapours revealed a most striking scene with extraordinary contrasts of colour: mounds of volcanic matter, white, yellow, blue, purple, pink, crimson, black, as many shades as in a rainbow. Overhanging these was the brilliant green of one of the spurs of Tate-yama, and above all a rich cobalt sky.
" We descended into the hell-like valley with due caution, for great or small springs were bubbling on all sides. The loudest noise-a noise as of a dozen boilers letting off steam-came from a bright yellow hole a few feet in circumference, whence a thick cloud of steam mixed with sulphuretted hydrogen was issuing with terrific force, ejecting lumps of the deposited sulphur to a distance of 10 or 15 feet. A few yards off a similar but smaller jet was vehemently hissing. Across a sulphurous mound, about 50 yards distant, was a pool of some 6 feet in diameter, consisting of green sulphur mud in a state of violent ebullition, the green liquid in the centre at times leaping 8 or 10 feet into the air. Then about equally distant from this and the roaring funnels another large pool was boiling, but with less sulphur in its water, which was of an ordinary brown muddy colour. Other geysers were scattered around, most of them of pure hot water, and smaller
a state of 870, when ) is crossed rming lake ligh range, 1 and Kiso t gradually and wildest 1 any other is crossed igh. It is f 9,500 and d lakelets. \(p\) the idols European anded from urrounding sulphurous er chain of - Here the ologist Von d described ridges, and colour-we thunderous iking scene iite, yellow, verhanging e all a rich
at or small of a dozen in circumdrogeu was distance of tly hissing.
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bubblings everywhere. On the slopes of the hollow stood a few stone idols. A couple of men were gathering sulphur." *

West of the Hida range the horizon is broken by the Siro-yama, or Haku-san, that is, "White Mountain," which is so called from its abundant snows, and which was the scene of eruptions in 1239 and again in 1554. Owing to tho generally colder climate of the west side of Hondo, the Haku-san, while 3,000 feet lower than Fuzi, receives a far greater quantity of snow, and its upper erevasses remain streaked with white throughout the summer months. According to a local tradition, it has never been entirely free from snow for the last two hundred years and even at its base, near the Itsinose hot springs, the ground is occasionally covered with frozen masses over 20 feet deep. Botanists have discovered a greater variety of vegetable species on Siro-yama than on any other mountain in Japan, a circumstance attributed by them to the peculiar clinatic conditions of these uplands.

\section*{Lake Biva.}

A low ridge running south and south-west from the Siro-yama bifurcates round a vast and profound cavity filled by the waters of lake Biva (the "Guitar"), which, according to the legend, was fort ed at the time when Fuzi-san rose above the surface. But long before this period there existed an inland freshwater basin, the Avo-umi, which word, contracted to Aomi, Omi, has become the name of the province encircling the lake. This basin has certainly been the scene of igneous eruptions. The island of Tsikubu-sima, containing one of the most venerated Sinto shrines in the Empire, was upheaved in the northern part of the lake in the year 82 of the new era, and other islets seem to be also of igneous origin. The surface stands some 330 feet above sea level, and in the profounder cavities the sounding line has recorded depths of 280 feet. The volume of water is thus far inferior to that of Geneva, with which Biva is often compared, and which it about equals in extent. Like Geneva, it is enclosed by mountains, some cultivated, some wooded, but all presenting bold or graceful outlines. In autumn, when the heavy elouds of the monsoon have been dispersed by the winds, the varied contours of the surrounding highlands, with their green, violet, bluish, or rosy tints, blend harmoniously in a marvellous landscape, ehanging incessantly with the shifting play of light and shade. Eastwards rises the Ibuki-yama, the loftiest crest in this vast amphitheatre, in the popular fancy formerly peopled with maleficent spirits. South-westwards stands the famous Hiyei-san, whose Buddhist monasteries were inhabited by 3,000 monks down to the middle of the sixteenth century. These real masters of the land, assembling in the Temple of Kimon ("The Devil's Gate"), were bound to pray night and day, beating drums and ringing bells, in order to dissipate the evil influences proceeding from Ibuki-yama, and thus protect the sacred city of Kioto, situateh at the southern foot of the mountain. The romantic region encircling Biva and its emissary, the Yodo-gava, is the true cradle of Japanese nationality, to which the grand historic memories thus lend an additional charm in
the eye of the intelligent traveller. In the russet clouds of the west, says the legend, is reflected the blood, still boiling in the surrounding craters, which has been shed by all those who have ever falleu on the battle-fields of their native land.
" Near Seta, at the southern extremity of the lake, there is a shrine dedicated to the memory of Tawara Toda Hidesato, a famous hero who flourished in, the tenth century of the Christian era. At that time the lake was haunted by a dragon, who was continually harassed by a huge centipede, living on Mikami-yama, which overlooks the south-east end of the lake. One day, when about to cross the bridge at Seta, Hidesato found it occupied by the dragon, who glared at him with eyes as large and bright as a pair of suns, and ejected flames from his gaping jaws. Nevertheless, the hero, nothing daunted, boldly stepped over the monster's back without deigning to cast a glance behind him. He had not gone far when a dwarf appeared in front of him, and after praising the courage of which he had just been witness, asked him to slay the oppressor. The warrior accepted the task, and returned with the dwarf to the lake, where they plunged in, and after walking a few miles along the bottom, came to a magnificent palace, adorned with purple and gold, which stood in a court strewn with lapis lazuli and paved with jade. The dwarf went in first, and reappearing shortly in robes of state, invited Hidesato to enter and take his seat at a banquet. Towards midnight the approach of the enemy was announced, and Hidesato, armed with his mighty bow, which required the united efforts of five ordinary men to pull, and three arrows each fifteen handbreadths long, stood ready to receive him. On came the centipede, his huge dark mass illuminated by a few thousand torches borne in his claws. Hidesato discharged his first arrow at the monster's iron forehead, but it bounded off without so much as leaving a dent behind. A second bolt also failed to take effect, and there was but one left. Suddenly bethinking himself of an expedient, he moistened the point with spittle, and shot it with unerring aim into tle same spot as before. This time, instead of glancing off the polished \(v^{\circ}\) :ce, the shaft buried itself up to its feathers in the body. The lights instant'y disappeared and the enormcus carcass fell to the earth with a noise like thunder. As \(\varepsilon\) reward for his prowess, the dragon presented Hidesato with an inexhaustible roll of silk, which grew again when part was cut off, and the famous bronze bell which he gave to the temple of Miidera" (Satow).

The peninsula projecting southwards from lake Biva, as well as the western extremity of Hondo, are almost distinct regions, which are attached to the great island only by narrow strips of land. Nevertheless they resemble the rest of the country in their highland character. Southwards rises the Oho-mine, one of the few groups where no volcanic formations have been discovered, and at the eame time one of the wildest and best wooded regions in the archipelago. Towards the west the Daïzen, an old igneous cone, commands a low range crossed by several passes scarcely 1,000 feet high.
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edicated to the tenth a dragon, ma, which the bridge ith eyes as ping jaws. ster's buck en a dwarf \(l\) just been task, and walking a purple and jade. The Iidesato to ach of the th required teen handhuge dark Hidesato off without effect, and moistened t as before itself up to enormous is prowess, grew again e temple of he western the great rest of the one of the the same owarde the by several

\section*{Tife Inland Sea.}

The winding marine inlet which separates Hondo from the southern islands is in reality a mere succession of fiords and nada, or independent basius, which have been united in a common " Mediterrancan" sea stretching for abcut 240 miles east and west, and everywhere studded with innumerable wooded islands and islets. Jailing through these placid waters, the traveller is surprised at every turn of the

Fig. 174.-Lake Biva.
Scale 1 : 750,000.

\(\longrightarrow 18\) Miles.
channel by a fresh vista, a continuous panorama of encbanting scenery thus unfolding itself in endless variety. In the Seto-utsi, or "Inland Sea," as it has been appropriately named, the coastline resembles that of Norway, but under an Italian sky, and clothed with the vegetation of the Eastern Archipelago. At the dawn of time, sing the national poets, here the divine pair, Isanagi and Isanami, were seated on the heavenly bridge upield by pillars of clouds, whence they delighted to contemplate the white-crested sea-horses chasing each other beneath them. Listlessly reposing on the clouds, the imnortal dipped his bright red spear-head in the deep,
and for every drop that fell there arose one of those verdant isles whieh are now dotted over these waters, and one of the first to appear was the fair Avadzi, which still stands sentinel at the eastern entrance of the fairy scene.

Geographically the Japanese Mediterranean nust be regarded as little more than a simple depression produced by erosion. Even in the deeper cavities there are scarcely more than 150 feet of water, while the mean depth is less than 80 feet. The Simono-seki Strait, as the western entrance is called, has hardly 30 feet, so that large vessels umaided by steam cannot safely enter into this narrow marine ehannel, obstrueted as it is by numerous reefs and dangerous eurrents. Of the other straits by which it is approaehed, the Tomoga-sima, being freer from strong currents, is genorally ehosen by shipping, while the Naruto Channel between Avadzi and Sikok is more dreaded than any other in the Japanese waters.

At the western entrance stands a pieturesque island, with a lighthouse built by foreign engineers and supplied with dioptrie lights, with the lantern poised so as to resist the effects of earthquakes everywhere so frequent in Japan. Through the stroit the course is tortuous, running first north then eastwards, when vessels pussing so or fro seem eompletely landlocket. "As the boat progresses a distance of smme ten or twelve miles, a varying panorama of great beutuy discloses itself at ever: mile. On either hand rise high lands, sometimes wooded from base to samn' it, sometimes diversified by hills elear of timber, but ' with verdure elad,' somewhes crested with trees, sometimes fringed at the foot with forests, or with strips wis birit green turf or yellow sands. Roeky beights rise behird, with sparse tufts of recetation, or stunted shrubs on their sides, showing the effeets of severe weather, or riven clefts into whieh boun'iful nature has erowded trees, lending majesty to the smiling foreground.
"Bays and inlets of entieing pieturesqueness appear, where trim native eraft of various dimensions are seen at anchor, while clear-looking villages lying low near the beaeh, or built up the hills in terraces, give life to the scenery. Rounding the last point, which, like several others, seems to bar all further advance, the spectutor is induced to faney, perhaps not regretfully, that the huge steamer must remain landloeked within this ter raqueous Paradise. The fortified eity of Simono-seki then looms in the distance on the northern side of the waters, the strait widening at every mile. Slowly the pieture unfolds its details and diseovers to the view a walled town with many large buildings stretching along the shore for several miles, and for some iistance inland. But this port is not open to foreign traffic, so the steamer purides its course to the eastward, passing several islets and another strait, until it emerges in a wide expanse of waters."*

\section*{The Island of Sikok.}

The island of Sikok, which skirts the south side of the Inland Sea for about half of its entire length, consists of an irregular mass of schistose hills running mainly east and west. The Sikokno Saburo, which is the chief stream, runs

\footnotetext{
- S. Mossman, "Japan," 1880, p. 13, 15.
}
parallel with the axis of these old schistose rocks, and the same direction is followed by the narrow western headland, which projects towards a corresponding promontory in the island of Kiu-siu, thus leaving only a very narrow passage for the waters of the Inland Sea. Although of comparatively moderate elevation, rising nowhere above 4,620 feet, the main ridge presents none the less a scrious

obstacle to the communication between the two slopes of th: island. Some of the passes are considerably over 3,000 feet high, and above the main ridge rise some peaks of volcanic origin. The hill sides are clothed with a rich and varied vegetation, which, in the neighbourhnod of the streams, often assumes an almost tropical aspect.

\section*{The Island of Kiu-siu.}

Like those of Sikok, the Kiu-siu roeks, ruming north and south, consist mainly of erystalline sehists, overlaid with trachytes, which are interspersed with tufa and lignite. But here also occur some volcanic cones, a few of which are either constantly or intermittently active. Such is the Aso-yamu in the centre of the islund, on whose slopes are some sulphur und alum beds, besides oehrous formations containing a white fatty substanee, which has not yet been analyzed, and which is caten by the inhabitants of the district. The eruption of 1874 changed the surrounding streams into torrents of a milky colour, a phenomenon apparently of frequent occurrence, to judge, at least, from the name of the chicf stream-the Sira-kava, or "White River." Although of moderate elevation, the crater of

Fig. 176.-Yama-gava and Mount Kamun.
Scale 1 : 220,000 .


Aso-yama resembles those of the moon in its vast proportions, being no less than 14 miles long by 10 miles broad between its vertical walls, which are from 700 to 1,000 feet high. Within this extensive area dwell over 10,000 people, who seem seareely conscious that their villages stand on the very mouth of \(a\) voleano.

The peninsula of Simabara, stretehing east of Nagasaki, consists of a single mass sloping regularly down to the sea. This is the famous Unzen-ga-take (Unzen-san), or "Mountain of the Hot Springs," whose vast crater swallowed up thousands of Christians in 1638, during the revolt of the recently converted Catholies, at that time very numerous in this part of the empirc. Although quiescent for the last one hundred years, the cone still emits sulphurous vapours, which in the time of Kämpfer were so dense that birds on the wing kept many
miles from tho mountuin. Mul und gases eseaped from innumerable fissures, and during the rains the whole groumd bubbled up like a liquid mass. A former eruption of tho neighbouring Miyi-yman, attended by tremendous floodings, cost tho lives of 50,000 persons.

South of Kiu-siu a group of volcanoes has received tho name of Kiri-sima, or "Fog Island," on uccount of the sulphurous vapours constuntly emitted by them. Here all the rocks consist of tufus, trachytes, pumice, and other igneous matter, and the plateau supporting the twin peaks of Kiri-simu is an arid region, strewn

Fig. 177.-Kago-bima and Mi-take Volcano.
Scale \(1: 300,000\).

with ashes and reddish scorix, relieved only by a few dwarf pines and other shrubs. These appear to be the culminating points of Kiu-siu, and they are certainly more elevated than \(\Lambda\) so-yama and Komats-yama in the south-east.

The peninsula enclosing the pieturesque bay of Kago-sima on the west is one of the most remarkable regions in Japan. The long tonguo of land bending round the bay is dominated by the superb Mount Kaimon, the Cape Horner of European maps, which is almost uurivulled for its beautiful form and symmetrical contour. North of it formerly stood a still more elevated voleano, the pyramidal crest of which was destroyed during an eruption, all wiemory of which has
perished. The circular basin thus formed is now filled by the water of lake Mi-ike, while a similar lacustrine formation overlooks the town and roadstad of Yrona-gava.

Kago-sima Bay also contains the remarkable Mi-take volcano, whose ruptured cone fills the whole islet of Sakura-sima. Above the cultivated and wooded zones

Fig. 178. -Reliky of Japan and Drpthe of the nuhrounimo Wateles. Scale 1: 15,000,000.

rise greyish crags and crevasses, which a hundred years ago still discharged dense volumes of vapour.

The group of islands forming a south-western continuation of Japan also consists of schistose rocks covered here and there with matter thrown up from the surrounding waters. Amongst the cones conspicnous is Ivoga-sima, the Stromboli
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of Japan, which is nearly as high ( 2,400 feet) as its Sicilian rivals, and which from its crater and side fissures, incessantly emits vapours, white by day and red by night. Its rich sulphur beds are one of the Prince of Satsma's chief sources of income. Tanega-sima and Yakuno-sima, the largest islands of the group, are now quiescent; but Naka-sima, Suva-sima, Yoko-sima, Ivo-sima, and the other islets stretching south-west parallel with the chief axis of Riu-kiu are all still active volcanoes. The chain of igneous rocks is continued towards the northern extremity of Formosa by a line of recfs also probably of igneous origin.

\section*{The Riv-kiu (Lu-chu) and Goto Archipelagos.}

Siunanguto and the small Linshoten group adjacent to Kiu-siu, belong geographically to the Riu-kiu Archipelago, which is better known by its Fokien name of Lu-chu, and which the natives themselves call Du-kiu," that is, "Land of the Precious Stone," or of the "Trunsparent Coral," as the term may be variously interpreted. The geometrical curve described by all these islands between Kiu-siu and Formosa, the radius of which corresponds to that of Nip-pon itself, probably represents the remains of a highland region by which Jupan was formerly connected with the mainland. Lu-chu comprises a number of secondary groups, the two most important of which stretch about half-way from Kiu-siu to Formosa, and form the so-called "Kingdom" of Lu-chu. Politically, this "kingdom" is at present a simple Japanese department, while the southern group of the "Three San" (Nan-san or Sak-sima) is still a subject of dispute betwen China and Japan. The Mikado's government, however, seems now disposed to surrender these islands to its powerful neighbour.

Like Korea, Lu-chu was long a vassal state of the neighbouring Empires of China and Japan. Towards the end of the fourteenth century, the Chinese, after various incursions into the archipelago, compelled the King to declare himself tributary of the "Son of Heaven," and accept the investiture from him. Within fifty years of that event the Japanese presented themselves in their turn, and enforced "presents," which were gradually chnnged to a regular tribute. In 1609 an expedition, undertaken by the Prince of Satsma, ended with the formal recognition of the suzerainty of Japan over the archipelago. Akin in race and speech to the Japanese, the islanders nevertheless preferred the Chinese, and even boasted of their vassalage to Peking. The distant master, of whom they knew little except through his presents, seemed a more agreeable potentate to serve than the Emperor of Japan, represented on the spot by their troublesome neighbour the Prince of Satsma. But after the revolution of 1868, which restored the Mikado to power, some Japanese officials were sent as direct administrators of the islands, and the King was called upon to break all his relations with Peking. In vain the unhappy monarch pleaded: "For five hundred years we havo enjoyed the protection of the Emperor of China; him we regard as our
* All these forms are merely phonetic varieties of the same word, the Japanese \(r\) changing to \(l\) in Chinese, and to \(d\) in the local Lu-ohu dialect. Compare the Latin and French nlmus and orme, and the Groek and Latin fríxpv and lacryma.-Evitor.
father, and to Japan we turn as to a mother. . . . Has not Confucius said that fealty is better than life? Ask us not to be disloyal, and forfeit our honour." IIe was fain to yield, and in 1874, after the victorious expedition of the Japanese to Formosa, the kingling was dethroned and Ia-chu definitely proclaimed a simple lien, or integral part of Nip-pon.

The reports of the learned Chinese Supao-kwang, sent by the Emperor Kang-hi to tho archipelago in 1719, were the only important documents wo possessed

regarding these islands down to the beginning of this century. But since the expeditions of Broughton in 1797, and of Maxwell and Basil Hall in 1816, numerous navigators of all nations, such as Jurien de la Gravière, Beechey, Belcher, and Perry, have visited the port of Nafa, in the main island, and published the accounts of their voyages. Both Catholic and Protestant missionaries have also resided in Lu-chu, while the Japancse and Europeans of Yokohama have even passed the winter season in the "Three San," in order to enjoy a milder climate than that of Central Nip-pon. But the result of these visits has so far been to render the local nomenclature more perplexing than it was in the time of Beechey, nd pubsionaries ma have milder s so far time of

Kang-hi. To the Chinese, Japanese, and native names of places have been added those of the varions Western nations, so that some of the islands have now no less than five distinct appellations. Amid all this confusion, the smaller islets and reefs have in vain been sought for by skippers navigating these waters, and a thorough survey of the archipelago by the Japanese navy is now urgently nceded.

The two chicf groups run north-enst and south-west, that is to say, parallel with the other mountain systems in China and Japan. The various islands of these groups consist themselves of little granite, schist, sandstone, or limestone ridges, scarcely exceeding 1,600 feet in height, and sending down sparkling torrents, which aro used up to the last drop in the rice grounds of the lowlands. The chief member of the northern group bears the name of Oho-sima, or " Great Island," although smaller in extent than Okinava, which takes the title of "Great Lu-chu," in which are concentrated nearly two-thirds of the population of the whole ken. It seems to have no igneous rocks, but the limestone crests of several hills have frequently been taken for lavas, owing to their peculiar vesicular structure.

Thanks to the high temperature of the surrounding waters, all the islands are encircled iny coral reefs resembling those of the
 South Sea Islands, and like them with openings opposite the river mouths, the polypes being unable to live in fresh water. Thus have been formed on the Okinava coast the ports of Nafa and Melville, the Unting of the natives, discovered by Basil Hall. In several places the reefs rise considerably above sea-level, a circumstance doubtless due to upheaval, and off Nafa the water is so deep that the sounding-line gives no warning to shipping of the dangerous proximity of these rocks.

Buddhism was introduced into la-chu about l,000 years ago ; but the natives seem to troable themselves very little with religious matters. The priests (bodzes) are not respected or esteemed in society; they are not allowed to marry or to eat meat; few people associate with them, and even the children turn from them in ridicule. Captain Basil Iaall remurks on the total absence of anything in the least degree resembling a religious ceremony:-"The bodzes kept the temple clean swept and took eare of the walks and hedges, and this appeared to be their only employment.
" Polygamy is not allowed in Lu-ehu, and the King is the only person permitted by law to luve concubines. They invariably spoke with horror of the Chinese practice, and were much gratified on learning that the English customs in this respect were similar to those of Lu-chu. The women are not treated so well as we were led to expeet from the mildness of character in the men. The upper classes of women are confined a good deal to their houses, and the lower orders perform much of the hard work of husbandry. When they are met out of doors by the men they take no notice of one another, whatever may be the degree of relationship subsisting between them.
"They appear to have no money, and from all wo could see or hear, they are even ignorant of its use. Though we were incessantly trying to make out what their medium of exchange was, we could never learn anything distinct upon the subject, nor could they be made to comprehend our questions about money. We saw no arms of any kind, and the natives always declared they had nonc. Their behatiour on secing a musket fired certainly implied an ignorance of fire-arms. In oue place we saw a spear which looked like a warlike weapon; but we had every reason to believe that it was used for the sole purpose of eatching fish. They looked at our swords and cutlasses and at the Malay ereeses and spears with great surprise. But the chiefs carried little ease-knives in the folds of their robes, and the lower orders had a larger knife, but these were always of some immediate practical utility, and were not worn for defence nor as ornaments. They denied having any knowledge of war either by experience or by tradition.
" We never saw any punishment inflicted at Lu-chu. A tap with a fan or an angry look was the severest chastisement ever resorted to, as far as we could discover. In giving orders the chiefs were mild though firm, and the people always obeyed with cheerfulness. There seemed to be great respect and confidence on the one hand, and much consideration and kind feeling on the other. During our intercourse with these people there did not occur one instance of theft. They were all permitted to come on board indiscriminately ; to go into the cabins, store-rooms, and wherever they liked, unattended. Yet there was not a single article taken away, though many hundreds of people were daily admitted, and allowed to examino whatever they pleased.
"The loose native robe was generally made of cotton in a great variety of colours. It opened in front, but the edges overlapped and were coneealed by the folds so as to make it difficult to say whether or not the robe was continued all round. The sleeves were about three feet wide, and round the middle was a belt about four or
five inches wide, always of a different colour from the dress, and in general richly ornamented with wrought silk and gold flowers. The whole of the dress folds easily, and has a qraceful and pieturesque appenrmes.
"Their hair is of jet black, and is kept glossy by juice expressed from a leaf. It is pulled tight up all round and formed at the top into a compaet knot, so as to conceal the crown of the head, whieh is shaved. Through the knot are thrust two metal pins, from four to six inches in length. The higher orders wear on state occasions what they called a 'hatchee-matchee', a kind of turban made by winding a broad band round a cylinder in such a way that a small segment of each fold is shown at every turn, in front above, and behind below.
" The cattle, which are of a small black breed, are used exelusively for agricultural purposes. Hogs, goats, and poultry, with rice and a great variety of vegetables, form the food of the inhabitants. Milk is never used. There are no shecp nor asses, and the horses are of a small slight make, and the natives are very fond of riding. The mode of dressing the ground is neat, and resembles the Chinese, particularly in manuring and irrigating it. Besides the sugar-cane, they grow tobacco, wheat, rice, Itidian corn, millet, sweet potatoes and many other vegetables.
"The bamboo and rattun grow to a considerable size, but the pine is the most conspicuous tree on the island, growing to a great height and size. The baniantree of India was seen at several places, the finest one overhanging the small temple at Napa-kiang." *

The Goto Islands, chosen by the Japanese Government as a place of banishment, are barely separated from Kiu-siu by a narrow channel studded with rocks and reefs. They form, with Hirado, a section of the orographic system, of which Pumpelly regards Chusun and the Ningpo Highlands as a continuation. Iki, lying to the north-west of Kiu-siu, is also a geogruphical dependence of this island. But Tsu-sima, standing in the very centre of Korea Strait, between the Broughton and Krusenstern Channels, seems to belong rather to the mainland than to Nip-pon. Some of its animal and vegetable species show an affinity to those of Manchuria. It long served as the commercial entrepot between Korea and Japan, and the almost independent Prince of Tsu-sima enjoyed a monopoly of the exchanges through Fusan, before that port was thrown open to Japanese shipping. In 1861 some Russian officers made a settlement in the island, with the ostensible purpose of building dockyards for the repair of their vessels, but in consequence of a diplomatic conflict with England, they abandoned the station. It was situated near Fachu, the capital, on a broad inlet, which at high water divides Tsu-sima into two parts.

Japan and its dependent islands, occupying an essentially volcanic area, are subject to frequent earthquakes, due probably to the pressure of the vapours pent up near the surface of the ground. During the historic period the most violent shocks have occurred in the neighbourhood of the large volcanoes, and more especially in the plains of Tokio, which lie near Fusi-san, and which are watered by streams descending from Asama-yama. As many as 100,000 souls are said to have perished in 1854, when the greater part of Yedo was destroyed.
- "Voyage to Korea and Lu-chu," p. 203, et eeq.

\section*{Mydrographe: System-Cheer Rivelas.}

Owing to the murrowness of the land, which is nowhere 200 miles wide, and to the extremely mountainous character of its surface, no room is left for the development of harge stremms. The rivers, which ure mumerons enough, especially ia Yeso and llomdo, in fact, resemble mountain torrents, with short and rapid courses, and, in their lower reuches, subject to sudden and disustrous inundations. They are consequently more danaging tham beneficial even for irrigation purposes. To narigation they ure not merely useless, but a positive hindrance, in consequence of the large quantities of sedimentary mutter which they wash down, and by which several of the best harbours in the archipehago have already been choked up. Such has especially been the fute of Osaka and Nihi-gata harbours on the east and west sides of Nip -pon, which were formerly accessible to the largest vessels, but which cun now be approached only by small craft. In Japan "a river-bed is a waste of sand, boulders and shingle, through the middle of which, among sandbanks und slullows, the river proper takes its devious course. In the freshets which occur to u greater or less extent every ycar, enormous volumes of water pour over these wastes, carrying sand and detritus down to the mouths, which are all obstructed by bars. Of these rivers the Shinmo, being the biggest, is the most refractory, und has piled up a bar at its entrance through which there is only a passage \(\boldsymbol{7}\) feet deep, which is perpetually shallowing." *

Subjoined is a table \(\dagger\) of all the Japanese rivers, which have a total course of more than 50 miles :-
\begin{tabular}{|c|c|c|c|}
\hline Name. & Source. & Outlet. & Length In miles. \\
\hline Shinano & E. Shinanc & Nihi-gata & 180 \\
\hline 'lone & N. Kodsuke & Gulf of Tokio und Pacific & 170 \\
\hline Kitakamo & N. of Rikuchiu & Ishinemaki and Murohama, E. coast of likuzen & 140 \\
\hline Ishikari & N. of prov. Ishikari, l'esso & W. coast of Ishikari & 130 \\
\hline Tenriu & Lake Nua & Pucific & 120 \\
\hline Kiso & S.W. Shinano & Pacifie & 115 \\
\hline Sakata & 8. of Usen & W. coast of Ueen & 110 \\
\hline Okima & S.W. of prov. Iwaka & Witari, E. coast of Iwaki & 110 \\
\hline Noshiro & W. of prov. Rikuchiu & Noshiro. W. coast of Rikuchiu & 100 \\
\hline Akano & Lake Inawashiro & Near Nihi-gata, W. coust of Echigo & 90 \\
\hline Sumida & E. Musashi & Gulf of Tokio & 90 \\
\hline 'Toshima & S.E. of prov. Ugo & Kubota, W. coast of Ugo & 70 \\
\hline Fıjii & Koshiu & Pacific & 70 \\
\hline Yodo & E. Iga & Osaka Bay & 70 \\
\hline Baniu & Yamanaka (Koshiu) & Pacific & 60 \\
\hline Oi & N. Koshiu & Pacific & 55 \\
\hline
\end{tabular}

\section*{Climate of Japan.}

Being washed by marine waters, and enveloped in an atmosphere charged with ocemic vapours, Japan enjoys a much more equable climate than the continental regions, from which it is separated by the Sea of Korea. While Peking has the winters of Upsala and the summers of Cairo, Tokio suffers far less from such extremes of heat and cold. The oceanie current, to which the Japanese have given
the name of Kuro-sivo, or " Black Stremn," corresponds in its course und climatic influences with the Gulf Strem of the North Athatic. It thows close by the const side of the large islauls, and its tepid waters, coming from the Straits of Mulaysia and the Philippines, bring with them an ntmospherie carrent firr milder than that of the neighboming mamband. Its mem temperature, some four or five degrees lower than that of the Gulf Stream, varies from \(7 t^{\circ}\) to \(81^{\circ}\) Fuhre, and thas cexerels by about nine degrees the normal temperature of the marine waters under the sume latitudes. During the sonth-west summer monsoons, the strem flows direetly to the consts of Kin-siu mul Sikok, und the sonth side of IImelo; while in winter it is diverted by the polur winds towards the north-cast. Its velocity varios from ubomt 30 to 45 miles il day, ind tho plummet has recorded depths of 3,000 feet and upwards.

