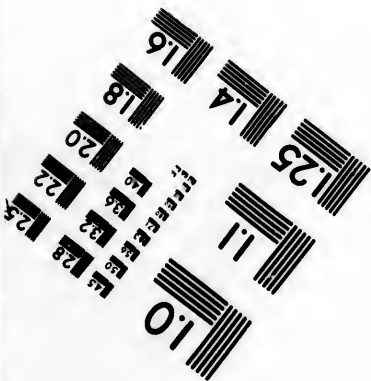
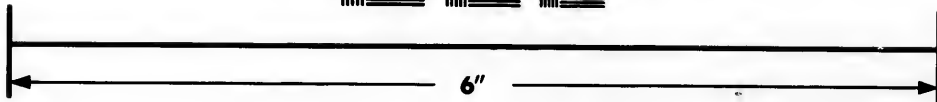
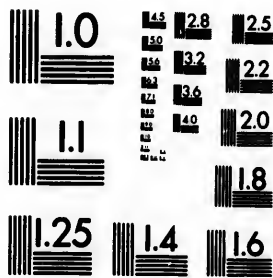


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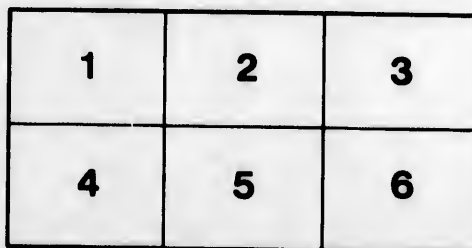
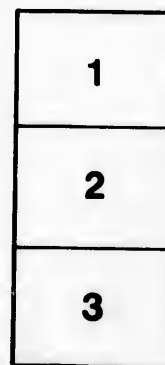
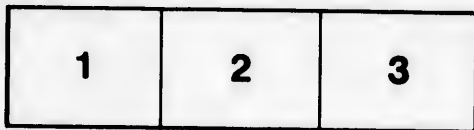
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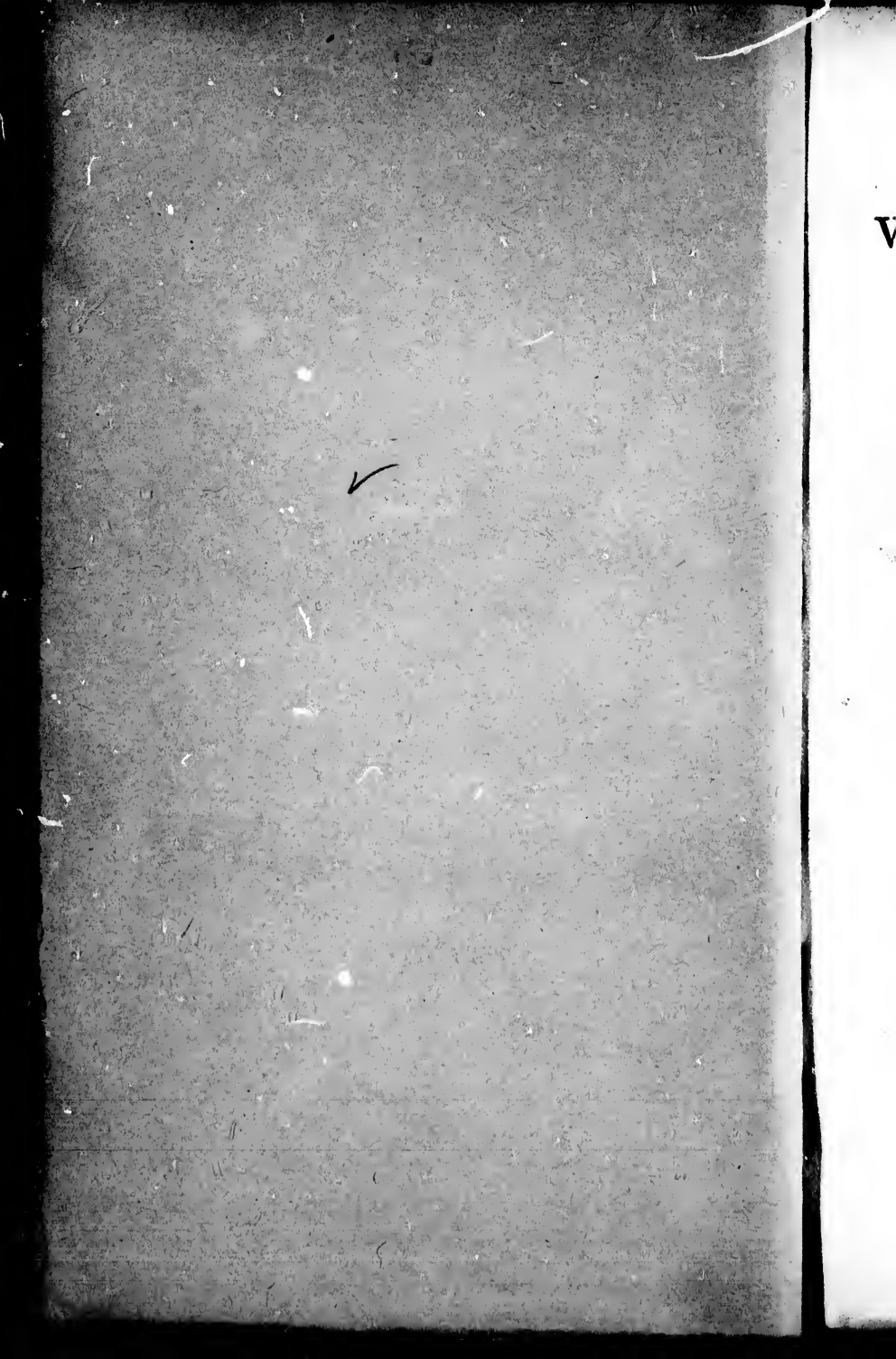
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ACCOUNT  
OF A  
VOYAGE OF DISCOVERY  
TO THE NORTH-EAST OF  
SIBERIA,  
THE FROZEN OCEAN,  
AND THE  
NORTH-EAST SEA.