In the north the Oya-sivo polar current, emerging from the Sea of Okhotsk, mects the Kuro-sivo, one branc! of whien penetrates through Tsugar Strait. As in the Atluntic, the two streams move wide by side in parullel lines, but in opposite directions, under a sky frequently charged with dense valours. The Oyn-sivo, which in winter fringes the east const of Yeso with drift ice, ulso brings large quantities of marine animals from the northem latitudes, thus contributing abundant supplies of food to the inhabitunts of Nip-pon. The cousts of Yeso, which ure exposed to the two streams of the North Pacifie, correspond in this resject to tho banks of Newfoundlund.

West of the Japanese Archipelago, a branch of the Kuro-sivo flowing round the island of Tsu-sima also contributes to raise the normal temperature in these latitules. Its influence is chiefly felt on the north side of Hondo, where its waters have an average temperature of about \(69^{\circ}\) Fahr. But the Tsu-sima streum, as it has been named by Schrenck, does not flow constantly in the direction from sonth to north. Under the action of the polar winds it is deflected in winter towards the south at least on the surface, and it then sweeps round between the Lu-chu Islands eastwards to the Kuro-sivo. But, owing to its small volume, its influence even in summer is of secondary importance in determining the oscillations of the temperature. Between the two slopes of the Japanese Archipelago the contrast in this respect is most striking. Here the isothermals traced from west to east are far from coinciding with the parallels of latitude. The mean temperature at equal distances from the equator is much higher on the east thun on the west side, where the mountains of like elevation remain snow-clad for a considerably longer period of the year. Pending more numerous and accurate meteorological observations, it may be stated in a general way that the isothermals are deflected more and more towards the north as we approach the Arctic zone. Thus, while the difference between South Japan and the corresponding coast of China is scarcely more than \(3^{\circ}\) Fahr., it exceeds \(8^{\circ}\) Fahr. between Yeso and Russian Manchuria. Thanks also to the moderating effects of the Pacific throughout the year, the periods of extreme cold and heat are delayed till February and August respectively. September is normally a warmer month even than July.
* "Unbeaten Tracks," i., p. 212.
+ A. H. Keane's "Asia," p. 612.

Notwithstumbing the udvanuges of its insular position, d jan is none the lens afferted by the general influences, which on the mainland everywhere tend to lower the temperature as wo proceed eastwards. Under the same parallel Jupan lus, on the whole, a climute cight or ten degrees colder than that of Binrope. So part of the urchiphgo is frre from show and ice, and in the central distriets of liondo the gromed hus ocensiomally remained for severnl days covered with snow to a depth of over 40 inches, while in Yeso tho glass has been known to full as much us twentr-eight degrees below freezing point. As elsewhere in the extreme

Fig. Inl.-Inotifemala of Japan
Neate 1 : \(15,100,000\).

\(\longrightarrow 300\) Miles.
east, the winter period in Japan coincides with the prevalence of the northern, and especially of the north-west polar winds, whose normal direction ought to be north-cast and south-west, but which are deflected to the south-oast by the influence of the Pacific basin. On the west coast the winter gales are so fierce as almost to arrest the navigation during their prevalence. Even the steam service between Nihi-gata and Hukodate is interrupted, and in several of the coast towns the houses are protected from the fury of the storms by screens constructed of hoardings with the interstices filled in with brushwood and moss.

These polar winds are followed in April or May by the tepid south-western monsoons, which, however, are frequently interrupted thronghout the smmer by intervals of ealm. 'lowards the end of summer, and experially in September, when the temperature of the marine waters is highest, and when the air is churgere with vapours, the least atmospherie disturbunce may give rise to a whirlwimb, at times sulficienty violent to be deseribed as a typhom. These eyclones previll exproinlly in the south and throughent the La-chin Arehipelago, but they never advance northwards beyond Sondai Bay on the cast const of IIombe, and are mostly contined to the aren of the Kuro-sivocurrent. This dangeroms period of aerial disturbances is succeeded by the finest senson in the year, a clear and bright autum, genial and refreshing after the relaxing summer heats. Owing to the greater regularity of the amual winds, the altermation of the seasons is far more uniform in Jupan than in the temperate regions of West Europe. Hence the various expressions introduced into the language, to denote at onee the seasom of the year and the state of the weather, which ought to normally correspond with it. Formerly it was fashionable to begin correspondenee with loug phrases referring to these regular changes of the wenther. "Now that the ice has melted, the trees are budding, and you flourish more and more in the enjoyment of perfect health, I uddress you these lines, written with the pencil. . . ." Such was the invarinble opening of letters written in spring.

The rainfall as well as the temperature is regulated by the monsoons. Except in Yeso and on the west side of Hondo, the winter season is nearly everywhere very dry, and the contrast between the two slopes is easily explained. The northwest winds, always accompanied by fine weather along the const of Russian Manchuria, become eharged with moisture while erossing the sea, and when they strike the Japanese uplands this moisture is precipitated in the form of snow. In some of the higher districts the snow lies so thick on the ground that the people are obliged to take refuge in the upper storeys of their houses, and snow-shoes then become universal, as in Canada. But beyond the erests of the hills, the atmosphere is free from elouds, and the sun shines brightly throughout the winter months on the lands facing the Pucific. On the other hand, both slopes are exposed to heavy showers throughout the summer monsoons. The downpours will at times last for days together, and on one occasion, when it rained incessantly for thirty hours at Yokohama, all the brooks rose from 10 to 16 feet, while the rivers were transformed to lakes. The rains coinciding with the summer heats and with the evaporation from the rice grounds, which cover such a large surface, the whole lund now becomes sodden with moisture, and while vegetation flourishes with a rank growth, men and animals pino in the oppressive and dripping atmosphere. The rainfall is altogether scarcely inferior to that of the tropies, and is about double that of West Europe. Thanks to these downpours, the Sea of Japan is far less saline than the Pacific, and consequently freezes much more rapidly. In this almost land-locked basin the tides are also very low, rising on the coast of Sado scarcely more than 22 inches.

The climate of the archipelago agrees on the whole very well with the European
constitution, and is in this respect so superior to the adjacent mainland that Japan is now generally looked upon as a sort of sanatorium for the English residents in Hong Kong and Shanghai. The chief drawbacks are the excessive moisture of the early summer months, wnich is somewhat enervating, and the sudden chills of autumn and winter, which are very trying to invalids. "To compare Japan as to climate with England, the former has a hotter summer, but a clearer and drier winter ; a heavier rainfall, but fewer rainy days; a spring comparable to that of 'England, and an autumn far surpassing anything England can show, at least at the same season and for the same length of time; in short a elimate which, if barely so healthy, has the advantage of being more thoroughly enjovable."*

\section*{Vegetation.}

Owing to the copious rainfall, the relatively temperate winters and moist summer heats, the flora of Japan is distinguished by extraordinary richness and vigour. The largest trees may be easily transplanted, and many species, which since the tertiary period have disappenred in China, continue to flourish in this archipelago. Thousands of plants from Malaysia, Indo-Chinu, the Himalayas, Korea, Manchuria, and even America, spreading over now submerged lands, or whose germs were carried either by birds or the occanic currents, have found a suitable home in these favoured islands. Apart from those introduced during the historic period from China or Europe, Franchet and Savatier have enumerated altogether 2,743 species, grouped in 1,035 genera and 154 orders. And although the flora is relatively well known, the future exploration of Yeso, and of some more secluded districts in the other islands, will doubtless increase these figures. Of the genera, no less than 44 seem to be peculiar to the Empire of the "Rising Sun."

In the Kuriles the birch, poplar, and willow grow in all the sheltered valleys; while Kunashir has its oak groves, although the irees seldom exceed 20 feet in height, except in the glens. For fuel and building purposes, the natives of this group rely mainly on drift wood. The mulberry and tea plant are cultivated in Hondo as far as Tsugar Strait, and even Akita is one of the chief centres of sericulture. Throughout the sonthern regions, as far north as Tokio, the vegetation aequires its dominant aspect from the intermixture of Malaysian and Indian species with those of the temperate zone. Yet the sugar-cane is limited by the southern shores of Hondo, while the larger varieties of the bamboo, over 60 feet high, are not found in the wild stute. The palm is not yet fully acelimatised, nor does the fruit of the banana come to maturity. In Japan there are seareely any grassy lands, nor even meadows properly so called. Wherever tillage has not given a uniform aspect to the vegetation, the land is shaded either by large trees or by shrubs and woody plants interspersed with herbage and creepers, hundreds of different species often presenting themselves within the field of vision. No more lovely flowering garden can be seen than these natural gardens of the Japanese land-
\[
\cdots \text {. "."The Land of the Morning," p. } 23 .
\]
scape. Yet amid these countless flowers, conspicuous amongst which is the snow-white
nd moist aness and ies, which ish in this [imalayas, lands, or found a uring the aumerated although 1 of some se figures. e "Rising d valleys; 20 feet in es of this livated in centres of he vegetand Indian ed by the er 60 feet atised, nor arcely any e has not ge trees or undreds of No more anese land-

camelia, we nowhere meet either the pinks and ranunculi of Europe, or even the papilionaceous varieties, or the common sweet smelling plants of the West. On the
whole, the flowers are more brilliant, hut less odoriferous than in our temperate zone. On the other hand, the forests present a greater diversity of species than in any other country, the tropics themselves not excepted. During a short stroll, and without leaving the beaten track, the botanist will meet with a hundred different varieties, for Japan, even more than China, is especially distinguished for the large proportion of its arborescent species. Nowhere else within an equal range are there met so many different kinds of conifers and caducous trees, and the bright red or scarlet autumnal tints of the Japanese woodlands are even more beautiful than those of North America. Unfortunately, in many upland regions, the forests havo been destroyed, and replaced by thickets of shrubs and crecpers.

The finest forests clothe the hillsides between 1,500 and 3,000 feet above sea level. But the splendid cryptomerix, the glory of the land, are no longer found in the wild state north of Tokio. The avenues of these trees in the Tosan-do district and in Yeso have been planted by the hand of man. The Hinoki eypress (chamacelparis), used in the building of slarines and for other religious purposes, being a hardier plant, is still found at an clevation of 5,500 feet in the Tosan-do Highlands. Leafy trees scarcely rise higher than 5,000 feet, but the spruce and larch are met at a height of 6,500 feet, while rampant conifers creep up to 8,000 feet and upwards.

Except the potato and tobaceo, of Americea origin, all the cultivated plants come from the East, whence Japan received its improved agricultural methods as well as its other arts. Rice, the mulberry, the cotton and tea plants, as well as most of the fruit-trees of the temperate zon', have been acclimatised. But the damp climate tends to swell the fruits, to the detriment of their flavour, so that the products of the Japancse orchards are, on the whole, far inferior to those of Europe and the United States.
"Very misleading statements have been made as to both the extent and the luerativencss of agriculture in Japan. For instance, it used to be said that the mountains of Japan were cultivated to their summits. How wide this statement is from the truth will appear from the fact that, of the \(28,000,000\) cho (one cho \(=\) 2.4507 acres) of land in Japan less than \(4 \frac{1}{3}\) millions are cultivated. Of the remainder far the greater part is covered with forests. It is true that the plains are cultivated with extraordinary care, and that among the lower hills every spot to which water can be brought is terraced for rice-culture. But there are great mountain tracts which have scarcely been brought under the sway of man, and of these as well as of the drier slopes above and around the paddy-fields, much is capable of cultivation.
"Then the luxuriant verdure of the country-the most luxuriant outside the tropics-is apt to give a mistaken notion as to the fertility of the soil. We see everywhere a magnificent flora. The plains are adorned in summer with every variety of green, from that of the young rice to that of the veteran pine. The valleys luxuriate in an overwhelming mass of foliage, and the mountain-slopes are for thousands of feet clad with an unbroken mantle of trees. Nevertheless it is true
that the soil of Japan is not naturally fertile. It is mostly either volcanic or derived from igneous rocks, in some places, as in the great productive plain of Musashi, it is directly drawn from volcanic tufa and ash. The extraordinary profusion of plants growing in a state of nature is due to the climate more than to the soil. Besides it should be noticed that these consist very largely of coniferous trees and other evergreens, plants which least of all tend to draw from the soil's resources. Then the productiveness of the cultivated land is largely due to careful manuring. This and the climato together make it possible for the Japanese farmer to gather two crops off one field in the same year. 'A new field,' says a Japanese proverb, 'gives but a small erop'-a saying which strikingly shows that the Japanese themselves have little faith in the natural fertility of the soil. The Japanese farmer treats his soil as a vehiele in which to grow crops, and does not appear to regard it as a bank from which to draw continual supplies of crops. Thus he manures every crop, and he applies the manure to the crop, not to the land.
"Nowhere is there more neat and painstaking tillage than in Japan. All the sewage of the towns and villages is utilised as manure. Of the \(4 \frac{1}{3}\) million cho under cultivation \(2 \frac{1}{2}\) inillion consist of paddy-fields, which yield on an average about 30 bushels of clean rice per acre, and the total produce of rice per annum is about \(170,000,000\) bushels, that of wheat, \(35,000,000\) bushels, und of barley \(55,000,000\) bushels."*

\section*{Japanese Fauna.}

The land being almost everywhere brought under cultivation up to the very mountain gorges, Japan has preserved but a very small number of the wild animals by which it was formerly peopled. The beasts of prey are represented by two species of the bear, one of which, peculiar to Yeso, resembles the Californian variety, and the extinct cave bear (ursus spelaus). The Japanese bear, properly so called, whiek is still met frequently enough in the upland districts of Hondo, is much smaller, and distinguished from all its congeners by its hanging lips. The wolf, which differs only in its smaller size from the European species, is now rare, while the so called wild dog, resembling the Australian dingo, has disappeared from the southern regions, where it formerly existed. The fox, which, like most other animals, is smaller than the continental variety, is both numerous and extremely daring, penetrating even into the towns, and visiting the little rural shrines where food is deposited in honour of Inari, god of the rice grounds. In the popular fancy it has become the companion of this deity, who is always represented accompanied ly two foxes, carved in wood or stone. A local superstition credits this animal with the power of assuming the form of a young woman, in which disguise it is apt to beguile benighted wayfarers. On the other hand, the badger is endowed with the faculty of transforming itself to articles of furniture or kitchen utensils, for the purpose of playing practical jokes on the industrious housewife. Similar magical virtues are also attributed to the cat.

A kind of monkey, the saru (macacuy spcciosus), with a rudimentary tail and a
\[
\text { * "The Land of the Morning," p. } 9 .
\]
red face, differing but slightly from the Barbary variety, is found in Hondo as far north as the Tsugar Strait, the extreme northern limit of the quadrumana in East Asia. A species of wild boar, an antelope, a deer, several kinds of rodents, nine varieties of the bat, and vurious cetacea, complete the series of local mammals, of which, apart from the marine nimals, Wallace enumerates ultogether thirty species, ull except five peculiarly Japunese. The genera, however, differ in no respects from those of the mainlind, while the snlient features of this fauna, resembling those of Munchuria und China, recall the time when the archipelago was connected with the mainland.

Fig. 183.-Badoer: Fac-bimile of a Japanesb Deaign.
 Some traces are also found of relationship between the animals of Nip-pon and North America, which are also attributed to an isthmus of dry land formerly uniting the two除 northern continents. Nevertheless, the differences now in existing between the allicd Vif species show that all land communication has been interrupted for long geological periods.

The Japanese avifauna, better known than the mammalia, is less varied than might be expected from the proximity to China. While the latter region possesses over four hundred, Nip-pon has no more than two hundred and fifty species, nearly all resembling those of the mainland. In summer many birds migrate northwards across Sakhalin or the Kuriles, and according to Seebohm there are only eleven species undoubtedly distinct from those of other regions. But amongst those common to the archipelago and other parts of the Old World, it is remarkable that several are sepurated from each other by thousands of miles. Thus a kind of pigeon unknown in China is peculiar to the Himalayas, Java, and Japan, while a Japanese jay is met elsewhere only in Europe, a distance of 6,000 miles. These species evidently at one time occupied all the intervening spaces, where, owing to changes in the surroundings they have gradually become extinct, and are thus now confined to narrow areas at either extremity of their former
domain. Altogether the Japanese ornithological world presents much analogy to that of temperate Europe, each species being represented in both regions by corresponding forms. Nevertheless the ototo-gisu, the king of Japanese songsters, fetching as much as \(£ 80\) in the market, is not a nightingale, as in Europe, but a member of the cuckoo fumily.
"The crow forms a salient feature of the landscape, especially in Yeso. Here there are millions of them, and in many places they break the stillness of the silent land with a babel of noisy discords. They are everywhere, and have a degree of most unpardonable impertinence, mingled with a cunning and sagacity which almost put them on a level with man in some circumstances. Five of them were so impudent as to alight on two of my horses, and so be ferried across the Yurapugawa. In the inn-garden at Mori I saw a dog eating a piece of carrion in the presence of several of these covetous birds. They evidently said a great deal to each other on the subject, and now and then one or two of them tried to pull the meat away

Fig. 184.-Fac-bimile of a Japangeg Bied Drsige.

from him, which he resented."* The Japanese crow is considerably larger than the European species, being about the size of our ravens, and fully a match in strength and courage for small dogs.

Legend fills the popular fancy with monstrous dragons, with whom the heroes of tho olden times had to do battle. These reptiles have now degenerated to harmless snakes, the only venomous animals in the archipelago being a trigonocephalous species, from which a healing drug is extracted, and a little crustacenn of the order of the cloporte. One of the most remarkable local reptiles is a gigantic salamander, the sanzio-uvo (Sicboldia maxima), that lives on fish and frogs, but is now becoming rare even in Japan. Beetles, butterflies, and other insects are extremely numerous, as is also the marine fauna, although several species of furbearing cetacea have already been exterminated. The beaver has also disappeared from several of the Kurile Islands, where it was formerly very common.

\footnotetext{
* "Unbeaten 'Tracks," ii., p. 129.
}

Compared with European peoples, the Jupancse possess a very small number of domestic animuls. The horse, imported from Korea, is of a smull, shapeless breed, very vicious, but vigorous, and possessed of great stuying powers. The Satsmu breed, mentioned in the fourteenth century by Matouanlin, is nearly extinct, and most of the horses now employed in the Yokohama circus are brought from Mongrolia. Holding very small furms, the peasumtry have no great need of live stock, hence oxen are rare, and in some districts absolutely unknown. From the eighth century of the vulgar era till recently the use of meat was forbidden, and all knackers and tamers were regarded as infamous, and under the name of Etas classed with actors and mendicants, as \(h i \min\), or " no men." But under the influence of European ideas, the townsfolk have recently taken to an animal diet, and the breeding of eattle for the market has alrcady made considerable progress. But owing to the damp elimate, goat and sheep farming has not proved successful. The ass also suffers from the prolonged rains, while the European pig thrives well.

\section*{Inhinitants-Tife Ainos.}

Execpt in the outer islands of Yeso, the Kuriles, and Lu-chu, the present population of Nip-pon is one of the most homogeneous on the globe. From Kagosima to Avomori lay, across ten degrees of latitude, the natives have everywhere the same speceh and customs, with tho full consciousness of their common nationality. But although now thoroughly fused in one people, they do not seem to belong to one stock originally, and are only indireetly connected with the aborigines of the archipelago.

The oldest traditions and records all speak of the ancient savages, the " Eastern Barbarians," Yelsis, Yebis, Yemisi, Mo-sin, or Mao-jir ("Hairy Men"), who formerly occupied the northern portion of Hondo, and who were the ancestors of the present Ainos. There is certainly no direct evidence to show that the Japanese are the civilised kinsmen of these northern barbarians, and the only probable relationship between them is such as may be due to erossings continued from age to age on the border lands. Although no Yebis may now be found in the north of Itondo, it is, nevertheless, certain that all were not exterminated by the conquering Japmese in the fifteenth century. Under the name of Adzma Yebis, they have become intermingled with the civilised intruders, and their physical features may still be traced in the present mixed population of the country, just as the stone weapons and other implements used by them are occasionally found in the ground. The women have here, as elsewhere, best preserved the aboriginal type, and the inhabitants, especially of the secluded Oga-sima Peninsula, still show a marked resemblance to the Kurile islanders. Ainos blood has even been traced as far south as the plains of Tokio, although the pure type is at present confined to Yeso, the Southern Kuriles, and the south of Sakhalin. According to the census of 1873, there were only 12,281 Ainos at that time in Yeso, and the whole race numbers at present probably less than 20,000 souls. The fow Kurile families occupying the northern islands of that archipelago are not to be distinguished from those of the


neighbouring Kamehntka Peninsula, and some Aleutians are also found in the isluads of Simusir und Urup.

Aceorling to Golovnin, the word " Ainos," like the names of so many primitive peoples, simply means "Men." Thinking themselves the centre of the universe, they sang of old, "Gods of the sen, open your divine eyes. Wherever your cyes full there cehoes the Aino speech," But a Jammese etymology quoted by Satow explains the word "Aino" to mean "Iog" (Inn), and an old tradition refers the origin of the race to a dog and a Jupanese prinecss bunishod northwards. The Aleutians have a similar tradition, and seem to be very proud of their eanine descent, pretending that for a long time they had paws and tuils like those of a dog, but were deprived of them on account of their crimes.

Most writers affilinte the Ainos to the other Mongoloid peoples surrounding them, and their small size, clear complexion, black hair and eyes, are taken as proofs of their affinity to the Japanese. But others group the Ainos with the Kamehadales, Koriaks, Aleutians, and some other northern peoples in a separate division of munkind, while they are by others regarded as a branch of the Eskimo or of the Polynesims, or even of the Western "Caueasie" stock.

Certainly the ordinary Aino type differs greatly from the Japanese. The complexion is lighter, the forehead broader and higher, the cranial capacity vastly superior, the nose more prominent, the eyes larger, more open and perfectly straight, like those of Europeans. But they are distinguished from all their neighbours chiefly by the great abundance of their hair, from which eircumstance they were commonly alluded to by Siebold, Krusenstern, Golovnin, and other older writers, as the "hairy Kuriles," from the name of the islands occupied by several of their tribes. The Jupanese annals also describe them as a species of wild beast, with manes and beards 4 feet long. "The first Aino," says the legend, "was suckled by a she-bear, whence he and all his descendants became covered with hair. Proud of his long beard, which distinguishes him from the other races whom he meets, the Aino regards it as some sacred appendage, which nothing will induce him to shave. In this respect, as well as in his features and expression, he bears a singular resemblance to the Russian peasant, with whom he might easily be confounded. Most travellers deseribe the women as repulsive, and apparently belonging almost to a different race from the men. But notwithstanding their sinall eyes and thick lips, Miss Bird, who visited them in their mountain homes, tells us that she met many women of very comely appearance even amongst the old people. The children, of whom their parents are extremely fond, are models of grace and beauty.

The average Aino is about the middle height, broad-shouldered, full-ehested, very strongly built, with short muscular arms and logs, and disproportionately large hands and feet. The bodies of most adults are covered with short, bristly hair ; and travellers have compared that on the backs of the children to the fine soft fur of a eat. The foreheads are generally high, broad and prominent, at first sight giving the impression of an unusual capacity for intellectual development. The nose, although short, is straight and the cheek-bone low, while the full eyebrows
form a straight lino nearly across the face. The eyes are somewhat deep-set and of a rich liquid brown colour, with a singularly soft expression, corresponding to the gentle and kindly charneter of the people. The skin is described as almost white, or else of a delicate olive brown tint, thin and light enough to show the changes of colour in the cheeks.

What little is known of the Aino lamguage is sufficient to show that it has no sort of uffinity to that of the Jnpanese, which greatly surpasses it in softness. But ulthough muny words end in sibilants, it is modulated with an almost musical neeent, and spoken with such slight dinlectic differences, that the interpreters from the Kurile Islumds have no difficulty in understanding the people of South Yeso. There is no literature, and hitherto none of tho Ainos have leurned to read or write, except a fow youths sent to tho schools at Tokio. But they have an excellent memory, und ure quick at sums. By means of littlo notched sticks and knotted strings, like the lernvian quippos, they keep all their accounts on the decimal system, and readily deteet any attempts of the dealers to cheat them. Their wooden utensils, with carved designs, also attest their urtistic skill and good taste, while the musical faculty is highly developed. Their melancholy airs are sung with a shrill voice, und their string instruments are ingeniously constructed of the tendons of the whules stranded on the coast.

The Ainos lead a wretched existence exclusively enguged in hunting and fishing. They follow the bear, deer and fox, and capture all the large cetacea except the whale, to whom they thus show their grutitude for driving the shoals of herrings up the ereeks in spring. When a bear's cub is found in the lair, it is brought home and given to a nurse, who suckles and rears it with her own children. For six months the animal is treated as a member of tho family, but in autumn a great feast is held, winding up with a banquet, at which the bear is devoured. "We kill you, oh, bear," they ery while sacrificing it, "but you will soon return to us in an Aino." The head stuck on a stake in front of the hut henceforth protects the household of its former host. The heads of deer are also wrapped in leaves and placed on poles, generally in the forest where they have been struck down. Such are the chicf religious ceremonics of the Ainos, who, in this respect, belong to the same group as the East Siberian tribes, amongst whom travellers have observed analogous rites. Like the Golds of Manchuria, tho Ainos are very fond of the company of animals. In nearly all the villages bears and eagles are kept in large cages, and become objects of family worship. Sun, moon, and stars, are also worshippel; besides "tho sea which feeds, the forest which protects" them, all the forees of nature, and the Kamui, or heavenly and earthly spirits, which are found both in the old Japanese cosmogony and in that of the East Siberian races. They also invoke the Japanese hero Yositsune, who vanquished their forefathers, because the legend praises his clemency to the conquered. Strangers, to whom they show hospitulity, are also honoured by the title of Kamui, and, like the Japaneso Sintoists, they profess a profound devotion for the shades of their ancestors. The house of the departed is levelled, and the materials burut or dried, after which a new dwelling is erected to him, resembling the one he occupied on earth. The
pikes and other objeets stuck romil these mortmary shrines ure curefully preserved, and the offers of strangers to purchuse the skulls of the dead are rejected with horror. There is no sucerlotal cante, all officinting in common, with fow rites beyond dancing, and copions tibations of saki, or rieo brandy:

In the commanity, the chief, generally the member of the tribe who possesses most arms und bears' heals, has no rights or anthority except as arbitrator when disputes arise. If public opinion charges him with the leust purtiality, he is at once deposed, and succeeded by the man whom his decision may have wronged. Polygamy is permitted, and marriages are common, if not between brother and sister, eertainly between near relations. Although the women work more than the men, they are not considered in any way their inferiors. The wife, who keeps an orderly household, enjoys an equal share with her hushand in the management of the common interests, and nothing is done without her udvice being given. Her rank and rights are clearly delineated in the tattoo marks traced by her mother. These marks aro begun at the age of tive, and continued till she is marriageable, when her toilet is complete. By means of soot rubbed into the incisions a sort of moustache is described on the upper lip, while the hunds and fore-arms are embellished with an intricate arabesque piece of embroidery. All the patterns are strietly determined by traditional usage, but the practice of tattooing has recently been forbidden by the Jupanese Government.

Still independent of, and even feared by, the Jupunese down to the middle of the sixteenth century, the Ainos continued to occupy the northern part of Hondo, where the town of Akita served as the common mart for the two races. But they have long disappeared from the large island, and aro now seldom seen on the south coast of Yeso. Honest, good-natured, active, individually courageous, although inspired with a superstitious dread of the government, they have neither the moral force nor the maturial resourees needed to hold their own against their powerful neighbours. The use of fire-arms, with which they pursued the prey, hus been forbidden, and the Japaneso fishermen come to fish at their very doors. With no companions except their dogs, they are unable to turn their attention to stockbreeding, and the little agriculture which they havo learnt is limited to planting a few vegetables round their houses. They wear coarse, but almost indestructible, garments, made by their women from the bark of trees, und in winter lined with skins and furs. Without being actually ill-used, they are always cheated by the Japanese; and, notwithstanding the protection afforded by the authorities, they aro demoralised by want, alcohol, and all its attendant evils. Many have married Japanose women, and all are more or less familiar with the language of their rulers, so that they must inevitably soon die out or become absorbed in the superior race. Like so many other obscure and half-savage races, they are threatened with extinction by civilisation itself. As if conscious of their approaching doom, they have become indifferent to life, and, although gay and cheerful, they will commit suicide at the least check or trouble. But infanticide is not practised except in the case of twins, when one is dispatched to save it from a lifo of hardship.

\section*{The Amomgane of Japan.}

The dominant people in Japan are evidently a mixed race, in which the Aino clement is bat alightly represented. Aceording to the prepossession of observers, they have been athliated to various stocks; but although Whitney und Morton regard them as members of the Cancasic fumily, most unthopologints chass them with the Mongol races of Siberia and bast \(A\) sia. The Chinese rocords referring to the land of Wo, that is, of Japan, before the inhabitunts were aequainted with the

Fig. 185.-l'linitive lopllatione of Nif-pon, accohuing to the Jabaneme Annalb.

art of writing, mention eertain facts attesting the preponderating influence of Chinese eivilisation even at that remote epoch. Migrations must havo taken place from the Yang-tze basin to the adjaeent arehipelago, and according to one legend the ancestors of the Japanese race were three hundred young men and women sent aeross the seas by the Emperor Tsin-Shi-hwangti in seareh of the "flower of immortality." Many have suspected the presence of Malay elements amongst the inhabitants of Nip-pon, while the curly hair and dark complexion common in the south have been referred by Siebold to a mixture with "Alfuros," Melanesians, and Caroline Islanders. Vessels may certainly have often drifted northwards with the equatorial
current and the Kurosivo, and it is powible that dupan may have in this way hern peoplent from the Pheifie or East Indian Arehipelugoes. At the same time no historic dorement mentions any vogages of this sort before the arrival of the Liuropens. The umals npeak only of the relations of the Jupunese with the neighbouring islanders and with the peoples of the mandand, whence the commanientions were in uny ease more easily entablimhed. Passing from Houdo and kinsin to Iki, and thence by 'Isu-sima und the Korean Arehipelago to Koren itself, mariners have the hand nlways in sight, while, accorling to the direction of the trude winds, even light cruft are constantly carfied from one const to the other. Thus it was that the Kmaso or Yusu oceupied simultuncously the south-eust corncr of Korea und the country of the Yomolz or Neno Kumi in the west of Jupan. They were not "pucified," that is, sululued, till the second century of the vulgur era. The Yamate, or Japanese properly so colled, seem to have originully dwelt on the southern shores of the archipelago facing the Pueific. But before any mention oceurs either of Ainos, Yusu, or Yamuto, the islands were alrendy peopled. On the plain of Yedo and in several other purts of Nip-pon refuse heups have been found resembling the Danish Kj̈̈lkirmmöhdinger, and containing, besides shells different from the living species, earthenware und human bones mingled with those of monkeys, deer, wild bours, wolves, and dogs. The race associated with these remains would seem to havo been anthropophagi.