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BY  
GAWRILA SARYTSCHEW,  
*RUSSIAN IMPERIAL MAJOR-GENERAL TO THE EXPEDITION.*

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TRANSLATED FROM THE RUSSIAN,  
AND EMBELLISHED WITH ENGRAVINGS.

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LONDON:  
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## AUTHOR'S PREFACE.

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**T**HERE is no sea with which our age is so imperfectly acquainted as the Frozen Ocean; and no empire which has more powerful motives and resources for extending its information, in this quarter, than Russia. Although the government has made several efforts, at different periods, to attain this object, yet none of their expeditions, except the first two, undertaken by Captain Behring, for the purpose of discovery, have brought them nearer the desired point; owing to the inexperience of those who planned and executed them, and who were neither of them aware of the endless difficulties to be combated in a boisterous element, and a corner of the globe so imperfectly known.

One grand impediment to their success was the size of their vessels, which were very well adapted for crossing the main on voyages of discovery, but could ill serve the purpose of passing through shallows, and making minute observations on the shores. By the removal of this evil I flatter myself that not a single bay, island, or mountain, has



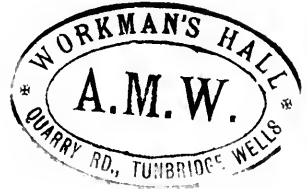
escaped our notice, on the coasts of which we have taken a survey, and that we have, in addition to this, been enabled to rectify the mistakes of former navigators.

During the eight years of our absence I had made it my daily practice to note down in my journal every thing that appeared to me worthy of observation, without any intention, however remote, of committing my remarks to the press; but the urgent persuasions of my friends, combined with the gracious commands of his Imperial Majesty, have at length over-ruled my disinclination to give them publicity. I now submit this my humble effort at contributing to the general good, with the fullest reliance on the indulgence of a candid public.

# A VOYAGE OF DISCOVERY

TO

SIBERIA, &c.



CHAP. I.

ARRANGEMENTS FOR THE EXPEDITION.—MY DEPARTURE.—  
—JOURNEY TO IRKUTSK AND JAKUTSK.—REMARKS ON  
THE LATTER PLACE.—OF THE JAKUTS' UNINHABITED  
PLACES, AND HORSES.—INCANTATIONS OF A JAKUTISH  
SHAMAN.

ON the 8th of August, 1785, our late revered sovereign, Catherine the Great, whose maternal care extended to the remotest corners of her realm, was pleased to communicate, in an ukase, the plan and destination of our voyage to the board of admiralty. In this she gave her directions for a geographical and astronomical expedition to proceed to the north-eastern part of Russia, for the purpose of taking the latitude and longitude of the mouth of the river Kolyma, together with a map of its banks, comprehending the whole chain of Tschukotish mountains, the eastern cape, and the numerous islands scattered in the eastern ocean, as far as the shores of America; and, finally, of obtaining a more accurate acquaintance with the seas separating the continent of Irkutsk from the coast of America.

Commodore Joseph Billings was appointed chief of the expedition: the other officers were, Robert Hall, Gawrila Sarytschew, and Christian Behring, lieutenants; Anthony Batakow and Sergei Bramikow, steersmen; Michaila Rohbeck, first surgeon; Mark Sauer, secretary; Joseph Edwards, mechanic; Luka Woronin, drawing-master; and Wassilei Siwgow, chaplain. Doctor Karl Mark succeeded assessor Patrin in the department of natural history, whose ill health obliged him to resign his situation at Irkutsk.

Agreeably to the arrangements of the empress, Commodore Billings was to be twice promoted during the voyage, and the inferior officers once. The whole crew, according to their respective rank, were to receive double pay during the voyage;

with the additional recompence of a year's double pay on their departure and return. Besides which, the superior officers were to have a pension for life; and those who might be disabled in the service, were to retire on half-pay. The wives and children also of such as died during the expedition, were to receive the half pay of their husbands or fathers; the wives until their second marriage, or death; and the children until they came of age.

The various preparations for the expedition lasted six months; all the necessary astronomical instruments being ordered from England: while much time was occupied in collecting the toys and trilling presents for the savage inhabitants, as well as medals of gold, silver, and copper, which were struck for the same purpose.

About the middle of September, I was dispatched with some workmen from Petersburg to Ochotsk, to forward the requisite preparations at the different places. The badness of the roads greatly retarded my progress as far as Tobolsk, but this impediment ceased with the setting in of the cold weather. On the 23d of October, I exchanged my wheeled vehicles for sledges, with which I passed over the river Irtysh. The ice in the Ob not being set on the 28th, we crossed it in the boats, but not without very great danger. During the rest of my journey I found all the other rivers passable by the sledges, except the Angara, in the neighbourhood of Irkutsk, which, from the violence of the stream, remains open till December, and I reached this place on the 10th of November\*.

My business here was to examine the state of the transport vessels and building materials, that whatever was wanting might be provided by order of the governor-general; and, in case of a deficiency in timber, hides were to be procured for making the baidas. These are large boats of a peculiar construction, made either of wood or hides.

In the latter case, the sides of the boat are covered with the skins of sea-animals instead of planks. They carry from eight to sixteen oars, but have no rudder.

After having made the necessary enquiries, and obtained an open order from the governor-general, to all the provincial magistrates, authorising them to afford me every possible assistance, I left Irkutsk in December, and arrived in Jakutsk on the 10th of January, after a journey still more tedious than the former. The road was very good as far as the river Lena; but our passage over the rough ice of this stream to the town of Aluknar,

\* Irkutsk is 6016 wersts, or 359 German miles, or 4295 English miles from Petersburg; accordingly the author went at the rate of 16 German, or 80 English miles a day.

was extremely troublesome. Between Alakmar and Jakutsk, I experienced no inconvenience from the roads, but much from the horses; which being used in those parts only for riding, drew our sledges on very slowly.

Jakutsk, situated on the left bank of the Lena, is the oldest of all the cities in that quarter. The ostrog\*, or wooden fortress, was erected in the year 1647, and soon afterwards the building of the town commenced. This old edifice, with its towers, is still standing, but in some places is fallen very much to decay. Within the enclosure there is a public building of stone, and a church: there are, besides, two stone churches; one by the convent, the other in the town, and two of wood. All the dwelling-houses are built of wood, in the old Russian taste, with here and there Jakutish huts interspersed between them. The want of glass for the windows is supplied either by isinglass or by bladders in the summer, and plates of ice in the winter, frozen into frames by snow. These are continually sprinkled with water, which is quickly congealed by the extreme cold of the climate, to such a degree as to resist the strongest heat of a room. The light penetrates through these ice-windows in a similar manner as it does through glass covered with white frost.

The inhabitants of the town consist of civil officers, *Bogaren Kinder* †, Kosaks, Jakutish merchants, and citizens. The latter are principally exiles, some of whom, even among the felons, have amended their lives, and attached themselves again to civil society. In fact, this remark will generally hold good, that criminals of the lowest order, sent to Siberia for extraordinary crimes, the sight of which impresses us with horror, not only have their liberty, but use it with the greatest moderation. Many of them gain the confidence of the inhabitants, and are admitted into their houses in different capacities. They are, of course, particularly on their guard to prevent even the suspicion of doing amiss, from the apprehension of being delivered over to perpetual labour in the mines of Nertschink ‡.

\* The word ostrog is here translated fortress, for which the Russians have likewise the word krepost; this, however, is never used in the present work. Ostrog is the peculiar appellation for Siberian fortresses, the greater part of which are aptly enough described by the deceased Georgi, when he says, "It would be dangerous to attempt storming them, for whoever wanted to mount their greatest and only bulwark, the wooden paling, would most probably come to the ground with the whole structure about him." 1 R.

† A class of inferior nobility, existing only in Siberia, and composed of meritorious Kosaks, who have been in the service of the emperor. They owe their establishment to Peter the Great.

‡ Considerable alterations have probably taken place in this respect since that period; for even in Catherine's reign, repeated ukases were issued, to

It is beyond all doubt, that many of these poor creatures are possessed of good hearts, and have been hurried, by some incidental or urgent circumstances, into the commission of atrocious crimes.

Heedless of the remonstrances made me against travelling that road farther in the winter season, I set off from Jakutsk on horseback, attended with a retinue of Jakuts for my guide, and pack-horses to carry my baggage and provisions; having laid in a stock for two months, and furnished myself, according to the custom of the country, with a coat of reindeer skins as a protection against the severity of the climate.