\section*{Time Present Japanese Race.}

Ethnologists havo attemptod to describe the churacteristic Japanese type. Bat although at first sight fow differences are detected, foreigners residing in tho country soon begin to distinguish two distinct types, which correspond partly to two social classes, and which the native artists have at all times reproduced and even exaggerated. These types are thoso of the peasauts and the aristocracy. Tho features of the peasant approach nearest to thosc of the East Asiatic peoples. He has the same broad, flat face, crushed nose, low brow, prominent cheek bones, half open mouth, small black and oblique eyes. He is best represented. in the northern division of Hondo, in the low-lying plain of the Tone-gava and on the highlands stretching west of Kioto. Tho nobles are distinguished by their lighter complexion, more pliant and less vigorous body, more elongated head, elevated brow and oval face. The cheek bones are but slightly prominent, the nose aquiline, mouth small, eyes very small and apparently oblique. Artists have accepted this aristocratic type as the ideal of beauty, transferring it to their gods and heroes, and exaggerating it in their portraits of women. Being found chiefly in the Kioto district and on the slope fueing the Pacific, it has been argued that these features belonged to a conquering "Polynesian" element from the eastern islands. But all shudes of transition are now found between the two extremes, and owing to crossings and shiftings of fortune many of the nobles might be taken for plebeians, while the oval face and aquiline nose of the aristocracy are often found amongst the lower classes. On the whole, the Jupanese face, with its olive complexion, lozenge shape and
receding brow, is far from answering to the Western ideal of beauty, and to most foreigners seems decidedly plain. But this plainness in the case of the women is often counterbalanced by a graceful carriage, charming expression, and tender glance. Those of Kioto and the southern regions bear the palm for beauty in the estimation both of natives and foreigners. Amongst the Samurai aristocracy many beardless youths betray a surprising resemblance to young women.

The inhabitants of the Lu-chu Archipelago form a transition between the "Polynesian" type of Japan and the almost Malay features of the Formosans. The eyes are nearly straight, the complexion of a somewhat olive tint, the beard fuller than that either of the Japanese or Chinese, and the hair usually gathered in chignon fashicn on the top of the head. But these islanders are espeeially distinguished by their gentle expression and graceful manners. Maxwell, Basil Hall, and the other early European visitors, speak with enthusiusm of this raee, which seems to laek no virtue except the strength of character and dignity inspired by the enjoyment of liber'y. In Lu-chu family names are borne only by the two privileged classes of the aristocracy and nobles of the second rank. The plebeians wear a different dress, and are forbidden the use of silver hair-pins and umbrellas.

To whatever elass they may belong, all the Japanese are of low stature, averaging from 5 feet to 5 feet 2 inches in the men, and under five feet in the women. The lower orders are mostly robust, broad shouldered, very straight, and endowed with a remarkable power of endurance. The Japanese coolie will carry a heavy load at a rapid pace for hours together, without stopping even when ascending stecp mountain passes. Attendants on foot keep up with their master's horse crossing the country at full gallop, and the acrobats are unsurpassed in strength and activity by those of the West. A tendency to obesity is found only amongst the wrestlers, amongst whom the Mongolian type scems, by a sort of atavism, to be preserved to a surprising degree. The artisans and peasantry are generally well proportioned, except that they are often somewhat knock-kneed, a defect due to the way children are carried on their mothers' backs. They also become prematurely aged, both sexes being usually covered with wrinkles about their thirtieth year, and retaining of youth little beyond their white teeth and fiery glance.

The prevailing malady is anemia, which sooner or later affects four-fifths of the omen is 1 tender \(y\) in the stocracy
reen the rmosans. ae beard chered in specially gentle manners. he other eak with which :cept the dignity f liberiy. are borne d classes les of the ans wear forbidden pins and re of low feet to 5 and under The lower d with a eavy load ascending er's horse a strength amongst atavism, generally a defect ne premathirtieth ce. ths of the
whole population, and which is attributed to the almost exclusive use of rice and vegetables, possessing little albumen and fat. Small-pox is also very prevalent and much dreaded, although the Chinese methods of inoculation have long been known. Even since the introduction of vaccination by Siebold at the beginning of the present century, this scourge still continues to leave its mark on the features of about two-thirds of the people. Notwithstanding their extreme cleanliness, the natives are affected by the taint of leprosy in every part of the archipelago, and especially in the Tokio district. Discases of the chest and lungs are almost as fatal as in Europe; but searlatina, erysipelas, puerperal fever, and many other Western maladies are absolutely unknown in the archipelago.

Few crossings have taken place between the natives and the Chinese settled in the seaports, although the number of ehildren sprung from alliances between Europeans and Japanese women is already relatively considerable. The type of the mother invariably prevails, and according to Wernich, the children of English or German paternity seldom survive, while the issue of unions between Frenchmen and native women thrives well, and are even more vigorous and sprightly than their pure-blood Eastern playmates. The descendants of Portuguese Christians and the women of the southern islands call themselves Europeans, still bear the names of their Lusitanian forefathers, and generally make it a point of honour to speak English. But nearly all take Japanese wives, and the race has thus become assimilated to the
 indigenous type, except that the hair remains slightly undulating, the forehead higher, the face less prognathous, and the eyes less oblique than amongst the surrounding populations.

It is no longer obligatory to wear the national dress, and in their eagerness to imitate foreign ways, the lettered and trading classes have adopted the European costume, which, although very unbecoming, has the advantage of helping to get rid of the old class distinctions. Formerly the style and colcurs of the clothes worn by both sexes in every social position were strictly regulated by law or custom. The usual material was cotton, silk being rescrved for the rich, or for grand occasions. The Kimono, or robe of the women, differs only in its greater length and brilliancy from that of tho men. In both the wide sleeves serve as pockets, and are usually filled with rolls of paper used as handkerehiefs or tablenapkins. Hence also "sleeve editions" answering to our small "pocket editions"
of books. The costume is completed by a skirt in the upper elasses, or drawers amongst the poor, while several robes are worn one over the other in cold weather. During the rainy season the artisms and peasantry eover their clothes with straw

Fig. 188 - Japaneme Musicians and Dealem.

or oil-paper cloaks. All except the coolies and couriers wear the so-ealled hata, high wooden clogs, which require great care in walking, and are even the cause of nervous uffections. The European boot is ill-suited for the muddy streets, and
indoors they walk bare-footed on the fine matting of the floors. The head-dress, especiully of the fair sex, is quite a work of art and much patient labour, consisting of a vast chignon of real and urtificial hair, cumingly devised, and over which many hours are usually spent. Being unable to afford all this time every duy, women engaged in work have their huir dressed once or twice a week ouly, and in order not to disturb the elaborate superstructure, they are obliged to sleep with the neek resting on a wooden pillow, so as to keep the head free from contact with the bed-clothes. A white cosmetic on the face and neck, crimson on the cheeks, the eyebrows blackened, the lips covered with gold leaf, and the teeth with a brown pigment, and the toilet of the highborn lady of the olden times may be pronounced completed.

Tattooing has been almost entirely abandoned by the women of all classes, and its use, even by the men, has now been forbidden by the Government. We learn from Matonalin that the nobles were formerly more richly decorated than the plebeians. But in recent times the most elaborate art has been lavished on the couriers and others, obliged, by their occupation, to appear almost naked in public. The designs, mostly in red, white, and blue, are diversely interlaced without any symmetrical arrangement, but always with great taste, so that a graceful proportion is observed between the lirds, dragons, flowers, and other more conspicuous objects.
 Thus a tree will be represented with its roots twined round the right font, the stem growing up the left leg, and covering the back or breast with its outspread leafy branches, on which are perched birds of various kinds.

Made up as they are of so many heterogeneous elements, it is extremely difficult
to form a just estimate of the Japanese people, and the difficulty is increased by their consciousness that they are just now, so to say, on their trial. They are consequently apt to assume false airs; and as they have endeavoured to assimilate themselves outwardly to Europeans, by adopting a foreign garb, they, in tho same way, affect the mamers and tone of a nation long aecustomed to Western culture. Execpt, perhaps, certain tribes of the New World, no people have developed to a higher degree the faculty of concealing their inwarl sentiments and preserving their equanimity under the most trying circumstances. Extremely reserved and sensitive to the opinion of others, they speak only after having well weighed their words, and maintain a sort of self-restraint in the presence of Europeans. Many officials have even taken to blue or coloured spectucles, in order the better to conceal their inmost thoughts; and even among themselves their outward indications of

Fig. 190.--Japanger Wumen.

anger, contempt, affection, or other strong passions, are singularly moderate, compared with the vehemence of many Western peoples. They suffer impassively without wringing their hands in despair, or appealing to the Deity with outstretched arms and upturned eyes. They have learnt from Europeans the custom of shaking hands, but it never approaches the hearty grasp of an Englishman. Mothers even rarely embrace their children; and this general reserve extends even to the demented classes, so that a "dangerous lunatic" is almost an unheard of phenomenon in Nip-pon.

The very effort to make a good appearance in the eyes of strangers speaks highly in favour of this interesting people. They are essentially kind-hearted, and nothing is rarer than instances of men rendered arrogant by their social position, and treating those beneath them with harshness. Those in the onjoyment of
power and privilege seek rather to avoid envy by their courtesy and considerution for others less favoured by fortune. No one, whatever his rank, assumes that haughty air which so many functionaries, great and small, elsewhere regard as their most highly prized prerogative. From the custom of bowing gracefully to each other, the Japanese have gradually acquired a natural attitude of deference, while the expression of the features generally reflects their kindly disposition. Even under extreme suffering patients preserve a mild glance and endeuring tone. This innate amiability, conspicuous especially in the fair sex, is usually accompunied by the domestic virtues of temperance, order, thrift, and common sense. The young women united by temporary alliances with Europeans, as is the custom of the country, seldom fail to ingratiate themselves with them by their carcful forethought, assiduous attention, and orderly management of the household. Strangers are surprised at the eheerfulness and calm resignation of the hard-working labouring classes, who adapt themselves to everything, and submit uncomplainingly to the greatest hardships and privations. Yet this resiguation cannot be attributed to the want of a higher ideal. The eagerness with which the European arts and sciences have been welcomed shows how keen is the desire of progress amongst all classes.

The Japanese are now committed to the new social evolution by a sense of honour, which has ever been one of their main springs of action. The practice of harakiri, or sappuku, maintained for centuries amongst the nobles, attests the strength of will with which they are capable of asserting their personal dignity. Although not of native growth-for frequent mention is made of it in the Chincse annals-this custom has nowhere else become a national institution. Whether commanded by the government in order to spare the nobleman a dishonourable death, or voluntarily performed in order to be indirectly avenged on an opponent by compelling him to give life for life, the act was always executed with serupulous nicety. No instance has been recorded of one of these determined suicides ever uttering an unworthy complaint in the presence of his friends assembled to witness his selfimmolation. Many cases, on the contrary, are mentioned of heroes resolute enough to compose verses or write their last wishes in their own blood after disembowelling themselves. Yet these men did not throw away their life rashly, and except where honour, rightly or wrongly understood, was at stake, voluntary deaths have always been rare in Japan. But wherever the test of courage is demanded in cither sex, the Japanese are excelled by no other people. The history of the forty-seven ronin, so determined in exacting vengeance for the murder of their master, so heroic in their self-sacrifice, is the most widely known in the country, and the graves of these daring men are still piously tended by the citizens of the imperial capital. The recent wars and revolutions also show that the people have not degenerated from the prowess of their forefathers, and we may rest assured that should Russia or any other Western power become engaged in hostilities with them, it will meet with a formidable adversary. Hitherto the European powers have obtained easy triumphs over most Eastern nations, thanks to the superiority of their armaments and discipline. But the Japanese people are not one of those which will henceforth
allow themselves to be conquered withont a struggle, nor will civilisation have to deplore the disgraceful subjugation of \(40,000,000\) human beings who are rapilly placing themselves on a level with the most advanced states of Christendom.

While recognising the superiority of Europeun scence and industry, the Japancse are none the less, in eertain respects even more, civilised than their foreign instruetors. In ull that regards frugality, self-respect, the sentiment of honour, mutual kindness and consideration, the mass of the people certainly stand on a higher level than most Western peoples. The humblest Jupunese peasant has un eye open to the wild grandeur and softer charms of the landscape, and takes care to build his hut by the sparkling stream, in the slude of a leafy thicket, or on an eminence commanding a fuir prospect of the surrounding seenery. His lowly dwelling is even usually adorned with flowering plants tastefully disposed. The country is not allowed to be disfigured by wayside inns erected on incongruous sites, and during the fine wenther groups rather of tourists than pilgrims are everywhere met visiting the districts famous for their romantic beauty.

The ehief defeet of the people, one which they most frequently complain of in their own writings, is a lack of perseverance. Yet even this charge cannot well be brought against the mass of the luborious and industrious elasses, but applies rather to the youth of the higher circles, who have perhaps been somewhat prematurely "eivilised" in the European sense. These half-educated representatives of "Young Japan" have often shown a distaste for solid study, and pass casily from one undertaking to another. Hence the "prophets of evil" have foretold a sudden and terrible reaction at no distant date. But it is seareely conceivable that a whole nation can thus retrace its steps and deliberately revert to the old order of things, especially when the progress already made is based on a solid scientific foundation.

\section*{Language and Letters.}

Like the arts, social institutions, and general culture of the people, the national speech has been largely affected ly forcign elements. The Yamato, or original language of the country, which has no relation to the Chinese, is an agglutinating polysyllabic tongue, affiliated by most writers to the Ural-Altaic family. Yet nothing but the vaguest resemblance has been detected between their structure, syntax, or vocabulary. Japanese is distinguished by great harmony, comparable in this respect to Itulian, by full syllables and euphonic laws. The adjective always precedes its nom, and the object its verb, and there are neither articles, cases, moods, nor teases, all the formal relations being indicated by particles or suffixes. The Yamato is spoken in its purity only in court circles, and by the caste of weect courtesans, who were probably formerly priestesses of the Sinto religion. Elsewhere the current speceh is the Sinico-Japanese, in which, however, the Chinese words have quite a different pronunciation from the Mandarin dialect. There is no instance in Europe of a similar intermixture of two languages. In English the
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Teutonic and Latin elements have been thoroughly fused, wherens in Sinico-Jupanese the Yamato and Chinese lic, so to sny, in juxtuposition. The Lu-chu diulect is regurded as a distinct lauguage, although nemrly reluted to Jupmese and written with the same syllabaries. It also contains muny Chinese words introluced by the lettered classes. A portion of the Bible lins been translated in. 'his dialeet by the missionary lettelheim.

In Junuese there are two systems of transeription, of which the oldest ure the Chinese ideogruphs introduced with the germs of the nutionul culture. But these signs are so numerous that it requires n whole life to master them all. In the elementary sehools us many as 3,000 are taught, but no one cun chaim to be educuted if he does not know at lenst 8,000 or 10,000 , which, after all, is searcely a third or a fourth of the complete dietionary. Hence, from the earliest times efforts have been made to simplify the art of reading. Even before the introduction of the Chinese ideographs the people wero aequainted with the Korean syllubary without adopting it. But later on they invented vurious originnl phonetic systems commonly spoken of as Sinai, or "divine writings." At present there are no less than seven different syllabaries, of which six are of local invention. The kiata kiuna, or "side writing," so called becuse added to the Chinese signs to determine their exact value, is in most use amongst the lettered elusses. For correnpondence, ballads, plays, and popular literature the hira kana, or " unitel writing," is ehiefly employed. But neither of these adequately replaces the Chinese signs for abstract ideas and scientific subjects. The Sinico-Jupanese words relating to mental coneeptions, being monosyllabie, have dozens of homonyms difficult to be distinguished one from the other without speeial signs. Thus the curious mixture of an agglutinating and a monosyllabic form of speech known as Sinico-Jupanese is unable to dispense with the two corresponding systems of writing-the Chinese ideographs and the "lateral" syllabary. The people fully understand how defective is the instrument used by them to express their thoughts. Nevertheless, the question has not yet been raised of rendering English obligatory in the schools for the purpose of gradually substituting a more convenient language for that at present current in the arehipelago. Most technical and abstract terms are, however, now taken from the European languages, and more especially from English, instead of from Chinese, as heretofore. The Latin alphabet is also taught, and various attempts have been made to render its use more general.

The language itself is by no means deficient in terseness or power of expression. Its greatest defeet is probably the absence of a relative pronoun, which occasionally produces involved and somewhat awkwurd coustructions. There is also a great dearth of abstract terms, and of words expressing the more subtle distinctions of Europenn philosophy. Nevertheless it is the opinion of Captuin Brinkley, who has devoted much attention to the subject, that if only the serious defect of its complex writing system could be removed, the Japanese language might, witl a little cultivation, soon be rendered a fitting instrument for the expression of Western seience and literature.

Since the eighth century there has been a considerable literary development,
which if not "luminons" muy ut least be describel ns " voluminous." Poetry, the dromm, history, and the nutural seciences have been cultivnted, und the intelleetual evolution of Japan may be said to have rim in parallel lines with that of the West. In the momasteries the old manuseripts were eepried, chronicles compiled, theological and metuphysimal treatises composed, while the "Courts of Lave" were held during the twelfth and thirternth centuries in the castles of the fendul lords, where the lettered warriors and strolling minstrels wrote their romances of chivalry, and recited their lyrical somgs just us in Europe. The perioul of literary Renaissunce mincides with the seventernth century, ufter which comes the uge of the eneyclopredists. At present jourmulism and political writings are swelling the bulk of the nutional liturature, which luns theon more or less affected by Europem influences since the middle of the eighteenth century, when secret socecties were formed for the translation of Dutch works.

The Aut of Printing in Japan.
From Mr. Sutow's recent investigations, it appenrs that to a religious lady belongs the honour of having introducel the use of printing in Japan. In the year 764 of the new ern the Limpress Shiym-tokn, in fultiment of a solemn vow, ordered a million small wooklen shrines to be distributed umong the Buddhist pagolus and monusteries throughout the arehipelago, und directed that eash of these shrines should contain a dharani or extruct from the Buddhist sacred writings. The Sanskrit or Puli text of the dharani was to be printed in Chinese characters, on slips of paper ubout 18 inches long by 2 inches wide, so as to be easily rolled up und deposited in the interior of the shrines. A large number of these slips are still preserved in the monustery of Hofu-riu-\%hi in Yamato, and facsimiles of some of them are often found reproduced in Japme, e antiquarian works. Opinions are divided as to whether the phates from which these impressions were taken consisted of metal or wood, ulthough they are now generally supposed to have been of the former material. The absence of all previous progressive steps leading up to this method of printing from the block or plate, shows that it was not a mative invention, but introdneed in the eighth century from China, whence most of the literature, religion, and philosophy of Japan had been previously borrowed. It is ulso noteworthy, that for a long time the art remained dormant, for an interval of no less than four centuries intervened between this first attempt and the appearance of the first printed book, which bears the date of 1172 .

Nevertheless, the religious direction originally given to printing by the Empress Shiyan-toku left its impression on the productions of the press for a considerable preriod. Copies of the Chinese Buddhist works alone were for a long time regarded as worthy of being reproduced, and between the ycars 1278 and 1288 the whole Buddhist Canon was printel und widely eirculated, while nothing was done for current literature, or even for the other religions of the Empire. Confucianism received no attention from the type-cutters till the year 1364, when a copy of the "Confucian Analects" was first published. This reprint, which is still in existence, hn works. ions were pposed to sive steps lat it was a, whence oreviously remained ween this f the date nsiderable e regarded the whole d done for fucianism opy of the existence,
is highly valuel on account of the many variations whieh it an ainw, ant bich often throw mach light on the received text.

Apart from the Buddist books not more than forty or tifty works are kbown to have been printed in Japan down to the begiming of the seventecenth century. A great stimulus was, however, then given to the art chicfly through the influence of the Koreans. After his first vietorions rmmpign in Korra, Hideyoshi hal brought back alarge number of books earrent in that coantry, und the literary netivity representel by these works, compmed with the stagnant state of letters in Japan, wounded the nutionul pride of the conquerors, amb stimulated them to a healthy rivalry. An examination of the euptured books some revealed the fact that the Koreans possessed the art of printing with movable types, which they had no doubt derived from the Chinese, and which they seem to have practised as eurly as the begiming of the fifteenth century, if not earlier. The Jupmese, always apt imitators, swon adopted this methol, and the first book printed in Jupan with mowable copper types bears the date 1596. From that time onwards the press, in varions parts of the Empire, has been busily enguged in reproducing every important book in Chineso literuture. The nutive literature also som legm to avail itself of the same casy means of circulation. But recent indiantions seem to make it probable that the time is approaching when Jupmese translations of European, and especially English, works will be mainly substituted for the publications both of the native and the Chinese writings. Mr. Fukusawn of Tokio has greatly distinguished himself in this direction. One of his classes lately trunslated the whole of Adan Smith's "Wealth of Nations" into Jupanese, and several other important European works, especially those treating of philosophy, natural science and politics, owe their appearance to this learned teacher and his pupils.

\section*{Religion-Sintoism.}

The religious thought of Japun, as of so many other comntries, is just now in an evident state of transition. Most of the educated classes and even the lower orders in the towns entertain or affect a profound indifference for the various religions of local or foreign origin. Yet some of the outward observances are still generally retained, mainly through the influence of the women.

As in China, three cults co-exist side by side, and the same individual may even conform to all three. Of these the oldest is the nationnl religion known as Sintoism, or the "Way of the Genii," which represents the conservative and reactionary element, which from the first protested against the intrusion of the Chinese language and culture. The Kosiki, or "History of the Things of Antiquity," which embodies the Sinto teachings, is the oldest and most remarkable work in Japanese literature. The Confucian system is little more than a moral code. But Buddhism is at once a metaphysical and religious system, which consoles its votaries for the miseries of the present life, and holds out prospects of happiness or repose in the after state. Thus according to the times, places, and other circumstances, these elements may beconse diversely intermingled without being antagonistic, although
under exceptional conditions und political reactions religious wars have occasionally broken out.

I, ike the Chinese, Korem, und Siberian nborigines, the Jupanese had origimally no other divinities exeept the forees of Nuture, with which they associated the souls of the dead and the right million uerial und terrestrial genii. How live nt pence with these comatloss hosts without endless conjurings und offerings? And how was the head of the fumily to thwart the malignant, and propitinte the beneficent npirits,

Hig. 191.-Nikko and the Uifpic Tone-gava.
Seale 1 : 380,000 .

without addressing them as mortals, and honouring them with feasts and banquets? Such is the old ancestral cult, associated with that of the Kami, or genii, and of natural phenomena, which still prevails under the Chinese name of Sinto. The rites of this extremely simple worship, which asks of its followers nothing but purity of soul and thought, are usually performed in the midst of the grandest natural surroundings, where have been raised the miya or yasiro, shrines consecrated to the genii, and containing the crystal mirror, symbol at once of purity and of supernatural foreknowledge. In the ceremonial the heads of families have been
replaced by a caste of hereditary priests, who invoke the genii on behalf of the multitude, who bring the offerings, and ir their honome celchrate the mutsuri, or puntomimes and thentrical representations.

By one of those coincidences so frequent in history, the revolution of 1867, which introduced the new culture from the West, was necompanied by a renction in the religions world, wherely the old Sintoist mimism again beenme the official religion of the Empire. But the funcrul ceremonies, which formerly played such a large purt in this system, are gradually losing their original hieratic character. There was a time when human sacrifices were associated with the burial of the great-women, slaves, and horses following their musters to the grave. Liven so recently as 1644 , it was found necessary to forbid the retainers of the daimios to immolate themselves on the berly of their feudal lorls. As in China, these vietims were replaced by clay imuges depositel in the graves or funeral urns. But the most romantic natural sites aro still chosen as the last resting plaess of the dead. The superb mausoleums of Yeyas and one of his successors have been erected in the loveliest valley in Jupan, surrounded by the glorious woodhuds of Nikko.

But the most sacred shrines of the Sinto worship are the two temples of the SunGoddess and the Goddess of Food, which are situated near Furnichi, in the province of Ise, about 90 miles south-east of Kioto. They hive for the Japanese the same importance as Mecea and Medina have for Mohummedans, and are yearly visited by thousands of pilgrims from every part of the Empire. In the capital no artism considers it possible to gain a livelihood, unless he has invoked the protection of these goddesses by performing the pilgrimage at least once; and the pensuntry ure even more constant votaries at their shrines. Formerly it was a common thing for the little shop-boys of Yedo to ubseond for a while from their employers, and wander along the public highway as far as Ise, subsisting on the alms which they begged from travellers; and having obtained the bundle of charms, eonsisting of the wood of whieh the temples are built, they returned rejoicing to their homes. The Ise pilgrims are all distinguished by large bundles of these charms wrapped in oiled paper, and carried suspended by a string from their necks. Popular stories are even current of dogs having performed the pilgrimage by themselves. These places derive their sanctity neither from antiquity nor from their magnificence, being in fact remarkably plain and even primitive in their architecture, but from the sacred metal mirrors forged in heaven for the Sun-Goddess. In every native house there is a small Sinto shrine containing paper tickets, inseribed with the names of various deities, one of whom is invariably the chief Goddess of Ise, and the puper box marked with this deity's name is supposed to contain some picees of the wand used at the Ise festivals. At one of these festivals called oni-osaye, or " kecping down the demon," two fishermen used formerly to be brought in a eage to the temple, with fluming torches on their heads, and it was their part, as demons, to enter the shrine and carry off the image, while others of the confraternity repelled them with naked swords. Wounds were frequently inflieted, and it was in faet considered that the shedding of blood on these occasions was neeessary to insure

Fig. 192.-Bundhist Trmplef at Nikro

the prosperity of the fishing craft. A quieter festival, heid in March, has recently been substituted for this sanguinary rite.

\section*{Buddhism and Ciristianity.}

The ethics of Kosi (Confucius), introduced in the sixth century with all the accompanying Chinese ceremonial, exercised, as in China itself, a preponderating influence on the political and social institutions of the country, but it in no sense offers the character of a religion properly so called. The Seülo, or "Halls of Holiness," are rather assembly roons for the learned than true temples, and the great Seïdo of Suruga-daï at Tokio has already been converted into a library for European, Chinese, and Japanese works. Buddhism, however, has preserved its sway over a large section of the community, notwithstanding the suppression of some monasteries, the conversion of bells into copper coinage, and the forcible transformation of numerous temples into Sinto sanctuaries. Introduced apparently about the middle of the sixth century, the worship of Shaka (Buddha) had the advantage of being identified in the minds of its adherents with Western civilisation, for with it came the writings, arts, and sciences of India. It also attracted the people by its pompous ceremonial, by the uogmas of transmigration and final redemption, and by the infinite variety of its gods and saints, amongst whom it cagerly hastened to make room for the shades of the great national heroes. Since its establishment Japanese Buddhism, almost entirely cut off from all communication with the Buddhist world on the mainland, has become divided into numerous sects, some claiming to have preserved the old faith in its purity, while others have become modified by the sanction of new revelations. But all had long lost the knowledge of the language in which the sacred books had been written, and it is only quite recently that, at the repeated suggestion of Max Müller, bodzes educated in the West have at last discovered in the temples of Nip-pon some precious Sanskrit writings hitherto supposed to have perished. The type of some Hindu idols has also been preserved from the time of the carly missionaries, neither sculptors nor workers in metal venturing to modify the traditional forms.

Of the sects by far the most popular is that which, under her thirty-three different images, worships Kannon, the Kwanyin of the Chinese, "Goddess of Mercy with her thousand helping hands." According to the census of 1875, the seven principal Buddhist sects possess between them no less than 88,000 temples, while the Sintoists have over 120,000 , many, however, of which are used in common by both religions, a simple bamboo screen separating the two altars. The "prayer mills," so universal in Tibet, are rarely found in the Japanese temples, although the devout are incessantly muttering the name of Buddha. They also write their prayers on scraps of paper, which they roll up in little pellets, to pelt the idols, and thus obtain their petitions through the efficacy of the divine contact. The inside of the statues is sometimes crammed with these papers, or else boxes are set going on which are inscribed the words "ten thousand prayers." The brooks and streams are also by some simple contrivances transformed to "flowing invocations."

The Shin-shiu, or "New Sect," founded by Shinran-shonin in the thirteenth century, probably ranks next in importance and influence. It differs in many
respects from ull the others, rejecting all Buddhas and deities except Amida Buddha, to whom alone prayers and invocations are to be addressed. Hence the charge brought against it of being a pure Theism, although Amida Buddha is not regarded as a creator, nor as having existed in his present state from all eternity. He is neither the preserver of all things, nor omnipotent, nor the regulator of events in this world, nor a punisher of \(\sin\) in the next. In fuct, he has no true personality at ull, so that his votaries seem to be rather Atheists than Deists, differing but little from the materialistic agnostics of Europe. Nevertheless their immense inflaence in every part of the Empire has reeently been strikingly illustrated in connection with the restoration of one of the great temples in Kioto. Towards the fund raised for this purpose the province of Owari alone contributed no less than \(500,000 \mathrm{yen}\), or about \(£ 100,000\). Offerings of all sorts in coin and kind also poured in from Kaga, Mino, Yechizen and other provinces famous for their devotion to Buddhism. Women and young girls are even said to have cut off their hair and twisted it into cords to drag cedar trunks to the capital, where these trees were hewn into pillars for the new temple. Buddhist priests also went about the country selling shares in a new railway company which has been projected to connect the remote provinces with Kioto.