The commander had provided me with a Kosak, who could speak Jakutish and Tungushish, and who served as my interpreter both with the guides and in the different districts through which I passed; and I found him every where indispensable, the Russian being neither spoken nor understood in those parts. All my countrymen, without exception, settling here, make themselves acquainted with their language for purposes of trade; a motive which cannot influence them to learn our's.

From Jakutsk to the river Aldan, 350 wersts distant, the road led me through Jakutish ulusses, or dwelling-places, over plains scattered with woods, lakes, corn-fields, and meadows. The woods, every where, consisted of larch and beech-trees. An uluss comprehends a certain number of dwellings, under the government of a Knäस्क\*, or elder. We generally passed our nights in the jurts of these Knäsk's, and were always received with great kindness. Hospitality is, in fact, the first virtue among the Jakuts in general. No sooner does a traveller arrive at a place, than they hasten towards him, helping him off his horse, and conducting him into their yurt, enlarging their fire,

enforce the execution of the laws against banished criminals; and, under Paul, there were very few exceptions, in which the indulgence of staying behind was granted to the condemned. "The horridest crimes," says the author, "are but too often the result of a momentary delusion, or vehement passion, particularly among uncultivated people." In corroboration of this sentiment, we shall give the following anecdote, as described by a person who saw the female alluded to;—a woman who had murdered her husband. He was a lad of 14 or 15, imposed upon her by her feudal lord, when she was at the age of 23, and was constantly provoking her by blows and ill treatment, until impelled by a spirit of revenge, she seized the opportunity of his leaning over a pail of water, to force his head in, and thus suffocate him. The person who related the anecdote to the translator met with her in a family in Siberia, where she had nursed the children from their infancy, and was beloved by them as a mother, notwithstanding the mark on her forehead. She was then advanced in years, but had not gained peace of mind by length of time. The remorse of a wounded conscience still clouded her countenance, and frequently filled her eyes with tears.

† Knüs—the diminutive of this word signifies, in Russian, a prince.

taking off his clothes, and cleaning them from the snow, &c. The bed is made ready for him in the most retired place, the table covered with the best their house can afford, and his comfort consulted in every particular to the utmost of their power; while to all this civility they sometimes add the present of a fox's or sable's skin. I always strove to repay their kindness by such trifles as I knew to be most acceptable. Tobacco is a great luxury with them; but they are so extravagantly fond of brandy, that when one glass is given them they make no scruple of asking for a second, and even a third. The Jakuts are probably descended from an ancient race of Tartars not yet converted to Mahometanism. This appears evident from a similarity of their features, their mode of life, and still more their language, which approaches so nearly to the Tartar dialect, that one of my attendants, who was a Tartar, understood most of what they said without any difficulty.

The number of Jakuts who have embraced the Christian faith is not inconsiderable, yet the majority are of the poorer class, who have submitted to be baptised perhaps in order to be freed for some years from the poll-tax. The rich are not disposed to renounce a plurality of wives, nor the use of meat, butter, milk, and above all, horse-flesh, during the fasts, as enjoined by the Catholic faith. The latter is the greatest delicacy they can possibly conceive; and they often tell the Russians that if they were once to make a proper meal from the flesh of a horse, they would in future prefer it to the tenderest beef. They eat the fat of horses and cows mostly raw, without any addition, and drink melted butter with the greatest avidity; which latter they regard as an excellent remedy for many disorders, and rub their sick with it when necessary. By way of pacifying a cross child, they put a piece of raw fat into its hand to suck. In summer, when the mares foal, they make their *kumys* from the milk, after the manner of the Tartars. Their beverage, in winter, consists of sour milk, unchurned butter, and water, which I found indeed not unpalatable. Hence it will appear, that almost all their food is composed of things forbidden by our (the Greek) church; but our priests keep the converted Jakuts very strict to their duty, and will not allow them to touch a single article that is prohibited; but as they have neither corn, fruit, nor fish, it is almost impossible for them to abstain so rigidly. The cause, therefore, why so many Jakuts remain heathens, may be attributed to the indulgence of their appetites.

The Jakutish jurts are built from the ground, describing a square of more or less magnitude, according to the size of the family. They first drive three rows of poles fast into the earth,

SARYTCHEW.]

B

the middle one of which is rather higher than the two on each side. On these poles they lay five beams crossways and sloping, which are covered with rough planks, and afterwards with herbs, mould, and dung. The middle of the interior is generally occupied by a hearth, from whence the smoke is carried out by a sort of chimney, composed of long thick sticks, plastered in the inside with pitch. The wood is placed in an upright direction on the hearth, and the fire is never extinguished during the winter. Broad benches are fixed round the walls of the jurts or huts, which are divided off by partitions into sleeping places. Their horned cattle are kept in a separate building connected with the jurt by an opening, through which they pass, from whence the whole dwelling is filled with an offensive smell. The summer jurts are altogether different from the winter ones, and have another name, being called *urasses*; they are round and conical, made of long poles, and covered on the outside with the bark of trees.

The rich Jakuts wear the skins of reindeer, and the poor those of horses. Their dress is the same in summer and winter, except, that in the latter case they use the fur with the skin, and in the former the skin alone. Instead of a shirt they cover the breast with a cloth, and over that wear a fur waistcoat and a long coat of the same. Their breeches do not reach the knee, which has a distinct covering, fastened with thongs, and continued from the calf by a leathern buskin, over which they wear a sort of boots, called, in their language, *eterbesen*. Those in better circumstances decorate their hips with cloths of red or blue, trimmed quite round, and fastened to the girdle.

Whenever a Jakut sets out on a journey, he binds his large knife, fixed in a long stick, to his girdle, and takes his steel, flint, and tinder with him; the latter of which is prepared from wormwood. In the hind part of his boot he fixes his wooden pipe, having a short tube, split down the middle, for the convenience of being cleaned, and fastened with thongs. He mixes more than half saw-dust with his tobacco, the fumes of which he mostly swallows until he is thrown into a state of stupefaction. He defends this practice on the ground of its efficacy against abdominal complaints.

The ordinary dress of the Jakutish female differs but little from that of the male; but their best garments are longer and larger than usual, being bordered with many pieces of coloured cloth and Chinese stuffs, worked with bits of silver and copper of different figures, and edged with a broad trimming of beaver and otter's skin. For this dress they have a particular cap, embellished with three tufts of feathers. They adorn their ears with large silver rings, and form their hair into a long queue.

On the 5th of February, I stopped at the last Jakutish dwelling-place; it was the jurt of an invalid Kosak, who filled the office of clerk to the knâsk of that district, and at the same time provided the couriers and post-horses. The road further on leads through an uninhabited country of 400 versts. Although the horses appointed for us were very good, yet the Jakuts begged me to wait some days, that they might rest from the labours of the field before they entered on so long and arduous a journey. I yielded to their request, and they kept the creatures tied up for four days, allowing them but a very small portion of hay only once in twenty-four hours. On the 11th, we pursued our rout through woody and marshy plains, where no sort of track was visible, nor any guide for the traveller but what the Jakuts had made for themselves. We passed over an immense tract of country, that presented nothing worthy of observation, until we came betwixt chains of lofty mountains, and followed the course of a river for many miles, either travelling along its woody banks, or crossing its ice and its islands. This single variation was succeeded by an endless plain, covered with snow so excessively deep, that our horses could not drag themselves onward without the utmost difficulty. The Jakuts call this tract *THE SMOOTH*, and are very anxious to hasten through it as quickly as possible, for fear of being surprized by bad weather; in which case the whole caravan might be buried in the snow: frequent instances of which were related to me by the guides. We were, however, fortunate enough to pass the perilous spot in safety, and arrived at the south of the river Amog-umog-gaga; which, after journeying 35 versts farther, brought us to the river Kumkui, whose banks are covered with warm springs. Here we found a single Jakutish jurt, the dwelling of a poor peasant, who had no cattle, and lived only on the fish and partridges that are very plentiful in those parts.

My guides telling me the next morning we had only to travel ten *dinschtschen*\*, or about 70 versts to the next place on the Omekon. It was now my turn to be anxious to hasten onwards, that I might reach the spot that day, and sleep once more in a warm jurt, after having spent eleven uneasy nights in the open woods and the bitter cold. I must acknowledge that this mode of travelling had become almost insupportable to me. Having been the whole day on horseback, and the whole night in the

\* A *dinschtscha* comprehends as much country as the wandering hordes can traverse with all their effects in a day. A great *dinschtscha* contains about ten, and a small one about seven versts. The word appears to be of Russian extraction: denn, in Russian, signifies a day, and has in the plural *din*. We find also in the Russian dictionary of the Academy, *poldaischtscha*, to imply half a day.—TR.



snow, without ever changing my linen, or taking off my clothes during the whole time. Thirty versts beyond our last night's abode, we passed the river Conta; and after crossing verdant meadows, reached the first jurts late in the evening.

My resolution was to have taken a little repose here, but learning that the knäsk of the district lived 40 versts farther, I remounted next morning, and set off with fresh vigour. On our way we had occasion to cross a great chain of mountains, named Atbas, to which the Jakuts pay homage, as in fact they do to all distinguished mountains, by depositing offerings of horse-hair on the trees. My guides did not omit this ceremony, each Jakut tearing out some hairs from his horse's tail, or mane, and hanging them on the nearest branches of the trees.