From all this it is evident that, contrary to the general opinion, a great deal of superstition and religious zeal still remain. On the other hand, there are many indications to show that the Japanese are not on the whole a very religions people, and that "at the present day religion is in lower repute than probably it has ever been in the country's history. Religious indifference is one of the prominent features of new Japan. Shortly after my arrival I was at a pienic held within temple-grounds near Tokio. The main hall of the temple was put at our disposal, and there our collation was spread, right in front of the altar. One Buddhist priest let his temple to one of my colleugues, by whom the altar was used as a sideboard. Another, finding the chanting of prayers not sufficiently remunerative, took some time ago to selling beer and taking photographs at the great image of Daibuts, near Kama-kura. Decaying shrines and broken gods are to be seen everywhere. Not only is there indifference, but there is a rapidly growing scepticism. Among the better educated classes this is widespread. The bare mention of Buddhism is cnough to provoke a laugh from the student who has imbibed foreign science and philosophy. But the masses also are becoming affected by it. During a discourse on Infinite Vision, which a priest recently delivered at a temple in Shina-gava, one of the congregation stood up and spoke thus sceptically : "Truly, the more we reflect on these subjects, the more are we plunged into the vortex of perplexed thought. All that the priesthood affirms on the subject of heaven and hell is a mere fabrication, an assertion of which any plain man can casily perceive the truth. If you explain the visible, which the cye can see and the understanding grasp, well and good. But as to the invisible, who can believe?"*

Christianity, which formerly claimed so many adherents in the southern provinces, is now reduced to very narrow limits. Soon after the arrival of Francis
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\text { * "The Land of the Morning," p. } 516 .
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Buddha, eharge \(a\) is not eternity. of events no true a Deists, less their trikingly in Kioto. ntributed coin and amous for have cut al, where iests also has been at deal of are many us people, \(t\) has ever orominent within r disposal, Buddhist used as a unerative, image of en everycepticism. ention of ed foreign

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Xavier, in 1549, the worship of Yaso (Jesus), at first regarded as a Buddhist sect, made rapid progress. The Jecuits founded a seminary at Funai, and within thirty years of the first conversions, the Christian communitics, grouped round two hundred churches, numbered over 150,000 members. A native prinec, zealous for the new faith, boasted of having burnt on his lands 3,000 monasteries, and dispatched an envoy to convey his homages to the "Great, Universal, and Most Holy Father of the whole World, the Lord l'ope." But an unguarded reply of a Spanish pilot wrecked on tho coast of Nip-pon caused the dictator, Taiko-sama, to reflect. To the question, "How has your sovereign been able to acquire so many lands ?" the Spaniard had answered, "By arms and religion. Our priests prepare the way by converting the people to Christianity; then the task of subjecting

them to our authority is a trifling matter." Thereupon Taiko-sama issued a decree, in 1587, banishing the Jesuits, and although his threats were not carried out at the time, ten years afterwards some Franciscan friars, who had given themselves out as ambassadors, and who had been denounced by their rivals, were condemned to be erucified. Nevertheless, the new religion continued to be tolerated till the year 1614, when some repressive measures were taken, and its practice finally interdicted after the return of an envoy sent to Europe to collect information on the religions of the West. Condemned to renounce their faith, the Catholies of Kiu-siu revolted, in 1638, but they were defeated and mercilessly put to the sword. Thousands were on this occasion thrown into the sea and down the crater of Unzen near Nagasaki. In 1640 four Portuguese ambassadors from Macao were put to death with most of their suite, and thirteen sailors sent back with the warning, "While
the sun warms the earth, let no Christian dare to set foot in Nip-pon! Let all know : If the King of Spain in person, or the God of the Christians, the great Shaka himself, violate this deeree, their heads shall fall!"

Nevertheless, a number of Catholies continued to practise their religion in some remote villages, and at the revolution of 1867 about 4,000 of them were exiled to the Goto Arehipelago and other islands, for having refused to take part in the religious ceremonies in honour of the Mikado. Christianity is at present allowed to be openly preached in the treaty ports, and the government has even sanctioned the conversion of Buddhist temples into Protestant or Catholic chapels. The English and American missionaries, numbering over one hundred altogether, are the most zealous evangelisers, although the results of ten years' efforts are very slight. On the other hand, the Buddhist priests, mostly of the Manto sect, which rejects celibacy and mortification of the flesh, have gone to Europe in search of arguments to be afterwards used against the Christian missionaries. Most of the numerous recent sects, such as the "Poor Brethren," the "United," the "Discontented," the "Sea-weeds," have only indirectly felt European influences, and occupy themselves more with social reforms than with religious changes. The adventurers landing in their ports are not calculated to inspire the natives with much respect for the religion of the foreigners, for, as they say, "the tree should be known by its fruits."

The prevailing moral tone of foreign residents in Japan is admittedly low, even though it might be unjust to speak of it as absolutely immoral. Nor is this low tone the only obstacle to the progress of Christianity. "There are many respectable men altogether indifferent on religious matters, and many professing Christians, who, with an inconsistency almost incredible, take every opportunity of giving vent to the unreasonable animus which they feel towards their fellowcountrymen who have come to preach the Gospel to the Japanese. The sneers and invectives, however, of such critics are inva:iably in exact proportion to their ignorance of the actual work which missionaries are doing.
"The missionaries of the various Protestant denominations work together amicably, and the Japanese have no sectarian warfare to perplex them in their consideration of the new religion. The three Protestant Churches represented, viz. the American Presbyterian, the American Dutch Reformed, and the Scottish United Presbyterian, have united in the one Presbytery, and together maintain the Union Theological School, an Institution which, in 1880, had seventeen students preparing for the Christian Ministry."*

\section*{Topography of the Kuriles and Yeso.}

The cold, foggy climate of the Kuriles and the northern division of Yeso have prevented the development of agriculture in those bleak regions. In 1875 there were only 453 settled residents in the Kuriles, besides those of the temporary fishing and hunting stations on the islands of Kunashir and Iturup. The more

\footnotetext{
* W. G. Dixon, op. cit., p. 570.
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Yeso have 1875 there temporary The more
northern islands of the group have in recent years been almost deserted, the whole population having been reduced in 1874 to seventy-two souls, confined to the threo islands of Sumshu, Unekatan, and Sinskatan. Even the interior of Yeso is mostly uninhabited, while the so-called towns of Soya, on La Pérouse Strait, Sibetz, and Nemoro, facing Kunashir, are mere fishing hainlets. The population is concentrated chiefly in the towns of the south-west, where the temperature is milder, and where supplies of all sorts are more abundant than in the north.

Sapporo (Satsporo), capital of the island, lies in an open alluvial plain watered by the Isikari and its affluents. It is a recent town, built on the American model,

Fig. 19t.-Hakodata Bay.
Seale 1:90,000.

and boasts even of its "Capitol." Here is a School of Agriculture, established by some professors from the United States, and the lands in the neighbourhood have been distributed amongst about 1,000 military colonists. A more inportant place is the fishing town of Ixikari, at the mouth of the river, where as many as \(1,200,000\) salmon were taken in 1860. Otaru (Otarunai), lying on the coast, west of Isikari, and connected by rail with the capital, also exports large quantities of fish even as far as China. Here about fifteen million pounds of salmon are yearly cured, and vast quantitios of herrings are used in the manufacture of manures. On a creek farther

EAST ASLA.
to the sonth-west lies the port of Iranai, where the chief export is coal from the neighbouring pits.

On the more thickly peopled south coast are the towns of Sarn, also a centre of the coal iudustry ; I'"buts, u much frequented fishing station, and Mororan, on the deep buy of Yedomo, where the bar hus 26 feet at low water. Here travellers embark to cross Volcmo Bay und visit the city of Hakodutr, which stands on one of the safest and most spacious harbours in the world. Thrown open to foreign trade in 1854, this port, which in clear weather commands a view of the Hondo

mountains, has made rapid progress since the middle of the century. The population has increased five-fold during that period, and about one hundred Europeans have settled in the town, which has become the chief station of the whalers frequenting the Sea of Okhotsk. A Japanese squadron visits the roadstead every year, but the foreign shipping is inconsiderable, the nutive steamers baving almost monopolised the export business. One of the staples of this trade is the kampu, or "sea cabbage," an eaiible seaweed 20 to 40 feet long, which is dried on the strand and forwarded to Hondo mid South China. Some fine comitry-honses have sprung up here and there on the slope of the hill, 1,150 feet high, which commands the approach to the roadstead and to the peninsula of Hakodate.

Yezasi, on the west coast of Yeso, is also a large town; but Matsmai, or Fuliu-yama, the southernmost town in the island at the western entrunce of Tsugar Struit, has lost much of the importanco it possessed in the old feudal times, when it was the residence of a native prince. The anchorage is bad, especially during the sonthern winds, and it has been deprived of the commercial advantages now transferred by the treatios to IIakodate.

\section*{Topography of Nip-pon.}

Lying beyond the rice zone, the northern extremity of Hondo is but thinly peopled, no numerous communities occurring till we reach the valley of the

Fig 196.-Nim-gata and Sado Irland. Scale \(1: 1,400,000\).


Kitakami River. Avomori (Aomori), on the south side of the large inlet opening towards Tsugar Strait, derives some importance from the movement of passengers who embark here for Hakodate. A larger place is Hirosaki, formerly capital of a vast principality. But no other large town is met till we reach Kulbata or Akita, 70 miles farther south, near the mouth of the Mimono-gava, and Morioka, on the upper course of the Kitakami. The produce of the rich copper mines in this basin is forwarded on flat-bottomed boats to Isinomaki, at the mouth of the river in the island-studded bay of Sendai. The populous city of Sendai, which gives its name to this inlet, lies 9 miles from the coast, in the midst of extensive rice grounds.

Sendai, which does a large trade in foreign wares, is noted for its production of fancy articles made from a kind of fossil wood collected in the district. Amongst
the curiosities of the place are the presents given by the Pope to the Mission which was sent to Rome in the year 1615 by I'rinee Date Masamme. Sendai was formerly the castle town of the feudal prince Date Mutsa no Kami, whose stronghold was partly ruined during the revolutionary war of 1868 . It is now used as a military barrack, and is approached by a handsome bridge of modern structure.

South of Sendai follow the towns of Nihommats, Fikur-xima, und others in the valley of the Abukma, where we enter the region of sericulture. But on the west slope in the winding valley of the Mognmi-gava are found the largest towns, such as Yonezarn, Yama-gatu, Tsirruymokin (the ancient Siomir), Sakatn. Here is also

Fig. 197.-Kanezaya anib the Wilite Mountain.
Scale 1: 900,000.


18 Milex

Vakamats, capitul of a ken, west of Lake Inavasiro and the Higasi-yama hot springs. The neighbouring forests contain many trees yielding the varnish used in the preparation of lacquer, and not far off is one of the chief porcelain works in Japan. The torrent or Kincu watering this district forms a junction with the Sinano, or river of the "Thousand Bears," in the plains of Nili-gnta (Niiguta), where the routes converging from both valleys join the main northern highway of Hokrokudo. Nihi-gata derives great importance from its position at the junction of so many roads, on the banks of a river navigable for some distance by steamers. Intersected by canals and encireled by avenues, the city is one of the cleanest in Japan. But although thrown open to foreign traffic, its export trade is inconsiderable, owing
on which ndai was ce strongused as a cture.
ers in the the west wns, such re is also tot springs. ed in the in Japan. Sinano, or where the Iokrokudo. nany roads, rsected by pan. But ble, owing

types and contumes of citizens of tokio.

TOKIO AND ITS


\section*{OKIO AND ITS BAY.}


to the bar at the mouth of the river, and to the prevalence of fierce gales in winter. Hence the rice, silks, teas, laequer, ginseng, indigo, and other products of the rich Nihi-gata plains have to be mostly forwarded by bad mountain roads across Hondo to Tokio. Teradomari, lying 30 miles farther to the south-west, had threatened to supersede Nihi-gata altogether by depriving it of the Sinano-gava, whieh might be diverted by canalisation directly to the coast at Teradomari. But the vast cutting, 300 feet deep at one point, undertaken for this purpose, has never been completed, and Nihi-gata, such as it is, still continues to be the best seaport on the coast. It is partly sheltered by the neighbouring island of Sado, and several native and foreign engineers have been invited by the Government to report on the best means of improving its approaches. Murakami, Kasirazaki, Imamatsi, and the other towns on this seaboard all suffer from the same want of convenient harbours or sheltered roudsteads. In the neighbourhood of Aigara, capital of Sado, are some old gold and silver mines, which have been worked for ages. The profit from these mines under their present management was estimated in 1881 at about \(£ 17,000\). But for many years previously the value of the precious metals obtained appears to have been more than absorbed by the working expenses. Limestone is the prevailing formation in the island of Sado, which is very hilly, consisting of two groups of mountains separated by an intervening cultivated plain.

On the large bay, protected westwards by the long promontory of Noto, are situated the trading towns of Uvots, Sin-minato, To-yama, Takaoka, while towards the south-west lies the manufacturing city of Kanezara (Isikava-ken), famous for its chased bronzes, painted porcelains, and textile fabrics. In the same district are several other industrial centres, such as Komats and Mikara, both on the coast. Farther south are the sea-ports of Takamats and Sakayi, whence are forwarded the products of the surrounding towns of Ohono, Mrumoka, and Fukuyi, lying at the foot of the lofty Siro-yamo, or "White Mountain."

South of the rich Sendai plains there are no large towns on the rocky east coast till we come to the decayed city of Mito, at the mouth of the Naka-gava. But the population becomes more dense in the fertile plain watered by the Tone-gava and its tributaries to the north-west. Here Takasaki and Mayebasi are noted centres of the silk industry, and at Tomioka the Government has established a model silk spinning factory, which has become the most important in the Empire. Near the mouth of the Tone-gava is the large town of Diosi (Chosi), with its port of Fnabasi at the northern extremity of Tokio Bay. Diosi, which consists of a group of villages extending over a space of about two miles, is ehiefly occupied in the fishing trade. Large quantities of the ivashi, a kind of pilchard, but of smaller size, are eaptured all along the coast and brought to Diosi, where they are boiled down in huge cauldrons. The oil thus obtained is used for lighting purposes, and the residue, after being dried in the sun, is sent inland for manure. The smells arising from this process render Diosi and the neighbouring villages almost uninhabitable by strangers.

Tokio (Tokiyo, Tokeï), the present capital and largest eity in Japan, is the old Yedo (Yeddo), or "Gate of the Bay." Its new name, synonymnous with the Chinese

Tongking, means " Eastern Capital," and dates only from the year 1869, when it became the residence of the Mikado. Nothiug existed in this region except fishing and rural villages until the close of the sixteenth eentury, when Toku-gava Yeyas, founder of the last Shogun dynasty, built his stronghold here. Under one of his successors all the daimios were ordered to reside in Yedo for half the year, and to leave their families and most of their household in the place, as hostages for their good behaviour. A multitude of nobles, soldiers, enployés, and retainers of all sorts thus came to be grouped round the hill on which stood the palace of the Shogun. Trade followed in their wake, and at the height of its prosperity, about the middle of the present century, Yedo certainly contained over a million inhabitants. Including the 800,000 armed retainers and attendants of the daimios, some authorities have estimated their numbers as high as \(2,000,000\) and even \(2,500,000\). But the eivil wars, the departure of many nobles with their households, and the commereial ruin caused by the fires and massaeres, reduced a large part of Tokio to a wilderness. But with the return of peace it has gradually recovered, and is now perhaps nearly as populous as under the Shogun regime. Its commercial and industrial preeminence is at the same time insured by its position as capital of the Empire.

Covering about as much spaco as Paris within the fortifications, Tokio oeeupies the north-west extremity of the bay at the mouth of the Sumida-gava, which is here connected with the Tone-gava by the Yedo-gava branch of that river. It is encircled south, west, and north, by low wooded hills, while a eentral eminence, surrounded by grey walls and a moat \(3 \frac{1}{3}\) miles in circuit, is crowned by the On -siro, or "Noble Castle," formerly residence of the Shoguns, now of the Mikado. The old dwellings of the daimios have been mostly converted into government offices and schools, and beyond this middle zone, also euclosed by walls and canals, stretches the eity properly so called. The busiest commercial quarter lies eastwards, between the Siro and the mouth of the "Kava," where stands the "Bridge of the Rising Sun" (Nip-pon Busi), regarded as the central point of all the imperial highways. Here the Ginza boulevard has already begun to assume the aspect of a European city. Within a small space, handsome brick houses streteh in a continuous line, broken elsewhere by gardens, tea and mulberry plantations, and clusters of eryptomerix. But most of the 250,000 houses are still eonstrueted in the old native style. During the day these little houses, with their black tiled roofs and white ledges, are open to the street, showing the kamidana, or saered images and ancestral tablets, disposed on their stands of honour. In a country like Japan, where earthquakes are so frequent, these frail bamboo and cardboard structures are much safer than stone buildings, but are also far more liable to the risk of fire. They are supposed to have an everage existence of about six years, and "fire," says a local proverb, " is the blossom of Yedo." At the first sigual of alarm the more costly objects are carried off to the nearest five-proof warchouses erected against sueh contingeneies. Some 10,000 houses were consumed by a conflagration in 1879. But a far more terrible fire broke out in the year 1657, when as many as 107,000 persons are said to have perished in the flames. Over 500 palaces of the daimios, 770 residences of other nobles and officials, 350 temples, and 1,200 streets of common houses were Yeyas, e of his , and to for their all sorts Shogun. e middle ts. Inthorities But the nmercial lderness. os nearly rial pre ire. occupies which is It is ennce, sur-n-siro, or The old ffices and tches the ween the ng Sun' s. Here can city. e, broken ptomerix. ve style. e ledges, al tablets, thquakes afer than supposed proverb, bjects are ingencies. far more s are said residences puses were
destroyed on this oceasion. In 1668 there was another great fire, which consumed nearly the whole of the city. Tokio has also suffered greatly from earthquakes, epidemies, typhoons, and foodings. The earthquake of 1703 is said to have destroyed over 37,000 souls, and no less than 190,000 , chiefly of the poorer elasses, were swept away by the fearful epidemic of 1773 . On the 11 th of November, 1850.,

the last great earthquake took place, and on this occasion over 14,000 dwellinghouses, besides 16,000 fire-proof "Godowns," were levelled to the ground. The loss of life was estimated at over 100,000 , but there is no trustworthy authority for these numbers, nor, in fact, for any of the statistics of lives lost during similar disasters in former times.

Tokio may be described as an aggregate of about one hundred smull towns and 60
villages, which, by expanding in every direction, have gradually become united in one city, while leaving here and there several open spaces occupied by gardens, groves, and fields. There are no remarkable arelitectural monuments, although a really imposing effect is produced by the cyclopean blocks of tho castlo walls, relieved at intervals by kiosk-like towers, and at some points rising fully a hundred feet above the broad and deep outer ditehes. The ynsiki, or palaces of the ancient daimios, are low buildings walled round and adorned with carved wooden porches. But tho most curious and ornate structures are the Buddhist temples, of which there are upwards of a thousand seattered over the city, and especially in the Asakusa quarter, where is the temple of the Golden Dragon dedicated to the Goddess Kwamon. This is at once the most frequented and the most venerable for its historic momories, ocenpying as it does the islet where the first monuments of Yedo rose above the surrounding swamps and waters. The neighbouring hills, such as Siba in the south, and Uyeno in the north, tower above the vast sea of houses and sacred edifices, and are themselves crowned with temples and tombs notable for their rich wood carvings, elegant decorations, noble torii, or porches, and enormous bells. Of the two museums recently ereeted on these hills, one contains a natural history collection, the other Japanese artistic works, besides an ethnographic exlibition of the greatest value for the study of the aborigines of Yeso and the Kurile Islands. The surrounding parks, planted towards the end of the sisteenth century, are amongst the finest in Japan, which is so rich in plantations of magnificent timber. The cemeteries, one of which near Siba contains the tombs and effigies of the forty-seven ronin, are also laid out as public grounds, shaded with trees, and made bright and cheerful with flowering shrubs. Tokio has now also its botanic garden, besides numerous nurseries ani horticultural establishments, but no public squares or free open spaces for popular gatherings. The people having been formerly excluded fron political life, the Japanese cities contained no such meeting-places, the forum being useless in the absence of free citizens. But the recent changes will necessarily require a corresponding modification in the plan of the towns.

The above-mentioned ronin are the subject of a famous story highly characteristic of the chivalrous period of Japanese histroy. Early in the year 1701 a young noble named Assno Takumi no Kami having been appointed to entertain the Mikado's envoy to the Shogun, happened to give offence to Kira Kodzuke no Suke, an old gentleman learned in court ceremonies, who was his instructor in the proper etiquette to be observed on this occasion. For some time he endured the taunts of Kodzuke no Suke, but was at last so provoked that he could no longer control his indignation, and attempted to kill his insulter with a dagger. This occurred in the palace of the Shogun, where to draw a sword in anger was a capital offence. Hence, although defeated in his attempt by the bystanders, Takumi no Kami received orders to dispatch himself according to the usual havakiri fashion. His castle of Ako was also confiscated, and his retainers were turned adrift into the world, thus becoming ronin, or "masterless men." Amongst them was 0 -ishi Kura no Suke, one of Takumi's chief counsellors, who formed a league with others
to avenge the death of their chief. After a short time their number having been reduced to forty-seven, all of whom could be thoroughly depended upon, the exerntion of their design was fixed for January 30th, 1703, when they attacked Korlanke no Suke's residence, drugged him from his hiding-place, and cut off his head, which they triumphantly deposited on Tukuni's grave in the cenotery ut Tokio. The Kubi-arai-i-do, or "Well where the head was washed," still exists near the path leading to the tombs of tho ronin themselves.

Although few European traders have settled in Tokio, it is nevertheless a very lively place, all the main streets being animated by orer 25,000 jimiksin (kwruma), vehicles drawn by hand moving about incessantly between the central parts and the

shore. The numerous canals intersecting the lower town in every direction are also usually crowded with craft loading and unloading at all the quays and wharves. The Sumida-gava, which is crossed by five bridges conneeting Tokio with the great suburb of Hondjo, is sometimes completely covered by barges and junks of every form, besides gondolas and pleasure-boats impelled by wind or tide. But the bay; in which forts have been erected on artifieial islands, is too shullow for large vessels in the vicinity of Tokio. Henee the real port lies farther south, at Sima-g/ava, while all the ocean steamers stop at Yokohama, where the new railway stations are as crowded as those of any European city. Here is also the Tski-dzi, or European "Concession," occupied by several foreign merchants. The railway, which, like

Yokohuma itself, has been partly construeted on reclaimed land, runs from this placo round the bay to Tokio, a distance altogether of 18 miles.

Tokio is the chicf industrial centre of Japan, although its wares are on the whole inferior in quality to those of Kioto, the old imperial capital. It munufaetures silks and other woven goods, porcelains, lacquer-ware, enamels, machinery, and is the main source of supply for ull towns lying east of Lake Biva. Tokio is also tho great literary centre of the Empire. In 1879 its University had 40 native and 12 foreign professors, with 150 scholurs, besides over 20 young students supported by its funds in Europe and America. The handsome College of Engineers, erected by a French architect, is almost unrivalled for the richness of its collections and the facilities of every sort offered to students. Besides 140,000 volumes and other treasures, the chief librury contains the oldest known Sanskrit manuseript, dating from the year 609 of the new era, and another library has already accumulated 20,000 volumes in European languages. Amongst the chief learned institutions is a Geographical Society, which publishes a joumal of its proceedings.

Before it became the terminus of the steam navigation with Europe, Yokohama was a mere fishing hamlet on the south side of Yedo Bay. Choice had at first been made of Kane-yara, lying 6 miles to the north, where the great Tokaido highway tums inland from the coast. But the neighbourhood of this highway, where the daimios and their suites were constantly passing, seemed dangerous for the security of the foreign settlement, while its shallow roadstead prevented the approach of large vessels. At Yokohama, on the contrary, the water is so deep that the largest vessels are able to ship and discharge the cargoes close in shore. The new eity already covers a considerable area, mueh of which was formerly oceupied by rice grounds and gardens, forming part of the flat land which extends along the shores of the bay, and which is backed by a semieirele of low wooded heights. A large export trade has been developed in teas, silks, rice, camphor, laequer-ware, and other local produce, exchanged chiefly for Luropean manufactured goods. Yokoska Bay, lying south of Yokohama, has become a Japanese naval station and arsenal. A large military encampment has also been formed near the fortified city of Sukura, between the Tone-gava and Samida-guva Deltas, towards the neek of the peninsula of \(\Lambda_{\text {ra-kidzusa. The barracks occupy the site of an ancient castle, }}\) former residence of the princely Hotta family, famous in the annals of the Tokugava Shoguns. Close by is the old exceution ground, where Sogoro with his wife and three sons suffered death in the year \(16+5\).

Some 14 miles south-west of Yokohama, near the east side of Sugami Bay, are situated the ruins of Kama-kura, eapital of the Empire from the twelfth to tho fifteenth century. According to the local tradition, it occupies the site of an old lake, but was destroyed during a civil war in 1333. Kama-kura never recovered from this blow, but its former splendour is still attested by the remains of over one hundred temples, many palaces and tombs, one of which is delicated to the memory of 8,300 legendary heroes, all of whom immolated themselves together. Near Kamakura stands the famous Daibuts, or "Great Buddha," a colossul bronze statue 40 feet high, remarkable for its calm and majestic expression, and containing in the

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10 whole res silks 1 is the ulso the and 12 orted by ted by a and the id other t, dating mulated ations is Tolohiama first been highway here the security roach of that the The new upied by along the ghts. A uer-ware, ed goods. ation and tified city eck of the nt castle, he Tokuhis wife
i Bay, are e fifteenth lake, but from this e hundred nemory of sur Kamastatue 40 ing in the

oa-tvyol koyad nayva 'vavacao so maza

\section*{TOPOGRALIIY OF NLP-PON.}
interior an small Buddhist temple. The hair of the image is supposed to be treated in such a way as to represent the suails truditionully said to have crawled up to proteet his bire hend from the rays of the sum. Neir Kuma-kumis the holy istand of Yenosima, which is also one \(r\) ? the most frequented phaces of pilgrimage in Japin. It is comected at low water loy a tongue of sand with the mainland,

Fig. 200.-Simola Bay.
Scale 1 : 45,000.

whence a magnifieent prospect is commanded of the bay, with its wooded shores and the suowy crest of Fuzi-san in the distance.

The ports of Odovara and Numadz, on the Tokai-do highway east and west of the peninsula of Idzu, have a considerable coasting trade as the outlets for the produce of the fertile district of Fuzi-san. Simoda, at the extremity of the peninsula, was nearly destroyed by the terrific sיbmarine carthquake of \(18 \tilde{4} 4\), and since then most of its trado has been transferred to Yokohama. Koftu, now Yamanasi-ken, lying in
a rich plain north of Fuzi, is one of the great centres of the silk industry, and posesesen a spiming factory modelled on those of France. Beyond it follow the towns of Sialzmokn, Mamamatz, and Toyobusi (Yosida), all lying near the shore of Tohotomi-nada bay. Itamanaty was formerly the castle-town of a powerful femal chief. In the mighbourhoul are two famoms Ninto temples, moted for their margifient intermal mal extermal decomaions. But since the downfall of the Tokn-gra va fimily, by whan they were endowed, their revemes bave been secularised, amd these eplemdial bildinges allowed to ge to ruin. Another temple in the same distriet comatans a murh revered imare, the femald Buddan, Kwan-non, which is tranlitionally said to have ben washed up from the sen in the year sof a.d. But since the disestablishment of Buddhism, this temple also has lost much of ita iormer aplembinur.

Nutym, ne, now Aitsi-ken, fommerl by Ota Nobmaga, laid out with the regularity of a chessimard, mul situated in a rich, well-watered plain on the hay of Ovari, is the fourth "ity in Japion for population, and is specially distinguished by the industry und enterprise of its inhalhitants. Ther are engaged in the manufacture of woollen and silken grools, enamels and porcelain, and a school of medicine has recently been
 of its fumons Sinto sametunry, serve assem-ports for the capital of the ken, as well as for Yomuyi, İusamats, Gifiu (Imaidzmi), Ohoynki, and the other cities of the plain. The maritime town of T'su ( \(A n o-t_{s i n}\) ), on the west side of the same bay of Ovari, is also mueh frequented by junks, and it., blue Ovari poreelanin, so maned from the province whence it is exported, is in most genemal use throughont the limpire, Finther on is the important city of Yamada, in the peninsula encireling the somth side of Ovari Bay in the province of Ise. Near it are the most renowned temples of Sinteism, the Ge-kn and Xai-ku, yemrly visited by multitules of pilgrims. Traditionally 3,000 years old, these temples date at any rate from the begiming of the vulgar era, although the present edifices are no more than exact reproductions of the original buildings.

They are pulled down every twenty years, reconstructed with timber of the same species, and thatched with straw. Nothing is ever changed in the arrangement or character of the fittings: none of the Buddhistic immovations so prevalent in other temples have yet descerated these revered momments of the Sinto worship. Sarcely a Japanese house but has amongst its saved relies a serap of paper bearing inscriptions as mementos of the temples of Ise, and some objects in consecrated wood from the same locality.

The eastern entrance of the Inland Sea could not fail to become the site of a large centre of population. Valia-1/fma, lying at the mouth of the Yosino-gava, north of the strait to which the Duteh have given the name of Linsehoten, is aecordingly an important trading place, and is moreover famons for the beaty of the surrounding semery, the fertility of its plains, and the abundance of its fruits. In the same valley lies the monastic city of Koyn-san, containing no less than 370 Buldhist temples and monasteries, formerly sanctuaries and plaees of refuge, where criminals and the suspected from all the surromding lands formd shelter. The carved
wools, puintings, and haequer-wure of Koya-san date from the flominhing rpowh of Japunse urt, and such is the marniticence of the sacred groves phanted romad the temples, that one of the most majestic species of conifers in dapan has reverived the name of Koyn.