Our horses were so jaded from hard labour and want of food that they carried us with difficulty the last stage to Omekon. During the whole of the journey they were allowed but two hours in the morning before day-break for grazing, being tied up the rest of the night as soon as we alighted; and the grass which they kicked up with their hoofs was so withered and rotten as to have lost all its nutritive quality; but in some places, even this miserable fodder was not to be found, so that I am persuaded the poor beasts did not get in the twelve days as much food as they ought to have had in twenty-four hours. I learnt, however, from experience, that, without such a precaution, they would not have gone half the way; for some of the horses, through the negligence of the guides, having rolled themselves in the snow while the sweat was upon them, were covered the next morning with such large ulcers upon their backs, that they could not bear either a saddle or any other burden: the Jakuts left them unguarded in the wood, intending to take them on their return in case they had recovered, but if not, they were still obliged to carry their owners.

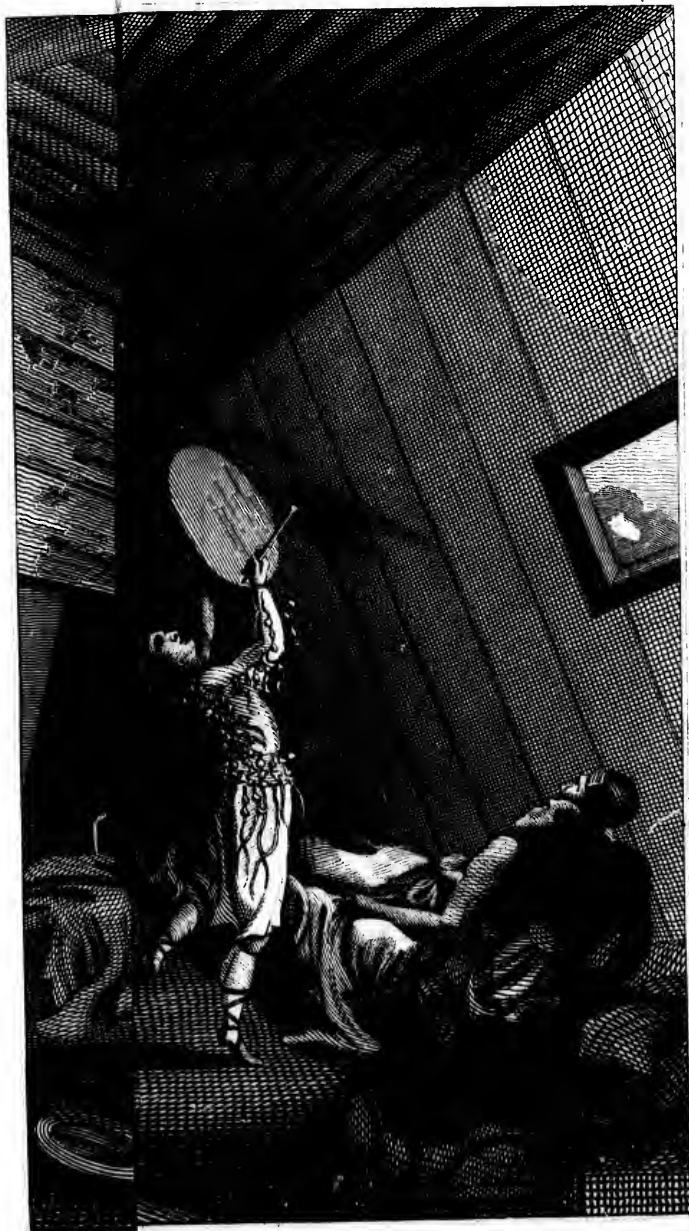
On reaching Omekon, I put up at the jurts of an invalid Kosak, clerk to the knäsk of that place. I was here informed that the deep snow would prevent me pursuing the journey to Ochotsk on horseback. Some Kosaks had just been making an attempt to go this road with the post, and after losing all their horses, were trying to get back on snow-shoes, when they fortunately met with the Reindeer-Tunguses, who thus saved their lives, and conveyed them to Ochotsk. Reindeer, which are in general use among the tribes in these parts for passing from one place to another, are very well calculated for the purpose, being detained neither by the deepest snows in the winter, nor the widest marshes in the summer. I therefore gladly consented to wait until the return of the messenger, dispatched to the Tun-