A strema in the vicinity of Kaya-sim in crosend by a renarkable hridge, the planks in the floor of which mumber thirty-seven, and are marked with the names of the thirty-seven Buddhas of the Kougo-kai. It is popularly supposed that no ono who is maceeptable to Kobo Daishi, the patron of the enot, cen pass over this bridge. When IIideyoshi mude a pilgrimage to the phace, ufter having risen to supreme power, he is said to have gono stealthily by night as far as the bridgre, whi h he crossed, und

Fig. 201.-Nagoya anil Ibleta of the Kiso-gava
Seale 1 : 8f0,000.

then turned back again. He thus satisfied himself that the slaughter he had been compelled to make of his enemies, in order to obtain the protectorate and restore peace to the nation, was appored by Kobo Daishi, and that he might now safely venture to pay his formal visit in full state, accompanied by all the nobles of the Empire, without fear of being put to shame in their presence.

The basin of the Yodo-gava, which comprises Lake Biva, fringed with its "eighteen hundred villages," and where are situated the cities of Kioto, Nara, und Ohosaka, is pre-eminently the historic land of Jupan. On the very shores of the lake itself stands the populous city of Hikone, the ancient residence of the daimio who was entitled to the regency during the minority of the Shogun. Hast of this place, which became famous during the intestine troubles towards the end of

\section*{RAST ASIA.}
the sixtenth cembury, is mituated the station of Sifhighlhura, where in the year 1,tion Yeyus gained the devisive viefory which led to the rise of the Shogromal dymasty of Tokn-gava, and to the destruction of the faction allied to the Chriatians.

Ohotz ( Otzu) and Sign-kirn, lying at the ontlet of tho lake, jointly form a city, the possession of which was also frepurntly disputed by the rival politieal purtion. On the heights of the liyci-sim, werlowing it on the morth, stand some fumons Sinto sumetmaries and still more celdhated lhudhist temples, that expeeially of
 dietator of the Eimpire and protector of the Jesuit missiomary Frmacis Xavier. Ohote,
 an advaneed guarter of kioto, with which it communientes by a branch of tho reeently opered railway. liy memen of its stemmers it has alwe arguired the monopoly of the local trade of lake biva, from whose waters sailing vessels have alreuly nearly disuppared. A speciality of the industry of Ohots is the manufacture of abuenses (sorohar), or calculating machines.

The city of Kioto, that is to suly, "Capital," called also Miako, or the "Residence," Saikio, or the "Western Capital," and Meienzio, or "Castle of Peace and Tranyuillity," has lost its runk mongest Japanese cities, and is now merely one of the three imperial, and the third only in the number of its inhabitants. After having been the sent of Empire lor nearly eleven humbed yeurs, it was supplanted by its custern rival, Yedo, in 1stis, when the sweeping revolution took place, which changel at once the govermment, administration, mad national enstoms. Since then the pepulation has diminished by more than one-half, und whole quarters have remained nlmost unimhabited. Neverthelens, Kioto, with its historie associatioms, still remanas the city of beanty, elegance, and refinement. It also excels the new capital, if not in industrial activity, at least in the artistie tuste of its products. Here are foum the most skilled , fapanese artisans in the manufacture of silks, brocades, embroidered fabries of every kim, enamels, poreeluins, ormumentul bronzes, und other metal wares.

The macient palace of the Mikados nt Kioto covers a space of about twenty-six ueres with its enclosures, and is surromeded ly a roofed wall of earth and plaster with six gates. The imer court is approached lig a flight of eighteen steps, corresponding in number to the original series of grades into which the Mikudo's officials were divided. Outside the court is a building called Kushiko-dokoro, where was kept the copy of the sacred mirror given to the Mikado's ancestor ly the Sum-Goddess, the original of which is supposed to be still preserved in her temple at Ise. When the palace was destroyed by fire in 960 the mirror flew out of the shrine in which it was then deposited and alighted on a neighbouring cherry-tree, where it was found by one of the Nail-shi, or female uttendants of the Mikudo. Henceforth the Nail-shi ulways had charge of the sacred emblem. Since the beginning of the seventeenth century the palace has been six times destroyed by fire, the last occasion having been in 18.54. In the following year it was restored exactly in its previous size and style, but very nearly experienced the same fate again in 1864, amental
when l'rince Cho-shin nttempted to seize the Mikudn. On this nercusion Kioto itself fell a prey to the flames, and nearly one-half of it was redued to asines. Sure then largo npaces formerly covered by homess have lwe converted into markit gardens, und the 90,000 residenees mentioned ly limucis Navier in one of his letters luve now been redued to about halt that number.

The suburb of Acria, lying cast of the city, has for centurien berm inhabited ly a eommanity of far-finaed potters, origimally from Koren. They work in their homes, where they prepure mid monld their paste, decorating and baking it themselves. Their products are thes gemine works of art stamped with the originality und perfect workmanship of each individual artisum. Few towns in Nip-pon cma the compured with Kioto for the regularity and order of its streets, all of which intersect wach other at right angles, like those of so many Amerieme citios. The limpid waters of the Kamo-gava sweep round its east side, here separating it from some irregularly built outlying quarters. It is erossed by several bridges, which are much erowded by tratlic, especially in summer. The north-eust angle of Kioto is ocenpied by the Kinri, or old palaee of the Nikados, with its now neglected gardens, while the heurt of the city is commanded from the west by the Nizio, a former stronghold of the Shoguns, the true masters of tho lund, and now the residence of the provincial governor. Some of the temples ure marvels of arehitecture, moted especinly for the carved entablatures of their porticos, and the neighbormag coneteries are the finest in Japan. Aecording to the official returns, thern. \(k\) in Kioto no less than nine hundred and forty-five buildings of all sorts erectid to the worship of Buddha, some of which dute from the ninth und tew is anturies. "Jw the westward stands the great temple of Kennin- ji , on a height, t id lower down towards the south another named IIongmin-ji, both now in use for the exhibition buildings. Tier upon tier, and in close preximity along the sides of the hills, are temples of various sizes and celebrity, from the one containing the colossal image of Daii Butz, or 'Great Buddha,' to the smallest wayside shrine."*

The Daï Butz here referred to is preserved in the temple of Todaï-ji, and is said to be 53 feet high, consequently 7 feet higher than the Kama-kura statue. It is in a sitting posture, with the legs crossed; the right hand uphifted with the palm outwards, the left hand resting on the knee. The body and all the ancient parts of the lotus flowers on which it is seated are apparently formed of bronzo plates soldered together. But the head looks like \(:\) single piece, although the temple is so obseure and the height so great that it would be diffieult to distinguish seams if there were any. A peculiar method of construction is said to have been adopted, namely, of gradually building up the wails of the mould as the lower part of the casting cooled, instead of constructing the whole mould first, and then making the casting in a single piece. This process would explain the appeurance of seams. On a hill near the temple stands a tower containing the huge bell east in the year 732 a.d. This bell is 13 feet by 6 , with 9 feet extreme diameter and 8 inches extreme thickness at the edge, and about 36 tons of copper with one ton of tin were used in the casting. (Satow.)
*S. Mossman, " Japan," p. 23.

The vast and fertile plain of Kioto, which amongst other produce yields the best tea in the kingdom, contains a number of other towns, which depend for their trade and industries on the capital. Thus Fiusimi, which might be regarded as a suburb of Kioto, is its chief port on the Udzi-gava, now regularly navigated by steamers. Another outlet of its trade is the port of Yodo, lying lower down at the confluence of the Kitzu, the Udzi, and the Kamo, whose joint streams form the Yorlo-gava, or "Sluggish River." The Kitzu, which here unites with the emissary from Lako Biva, flows by Nara, one of the oldest cities in Japan, and amongst the carliest imperial residences. Here are some magnificent sacred groves, and especially a park, in-

habited for a thousand years by herds of tame deer, whose antlers are worked into all kinds of little fancy objects, which are regarded as saered. Here also is the sumptuous temple containing the Daï Butz, a bronze statue over 50 feet high, and weighing 450 tons. It is one of the largest and oldest in Japan, dating from the eighth century. Kusica-bara, one of the suburbs of Nara, is the ancient Asicara, capital of the Kingdom of Kinmu Tenno, founder of the dynasty of the Mikados. From the name of this place, Nip-pon was long known as Asivara, the "Valley of the Pliant Reeds." Not far from Nara is Kori-yama, another city of some importunce.

Kioto is connected by rail with its sea-port of Ohosala, which, like the two
capitals, is honoured with the title of \(f_{t}\)-that is, Imperial City-and which ranks as the second in Japan for population, and first for its trade with the interior. From its geographical situation Ohosaka was naturally destined to aequire a commanding position amongst the cities of the Empire. A general survey of the Japanese Archipelago shows at a glance that the most favoured region is the coast

of the large island watered by the inland sea. The west side, facing the inhospitable shores of Manchuria, is exposed to cold winds and a heavy surf. The eastern sea-board again is turned towards the boundless wastes of the Pacific Ocean. On the other hand, vessels from China must have first reached the southern shores, which enjoy the three-fold advantage of a genial climate, good harbours, and
proximity to civilised lands. The ports of the Inland Sea also enjoy the same privileges as inland marts, stunding, as they do, at the converging point of numerois trade routes. Ohosaka, which lies near the castern entrance of the Japanese Mediterramean to the north of Sakahi, which it has succeeded as a large sen-port, occupies a central position relatively to the southern division of the great island, while it is connected by a navigable stream with an extremely fertile and densely peopled plain. In the surrounding waters, which present one of the easiest approaches to the Pacific, storms are rare, and the prevailing south-west and northwest winds elsewhere obstructing the coast navigation for months together, are here replaced by breezes alternating with the morning and evening, and thus facilitating the progress of sailing vessels. Thus everything combines to secure a large trade for the sea-port of Ohosaka. Deep-sea vessels are, doubtless, obliged to anchor at some distance from the muddy canals which intersect the city in all directions. But the local merchants have contrived to preserve their foreign relations, and conduct the exchanges through the medium of other ports. By means of numerous steamers of slight draught, this emporium still retains a monopoly of the local trafic in rice, fish, edible sea-weed, timber, and other products, which are distributed from this place throughout the whole of South Japan. Here is prepared the best saki in the country, and Ohosaka has also become an important industrial centre, where are manufaetured many wares formerly imported from Europe. The fancy goods of this place are now forwarded in large quantities to Europe, and as many as four millions of fans, worth about \(£ 26,000\), were exported in the year 1877. Watch-making has been recently introduced by a young man who aequired a knowledge of the trade in Switzerland.

Ohosaka is the "Venice of Japan," at least in its lower districts, which are intersected in every direction by rivers and canals, crossed by hundreds of bridges. But one of the quarters rises gently on the north-west side towards the castle, whose half-ruined granite walls still present an imposing appearance, owing to their great size and solidity. From this point a fine view is afforded of the surrounding district. The imperial mint is a model establishment, erected at great expense, and fitted with all the appliances found in similar edifices in tho West. The plant was brought from Hong Kong, where it had proved a failure; but under Japanese management it has succeeded so well that the Government has been able to dispense with the further assistance of nearly all the original English staff.

The usurper Hideyoshi, having resolved to make Ohosaka the seat of Empire, caused a castle and palace to be crected here in the year 1583, which were probably the most magnificent group of buildings ever raised in Japan. The palace survived the storming of the castle by Iyeyasu in 1615, and in 1867-8 the members of the European legations were several times received within its walls by the last of the Shoguns. Vast sums were lavished by Hideyoshi on the decorations, and the enormous blocks used in the construction of the principal gateway still attest the magnificent plan of the founder. In February 1868 the buildings within the castle were set on fire by the Shogun faction, and were completely destroyed in a few hours. Since then the fortifications have been occupied by the head-quarters

\section*{Empire,} robably ace surlembers the last ms, and 1 attest hin the yed in a puarters
of the Ohosaka Militury Department. The castle domains are neurly 3 miles in circumference, and although smaller than that of Tokio, the castle itself is still the strongest in the Empire. Some of the granite stones composing the bastions range from 20 to 42 feet in length, by 15 to 20 in width, and 6 to 8 in thickness. They are said to have besi: quarried in the immediate neighbourhoorl, but even so it is difficult to understand Low they were raised to their present position. Even yet the place would be impregnable to uny except the heuviest modern guns, and in the hands of skilled engineers might hold out for a long time against European ironclads.

Some of the temples of Ohosaka are amongst the most remarkable in Japan. Such is that of Si Tennozi-that is, of the "Four Heavenly Gods," the " Maha Raja" of the Hindus. It lies in the south of the city, whero it has given its name to a suburb classed in the statistical returns as a separate town. Another temple, situated near the shore on the road to Sakahi, an industrial dependence of Ohosaka, is an ancient Shinto sanctuary, frequented especially by fishermen. The turtles and fishes here preserved in the sacred ponds, overgrown with the lotus plant, are fed by the piety of the faithful. But the multitude is at present attracted to the other side of the city, where stands the railway station, centre of the passenger and goods traffic for the whole of South Japan. The Hiogo line, at the junction of the Kioto and Hiogo lines, whieh is twenty-two miles long, passes by Amagasaki, Nisimomiya, and some other large towns in the neighbourhood of the bay.

The ancient city of Hiogo, which stands near the neek of a promontory, often gives its name to the new town of Kobe, from which it is separated by a dry ravine. The headland overlooking Hiogo shelters on the south-west side the harbour of Kobe, which is deep enough for large vessels to anchor elose to the shore. The 400 or 500 Europeans settled in Kobe constitute the most important foreign colony in the Empire next to that of Yokohama. The roadstead may be regarded as the advanced outpert of Ohosaka, the foreign trade of which passes almost entirely through the new sea-port. During the summer months the strangers residing in Kobe visit the famous hot springs of Arima, which lie in a romantic upland valley farther north. Near the springs is a dry well called Tori-ji-goku, or "Bird-hell," the deadly exhalations from which aro said to be fatal to birds and small animals approaching too near the spot.

Close to Hiogo is the artificial island of Tsuki-jima, said to have been constructed by Kiyomori in the year 1161 a.d. According to the legend, this island was twice swept away by the waves, when a learned sage being consulted discovered the cause and remedy. The sea at that spot was inhabited by a dragon, who was enraged at the usurpation of his domain, but who might be appeased, if thirty "human pillars" were sunk in the sea and stones inseribed with Hindu texts placed over them. The required number of "pillars" huving been collected from travellers passing that way, a great outery was raised when it was found that some of them were natives of Hiogo. These had accordingly to be released and replaced by others, whose friends again objected so energetically that the ceremony had to be postponed. Meantime a youth nanied Matsuwo Kotei came
forwarl and offered himself as a voluntary vietim instead of the thirty, adding that the dragon would ecrtuinly prefer one willing to thirty unwilling pillars. Tho offer was aceepted and Matsuwo placed in a stone coffin, which was sunk in the sea

to the entire satisfaction of the monster, who opposed no further obstacle to the construction of the island.

On the north side of the large island the two cities of Tsuruga and Obama on Vakasa Bay correspond to those of Ohosaka and Hiogo, with which they communicate through Lake Biva and the neighbouring depressions. These northern ports of the isthmus, turned towards the storni-tossed sea of Japan, and possessing merely a narrow strip of arable land at the foot of the hills, could scarcely hope to compete with the commercial citics of the southern shores. But carriage roads and
even railways will ere long serve to forwurd the produce of the south to the northern coast lands, whilo the ulverse winds of the western waters have been already overcome by the introduction of steam navigation. The harbour of Tsuruga, which is of small extent, but which is accessible to the largest vessels, and which is sheltered by an amphitheatre of hills from all winds exeept that of the north-west, is the best on the inner side of Hondo, and will probably beeome the chief station for vessels trading with the ports of Korea and Russian Manchuria. Tsuruga is already one of the entrepots for the edible sea-weeds and fish forwarded

from Hakodate, a traffic in which hundreds of junks are yearly engaged. The question of opening this port to European shipping has been frequently discussed.

West of the isthmus, the centre of which is occupied by Lake Biva, nearly all the towns stand on the shores of the Inland Sea, or at least on the southern slope of the peninsula, which is by far the most fertile and populous. Nevertheless a few busy places are also found on the opposite side. Towards the western extremity of Vakasa Bay lies Yura, in the midst of orange groves which yield the best fruit in Japan. In the neighbourhood is found the "third wonder" of the country, the Amatate-basi, a natural causeway of rocks projecting far into the sca. Farther on the highway along the coast traverses the towns of Tottori and Yonago. A little west of the latter place stands the picturesque town of Matsuye, or Simame-ken, on the banks of the winding brackish lagoon of Sinzino-ike, which communicates through a narrow outlet with the sea.

Akasi, the first place lying west of Hiogo near the coast of the Iuland Sea,
necupies on the south side a commanding site, whence is afforded a magnificent panoruna of the islond of Avadzi and the two fine bays surrounding it. Further on Himelzi, associated with the memory of Tainkosanm, hes at the outlet of an extremely fertile valley, und at the junction of several routes, one of which, built by French engineers, is the best in Japan. It leads to the interior of the peninsula and to the productive mines of Ikinno, the chief metallurgic establishment in the Empire. The French directors, by whom it is managed, reduce the gold and silver ores for the imperial mint at Ohosuku, but they have not yet begun to smelt the rich copper ores of the sume district. The chief industry of IImedzi is the leather ware still prepared aceording to the old Japanese method, and rivalling in beauty and durability thut formerly produced in Cordova.

Tho inland town of \(T \times u-y / m m\) is oceupicd chiefly with spiming, dyeing, ar.' ironmongery. Both Oka-yama and Fukiu-y/ama, which lie on deep inlets or creeks of the Inland Sea, wero the former residences of powerful daimios. But they have now beon outstripped by the commercial port of Onomitsi, one of the chief stations of the coast stemmers plying between the two sides of the winding Inland Sea.

Last of Ohosaka and IIiogo-Kobe the most important port in these waters is Hiro-sima, which, like Ohosaka itself, lies at tho northern extremity of a ereseentshaped bay, and on the mouths of a river winding through a fertile pluin. With its numerous winding-canuls, heidges, and boats plying in all directions, this place might also claim to be regarded as a sort of Japanese Venice. On one of the islands studding the buy over against Hiro-sima stands another of the "three wonders" of Jupan, the much frequented Shinte temple of Itsku-sima, or "Islo of Light," consecrated to the three divine virgins sprung from the broken sword of the God of the Winds. The sanctuary contains some curious antique wood carvings, but the finest objects in the island are the magnificent woods, which are never touched by the axe. Previous to the revolution of 1868 no food was allowed to be consumed on the ishond, where all burials were also interdicted. At the death of any of the priests, pilgrims, innkefpers, or fishers, who form the whole population of the island, those engaged in removing the body to the mainland were obliged to remain away for fifty days, and on their return were confined in a sort of quarantine for the same period. It is still forbidden to cultivate the soil of this holy island of Itsku-sima, so that all provisions have to be brought every morning from across the water. On the arrival of the boats hundreds of tame deer collect from the depths of the forests, to receive their share in the distribution of the food.

Beyond Hiro-sima, and on the west side of the bay, stands the industrial town of Ivakuni, noted for its paper, matting, and woven goods manufactures. Farther on several less important places follow from inlet to inlet as far as the Simono-seki (Akamaga-seki) ehannel, the north side of which is occupied by the straggling town of like name. Enclosed between wooded hills and the sen, Simono-seki has been called the Constantinople of the Japanese Bosphorus, although occupying a secondary place amongst the cities of the Empire. The neighbouring shores yield the edible sea-weed of commerec. The large city of Hagi, standing on a roadstead hed by nsumed ; of the e island, in away the same ku-sima, e water. of the town of rther on ono-seki raggling -seki has pying a res yield oadstead
studded with islands and islets, has been reeently succeeded as mpital of the province of Nagnto by Yamagutsi, which lies farther inland on a small atfluent of the Japanese Mediterranean. In the neighbourhood are numerons thermul springs.

\section*{Topogirapity of Sikok, Kif-sit, and Raf-kie.}

All the important towns of the islund of Sikok stand either on the const, or in the immediate vieinity of the sea. Most of them face the manaland of Ifondo, from which they are separruted by struits, which may easily be traversed in a few hours. The attractive force of Kioto and Ohosaka has drawn the inhubitants especially to the north side, where, going east and west, the towns of Tokill-sima, Tuiamats, Maruyame, Imabar, and Matsu-yama follow each other in quick succession. Ucazima alone stands on the strait which separates Sikok from the ishund of Kiu-siu. On the south const, which faces the open sea, there is only one town, Kotsi, capital of the formerly powerful fendal principality of Toza. Thanks to the intelligence and industry of its inhabitunts, Kotsi has become the busiest place in Sikok, and the centre of the paper manufacture for the whole of Japan.

The most animated part of the large and populous island of Kiu-siu, or the " Nine Lands," is turned towards the south and west-that is to say, towards China and the southern waters first reached by vessels frem the West. On the east coast the only importunt place is Miyasaki, and on the north-east, facing the Inland Sca, the only large centres of population are Usuki and Nakats. Oita-ken, or Fumaï, where the Catholic missionaries founded the first Christian community, is now in a state of decay, as is also Kokura, which stands over against Simono-seki, south of the entrance to the Inland Sea. The silting of its harbour now prevents large vessels from approaching Kokura, while the passenger and goods traffie, which formerly followed the coast route from Nagasaki to Tokio, and which was, consequently, obliged to use the ferry at Kokura, is now conducted by steamers, which are no longer obliged to stop at this place. The marine chamel here, about 1,800 yards broad, will, ere long, be probably crossed by an already projected railwny viaduct.

The twin towns of Fukuoka and Hakata, separated by the mouth of a small river, which falls into a pieturesque bay, concentrate all the trade of the north-west side of Kiu-siu. Fukuoka, lying to the south, comprises the administrative and aristocratic quarters, while the traffic and industries are centred in Hakata, where are manufactured some fine silk and cotton goods. Some temples and old flatroofed houses in the neighbourhood are the only stone buildings which existed in Japan before the late revolution. The two cities are connected by much frequented routes with the populous towns of Kurume and Saga, situated farther south, near Simabara Bay. In the neighbouring peninsula of Hizen are some coal and kaolin deposits. Here, and especially near Arita, in the same district, are produced the finest Japanese porcelains; amongst others, the small delicate and transparent shellshaped cups. Over two hundred ovens are constantly burning round about Arita. These wares, which have long been imitated by the Dutch, are indifferently known 01
as Ilizen, Aritu, or Imari porechins, from the names of the province, the industriuy town, and the sea-port whenee they are forwarded. The town of IIirato or Firando, in the istand of like name at the extremity of the peninsula, is much frequented by the stemuers plyine ulong the coast. In the sevententh century, for the ten yeurs from 101:3 to \(16: 3\), this phee was thrown open to the Eughish and Duteh truders.

Nagusuki, or "Cupe Lomg," which became famous in the West us the only pluce in the Empire not closed to foreign trude after the expulsion of the lortuguese in 1623, is by no mems one of the largest cities in Japan. Although its excellent port, or ruther the inlet, is from 60 to 100 feet deep, und well sheltered by the surromading hills, it has the disadvantage of being situnted at the extremity of a narrow peninsulu destitute of fertile or productive lands. But while its foreign trade has remuined almost stationary, the loeal traffic hus, nevertheless, considerably inereased, entirely, however, to the profit of the nutive shipping. Nugasuki exports little agricultural produce, but does a large trade in lacquer and mother-of-pearl wares, enmmelled and cloisomé pottery, and other products of the loeal industries. A portion of its export trade is now shared by Fukubori, and some other neighbouring towns. But, thanks to its historic associations, Nagasaki still remains one of the most interesting pluces in Jupan for all intelligent European travellers. Its bay also presents one of the finest prospects in these waters, although the view has been somewhat marred by the erection of unsightly fortifications on the surrounding headlunds. The bay is encireled by an amphitheatre of green hills, rising to a height of 1,000 feet, laid out in well-cultivated terraced plots, or clothed to their summits with a dense forest growth.

The entrance of the bay is studded with numerous islets, amongst which is the solitary rock of Takaboko, or the "Lofty Spear," the Papenberg, or "Priests' Hill" of the Duteh, so named in memory of the missionaries and Japanese converts said to have been hurled from this spot into the sea in the year 1622. Above the city the place is also shown where twenty-six priests were erucified in 1597. The narrow artificial fan-shaped islet of De-sima, where the Duteh traders were confined, like victims of the plague, is now eonnected with the mainland, and the buildings which served as the prison houses of the foreigners from 1639 to 1859 have been destroyed by a fire. In the interior of the city is shown the quarter where the Chinese merchants were confined. The neighbouring town of Inasa possesses some dockyards, reluctantly ceded to the Russian Government for refitting its vessels. Farther south, and beyond the bay, are scattered several islands, amongst others Taka-sima, which has some coal mines worked according to the European method. In 1881 the daily yield was about 1,000 tons, or as much as that of all the rest of Japan.

The town of Simabara, which was destroyed by an eruption from Mount Unzen in 1792 , lies at the east foot of this volcano, whence flow numerous hot springs. It commands the west entrance of the large bay of like uame, while to the east of the opposite side, and some distance inland the town of Kmumoto (Kumamoto), is grouped round an ancient stronghold, whose sloping bastions are crowned with verandahs and elegant houses under the shade of camphor trees. 'This is the most
lustriul irendo, ted by 1 years aders. y place uese in seellent by the ty of a foreign derably exports of-pearl lustries. ghbour\(s\) one of rs. Its iew has ounding a height summits
h is the Priests' converts bove the 7. The rs were and the to 1859 quarter of Inasa refitting amongst European nat of all It Unzen ; springs. e east of moto), is ned with the most


BIRDSEYE VIEW OF NAGASAKI.
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centrul as woll us the largest city in the island ; but there ure few iuportant eentres of population in the disfriet, und the place has no hurhour, although it is necessihle to flat-bottomed craft, wheh ure here baded with produce for the Nagasaki market.
 und intelligent," in the senthern part of the ishand, has no large cities. But along the const or in the vicinity of the sea there ure severul busy places, such us \(I / 2 m i\),
 sima Buy the town of like nume. This fumous place, whose citudel was bombarded by the English in 1864, stretehes along the west side of the biy over

Fig. gog.-Nafa and Siumi in the Ibland of Okinaya.
Seale 1 : 180,000 .

against the magnificent solitary volcano of Sakura. The trade of Kago-sima is insignifieant, and it has no noteworthy industries except faience and imitations of all the "Old Satsma" porcelains. Recently some Japanese capitalists have here established a cotton spinning mill and a manufacture of arms. Kadziki, at the north-west angle of the buy, is mueh better situated for trade, its harbour being far less exposed to storms, while it enjoys easy communication with the productive districts in the north. According to Voyeikov, it would soon become one of the most flourishing sea-ports in the Empire were it thrown open to European shipping. The tobacco of Kadziki is already exported to Cuba, whence it is distributed over the rest of the world under the form and name of " Havanna cigars."

The inhmbitunts of Liu-kiu (Riu-kin), being senttered over the numerous islands of the are hipelage, are mostly cone creeks. The only towns worthy of the mane are foume in the large folme!, the central promp, Whinava-sina (Ckima), the Chung-ching-tan of the Chise Ihere
 mont frepmented sen-purt in the urchipelago, notwithanding the numerons revss ohstrueting the "pproach to the romadstend. Its chicl exports are sugar, cottom, mud silks, which are shipped by danuese vessels for the northern indunds to a yeurly vulue of abmot \(£ 40,000\). A pabed route, one of the finest in the Bimpire, winds butwern wouled hills through a plensmat valley from Sufu up to Siani (Siali, sheui,
 this tuwn is regularly laid out, und surromuded by fine phatations of arecound other tropient plants. One of its buithings bears the title of Cuiversity:

The large ishand also comtains two other towns, Tomen mad Kimma, and the urbm pepmintion numbers altogether fin,000 souls, or half of the population of Okimusn, consisting exclusively of Sizuki", or "mobles." All the pensuntry ure hëmin, or "plelsiuns," and are distinguished from the nobles by the bronze pins worn in their hair."

\section*{Tier Bonin Auchiplago.}

Besides Liu-kiu and the numerous islmads geographieally depending on the main urchipolugo of Nip -pon, the Japanose Govermment also lays clain to a smull group lying in the Puefic Ocem, 600 miles in a struight line to the sonth-south-cast of Kioto. This solitary group is known in Burope as the Bomin Arehipelago, Bonin being a corruption of the Japmese Manin-to, or "Chinhubited Islunds." But having been uguin occupied in recent times, they should, properly speaking, resume the nume given to them at the end of the sixteenth century, when Prince Sadnyori, driven thither by a storm, took possession of them on behalf of the Government, and guve them his funily name of Ogasarara. At that time they had already been sighted by the Spmish explorer Villalobos, when mavigating those waters in 1543. A century later on the Dutch Captuin Matthys Quast, accompanied by the illustrions muvigator Abel Tusman, also surveyed the southern islands of the group, which ulready figure on various contemporury charts of that part of the Pacific Ocean. Nevertheless the memory of these discoveries had been completely forgotten when the Americun whaler Coffin visited the southern islands in 1823. Next year he was followed by his countryman Ebbet, also a whaler, who explored the central islands of the arehipelago. In 1827 the English Admiral Becehey occupied the Ogasavara group, and the English continued to claim possession of it till the yeur 1861, when the question was finally settled in favour of Japan.

Although frequently visited by whalers und others since the hydrographic surveys of Becehey, Lütke, Collinson, and Perry, the Bonin Archipelago is still far from being fully explored, and only a very few points have been astronomically determined. The great diserepancies still prevailing in the outlines and nomen-
* Gubbins, in Proceodings of the Royal Geographical Society fur October, 1881. still far omically nomen-
clature of the various islands ure evident from Pary's map compmed with the Japanese chart of the two principul groupe of leod and Cotlin. ( Wh the limepran majes the two northern grompe far less important than the othere, inar the names of Kater and larry. There are altugether four \&romps, comprining eighty-nino
 miles. All these islands, which ure dieposed in the direction of the moridian, mas be wharded us a geologieal continuation of the volemnie chan of the "Soven Islomes " lying sonth of Vedo Buy. Iateiseo is distant sao miles from the Parry group; but other intermediate islets rise above the surface, while temperary volennoes are known to have made their apearance in these waters. 'lhe hillsof the Ogasavara Arehipelago, nome of which rise to a height of 1 ,300 feet, are alse mostly of volemie formation. They alomul in lavas, tufa, basalt colmmes, while the crests of the cones terminate here and there in eraters. Hut sehists and eryatulline rocks also oecur, nor did the natumists of l'erry's Americun experlition olserve any traces of recent igncous action.

Lying between the 28 th und \(\mathbf{2 6}\) th purallels of latitule, beyond the cold ocomic eurrent, these islands enjoy a tropienl elimate, warmer than those of the I,in-kin Archipelago, although the lutter are situated nearer to the equator. The forests clothing the hillsides belong to the vegetation of the torrid zone, consisting mostly of palms such as the areca and pandanus, hesides the sago plant und a species resembling the cocoanut. IIere are also tree ferns, but the camphor tree has not yet been disoovered. The giant of theso woollands is a species of mulberry, the stem of which exceeds 13 feet in circumference. The soil, being composed of volemic debris, is extremely fertile, yielding all the Japanese cereals, the sugur-cane, bunama, pine-apple, tallow tree, and wax plant. In the valleys the edible mishroom grows in the greatest profusion.

There are no indigenous quadrupeds, and the sheep, goats, pigs, cuts, und dogs found in the wild state are the descendants of domestie animuls lunded on the islands by the early navigators. A few harmless reptiles glide umidst the rocke, und the forests are tenanted by a very limited number of birds. When the first explorers landed on the islands these birds betrayed no fear of man, and allowed themselves to be taken by the hand. The islets abound in various kinds of fishes, cetacea, crustacea, and turtles.

The archipelago was first occupied in recent times in the ycar 1830 by immigrants, who traded with the whalers. At the time of the American expedition the island of Peel, the Tsitsi-sima of the Jupanese, had a popnlation of thirty-one souls, Americans, English, Portugucse, and Polynesians In 1880 their numbers had grently increased, for in that year there were no less than a hundred and sixty houses, of which a hundred and thirty belonged to Japanese subjects. Peel is the only inhabited island, and here is Port Lloyd, the Oho Minato of the Japanese, and the centre of the administration. It oceupies the interior of a erater whose sides havo fallen in, and affords good anchorage in 130 feet of water.

EAST ASIA.

\section*{Vital Statistics-Agiculiture.}

Although Japan is to a large extent covered with mountains, and in the north too cold to be thickly peopled, the population of tho arehipelago is, nevertheless, far denser than that of France or of many other countries in the west of Europe.* In Nip-pon proper, that is in the "Eight Islands," there are about 230 inhabitants

Fig. 207,-Bonin, on Ogasavara Archiprlago.
Scale \(1: 900,000\).

to the square mile, and the increase has been very rapid since the revolution of 1868, when regular official censuses began to be taken. The returns gave \(35,110,825\) for the whole Empire in 1871, and \(35,925,000\) in 1880, so that for the
* Area and population of Japan :-

intervening nine years the increase was at the rate of about 90,100 yearly. Ilen e in the natural excess of births over deaths Japan stands nearly on a level with Great Britain, while the population of both countrics is about equal. Should it continue to enjoy internal peace, there can be no doubt that the archipelago will outstrip France in the number of its inhabitants long before the close of the nineteenth century.

The returns having been carefully made, the general results may be accepted as approximately true. Consequently there can be no reasonable doubt that in Japan the male is in excess of the female population, a remarkable fact already attested by the ancient national records. The excess seems to be about three per cent., whereas in European countries, or in those in the enjoyment of European culture, this proportion is found to be reversed in favour of the female sex wherever systematio returns have hitherto been made.*

How such a large relative population can be supported in the land is explained by the diet and habits of its inhabitants. The national tradition recognises five sacred plants, rice, wheat, barley, sarasin, and the azuki pea, which the Wind-God, brother of the Sun, extracted from the body of the Goddess of the Great Air, and which he planted in the soil of South Nip-pou. Amongst these five plants rice holds by far the first rank, and supplies the chief food of the people. Every person usually requires about two and a half pounds daily, but the vegetables, fruits, and farinaceous preparations added to the staple article of diet do not average more than ten ounces. The poor scarcely ever touch meat, which is little eaten even by the upper classes. Thus all the arable land, formerly valued at scarcely more than \(11,000,000\) acres, is directly employed in the production of food. Wherever it can grow, even on the slopes of the hills and mountains, which cannot be irrigated without great labour, rice is planted. Nor is it loosely sown, but disposed by the hand in parallel lines, carefully manured with animal substances and constantly watered.

\section*{Rice and Tea Culture.}
"Rice being the staple produce, the seasons for sowing, growing, and reaping, are diligently watehed by the farmers, who formerly cultivated the land under the daimios as part of their retainers, but now farm under the Mikado's government, paying an annual tax or rent. The rice lands generally lie fallow all the winter, and consequently yield only one crop in the year. In the last days of April, or about the 1st of May, little patches of ground are prepared in the corners of the fields as seed-beds for the young plants. Here the seed is sown thickly, sometimes having been steeped in liquid manure previously to its being sown. It vegetates in the wonderfully short time of three or four days if the weather be moist or warm, as is generally the case at that season of the year.
"In the meantime, while the seed-beds are vegetating, the labourers are busily employed in preparing the land, into which it is to be transplanted. This operation commences at the beginning of June. About three inehes deep of water then cover

\footnotetext{
*Proportion of the sexes according to the census of 1880 :-men : 18,210,500; women : 17,714,s23.
}
the ficlds, and the planting goes on with astonishing rapidity. A labourer takes a lot of plauts under his left arm and drops them in little bundles over the inundated soil, knowing almost to a plaut what number will be required. Others, both men and women, take up the bundles which are thus thrown down, and the planting commences. Tho proper number of plants are selected and planted in rows by the hand in the muddy soil. When the hand is drawn up the water rushes in, carrying down with it a portion of the soil, and thus the roots are immediately covered. The planting scason is at its height about midsummer, and is generally over by the middle of July. By November the bright green erops are waving in the breeze, the ears are ripe and harvest is coneluded.
"Besides this great summer crop of rice there are winter crops of wheat, barley, buckwheat, peas, beaus, onions, and potatoes. The three first mentioned may be considered as the staple winter productions which are cultivated on land above the level of the rice valleys. The wheat and barley are sown in the end of October or begiming of November; these soon vegetate and cover the hillsides with lively green during the winter months. As the land has been carcfully cleaned and prepared previously, scarcely any further labour is necessary until the following spring.
"By the beginuing of May the plants are in full ear, and harvested in June, the corn being cut with a small reaping-hook. When housed the heads are struck off by a short bamboo and fall through a grating from the straw. These are then laid on a broad flooring of cement, hard and smooth, and the wheat or barley threshed out with a flail."*

Nevertheless, a portion of the land has to be reserved for the cultivation of economical plants, such as the mulberry, ginseng, indigo, and trees yielding vegetable wax, lacquer, and paper. The tea \(p^{1}\) nt is carefully cultivated, and yields a produce highly appreciated by the American buyers, who prefer it, notwithstanding its roughness, to that of Hankow and Shanghai. In some districts of the southern islands the facilities of exportation have given a preference to the growing of oranges even over that of cereals. Siebold enumerates altogether about five hundred plants cultivated in Japan for economical, ornamental, and other purposes, and of this number over one half have been introduced from abroad.

Next to rice by far the most important plants are the mulberry and tea. "Silk is more or less produced in almost every provinee of the main island north and east of Osaka. But the four districts in which it is cultivated in the greatest abundance are Oshui, Joshui, Koshui, and Sinshui. Oshui produces the largest quantity, but the silk does not equal in quality and fineness of size that of the other districts. Joshui and Sinshui are noted for the fine size of their silks, which feteh the highest prices in the London market. But the greater part of them are sold on the Continent, as baing better reeled than any other silk from the East. During the failure of the silk crops in Italy and other continental states, through the deterioration of the silkworm, eggs were imported in very large quantities from Japan, which improved the culture.
"Tea is still more important thun silk, und its cultivation and manufucture employ a considerubly greater number of people. The tea plant was introduced from China into Japan about the beginning of the ninth eentury by a Buddhist bodze named Yeitsin, who presented the first cup of tea to Saga, the reigning Mikado, who patronised the cultivation of the shrub. Since then its use hus become universal, and the home consumption is now so great that there is not much left for exportation. So genial are the elimate and soil of some distriets for its growth that the plant grows wild, while it forms hedges in gardens.
"Tea is produced throughout the greater part of Nip-pon und in ull the provinces of Kiu-siu. The finest qualities come from Yamu-siro, but the two largest producing districts are Isay and Owari. Suringo, Simosa, and Koshui are the provinces which supply the Yokohama market with the earliest new teas.
" Tea of the finer qualities requires special care in the cultivation. The plantations are situated remote from the habitations of man, and as much as possible from all other crops, lest the delieacy of the tea should suffer from smoke, impurity, or emanations of any kind. Manure of a special kind is applied to the roots, consisting of dried fish like anchovies, and a liquor expressed from the mustard seed. No trees surround the plantations, for they must enjoy the unobstructed beams of the morning sun, and the plants thrive best upon well-watered hillsides. The plant is pollarded to render it more branchy, and therefore more productive, and must be five years old before the leaves are gathered.
"The process of harvesting the leaves, or rather of storing the tea harvest, is one of extreme nicety. The leaves of the finer and the coarser teas are sorted as they are plucked, and no more of a kind are gathered in a day than can be dried before night. There are two modes of drying, called the dry and the wet process. In the one the leaves are at once roasted in an iron pan, then thrown upon a mat, and rolled by the hand. During the whole operation, which is repeated five or six times, or till the leaves are quite dry, a yellow juice eqxudes. This is called the dry preparation.
"In the wet process the leaves are first placed in a vessel over the steam of boiling water, where they remain till they are withered. They are then rolled by hand and dried in the iron roasting pan. When thus prepared, less of the yellow juice exuding, the leaves retain a lighter green colour, and more of fine flavour. When fresh dried, the tea is delicately suseeptible of odours and requires to be carefully guarded from their influence. The finest qualities are packed in jars, in order to retain their aroma." "

The Japanese are excellent busbandmen, or, at least, market gardeners. They till the land in the same way that the European gardeners work their plots with the spade and hoe. No weeds are allowed to sprout, and everything available for manuring purposes is ca: ully utilised. The quantity of animal refuse used in this way probably exceeds that which is actually consumed, for enormous quantities of fish are imported from Yeso for the sole purpose of emriehing the land. Nevertheless, the soil is inadequate for the ever-inereasing population. All the plains

\footnotetext{
- Mossman, p. 189.
}
are under tillage, and nothing now remains to be reclaimed except some marshy ulluvial tracts and the slopes of the mountains.

\section*{Natural Resources of Yeso.}

The island of Yeso no doubt presents a vast field of colonisation to the Japanese. Larger than Ireland, and yielding the same description of plants, it might support a population of several millions. But it is too cold for the cultivation of rice, so that the people emigrate reluctantly to a region so much more inhospitable than their own. Nearly all the Japanesc attracted to Yeso by the Colonial Office regard themselves as exiles, and never fail to seize the first favourable opportunity to return to their homes. But although offering such limited agricultural advantages, Yeso must soon attract attention in consequence of its vast resources in timber and minerals. The whole island may be said to constitute a boundless forest, consisting of various species, amongst which are thirty-six kinds of trees useful to the carpenter and cabinct maker. Scarcely does the traveller leave the beaten track when he finds his progress arrested by thickets of creepers, bamboos, and other undergrowths, overshadowed by trees of great size. It is difficult even to cross the clearings, where the clusters of the Eulalia Japonica grow in dense masses to the height of a man on horseback.

Until good roads are opened Yeso must continue to derive its importance exclusively from the coast fisheries. In the abundance of its marine life this island resembles Oregon, on the opposite side of the Pacific. Some of the nets employed in the salmon fisheries are 4,000 feet long, and require seventy men to manipulate them. At the end of the day, after three draughts, as many as 20,000 fish are found to have been taken in these nets. Even the worst seasons will yield \(1,200,000\) salmon, with a total weight of 3,000 tons.

Fishing is also successfully pursued aiong all the cor :- of Japan proper and of the Liu-kiu Archipelago, and fish is far more generally nonsumed by the people than meat. Piscicultural establishments have even of late years been formed on a large number of streams in Central Nip-pon. Mother-of-pearl is coilected by divers in the Liu-kiu Islands, while the rorqual and other species of cetacea are pursued by daring fishers in the open seas. A favourite subject of pictorial representation is the flcets of smacks pursuing these large animals, and driving them with the harpoon towards strong wide-meshed rope nets.

\section*{Land Tenure-Mining Industry.}

The land belonged formerly to the State, under which the peasantry held it as hereditary tenants. Thanks to this perpetual tenure from father to son, the cultivators had at last acquired a certain independence, ranking in the social scale immediately after the nobles, and above the nerchants and artisuns, who, nowever wealthy, were regarded as their inferiors. The land-tax varied according to the nature of the crops, the abundanco of the harvests, and the caprice of the prince.

Fixed in somo districts at no more than one-tenth, it rose in other places to a third, a half, and ceven three-fifths of the whole yield. The recent revolution, by which tho whole social system has been so profoundly modified, could not fail to denl with the land question. By a tax of two and a half per cent. the peasantry have become the virtual proprietors of the soil, and the Japanese law of land tenure may in a general way be said to have been conformed to the Roman right. Large landed estates have already been developed in Yeso, in the northern section of Hondo, and even in certuin central districts, wherever the land was found lying fallow. Some of these reeently formed domains rival in extent those of Ireland or Russia. There is one estate near Nihi-gata entirely under rice, which is no less than twenty square miles in extent, and yields an income of about \(£ 16,000\) to the owner.

The laws of inheritance still bear traces of a matriarchal social order. The eldest son inheriting a patrimony cannot abandon it, and his wife must occupy it with him and take his family name. The daughter inheriting, when the father has had no male issue, must in her turn remain on the paternal estate, in which ease residence also becomes obligatory on her husband, who takes her name. When a new household is founded, if the dwelling has been furnished by the father-in-law the husband also takes the name of the wife who brings him the residence.

The mining industry is of less relative importance in Japan than was formerly the case. In the seventeenth century the Portuguese are said to have annually exported from the archipelago six hundred barrels (?) of pure gold, valued at nearly \(£ 800,000\). This metal was at that time comparatively plentiful, for it was only twelve times the price of rilver. In many mines the copper ores contain a considerable proportion of gold, and these ores were accordingly reckoned amongst the most lucrative articles exported by the Dutch. The Sado gold mines, which are the oldest in Japan, have been worked for centuries, but most of the other mines are not sufficiently productive to continue the works The only minerals at present mined are silver, copper, and iron.* Considerable deposits of iron are found in various parts of the archipelago, and Urup, one of the Kurile Islands, harbours immense reserves of ores containing as much as eighty per cent. of pure metal. The mines in the neighbourhood of Sendai supply the smelting works with ores sufficient to yield as much as fifty tons of iron daily.

Other metals, such as lead, tin, cobalt, quieksilver, are produced in insignificant quantities, and the petroleum wells have deceived the hopes of speculators, who expected to find in Japan " oil rivers" rivalling those of Pennsylvania. On the other hand the archipelago is extremely rich in coal deposits. The island of Yeso especially contains carboniferous measures estimated by Lyman at 400 billions of tons, a quantity sufficient to supply the present consumption of the whole world for the next 2,000 years. Yet the output in all Japan was no more than 350,000 tons in the year 1879.

Most of the Japanese mines belong to the Government, which has also begun


to work the marble quarries, hitherto neglected on account of the hardness of this materinl.

But from varions adverse circumstunces the mining industry bears no proportion to the great naturul mineral wealth of the archipelago. "The methods of working, which were until comparatively lately in vogue, were crude and unremmerative; and even now there are many mines which, although worked on foreign principles, yield little or no profit, eliefly on necomnt of their imperfect communication with

Fig. 20s. - Minelial. Deposits of Yesu. Scale \(1: 5,500,000\).

centres of trade. Far up among the innuntains the roide leading to them are often wretched bridle-puths, accessible only to pack-horses, so that transportation is both slow and expensive. The present Government, however, have turned their attention to the improvement of the highways. The recent outlay for costly machinery, and the heavy expenses incurred in sinking shafts, consiructing furnaces, \&e., have also tended to consume any rovenue derivable from the Government mines. Gold, silver, copper, iron, lead, sulphur, coal, basalt, felspar, greenstones, granites (red and arey), narble, roek-erystal, agate, carnclian, amber, pumice-stone, talc,
alum, \&. ., are fomen in greater or less quantities. Coal-beds extend from Nagasuki to Yeso. The supply of sulphur is almost inexhaustible, and of wonderful purity."*

\section*{Manuracteres-Japanese Art-Porcelain.}

Although the chief oceupation of the people is the cultivation of the land for the local consumption, the Jupanese Empire is of all Asiutic lands the most industrial, and the products of its factorios are now exported to all quarters of the globe. The Japanese have always been renowned potters. Even the graves of the anthropophaçi diseovered by Morse havo yielded highly ornamented earthenware, the patterns of which persisted throughout the historie ages. In the burial-places of all the subsequent epochs areheologists have found baked clay figures, which were disposed in circles round the graves. Nevertheless, to the Chinese and Koreans the Japanese are indebted for their proficiency in this art. The most famous names of potters in the national records are those brought by a prinee of Satsma from a victorious expedition to Korea in \(159 \%\), and settled by him at Naesivo-gava, in his principality. These were the makers of the chuise imitation porcelains known as "Old Sutsma" ware, which are still so highly esteemed, but which have, unfortunately, become extremely rare. The manufucture of poreelains, properly so-called, was also first introduced by Korean craftsmen, who settled in the sixteenth century at Kioto. In recent times the number of keramie works has been greatly increased, and scme districts, where the art was hitherto unknown, now produce wares remarkable for the richness of their colours and the originality of their floral and animal designs. The most famous potters' villages differ in no respeet from the ordinary hamlets of the country. Eaeh workshop comprises the members of a single family, each of whom watehes in his turn over the baking of the materials in the public oven of the commune. In the fabrication of bronzes, also, each object is entirely produced by the same artist, who casts the metal, does the ehasing, eolours it with oxides, enerusts it with the precious metals, nacre, eoral, or pearls.
" A superficial examination of Japanese and Chinese poreclain might lead to the conclusion that there is not much difference between the two kinds. But this is only so far true that, like most other arts, the former is derived from the latter. But a careful comparison of the products of each country will show how much more graceful in form and finish a.e those of Japan than their Chinese prototypes, which, in comparison, may be regarded as almost clumsy and inelegant. The human figures painted on them do not certainly differ materially in artistic design or proportion of form. But the birds, fishes, insects, plants, and flowers of the Japanese school are infinitely more true to nature than are those of the Chinese designers. There is also a considerable difference in the selection of the subjects, animals such as tigers, bears, and boars being frequently seen on Chinese, but very rarely on Japanese, porcelains. This arises from the fact that there are few such

\footnotetext{
*"The Land of the Morning," p. 12.
}
animals in the archipelago, while they still abound in the mountain regions of the northern and western provinces of the Middle Kingdom.
"Jupanese porcelain has constituted for several centuries one of the most important articles of export to Europe, where, on account of its excellence, it immediately excited the admiration of connoisseurs, and is to the present day considered one of the most beautiful branches of Oriental art. The chicf poreelain manufactories for the finest ware ure in the province of Fizen, in the island of Kiu-siu, and especially in the department of Mashura, near the hamlet of Uresino, where the material from which it is made is found in abundance. Although the clay is naturally fine and clean, it is necessary to knead it, to wash it and eleanse it before it acquires the degree of purity required to render the porcelain translucent.
"At anorher place in the same province the material is found in the hills close to the sea-port town of Imari, on the slopes of Idsumi-yama, from which more than forty different kinds of porcelain are manufactured. This kind of material is hard, and when mixed with the soft clay, it prevents the fabric from cracking or breaking in the oven when being baked. Before this the patterns are painted with fine brushes on the ware. The fire is then kept up for fixing them, which soon dries the earth spread over the outside of the oven.
"Articles designated \(\boldsymbol{Y e n - g u i}\), such as cups, saucers, plates, and dishes of every kind, which are in common use among all classes, and constitute nine-tenths of the porcelain manufucture, are mude by hand and turned on tho lathe. The cups and saucers, when painted inside and outside with circular lines, are placed on the dise, turned round, and the paint brush thus forms the circle. When they receive two coatings of glaze they are well dried, and placed in the oven, where they are baked a second time.
"There are other localities engaged in the industry, which obtain the raw material for manufacturing poreelain from Kiu-siu, and have come into note since the Japanese exported so largely to the nutional exhibitions of Europe. Of these the now well-known Satsma ware has obtained pre-eminence. It is of a rich cream colour, bearing tasteful designs of flowers, birds, insects, and other natural objects. Sometimes it is manufactured into elegant chimney ornaments and graceful vases, in imitation of a bamboo stalk and the like. But the foreigners prefer tea and coffeo services, card baskets, and other European designs, which restrict native genius in the art.
"Near the ancient capital of Kioto there is a similar deseription of ware manufactured, but of inferior quality. Of all these tiny productions, that of eggshell tea-cups, as thin as their name indicates, but sometimes strengthened by delicate bamboo work, is prized highly by connoisseurs. It is said not to be a Jupanese invention, but to have been copied from the Chinese many centuries ago."

\footnotetext{
*Mossman, p. 181.
}

\section*{Lacquer-ware and Papra.}

The Japanese artisans have also been for eenturies aequainted with the art of weaving heavy linen and silken fabrics, and their brocades, interwoven with gold and silver thread, still form admirable hangings or festive robes. In one of the temples at Nura are preserved some lacquer boxes, said to date from the third century of the Christiun era, which attest the superiority of the Japmese in this industry for a period of one thousand six hundred years. The Japanese lacquers of the better epochs fixed on copper, or more frequently on the wood of the Pinus

Fig. 209.-Scknes of Indtstrial. tife.
Fao-rimile from a Japanesc Album.

retinispora, and ornamented with gold, silver, or mother-of-pearl, are amongst the choicest contents of our museums. The most highly estecmed are those of the sixteenth century, a period answering to that of the Renaissance in the West. The finest specimens have a metallic lustre, and are almost indestructible. The Nile having been wrecked on the Mikomoto reef, near Simoda, all the treasures she was conveying to the Exhibition of Vienna remained for eighteen months under water. Yet when the lacquer objects were at last brought up by the divers, they were found to be perfectly intact, their polish having lost nothing of its original splendour.

Japanese lucpuer-ware fur surpusses even the finest Chinese finecimens in delicacy und finish. It also possesses an unexplained property-a hardnessenabling it to resist the roughest usage without being seratehed, und to endure high temperatures, while its pwlish is the most perfect known. The process of its mumuficture is thus deseribed by Jucquemurt. "The wood when smoothly planed is covered with uthin sheet of paper or silk gauze, over which is spreud a thick coating, mude of powdered red sandstope and buffalo's gull. This is allowed to dry, after which it is polished and rubbed with wax, or else it receives a wash of gum-water, holding clulk in solution. The varnish is laid on with "f fat orush, and the article is placed in a damp drying-room, whence it passes into the hands of a worknum, who moistens and again polishes it with a piece of very fine-grained soft cluy slate, or with the stalks of the horse-tail or stave-grass. It then receives u second coating of lacquer, und when dry is once more polished. These operations ure repented until the surface becomes perfectly smooth and lustrous. There are never applied less than three coatings, but seldom more than eighteen, although some old Japunese ware aro said to have received upwards of twenty.
"The most highly esteemed varieties are the gold, the black, and the red lacquer, the last of which seems peculiar to Japan. It is nearly alwuys of a pure bright colour, and the ormamental parts are very carefully executed. The black variety is distinguished by the number of its contings und the perfection of its polish, which has the effect ruther of a metal than a varnish. The illusion is enhanced by the deliency of the reliefs in gold, certain pieces looking like burnished steel incrusted with pure gold. Some of the specimens, especially those known as "mirror laequer," are remarkable for the purity of their lustre, and for their peculiar style of ornamentation, the process of which has vemained a mystery. On the surface are brought out the details of plants executed in gold, with the most delicate reliefs. Then, according as tho stoms sink in, the reliefs disappear, the details vanish, and the whole continues to fade away, as might an object immersed in water, and gradually obliterated by the depth and absence of light. Black laequer is applied to every conceivable object, from furmiture, panels, folding-screens, tables, scats, and stands, to the daintiest artistic conceptions, such as fruits, flowers, figures, armorial bearings, plants and mimuls.'

The Japanese are also pre-eminent in the manufacture of certain kinds of paper, which they preparc from the pulp of the mulberry, the Brassonetia papyrifera, the hibisens, and several other species of plants. If, as has been pretended, the rank of nations in the scale of civilisation is to be determined by the quantity of paper consumed by them, the Japanese might certainly claim the first place. They use paper, not only for printing and painting, but also for a multitude of other purposes. Quires of paper replace our handkerchiefs and table-napkins; the stools used as pillows are covered with paper ; the windows have panes of paper instead of glass, while panels of the same material form the movable partitions of the houses. Paper garments coated with vegetable wax are worn in rainy weather; paper is still the substitute for the leather coverings of the vehicles drawn by hand; and in machinery paper bands are found more durable than those made of
leather. All attempts to imitate some of the Japunese papers have hitherto failed, but for perfect whiteness the English and lirench prolucts are superior, those of Japan always showing a yollowish tinge.

The Kijij, or puper-tree, and the process of its conversion into puper nre thas described by Mossman. "Fromastrong-hranched wood root rises a straight, thick, equal trunk, very much branched out ; covered with a fat, firm, clammy, ehestmutcoloured burk, rough without, but smooth on the inside, where it ulheres to the . wool, which is loose and brittle, with a lurge, moist pith. The brunches and twigs ure very plump, and covered with a small down, or wool, of a green colour, inclining to purple. Every year, when the leaves have fullen off, in the tenth Japmese month, which unswers to our December, the twigs are cut into lengths, not exceeding three feet, and put together in bundles, to be afterwards boiled in an ulkuline lye. These faggots are placed upright in a large kettle, which must be well covered, and boiled until the bark shrinks so far as to allow about hulf an inch of the wood to appear muked at the top. When they have been sufficiently boiled they are taken out into the air to cool, afte" which the bark is stripped from the wood, which forms the pulp for making t' jer. For this purpose it has to be washed and eleansed, and this process is of no small consequence in producing smooth, white paper.
"The washing takes place in a running stream, the bark being placed in a sort of sieve, which lets the water run through, while it is stirred constantly with the hands until it becomes a soft woolly pulp. IIaving been sufficiently washed, the pulp is spread out upon a thick wooden table, and beaten with a wooden mallet until it is reduced to the requisite fineness. Then it is put into a narrow tub with a slimy infusion of rice, and of a root called Oreni.
"The moulds on which the paper is to be made are formed of the stems of bulrushes cut into narrow strips. The shects are then lifted one by one from the mould, and laid up in heaps upon a tuble covered with a double mat, and a small plank or board placed on each heap. Weights are gradually piled up for a day, after which the shects are lifted off singly on the palm of the hand, and transferred to a rough plank, on which they are placed, and afterwards dried in the sun. The finest quality is of a white, smooth surface, although, as already remarked, never quite appronching the pure white colour of the best European paper."

The Japunese are also our masters in wieker-work and in the preparation of straw objocts, of which they have a surprising varicty, ranging from waterproof cloaks to marionettes of all forms and sizes. The leather industry is represented in several towns by some choice articles, but as a rule this material is very little used in the industrial arts, owing to the contempt in which the tanner's trade is held. Those engaged in the dressing of skins were formerly included in the despised caste of the Etas. Amongst the noteworthy products of Japanese industry, mention should be made of those " magic mirrors" whose dazzling brightness, according to the legend, induced the inquisitive and jealous Sun-Goddess to emerge from the cave to which she had withdrawn. The images projected by these mirrors on walls, under tho influence of heat and of the pencil of rays, are due to 62
the fact that the metal surface is not of uniform thicknoss and consistener . Hence when hented it expmods inregnlarly, and thas reveals, by the calendater? ceflection of its varying reliofs, the desigus or writings which are, us it werc, emboriend in it.

The atriking origimality und endless versatality of the mational urtistic gemas aro woll illastrated by tho Japmese ivory earvings, many of which challenge our highest praise and admitation. Among these objacts are the pitongs, or procil-cases, mu less vigorously executed than those of Chinm. 'rloe pliant muterinl is ulso fashioned into curions boxes und cabinets, cumingly embellished with fine reliefs

Fig. 210.-Athert Scengh.
Facosimila from a Japmueno Allum.

divided iato compartments most skilfully put together, forming those medicinechests that look like a single piece, and on which stand out figures of the dairi in their rich costumes, their emblems carefully reproduced and often held by uttendant officers crouched behind them. All this microscopic work is occasionally heightened by touches of lacquer and gold, and incrustations of mother-of-pearl or of pietra durra.

Yet it is not this, nor even the miniature caskets with their endless divisions, that excite the greatest wonder. In them wo, of course, recognise a murvellous art, lut still traditional, and like the Chinese, somewhat mechenical, so that the
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\section*{IMAGE EVALUATION \\ IMAGE EVALUATION
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style of one piece prepares us for another. But it is in the minute little netzkés, as they are called, that to the astonished observer is revealed the unforeseen, the mind of each individual artist, with its manifold types, its surprises and constant flashes of genius.