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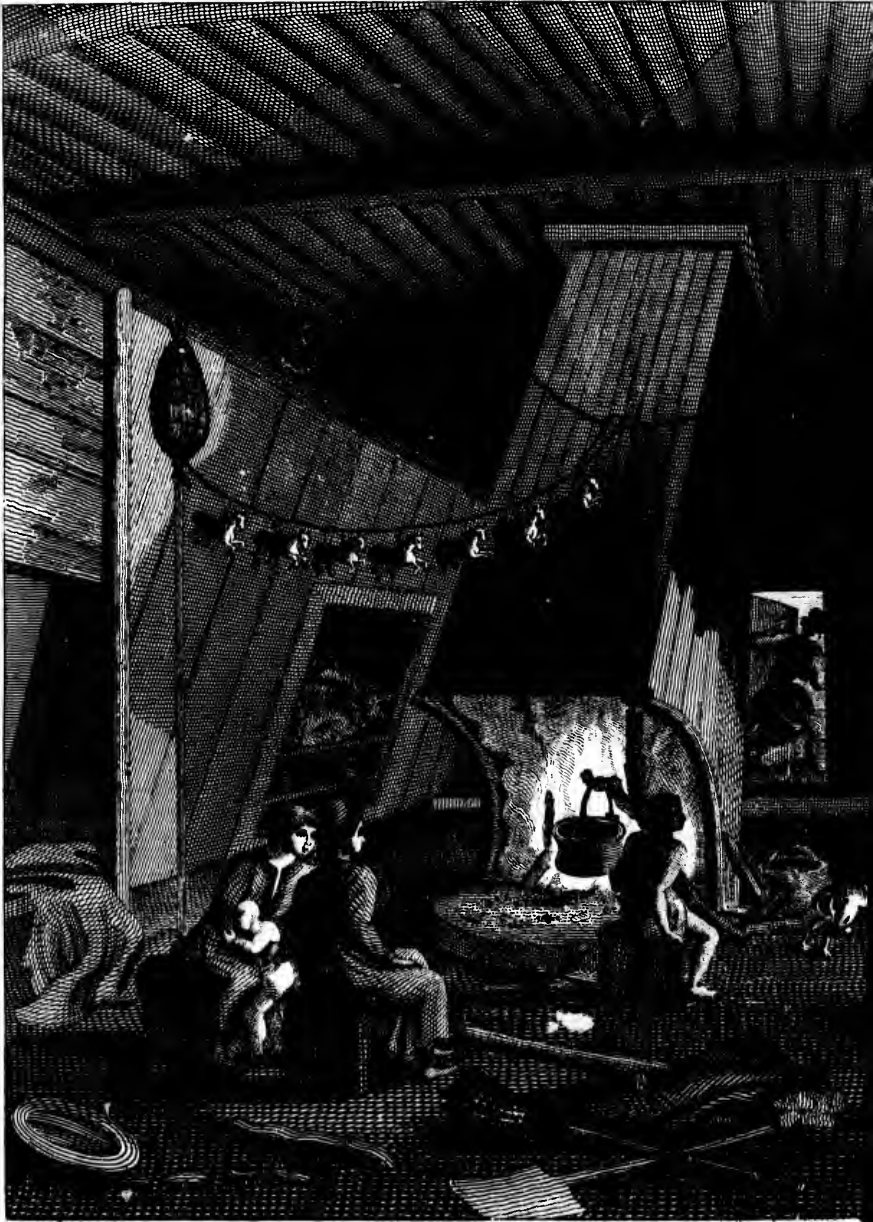
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*A Jukalian - Priest invoking the*



*Priest invoking his deities to cure a sick man.*



guses in the mountainous countries, who wander about with their jurts and their reindeer.

In the mean time, I had an opportunity of witnessing the incantations of a Jakutish shaman. He was invited by a sick person to appease the evil spirit supposed to have sent the disorder. The shaman exchanged his usual Jakutish dress for the habit of his office, made of reindeer leather (called Rudwuga), which reached not much above the knee, and was covered over with narrow thongs, and thin bits of iron of different shapes and sizes. Having made his arrangements, he untied his hair that was fastened together upon his head\*, smoked a pipe of tobacco, took his tambourine, seated himself in the midst of the yurt, and beating it first at long intervals with his bolujach, or a flat stick covered with reindeer-skin, sung a shaman's song; in which, as my interpreter told me, he challenged all the seven spirits under his command. A few minutes afterwards he began to beat his tambourine again, and bawl with great vehemence, standing up and addressing himself in different positions; and then to jump and hop about the sick person to the sound of his instrument, at the same time screaming with a horrible voice, and distorting himself in a hideous manner. His head, with the dishevelled hair, rolled backward and forward with such rapidity that it seemed to be moved by springs; his eyes glared like those of a maniac; and falling soon after, from the violent exertion, into a sort of swoon, two Jakuts used their endeavours to support him. Recovering in a few minutes, he called for a knife, with which he stabbed himself in the body, and commanded a Jakut to drive in the weapon to the hilt; then going to the hearth, he took out three burning coals, and swallowing them, danced without discovering any symptoms of pain. At length he pulled the knife out of his body; and, after vomiting the coals with some difficulty, began to prophesy that the sick man would be better if he offered a horse to the wicked spirit which tormented him; at the same time defining the colour of the horse to be sacrificed. In all such cases, the lot, of course, always falls upon the fattest and choicest.

The shamans demand nothing for their trouble, but are contented with what is given them: they have, however, always the privilege of the first seat at the feast on the sacrifice, when they eat with a voracious appetite. For the evil spirit they set apart the head, legs, tail, and skin; which, when stretched upon a pole, are hung on a birch, or larch-tree, from whence they are never removed.