These little trinkets or charms, known in Europe as Jupanese butons, were the only ornaments with which the upper classes relieved the somewhat sombre hues of the old natiomal costume. Eael minute ivory object, with its studied expression, uttitude, and dress, often profusely adorned, is an original composition, a chupter, so to say, on history or marners, a caustic satire aiming its darts at the socinl vices, and not unfrequently at religion itself. One represents the Sinto God Cheu-lao jeering at the followers of the Tao-tse cult, and making the most comical grimaces beneath his prominent skull, which assumes the form of a cucumber; another shows the same divinity typified by a rival artist as a cuttle-fish impaled upon a rock. Elsewhere groups of devotees are grouped in the most grotesque attitudes, and making the most hideous faces. Nor is there any lack of graceful forms. Jucquemart mentions a group of young women, carved out of a solid piece of ivory, decked with elegant head-dresses and richly attired, one of them suckling a child. On examining the little head bent over her nursling, we are astonished at the skill displayed by the artist, in depicting on such a minute scale the tender eare of a mother, and her total abstraction from everything except the child of her affections. Very wonderful also are the figures of professional beggars, which exist in great variety. Nothing can be imagined more curious or more picturesque than these real or sham eripples, borne on the backs of animals, or themselves leading monkeys about, and grouped in all manner of grotesque associations.

The representations of animals are no less correct and amusing in their infinite humour and variety. Here we have a most lavish display of the most fanciful and whimsical conceptions-frogs dancing a wild sarabande on an old straw slipper; rats huddled together with their lively faces peeping out in all directions; a mouse that has taken possession of a fruit, and enseonced itself like the rat of the fable in a cheese. Here is a chestnut pierced by the gnawings of a worm, which has traced out in the ivory a narrow passage, emerging at last through a hole in the brown rind, and crawling to the surface, where it seems as if still creeping, so lifeliko is the imitation. Here again is an egg, an irregular fracture in its broken shell giving a peep inside. As far as the eye can penetrate it detects the microscopic figures of a Buddhist pantheon; caeh separate divinity may be recognised by his features, as well as by his distinctive attributes.

After studying these ingenious objects, distinguished at once by their technical skill and inspiration, wo remain more than ever convinced of the cnormous difference between the Japanese and Chinese schools of art. The latter, at once painstaking and skilful, reproduces with undeviating fidelity the types handed down by the national traditions from time out of mind. The former, trained to the independent observation of nature, and left to the promptings of individual genius, infuses into its work that distinctive humour and pungent fincy, which a philosophic mind may delight to emborly in grotesque scenes, in order, through them, to aim tho
shafts of their satire against the manners of the times. The Japanese ivory trinkets thus present some managry to the Punch, Charivari, and other illustrated caricaturo literature of the European nations.

\section*{Dechine of Aut-Tuafic in "Cerios."}

Sinee Japan has begun to trade freely with the rest of the world, the national industries have contered on ut period of suspense, if not of actual deeline. In order to meet the increasing foreign demand, the native craftsmen have been ehiefly

Fig. 211.-Thr Gods
Fac-simile from a Japanese Album.

occupied in the production of cheap wares, whereby their artistic skill has been impaired. .Foreign competition has also ruined several of the local industries. Nevertheless, the best traditions of art have been kept alive in the production of bronzes, laequer-ware, pottery, silks, painted and figured papers. In these branches the works of the Japanese artists are still distinguished for the harmonious disposition of the colours, the sobriety of the ornamentation, the natural grace and variety of the designs. Flowers, foliage, branches, insects, fishes, birds, small quadrupeds, and all natural objects, are depicted with an almost miraculous happiness of expression, a boldness of foreshortening, and a freedom of execution beyond all praise. In the
most offhund way the nutive artist will dush off vast decorntive compositions, in which all the partsare perfectly balaneed, and symmetry secured without a repetition of forms. Even in strewing the floors with muny-coloured sands, the common people, who are by no means artists by profession, improvise ornamental patterns of surprising truth and lightness. Design enters into the ordinury courso of instruction, and the native of Nip-pon is always ready with his pencil. Shrewd observers of nature, the Japanese artists display remarkable skill in seizing the characteristic traits and aititudes of individuals, and the shafts of their satire are aimed not only at tho

Fig. 212.-Rats as Rice Merchants.
Fac-simile from a Japanese Album.

despised bodzes, but also at the grandees, always represented, however, under the figure of foxes, apes, wild boars, or such like animals.

Although Japan received its first lessons in Art from China, it soon eseaped from mere servile imitation, retaining nothing but the method and processes, which it upplied to the objects of its choice with a perfect freedon, fall of sprightliness and endless fancy. Even in the traditional art of the Buddhist monasteries the motives imposed by religion are reproduced with a surprising variety of details. But if the human figure is always treated with great energy of action, an astonishing intensity of expression and a remarkuble appreciation of types and characters, it is seldom that the limits of the grotesque are not passed, so that the representation usually degenerates into caricature. At the Exhibitions of 1867 and 1878, Japanese

Art, which had long been appreciated by European experts, revealed to an astonished public its incontestable superiority over the Chinese sehool. It has ulready excreised considerablo influence on modern ornamental designs, especially for porcelains, wall puintings, mud woven fabries. The Japanese school deserved to find imitators in the West, although its fame was established in foreign luuds at the very tine when it began to degenerate at home through a love of gain and hasty workmanship.

The traffic in "Curios"-that is, in all sorts of artistic objects, old and modern, real or shmm, has already become a leading feature of Anglo-Jupanese life in the sea-ports open to foreigners, and Dixon gives us a graphic account of tho "Curiomen" engaged in this lucrative business. "I had not been long in Jupan before I was seented out by the Curio-men. One day at luncheon my boy entered with the information that a doyu-y/f (curiosity-dealer) had come, und was waiting in tho hall. When the meal was over I went to see him. IIe was a little man, with a simpering countenance, and on my upparance touched the floor repeatedly with his forehead, muttering something the while in a tone of the most perfeet courtesy. It was to the effect that he had taken the liberty of coming to hang on to the august master's eyes, in order that he might be so fortumate as to sell to the august master a few old and rare Curios, which he had recently bought from some great damios.
"Around hin his goorls were laid out-lacquered eabinets, bronzes, pieces of porechain, swords, and the like. With a look of the most thorough deference, he squatted while we examined these, his assistant keeping humbly in the background. A cabinet took my fancy. I asked if this were really old. He at onco replied in an assuring voice, and pointed with satisfaction to a daimio's crest imprinted on it. 'How mach?' I asked. 'It is really a good article, and as this is the first time I will make it cheap, although by so selling it I shall not make a single tempo (cent) of profit. Because it is the first time, and the gentleman will no doubt give me his honourable custom in future-it is really old, and I am not telling a lie-I will make it 20 yen and 50 sen (about \(£ 410 \mathrm{~s}\).).' 'Nonsense! that is far too dear ; I believe after all it was made in Birmingham.' This evoked a hearty laugh, and a look at my boy, as much as to ery, 'Your master is a knowing one, isn't he?' But the imputation was vigorously repelled. 'No, honourable master, all my goods are genuine; English imitations are in Yokohama only. As this is the first time, I will sell it for 19 yen. I have some cheaper things behind here, but I know the honourable gentleman would not condescend to buy such inferior things. Just look at the difference. This article is really good; 19 yen, even a little more I cannot reduce the price.' 'I offer 12 yen.' The two men look at each other, and laugh incredulously. 'I will reduce the price to 18 yen. I caunot go further without losing on it.' 'Let us split the difference- 15 yen.' There is a thoughtful pause, then a low conversation with his assistant, the result being that he bows his head to the floor with a resigned expression, and the bargain is struck.
" A few minutes later there is a sound of much laughter and joking in the servants' (quarters, whither the Curio-men have betaken themselves, and my boy,
when ho next enters, does not fail to admire tho article I have bought, and commend the character of the denler who has sold it. Presently l cutch a sight of that worthy bowing to mo through the window, as he walks off with his puck on lis back.
"From that day forth the visit of the dogu-ya was an occurrence that could be relied upon almost as surely as luncheon itself. There were ubout hulf-i-dozen men with whom I had dealings, and it was not uncommon for two or more of them to arrive at the same time. No donbt all of them alike had lenrned everything ubout me from the servants-my tastes, my hours of leisure, whether or not I was hurd to drive a bargain with, on what day of the month my puy-day fell, whether or not I was a rigid Sabbatarian, \&e. The right of entering the house was possibly purchased from the domestics, in whose quarters they would, in the event of my absence, sometimes wait for me several hours. Their phasibility was as irrepressible as their sagacity. According to their own account they wero always giving burgains. At their first visit it was beeause it was the tirst time that they agreed to sell their wares at a clear loss. But on every succeeding occasion they professed to make tho same sacrifice for some renson or another, often one of an elaborately fictitious character. No exposure could disconcert them. They were always ready to disarn reproof by making an opportune confession. It was quite true that they hat once or twice taken advantage of a neweomer's inexperience, but the honourable gentleman with whom they were now dealing was too sharp to have a like fate; he could not be taken in. The august master knew well what he was about, didn't he? And with that the one would look knowingly at the other. If all their customers were as well versed in Curio buying as the honourable master, they would make no profit at all; they would need to start a jinrilisia. And here they would all laugh good-naturedly.
"They wero always ready for any amount of banter, and did not hesitate to reply to a picco of irony. 'It is a lie;' an expression which in English seems an insult, but which on account of the inadequate appreciation of truthfulness that prevails amongst the Japancse, in common with other Easterns, often means little more than ' You are joking.'
"Even the most artful of these Curio-men were generally kind-hearted fellows, so much so that it was difficult to lose one's temper even when most flagrantly cheated. And some of them were certainly more honest than others. There was one jolly fellow who, I remember, brought me a present at the New-Year time, and on the morning after a serious fire had occurred at the college several of them called to congratulate me on my escape."*

\section*{Foreign Trade.}

After the expulsion of the Portuguese, and the extirpation of the native converts, the trade of Japan with Europe had fallen in the yeur 1685 to the sum of 300,000 taels, or a little more than \(£ 80,000\). At this time the Governor of Nagasiki also took every precaution to prevent the imports from exceeding the stipulated value.
* Op. cit., p. 274, et seq.

The Chinese traders had the right of disposing of grools at Nagasaki to double that amount. But they were otherwise as joulously watched as the Duteh themselves, in punishment of their contrabond truffic in crosses and Catholic devotional works. The eommercial relations of the industrious land of the Rising Sun with the outer world had been altogether reduced to exehanges of the unnual value of about \(\mathfrak{f}: \neq 0,000\). Although Japun is surrounded by islands, islets, and inlets, uffording every facility for smaggling, the contraband trade was almost extinguished. Piraey rather than trade becane the resouree of those daring Japaneso mariners who infested the coasts of Formosa und Fokien. Following in the track of thoso eorsairs who during the first centuries of the vulgar era had penetrated into Malaysia and up the Meinan Estuary, and who had supplied the King of Simm with his best troops, the Jipanese rovers again uppared in the same waters towards tho end of the seventeenth contury, when a colony from Nip-pon guarded the approaches of Ayuthia, at that time capital of Siam. Being deprived of the compass, to prevent them from venturing too fur on the high sens, the Japmese navigators had for the last three centuries ceased to make distant voyuges, and even held aloof from foreigners wrecked on their consts. On the oceasion of the submarine earthquake at Samoda, about a hundred Jupmese perished, rather than break the law forbidding them to board European vessels. Two only of the wholo numiner availed themselves of the rope thrown to them by the erew of the Russian ship Diana.

Since the opening of the treaty ports in the year 1854 trade has continued steadily to increase from decade to decade, but not from year to year, progress having been temporarily arrested by the civil war of 1868 , by the depreciation of paper money, overstocked markets, and other causes. During the twelve years from 1867 to 1880 the commercial operations of the Empire with foreign countries in the six treaty ports of Nagasaki, Miogo-kobe, Ohosaku, Yokohama, Nihi-gata, and Makodate, have been far more than doubled.* But compared with the foreign trude of European countries this movement is still far from considerable, scareely representing much more than eight shillings per head of the wholo population. The expectations of muny foreign merchunts, who flocked to Japan as to a new Eldorudo, have aceordingly been disappointed. Possessing in the country itself most of the produce and manufactured wares required for the local demand, the Japanese import from abroad only what is absolutely indispensable for their wants. In exchange for their teas, raw silks, \(\dagger\) camphor, cocoons, fans, and other fancy articles, they take from Europe and America nothing but woollen and cotton woven fabries, hardware, and a few other manufactured goods. Opium is spocially excluded by international treaties, and all importers of this drug are liable to capital punishment. The sugar and rice taken from China are paid for chiefly by "sea cabbage," which is so highly appreciated by the Southern Chinese, and by ginseng, from the upper valley of the Sinano River.
*Foreign trade of Japan:-


During the last few years the Japanese importers havo been introducing large quantities of cotton yurns, which are employed in the families in the production of fabrics of a more substmatial charneter, us well as more in accordance with the natiomul taste than the slop, groods from the Massuchusetts and Lameashire mills. In certuin inland distriets every house has its loom, which is worked by the women, while the men are engaged in tillage or gardening. Large spinning mills and printed ealico and cloth factories have also been reeently established, in order to emaneipate Jupan from the monopoly hitherto enjoyed by the Euglish manufac-

turers of such goods. For the same purpose of becoming commercially independent of Europe, the Japanese are also engaged in developing the glass and clock industries and in the production of lucifer matches. There is scarcely a single European article that they are unable to imitate, and the Ohosaka craftsmen are now producing fire-proof safes, perfect in all respects down even to the very names of the more famous European patentees. A Japanese house has already opened a branch in Milan, in order to supply the Italians directly with silkworms' eggs, thus depriving foreign brokers of their commissions. England hos even received cargoes of bricks consigned from Japan.

\section*{Simpina.}

The grent extent of their sen-bourd und the ohstueles presentell to inland commanicution hy the rugged surfure of the lund, combined with the facilities offered to shipping by the innumeruble creeks med inlets, expeciully on the cust side of Honuto, und generully in the somthern districts of the urchipelago, could not fuil to make the Jumese a seafaring people. Simall cralt too frail to venture beyond the

Fig. 214.-Jalinege Lines of Nanioation.
Neale 1: 12,000,000.

inlets are counted by hundreds of thousands, and in the coast villages every family has its boat. Of vessels over 20 feet long, and strong enough to face the open sea, there were numbered over 30,000 in 1872, and before that time the English Admiral Hope, when traversing the Inland Sea, met upwards of 1,500 junks, besides burges and boats. Previous to the revolution of 1868 there were no keded ships like those of Europe, the mercuntile marine consisting exclusively of junks built on
models imposed by the State.' Yet some even of these vessels were over 200 tous burden, and freely maviguted all the waters of the wrehipelago.

All direct commereial relations with foreign lands being interdieted, the large junks which conveyed mundurins und umbussudors to the Liu-kiu Archipelugn, Formosin, and Chima, belonged exelusively to the Govermment. But since the opraing of the treaty ports to European trade the mereantilo mavy has beedn rupidly developed. Japun already equals France, white surpassing several baropeom stutes in the number und tomage of its stemmers, as well as of its whole theet. The Burracouta, which was the first paddle-bont that made its appearance in a Japunese port, had scarcely entered the Nagasaki waters when the mutives, cuger to learn, usked permission to stady the uction of the engine, and obtuined from the chicf engineer a plun and section of the works.

As soon us the Japaneso daimios found themselves in direct relations with foreigners they hastened to purchuse steamers, with the view of enhuncing their prestige in the eyes of their subjects. About two hundred of these vessels were presently seen lying ut unchor before the palaces of the daimios. But most of them being crazy old bouts, sold at exorbitant prices and mannel by inexperienced crews, they soon becme useless hulks. The eru of real deep sea nuvigution had not yet begru.

As early as the year 1872 a Jupmese vessel had ulrendy crossed the ocem, bound for Sun Frunciseo, and since that time the flag of the Rising Sun has uppenred in the ports of the West. The Mitsubisi Steanship Compuny, which, however, enjoys a government subsidy, owned in 1876 more than forty vessels of 2,000 tons burden, plying between all the sen-ports of the arehipelago, and ruming us far as Hong Kong, Shanghai, and Vladivostok. This compuny is grudually monopolising tho local earrying trade to such an extent that foreign shipping has notably diminished during the last ten years. The English flag alone has hitherto suffered nothing from this native competition. The Chinese olso tako a considerable share of the profits derived from the trade of Jupan. As brokers and ugents they are gradually replacing the Europeans and Americans in all the treaty ports. In every commercial house the situation of comprador or commissioner, is invariably occupied by a native of the Middle Kingdom. \(\dagger\)

\section*{Roads-Rallways-Telegraphs.}

Although the sea, now lit up by numorous lighthouses, \(\ddagger\) still offers the readicst means of communication, road building has not been completely neglected. Carts
* Jupanese mercantilo navy in 1879:-

\(\dagger\) Foreign Shipping enguged in the trade of Japan (1878) :-
English vessels
Oitsers
Others . . . . . . 351 , 331,181 ,
\(838, \overline{748}, 872\),
Foreigners residents in the Japaneso Treaty Ports (1878):-English 1,170; other Europeans and Americans 1,410; Chinese, 3,028 ; total \(5,505\).
\(\ddagger\) Lighthouses in Japan in 1881: 45, besides the harbour lights.
drawn by oxen were till recontly fomad only in the mighlomehome of kioto, tho
 While mewhere the routes, for the most part mere male tomeks, aro being gradually
 to the fon historial man highway, which take their mane from the provines truversed bey them. These are the 'rokaiodo and Sakusen-do, eonneeting T'okio

Fig. 2lo.-Vikw taken on the 'lokatedo Iltohway.

with Kioto, one by the coast, the other over the hills; the Mokroku-do, which follows the western slope, and the Tosan-do, or great northern route.

As regards railways, Jupan has hitherto remained satisfied with setting an example to China by constructing the two lines from Yedo to Yokohama, and from Ohosaku to Kioto and Kobe, which are quite as mueh frequented as the busiest lines in Europe. But sinee the completion of these works, little has been done beyond building a few short mineral railways. Recently, however, the town of

Ohot: has ben comnected with Kioto, mul in Yowo, Supporm, capital of the inhum, now enjoys stem commmicotion with the pert of Garmai. A begiming has ulso been made with the great project of emstrocting a trank line from the mothern to the smothern extremity of Hondo, through Semdui, 'lokio, Sugovin, and Kioto, with branches ramifying to all the large towns on the west side of the island. "The tirat seetions to be completed of this seheme are those rmminer from Ohotz to Tsurugn, and from Tokio to Takasaki. All the phat of the mew lines will be of local production, execpt only the locomotives, to bo supplied from America.

The progress of the telegraphie mad powtal services has been far more rapid. The first telegraphic line was oprued in 1stat, and in laso the network compriwed
 through, Shanghai mad Vladivostok with the continental systems. At the same date the postal romes had acepuired a total development of 35,000 miles. In the administration of this servied, Jupun, which was one of the first powers to join the Universal l'ostal Union, is fully on a level with the leading states of the West, and fur in udvence of several Luropems countries.

\section*{Literatere and Puble Instriction.}

The circulation of newspapers lus increased at a surprising rate. The first publication of this sort uppenred in the your 1871, and in 1878 there were ulready 2066 periolieals in Jupmese mud 9 in foreign languages, with a joint circulation of nbout \(20,000,000\). During the sume yeur 5,317 new works were published in 9,967 volumes, so that, in this respect, Jupan takes the third place amongst the nations of the world, exceeding even Great Britain in the number of its printed works.* Of late years, unserupulous Jupanese editors have begun to compete with those of Europe, by issuing comuterfeit editions of English publications. Nearly all the more important Europeun scientific works ure also regularly trumslated into Japranese, and the names of Darwin, Iuxley, and Herbert Spenser are household words amongst the educated classes in the Empire of the Rising Sun.

The rapid progress of general literature shows how earnestly the Japunese have taken up the question of public instruction. Dducation has been placel on a demoeratic footing, and all, whatever their social position, are now enubled to study the arts and sciences in the public sehools. According to tho luw, elenentary schools must be founded in the proportion of one to every 600 souls. The educational machinery, as now orgmized, is completed by secondary and techmical colleges, academies of art, industrial institutions, the university of Tokio, and several scientific ligh schools. Of these, the first in point of time is the Nagasaki Suhool of Medicine, opened in 1829. Even the prisons are transformed to systemutie educational establishments, in which the political criminals usually act as monitors. One of the heaviest items of the national expenditure is that administered by the Board of Public Instruction, while, apart altogether from the action of the State,

\footnotetext{
* London and China Express, N. 4, 1881.
}
the Jupunese people are distinguished beyond all others for their generous zeal in the callse of education. In the five years from 1875 to 1879 the voluntary contributions for this purpose exceeded \(£ 1,680,000\), exclusive of lands, buildings, books, instruments, and donations of all sorts. Amongst the numerous associations of recent creation, is a society founded especially for promoting education, and which has already no less than 3,000 members in every part of the Empire.

Nevertheless two-fifths of the boys and four-fifths of the girls are still absent from the public sehools. Many children, however, are taught the elements at home, and the chief fault hitherto found with the Jupanese educational system is that its courses are far too comprehensive for the primary and secondary sehools. Iustruetion loses in depth what it gains in extent. The violent athletie exereises of the Samurai youth have also been indifferently replaced by inadequate gymanstic discipline, much to the detriment of the health of the pupils.

The number of foreign teachers invited by the Japaneso Government from Europe and America, to instruct the people in the arts and scienees of the West, is diminishing from year to year.* The salaries also have been gradually reduced to a very modest figure, a circumstance which explains the general substitution of German for Eaglish and American professors. Engineers engaged to lay down roads and railways, or to build and work steamships, physicians to whom the management of hospitals had been intrusted, officers invited to instruet the native troops, jurisconsults cliosen to dyaw up the laws, financiers arriving in the hope of manipulating the national funds, were all redueed by the gentle but firm attitude of their hosts to the exclusive position of teachers cach in his special province. They were requested, not to apply their talents to their own direct advantage, but to render themselves gradually useless by training pupils destined soon to replace them. In this way New Japan, which aspires to renovate itself by its own forees, was able rapidly to dispenso with the services of many burdensome and indisereet foreigners, who have ulways been regarded in the light of necessary evils. "As the cagle is contained in the shell, so the future of a peoplo lies within itself," proudly says a modern Japanese writer.

\section*{Historic Retrospect-The Revolution.}

The reigning family descends traditionally from Zinmu-Tenno, the "Divine Conqueror," son of the god Isanami and great-grandson of the "Sun-Goddess." The Mikado now oecupying the throne is supposed to be the one hundred and twenty-third emperor bearing the three divine insignia of the mirror, sword, and seal. For the dynasty of the Sun, whose emblem is the chrysanthemum, suggestive in its form of the luminous globe encircled by rays, is said to have reigned uninterruptedly for twenty-five centuries and a half, in other words, from the time of Nabuchoolonosor or of Tullius Hostilius. The first nine centuries, however, of this dynasty belong exclusively to the legendary cpoch, and authentic history dates

\footnotetext{
- They numbered 705 in 1875.
}
only from the close of the third century of the Christian era, when the Chinese ideographic writing system was introduced.

Previous to the reeent revolution, which changed the form of the governments the authority of the Mikudos was little more than nominal. Since the end of the twelfth century they hud, so to say, been relegated amongst the gods, and their power was exereised through the medium of a Shogun, who had become the virtual sovereign. When in 1853 the Americans, and after them the Russians, presented themselves to demand the conclusion of a treaty of commerce with the Kingdom of the RisingSun, the only part taken by the Mikudo in the deliberations was to "address fervent prayers from morning to night to the Kami and the ancestral shades." Shut up in his palace, or rather his temple, and a complete slave to etiquette, ho was allowed neither to tread the ground, expose his person to the open air, nor let the sun shine on his head.

But the Shogun himself was no longer in possession of the supreme authority, which the famous Yeyas, founder of Yedo, had bequeathed to his family at the end of the sixteenth century. Although elosely watched by the Government, the imperial feudatories, that is to say, the eighteen great daimios and the three hundred and forty-four lesser daimios, constituted none the less a political estate far more powerful than the official representatives of the sovereignty. When the Shogun, alarmed by the appearance of the American squadron under Commodore Perry, found himself obliged to renounce the traditional poliey of the Empire, and nuthorise foreigners to trade directly with his people and even to take up their residence on Japaneso soil, such a radical measure could not fail deeply to affeet the opinion of the feudal lords and of the whole Samurai class. So loud became the clamour, that the first time for many centuries outward rumours penctrated into the saered enclosure of the Mikados. At the instigation of the nobles, the reigning emperor was compelled to intervene and issue orders to the Shogun. Fierce struggles broke out in various \({ }_{1}\) laces between the aristocratie septs, some siding with the "King of Yedo," others with the Mikado, othersagain acting still more independently, and taking part, now with one now with the other, according to their caprice or personal feelings. The league of the daimios of Satsma, Toza, and Nagato, always opposed to the free admission of foreigners, acquired the upper hand in 1863, and ordered tho Shogun to abrogate the treaties of commerce. But these feudatories had themselves European instructors in their armies, physicians and teachers from the West or the New World in their houscholds, while the strangers also supplied them with guns and ammunition. Accomplished facts could no longer be undone, the barriers of scelusion had been once for all burst asunder, and the social revolution henceforth followed its normal course.

While steps were being taken to call together the Gakziuyin-that is, the general assembly of the Samurai-with a view to the settlement of all urgent internal and external matters, a "cohort of the heavenly wrath" was being formed in the western distriets, and foreign vessels penetrating into the Inland Sea were being bombarded by the coast batteries. But not only did the foreigners refuse to withdraw peacefully, but they returned with their fleets, forced the passage of

Simono-seki, and exacted a war indemnity, followed soon after by an extension of their privileges. But although all their demands had to be granted, the Shogun, looked upon as responsible for these humiliations, was compelled to abdicatc. After u vain attempt at resistance, he was deprived of all his functions, and the Mikado re-entered into the full possession of the supreme power. The daimios themselves petitioned for the abolition of their privileges, and one of them intrigued for tho honour of razing his castle and converting the site into arable land. The feudul system was abolished, together with all class distinctions; the right of receiving instruction was granted to every eitizen; marriages were permitted between all social ranks, and plebeiams (hei-min) were even admitted to the administration. The despised Etus were placed on a footing of equality with all other subjects, and the Samurai were obliged to lay aside the two swords by which they had hitherto been distinguished from the populace. Nevertheless the official census still recognises the aristocratic or plebeian origin of the people.* In order to indicate that the accomplished changes were irrevocable, and that the new era of the Meidzi, or " Enlightened Law," was definitely established, the Mikado removed his residence from the sacred city of Kioto to the much larger city of Yedo, in the very heart of the radical circles of New Japan. The last insurrection he had to put down was that of the crews of the imperial navy, who had seized Makodate and set up an independent republic in that place, on the model of the United States of North America.

In 1869, just one year after the revolution had swept away all the rival powers of the imperial authority, the Mikado himself paid homage to the hitherto unheardof power of public opinion. In language that had never yet been uttered in Jupan, he solemnly promised in presence of his ministers that a deliberative assembly should be summoned to diseuss the organic laws, that justice for all alike would henceforth be lis guiding principle, and that he would on all oceasions have recourse to men of sterling worth and intelligence. These promises, sworn "in the name of the ancestral shades," have not yet been entirely fulfilled, and Japan still awaits the convocation of its constituent assembly. The envoys sent to Europe, in order to study the popular forms of government, reported in favour of the system calculated to insure for themselves the greatest amount of personal influence, and the State has consequently reserved its absolute forms. The press, not even excepting that conducted by foreigners, is regulated by extremely severe laws, which have been aggravated since 1878, and which permit the approval but not the free discussion of imperial measures. Public meetings are not authorised, and the continual watchfulness of the "head of the village," combined with an organised system of espionage, still remains the chief instrument of government.
* Japanese nobles in 1875 :-
\begin{tabular}{lllllrl} 
The Mikado's Family & . & . & . & . & 31 & persons. \\
Knghe and Daimios & . & . & . & . & . & 2,829
\end{tabular} "

\section*{Administration.}

The only representative institution is that of the provincial assemblies, which bears some analogy to the Russian Zemstro, on which it has been modelled. But the electors must belong to the proprietary elasses, and pay at least twenty shillings of taxes. None are eligible unless they pay forty shillings, and have resided for three years in the district. The deliberations of the assemblies thus elected are limited to the discussion of the taxes and local expenditure, and the session is limited' to one month in the year.

The ministerial department is modelled on that of European constitutional governments. The supreme council is presided over by a Prime Minister, assisted by a Vice-President, and comprises the sccretaries of all the chief administrative branches-Interior, Foreign Office, Finance, War, Navy, Education, Board of Works, Justice, Imperial Houselold, to which has reeently been added a Board of Trade and Agriculture. Below the Ministerial Couneil is the legislative body, which prepares the laws under the presideney of a prince of the blood, and submits its labours to the ministers without further right of intervention. On some special occasions the Government also summons an assembly of the provincial functionaries, to consult them on the question of imposts. But over the deliberations of this body the prefect exercises a power of veto.

In this country, where the communes enjoy merely a fietitions autonomy, although the mayors are elected by the heads of families, the administrative hierarchy comprises altogether seventeen ranks, divided into the three eategories of the Shoknin, Sonin, and Mannin. Till recently the Chureh was conneeted with the State by means of a publie grant, which in the year 1879 amounted to \(£ 27,000\) for the "temples of the gods." But the expenses of public worship are now left entirely to the devotion of the faithful. The "Colonies," that is, the outlying dependencies of Yeso and the Kurile Islands, were hitherto administered by a special department; but this so-called Kaitakusi, or colonial department, has now been replaced by a company, which is virtually invested with a commereial monopoly.

The ancient laws of Japan, modelled on the Chinese jurisprudence of the Ming and Tsing dynasties, and on the decrees or "Hundred Laws" of Yeyas, have been codified since the revolution of 1868 . But while their severity has been greatly mitigated, certain actions, formerly regarded as indifferent, are now subject to penalties. Thus the head of the family has been deprived of the absolute power he heretofore enjoyed over his children, and the formerly widespread practice of selling his female issue can no longer be exereised with impunity. Woman also, whom the ancient jurisprudence regarded as destitute of all rights except when defended by her husband or father, has also now acquired a legal status as a responsible human being. The pillory as well as torture has been abolished, although according to the accounts of foreigners the latter is still practised under the relatively mild form of the lash. Marderers, rebels, highwaymen, and dealers in opium are liuble to capital punishment by hanging or beheading, although the courts have seldom oceasion to inflict this sentence. Compared with the prisons of
the West, those of Japan are almost empty. In 1873 they contained altogether only 6,465 criminuls, amongst whom there were loss than 500 women, a proportion relatively ten times less than in European commtries.

Some French jurisconsults, invited to Japan in order to study and recast the national laws, prepared a civil and penal code, which the Japanese Government published in 1880 us the laws of the State. But it is to be feured that several of these innovations may have a tendeney to disturb the sense of justice in the minds of the people, many acts, such as tattooing and bathing in publio, hitherto regarded by them as perfectly harmless, being now treated as criminal. The ehief object aimed at by the Government in changing its jurisprudence is to offer such pledges to the foreign powers as may induce them to renounce their privilege of exterritorial

Fig. 216.-The Piliohy in Japan hefore the Revolution.

jurisdiction, and allow their subjects to become amenablo to the local authorities. At present all foreigners in Japan depend exclusively on their ambassadors and consuls. But they are strictly forbidden to meddle with the politics of the country, or even to publish Japanese periodicals under pain of inprisonment, fines, or hard labour, inflicted by the consular courts.

For judicial purposes Jupan is divided into four circumseriptions, with courts of appeal at Tokio, Sendui, Ohosaka, and Nagasaki, respectively.

With the exception of a hospital founded by the Duteh physicians at Nagasaki, Japun possessed no public establishments for the treatment of disease previous to the revolutionury epoch. But with its usual zeal for imitating European institutions, the country has begun to found hospitals in many places. At the end of the
your 1878 there were altogether as many as 159 , of which 35 had been entirely built by means of voluntary contributions. As in most European states, vaccination has become obligatory.

\section*{Finance-Mint-Army and Navy.}

The finances of the Empire aro not in a very flourishing state. Being anxious to stand on a footing of equality with the European nations, whose systems of eredit it was studying, Japan has not been able to resist the temptation of ereating a

Fig. 217.-Adminigthative Divisions of Japan. Scale \(1: 16,000,000\)

public debt. Including paper money,* its liabilities amount altogether to upwards of \(£ 72,000,000\), of which no more than \(£ 2,400,000\) 'are due to foreign banks. The pensions of the nobles and the redemption of their privileges represent over \(£ 40,000,000\) of the whole debt, the annual interest on which now amounts to \(£ 3,200,000\). Fully two-thirds of the national income are derived from the land tax.

Being protected by the sea, Japan could scarcely stand in need of a standing arny. But during the critical times following the revolution, the new government
- I'aper money circulating in 1881, \(\mathbf{~ 2 2 , 6 0 0 , 0 0 0}\).
required to be protected from the possible insurrections of the old military caste of the Samurai, henceforth deprived of its privileges, and only gradually transformed to a class of public functionaries or police agents. An army is now being constituted on the basis of conscription, drilled, equipped, and organised by French officers on the European model. The service, which is obligatory in principle for ull Japanese subjects, except the Ainos and inhabitants of the Liu-kiu Arehipelago, lasts for three years in the active forces, and three in the reserve. The territorial army with its reserve further comprises all male adults between their twenty-third and fortieth year not in active service. The peace footing amounts altogether to \(35,000 \mathrm{men}\) of all arms, raised in time of war to 50,000 exclusive of the reserve. These forces suffice not only to maintain peace within the Empire, but to defy China and Korea, and even to resist Russia. It is even to be feared that, confident of her strength, Japan may be induced to adopt an aggressive policy against her weaker neighbours. Hitherto, however, the national forees have only been ealled upon to undertake one foreign expedition to the island of Formosa, on which occasion they distinguished themselves by their perfect discipline. But in the year 1877 they had to repress the terrible Satsma rebellion, which cost them over 30,000 men killed and wounded.

The Empire is divided into six military circumscriptions, Tokio, Sendai, Nagoya, Ohosuka, Hiro-sima, and Kmamoto. Two military schools have been founded at Tokio, and the two chief arsenals are those of Tokio and Ohosaka.

The Japanese navy, whieh has been organised under the direction of English officers and engineers, consists exclusively of steamships, including several ironelads. In 1879 it comprised altogether 29 vessels, mounting 149 guns and manned by 4,240 sailors and marines. The chicf dockyard is that of Yokoska, near Tokio, and the whole archipelago is divided into the two maritime arstricts of Tokai, or the "Eastern Sea-board," and Saikai, or the "Western Sea-board."

The ancient political divisions of Japan, still familiar in the mouths of the people, are those of the four Do, or main highways. But in order to break with the national traditions, the old provinces have been replaced by Kcn, or departments, which are again subdivided into Kohori, or districts. Formerly the provinco of Kinai constituted the personal domain of the Mikado, to whom its reveriues were specially assigned.

A complete list of the administrative departments will be found in the statistical tables.


STATISTICAL TABLES.
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multirow[b]{3}{*}{China proper Korea} & \multicolumn{5}{|c|}{CHINESE EMPIRE.} \\
\hline & \[
\begin{gathered}
\text { Area } \\
\mathbf{m} \\
\mathbf{1 , 6 . 5}
\end{gathered}
\] & \[
\begin{array}{cc}
\text { sq. } & \text { Estimated } \\
\text { Bot } & \mathbf{3 a t i o n}, \\
\hline 050,00
\end{array}
\] & popu- & \multicolumn{2}{|l|}{Egtimate of tur lopujation of tile Chinehe Empiue according to liacze.} \\
\hline & & \multicolumn{2}{|r|}{8,000,000} & \multicolumn{2}{|l|}{Chineso Propor according to liacre. \(\quad 335,000,000\)} \\
\hline Manchuria & & \multicolumn{2}{|l|}{12,000,000} & Si-fan, Man-tze, Mino-tze, Lolo & 20,000,000 \\
\hline Mongolia & & \multicolumn{2}{|r|}{4,000,000} & Koreana . . . . & 8,000,000 \\
\hline 'l'ibet & & \multicolumn{2}{|r|}{6,000,000} & Manchus & 8,000,000 \\
\hline Kukiz-nor and & didan 12 & \multicolumn{2}{|r|}{150,000} & Tibetans & 6,500,000 \\
\hline Kashgaria & & \multicolumn{2}{|r|}{1,000,000} & Mongolians . & 4,000,000 \\
\hline Zungaria & & \multicolumn{2}{|r|}{300,000} & Tanguts, Sok-pa, and Hor-pa & 250,000 \\
\hline \multirow[t]{5}{*}{Kuja Total} & & & 000 & Kashyriana . - . - & 700,000 \\
\hline & 4,567 & \multicolumn{2}{|r|}{\[
\frac{150,000}{381,600,000}
\]} & Kirghiz - . & \(30,00)\)
60,000 \\
\hline & & & & T'ureuchi, Dungans, Solona, und Sibos & 60,000
10,000 \\
\hline & & & & Total & 1,600,000 \\
\hline & & \multicolumn{3}{|r|}{CIIINA PROPER.} & \\
\hline Provinces. & Area in squar miles. & Pop. 1842. & \multicolumn{3}{|c|}{Chief Prefectures (Fu).} \\
\hline Pechili . & \multirow[t]{2}{*}{67,260} & \multirow[t]{2}{*}{36,879,838} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Shuntion (Peking) ; Paoting; Shunte; Hokian; Kwanping; Siwanhoa; Taiming; Tientsin; Chingte;}} \\
\hline & & & & & \\
\hline Shantung & \multirow[t]{2}{*}{¢3,762} & \multirow[t]{2}{*}{29,529,877} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Tsinan ; Latichew; Uting; Tringan; Tengchew ; Tungchang; Tsaochew; Tainchew; Yenchow;}} \\
\hline & & & & & \\
\hline Sbanai . & \multirow[t]{2}{*}{65,949} & \multirow[t]{2}{*}{17,056,925} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Tayuan; Fonchew; Lungan; Ningwu; Pingyang ;}} \\
\hline & & & & & \\
\hline Honan . & 60,913 & 29,039,771 & \multicolumn{3}{|l|}{Changte; Chingehew; Krifung; IIonan; Hoaiking ;} \\
\hline Kiang-su & \multirow[t]{2}{*}{40,138} & & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Nanking; Hoaingan; Sungkiang; Suchew; Chang-}} \\
\hline Kiang-8u & & 39,646,924 & & & \\
\hline Nganwhei & 63,980 & 36,596,983 & \multicolumn{3}{|l|}{Nganking ; Fengyang; Hweichew; Luchew; Ningkwo;} \\
\hline Kiang-si & \multirow[t]{2}{*}{68,875} & \multirow[t]{2}{*}{26,513,889} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Nanchang; Fuchew; Yaochew; Swichew; Kanchew; Kienchang; Kingan; Kiukiang; Kwangain; Liu-}} \\
\hline & & & & & \\
\hline Fokien . & \multirow[t]{2}{*}{45,747} & \multirow[t]{2}{*}{22,799,556} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Fuchew; Chuowu; Hinghoa; Kienning; Taipo; Taiwan; Changchew; Tawanchew ; Tingchew;}} \\
\hline & & & & & \\
\hline Che-kiang & \multirow[t]{2}{*}{35,659} & \multirow[t]{2}{*}{8,100,000} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Hangchew; Shaohing; Huchew; Kihaing ; Kinhoa; Kuchew; Ningpo; Wenchew ; Tuichew; Chuchow ; Yenchew}} \\
\hline & & & & & \\
\hline Hupeh. & \multirow[t]{2}{*}{69,459} & \multirow[t]{2}{*}{28,584,564} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Wuchang ; Hanyang; Shinan; Hoangehew ; HingYang; Nganlu; Chingchew; Tengan; Ichang;}} \\
\hline & & & & & \\
\hline Hunan. & 83,200 & 20,048,769 & \multicolumn{3}{|l|}{Changeha; Hengchew; Paoking; Changte; Chenchew;} \\
\hline Shen-8i & \multirow[t]{2}{*}{81,192} & \multirow[t]{2}{*}{10,309,769} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Singan; Fenghiang; Hanchung; Hingan; Yulin; Tungchew; Yengan.}} \\
\hline Shan - & & & & & \\
\hline Kan-st. & 259,620 & 19,512,716 & \multicolumn{3}{|l|}{Lanchew ; Kanchew; Kingyang: Kungchang; Liang-} \\
\hline Sechuen & \multirow[t]{2}{*}{184,997} & \multirow[t]{2}{*}{35,000,000} & \multicolumn{3}{|l|}{\multirow[t]{2}{*}{Chingtu; Shunking; Kiating; Kweichew ; Lungan; Ningyuen; Paoning; Switing; Suchew; Chung. cheng; Tungchwen; Yachew.}} \\
\hline & & & & & \\
\hline Kwangtıng & 90,219 & 20,152,603 & \multicolumn{3}{|l|}{\begin{tabular}{l}
Canton; Shaochew: Hwichew; Kaochew; Liechew; \\
Lienchew; Chaohing; Shuochow; Kuingchew.
\end{tabular}} \\
\hline
\end{tabular}


Numbr of Cuinerf settifm Abroan. 1, seim Manchuria (1860) Jupurese Einpiro (1879) United States (1881) Britimh North America P'ru, Bazail, Culan . Guinnt, West Indies Sundwich Islands (1881) Other Pucific Inlands British Indin, Mauritius, South Africa Anstralin (1880) Philippin s Datel Fant Indies
Malacea and Struits Settlements
Annam, French Cochin Chima (1880)
Siam, Cambeja, Burma
Foheign Rebibenta in China.
\begin{tabular}{|c|c|c|c|c|c|}
\hline & He & :81 & rs & hiva. & \\
\hline English C & me & ou & & Resid & 2,070 \\
\hline American & " & " & 31 & . & 469 \\
\hline German & " & " & 64 & " & 381 \\
\hline French & " & " & 20 & " & 228 \\
\hline Ruseian & " & " & 1i; & " & 79 \\
\hline Jupanese & " & " & 2 & " & 61 \\
\hline
\end{tabular}

Yieln of tur Chingbe Coal Mines (1878).
Shan-si . . . . . \(1,700,000\) tons.
\begin{tabular}{lllll} 
IIunan &. & \(\cdot\) & \(\cdot\) & \(\cdot\) \\
Shantung & \(\cdot\) & \(\cdot\) & \(\mathbf{6 0 0 , 0 0 0}\) \\
Pechili & \(\cdot\) & \(\cdot\) & \(\cdot\) & \(\mathbf{2 0 0 , 0 0 0}\) \\
Other Provinces & \(\cdot\) & \(\cdot\) & \(\cdot\) & \(\cdot\) \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{Silk exported (1876)} \\
\hline Ten & & \\
\hline \multicolumn{3}{|l|}{Opium imported (18:0)} \\
\hline Cottons & " & , \\
\hline Linens & - & ', \\
\hline Metals & " & \\
\hline
\end{tabular}
- \(£ 9,500,000\)
- \(\quad 0,35 \pi, 000\) - 11,000,000 - 7,600,000 - 1,486,000


Avorage trade with British Empire:-02 per of all the imports; 74 per cent. of all tho exports.
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{Sumplino Returna (1880).} \\
\hline & & Versels. & Tonnage. \\
\hline British & & 12,397 & 9,606,156 \\
\hline Chinesa & & 5,335 & 4,699,255 \\
\hline German & & 1,501 & 632,044 \\
\hline America & & 1,070 & 287,369 \\
\hline French & . . & 128 & 150,207 \\
\hline Japanese & & 128 & 138,000 \\
\hline Sundries & . \(\quad\) & 709 & 162,000 \\
\hline \multicolumn{4}{|l|}{Ghess Fohelon Tradr of the 19 Chenesb Theaty} \\
\hline 1870 & & & £35,2:0 \\
\hline 1880 & & - & 16,278,000 \\
\hline
\end{tabular}

Tradr of Tirnt-sin (1879).
Imporls: \(£ 6,000,000\); exports: \(£ 170,000\) Russian transit trulf, \(£ 1,080,000\).
\begin{tabular}{|c|c|c|c|c|}
\hline \multirow[t]{4}{*}{Shipping} & British & & \multicolumn{2}{|l|}{194,680 tons.} \\
\hline & Chinese & & 203,950 & ., \\
\hline & Amerienn & & 25,47i & , \\
\hline & Sundriea & & 37,950 & " \\
\hline \multicolumn{5}{|l|}{Trude of Cho-f11 (1879) : \(£ 4,200,000\).} \\
\hline \multirow[t]{2}{*}{Shipping} & - & 1,376 ves & 804,000 & tuns. \\
\hline & Fobrion & Tuade of & ano. & \\
\hline 1878 & & & & ¢20,000 \\
\hline 18s0 & & & & 600,000 \\
\hline
\end{tabular}

\section*{Thaide of Ilankow.}

Ten shipped at Lankow (1880): 111,000,000 lbs.; value \(£ 4,200,000\).
Brick ten prepmred at Hankow for tho Russinn market (1880), 20,300,000 llss.
Shipping of Hankew (1879):-
1,320 vessels of \(\mathbf{7 3 3}, 835\) tons, of which


Total exchnnges of Hankow :-
1878
187
1879 . . . . . . . \(20,264,000\)
Foreign trude of Wuhu (1870) : \(£ 1,100,000\).
Trade of Shanomai (1879).
\begin{tabular}{|c|c|}
\hline Imports. \(£ 19,634,000\) & \[
\begin{gathered}
\text { Exports } \\
£ 17,423,000
\end{gathered}
\] \\
\hline \multicolumn{2}{|l|}{Tea exported from Shanghai (1879) :-} \\
\hline To England & 38,593,500 lbs. \\
\hline United States . & 20,830,000 \\
\hline & 1,772,000 \\
\hline
\end{tabular}

Silk exported from Shanghai (1879):-
To Eugland . \(\quad \cdot 20,240\) bales. France . . . 16,172 America . . . \(\quad \mathbf{5 , 3 9 0}\) India . . . 2,075 Switzorland - . 1,038

Shippina of Shanghai (1879).


Shipping
19,780 tons.

\section*{Thane of Fuchew (1879). Imports.
\(£ 1,741,000\) \\ Exports. \\ \(£ 3,200,000\)}

Shipping
577 vessels of 418,083 tons
Of which British . 433 , 345,569

\begin{tabular}{|c|c|}
\hline  &  \\
\hline Sugar expurted (1880), 18,000 tons. & Nhign-tze and Tashi-humpo - . \({ }^{\text {a }}\) 14,000
13,000 \\
\hline  & \(\begin{gathered}\text { Chetank } \\ \text { (ivunze }\end{gathered} . \quad . \quad . \quad . \quad . \quad .120000\) \\
\hline Of which liritish 0 & Chona-jong . . . . . . 6,000 \\
\hline Smigrante from Amoy (1879), 20,012 & Kirong . . . . . . 4,000 \\
\hline lumigrants to " " 20,007 &  \\
\hline 'Tiane of Swatow (1879). & 'I'uanr of Thest witit India (18:0). \\
\hline Nhipping, \(360,2.20\) tons. & Exports to Indis . . . . \(\$ 150,000\) \\
\hline 'limade of ('anton (1879). & Imports from India Annuul import of brick tea from China, 8330,000 . \\
\hline Inports. Exportw. & KASHGARIA, OR CIIINESE TURKESTAN. \\
\hline  & KANHK, \\
\hline Of which l3ritish about 6is per went. & \begin{tabular}{cc} 
Area in square milew. \\
250,000 & population. \\
\(\mathbf{1 , 0 0 0 , 0 0 0}\)
\end{tabular} \\
\hline Sumprino or Whampoa (1879). & Curer Towns. \\
\hline  & Yırkan . . . . 00,000 \\
\hline Tolal 1,892 . . 1,661,000 & Kushgar . . . . 80,000 \\
\hline & Khotan . . . . . 40,000 \\
\hline  & Siunju - . . . . 35,000 \\
\hline Tuade of Kiuncenew (llainan). & Aksm . . . . - 20,000 \\
\hline Imports (1879). Exporta (1879). & Kiria . . . . - \({ }_{10,000}\) \\
\hline £282,000 \(\quad\) 1888,000 & Ynngi-hissar . . . - 10,000 \\
\hline Shipping (1880), 212,72. tons. & Yargalik . . . . \(\begin{array}{r}10,000 \\ 0,000\end{array}\) \\
\hline Tuade of 'Taiwan, Foumosa (1879). & \\
\hline Imports. Exports. & \\
\hline ¢493,000 £is6,000 & \(\underset{\text { Area in }}{\text { mqure milen. }} \quad \begin{gathered}\text { Fstimated } \\ \text { Population. }\end{gathered}\) \\
\hline Shipping, \(10.4,375\) tons. &  \\
\hline Thade of Tamsiel, Fonmosa (1880), ef , 074,000. & Inuer Mongolin \(\}\) ( \(2,000,000\) \\
\hline Shipping ( 1879 ), 29.4 vessels of 88,828 tons. Tra exported (1880), 14,625,000 ions. & \begin{tabular}{l}
Cuige Towse. \\
Vrga . . . . 30,006
\end{tabular} \\
\hline Sumpino or Hesa & Koblo . . . . 3,000 \\
\hline Sutretso or & North Ulinsutai . . . . 3,000 \\
\hline Trane of Macau (1878), £500,000. & Monoolis. Khailur . . . . 3,000 \\
\hline Tea expurted (1878), £252.000. & Kerulen . . . . 1,500 \\
\hline Receipts from tho lotteries and gambling-houses, & ( \({ }^{\text {crumehi . . . . 15,000 }}\) \\
\hline Receipts & Musoulian Turfan . . . . 10,000 \\
\hline & Kansu. ( Ilami . . . . 6,000 \\
\hline Imemal Bunoet of Cuina (1876). & Sourit Kuku-khoto (Kweihua- \\
\hline Land tax . . . . . . £5, 030,000 & Mosgolia. \({ }^{\text {eheng) . . . . } 30,000}\) \\
\hline Grain mod fodder tax . . . . 4,100,000 & Attached to
SuAS-si.
dolon nor (Lama-miao) . 30,000 \\
\hline Likin, or loenl eharges on merchandiso - 6,2600000 & Inner \\
\hline Foreign customs . . . . . \(4,690,000\) & Monoolia. Jehol (Chingte-fin) - \({ }^{\text {a }}\) - 20,000 \\
\hline Sult tax . . . . . . . \(1,564,000\) & Attnched to Paku (Pingchwen-hien) - 10,000 \\
\hline Salo of public offices, \&c. . . . 2,180,000 & Pechur. ILada (Chifeng-hien) . 10,000 \\
\hline Sundrics . . . . . . 438,000 & \\
\hline Total Revenue . \(£ \mathbf{£ 2 4 , 8 6 2 , 0 0 0}\) & \begin{tabular}{l}
ZUNGARIA AND KUINA. \\
Area in square miles. Populntion.
\end{tabular} \\
\hline & Zangaria . . . 120,000 300,000 \\
\hline Public Drat (1878), \(52,232,000\). & Kulja . . . 26,000 150,000 \\
\hline Army. & Chier \\
\hline Manchu Regulars . . . . . 270,000 & Old Kulja . . . . 15,000 \\
\hline Chineso Militia, \&c. . . . . . 800,000 & Suidum . . . . . 4,000 \\
\hline & Chuguchak . . . . 4,000 \\
\hline Total . 1,070,000 & Manas . . . . . 3,000 \\
\hline & Shikho . . . . . 2,500 \\
\hline TIBET. & Bulun 'Tokhoi . . . 1,700 \\
\hline Area in Estimated & Tultu . . . . . 1,700 \\
\hline  & Karkara-us ı. . . . 1,500 (?) \\
\hline Kuku-Nor and Traidam . 120,000 150,000 & Exclusive of lumas and Chincse garison troops. \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{2}{|r|}{Area in aquare milen.
\[
116,000
\]} & \multicolumn{2}{|l|}{Fatimared population. \(8,000,009\)} \\
\hline Provineen. & No. of Houmea. & Chief Towns. & No. of Districts. \\
\hline Piengtan-to & 239,400 & l'iengyank & 12 \\
\hline Lamkieng-to & 103,200 & Hunheng & 24 \\
\hline Hounghai-to & 138,000 & Hai-tsiu & 23 \\
\hline Kangwen-to & 93,000 & Wen-tsiu & 20 \\
\hline Kinugkei-to & 180,000 & Hanyang (Seul) & 36 \\
\hline 'Trsongtsieng-to & 24,080 & Kong-tsiu & 54 \\
\hline Kiengsang-to & 421,500 & 'Tuiku & 71 \\
\hline Tsienla-to . & 200,550 & Txien-tsiu & 66 \\
\hline & 1,506,330 & & 332 \\
\hline
\end{tabular}

JAPAN.


Total populution (1880), 35,025,313 ; por squaro milo, 230.



Chelits and Provinces.
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|r|}{Chiclita and Provincera.} \\
\hline Circuitm. & Area in muare miles & Popubition, 1876. & 1'ruvinces. \\
\hline & \[
2,067
\] & & \begin{tabular}{l}
Iama-siro; Inmato; Kavatsi ; Idami ; Setz. \\
Lu, Kahi : Suruga; Tootomi ; Mikava;
\end{tabular} \\
\hline \begin{tabular}{l}
Kintivio \\
Tokai-do
\end{tabular} & \[
15,478
\] & \[
7,710,282
\] & Sagami: Ida; Kahi; Suruga; Tootomi; Makana; \\
\hline & & & Simosar Ilitutsi. \\
\hline Toman-do & 40,478 & 7,270,408 & \begin{tabular}{l}
Omi; Mino: Ihda: \\
Ugo; IVasiro; likazen; Mats; Ezen.
\end{tabular} \\
\hline Ilokuroku-do & 6,785 & 3,448,100 &  \\
\hline Smindo . . & 6,400 & 1,600,755 &  \\
\hline Sanyo-do & 8,407 & 3,048,170 & ILarimu; Nimazaka; Bizen; Bitsiu; Bigo; Akl; Suvo, Nagato. \\
\hline Nonkri-do & 8,784 & \(3,375,724\)
\(6,280,740\) & Kihi; Avadai ; Ava; Snnuki; lyo; Iozn. Trikuzen; Tsikugo; Buzen; Bugo; llizen; lligo; \\
\hline Sakaido & 16,790 & 4 & Lliuga; Ohosmi ; Satsmu; Iki ; T'su-simn. \\
\hline \[
\begin{aligned}
& \text { llok'kni-do (Yeso } \\
& \text { and Kuriles) }
\end{aligned}
\] & \} 30,270 & 149,554 & Osimn; Siriben: Isikari; 'I'esiho; Kitami; Iburi; llidakn; 'Tokntsi; Kusiro; Nemoro: 'Tsi-sima. \\
\hline 0 Circuits. & 147,582 & 34,647,480 & 84 I'rovinces. \\
\hline
\end{tabular}


STATISTICAL TAHLLS.


\begin{tabular}{|c|c|c|}
\hline & Imports. & \\
\hline Yarns & 1 , & \(\boldsymbol{£ 1 , 5 1 0 , 0 0 0}\) \\
\hline Cottons. & . . & 1,035,000 \\
\hline Woollens & . . & 1,158,000 \\
\hline Raw Cuttor. & - . & 614,000 \\
\hline Metals . & & 377,000 \\
\hline Silk and Cocoons & Lxports. & 1,841,000 \\
\hline Tea & - . & 882,000 \\
\hline Rice & . . & 928,000 \\
\hline Dried Fish & - & 206,000 \\
\hline Coal & & 171,000 \\
\hline Poreelain (16ir) & & 100,000 \\
\hline
\end{tabular}

\begin{tabular}{ccc} 
Foneign & Thabe of Yohohama (1880). \\
Imports. & Exports. & Shipping. \\
\(£ 5,190,000\) & \(£ 3,710,000\) & 1,522 vessels.
\end{tabular}

Fumeign Phank of Ohosaka and IIogo-kome (1880).
\begin{tabular}{ccc} 
Imports. & Exports. & Shipping. \\
\(£ 1,750,000\) & \(£ 1,160,000\) & 23 T,000 tons.
\end{tabular}


> Japanear Aghceltuhal Returns (1880).
\begin{tabular}{|c|c|}
\hline Land under timber & 60,000 sq. miles. \\
\hline Arable land & \(50,000,000\) acres. \\
\hline Land under cultivation & 12,530,000 ", \\
\hline ,, riee & (i,800,000 , \\
\hline ", ", other erops & 4,250,000 \({ }^{\text {, }}\) \\
\hline Rice crop . & \(20 \overline{5}, 000,000\) bushels. \\
\hline Barley crop & 60,000,000 ", \\
\hline Wheat erop & \(38,000,000\), \\
\hline Tea crop & \(90,000,000 \mathrm{lls}\). \\
\hline Sorghun sugar crop & \(65.000,000\) " \\
\hline 'I'abuero erop & 90.000 .000 \% \\
\hline Pulse crop. & 50,000,000 bushe's. \\
\hline Silk, total yield . & £11,000,000 \\
\hline Silk and cocoons exported & £2,310,000 \\
\hline
\end{tabular}

Japanese Minellal Retuhns (1879).
\begin{tabular}{|c|c|c|c|c|c|}
\hline Gold raised & - & - & & & £46,000 \\
\hline Silver & - & - & - & & 90,000 \\
\hline Coppler , & & . & & & 287,000 \\
\hline Lead ," & & & & - & 5,000 \\
\hline
\end{tabular}

Japanege Minekal Reterns (1879)-(continued).

Iron
Coal
letrol
Petrolcum rais a . . \(\quad 342,000\)
Coal-fields of Yes.) - \(100,000,000,000\) tons.
l'otal yield of minerals (1881) \(£ 1,000,000\)

'Total Reveuue and Expenditure, balanced (1880), £11,130,000

National Debt, \(£ 72,070,000\).
Chief source of Revenue, the Land Tax, 87 per rent. of the whole.
Army-Preace footing, 35,560; War, 50,230; Reservo, 20,000.

Navy.-Ships, 23 ; Men, 4,242; Guns, 149
Pulice. \(-23,334\),
Railways open ( 1881 ), 76 miles
l'ufsenger traffic (1879), \(3,000,000\).
Raiways projected, 500 miles.
Pustal Returns (1879).
Letters forwarded, 55,775,206.
Money orders issucd, 249,429 - value \(£ 740,976\).
l'ost Offices, 3,927 ; Mail routes, 36,052 mile's.
T'elegraph lines, 3,344 miles.
Telegitphic dispatchen, 1,045,44..
Submarine cable system completed, 1880.

\section*{Puble Instriction}

Elementary schools (1879), 25, 459. girls.
Middle schools, 389: Attendance, 20,522.
University ('Tokio): Professors, 56; Students, Un
-10.
Schools teachin
Atendance, 1,522
Foreign teachers in Government employment, 97.

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Works published during the year ending July, 1879. Itegislation, political economy . 543 Educational Geography Philology Mathematics History:
Religion
Rovels, po Nuwspaperty, miscellaneous . 2,925 Newspajers, 211 : Circulation, \(29,000,000\).

\section*{Miscellanegus.}

Ceinage stıuck at tho Ohosalia Mint (1880), \(£ 17,000,1000\).
Paper Money in circulation (1881), \(£ 22,600,010\).
Native Christians : Protestunts, 7,500 ; Roman Catholies, 4,000; Greek, 4,000.


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