\* The shamans only let their hair grow, the other Jakuts cutting their's off, after the manner of the Russian peasantry.

The credit which the shamans enjoy with all these people, prevents them from being suspected of any deception; and the conceit of their holding an intercourse with evil spirits, confirms every one still more in the opinion, that whatever happens through the shaman is effected in a supernatural way by the aid of devils. This prejudice of course affords them an opportunity of imposing several tales and absurdities upon the superstitious ignorance of the multitude; such as pretending to have the power of knowing the past, present, and future; of commanding the winds and storms; of producing fine or bad weather; of finding things that are lost; of healing the sick, affording good sport to the hunter, &c. and all which they never neglect to turn to their own advantage.

## CHAP. II.

DEPARTURE FOR OCHOTSK ON REINDEERS.—THE TUNGUSES.—THEIR JURTS AND MANNER OF LIVING.—ARRIVAL AT OCHOTSK.—REMARKS ON THE TOWN, ITS TRADE AND INHABITANTS.—THE FISHERY, AND DIFFERENT SORTS OF FISH.—FOWLING.—BIRDS OF DIFFERENT KINDS.

**T**HE messenger returned in twelve days, bringing with him twenty-five reindeer, a jurt, and two Tungusish families, with which I pursued my journey from Omekon on the 11th of March.

Some of the reindeer were employed for carrying our provisions and clothing, and others were saddled for our use. It was some time before I could accustom myself to this mode of riding without real inconvenience, the saddle having neither girths nor stirrups, and its smallness scarcely allowing me a firm seat. It rested on the shoulders of the reindeer, and was only tied by a single slight thong, so that with the smallest loss of balance I must inevitably have fallen. Another little thong slung round the neck of the creature served as a bridle.

The first day we went 50 versts. In the commencement the road lead us over meadows, and afterwards through a woody vale surrounded with mountains. We took up our abode for the night on a mountain, abounding in moss, the favourite diet of the reindeer, where the jurt was erected. The Tunguse men having cut the poles for the jurt, and lighted the fire, the remainder was done by the women, who unloaded the reindeer, unpacked the baggage, and fixed up the jurt. These people carry about with them all the materials for such a shelter; such as the rowdugen, the pieces of bark sowed together for a co-

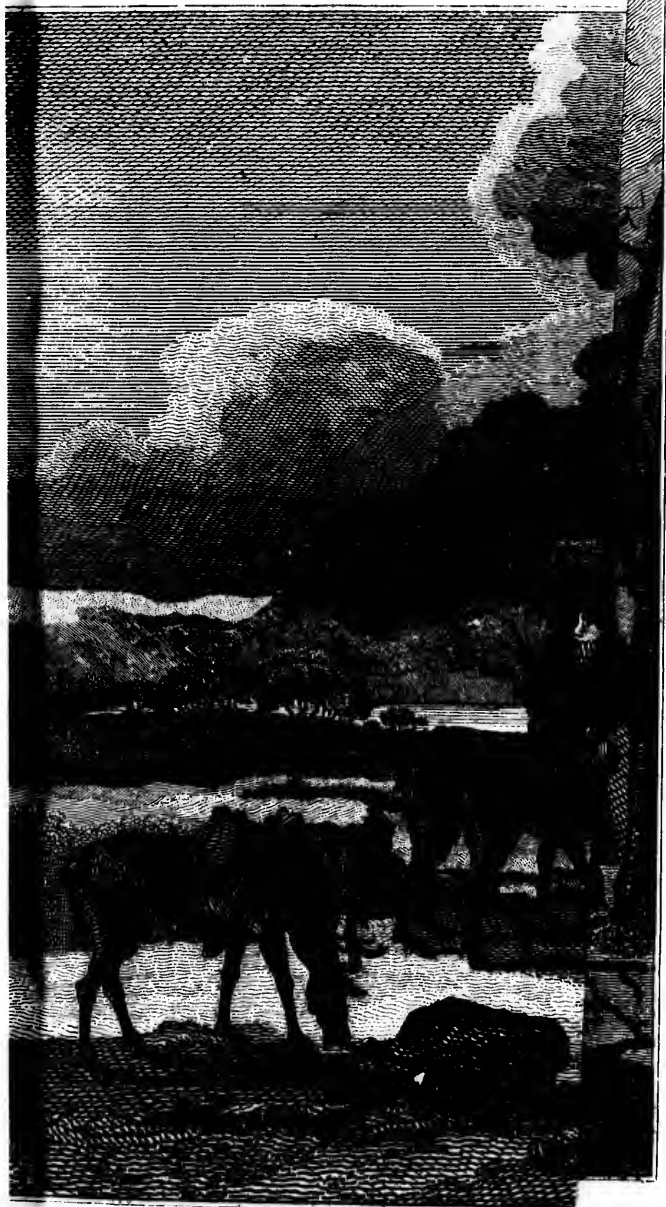
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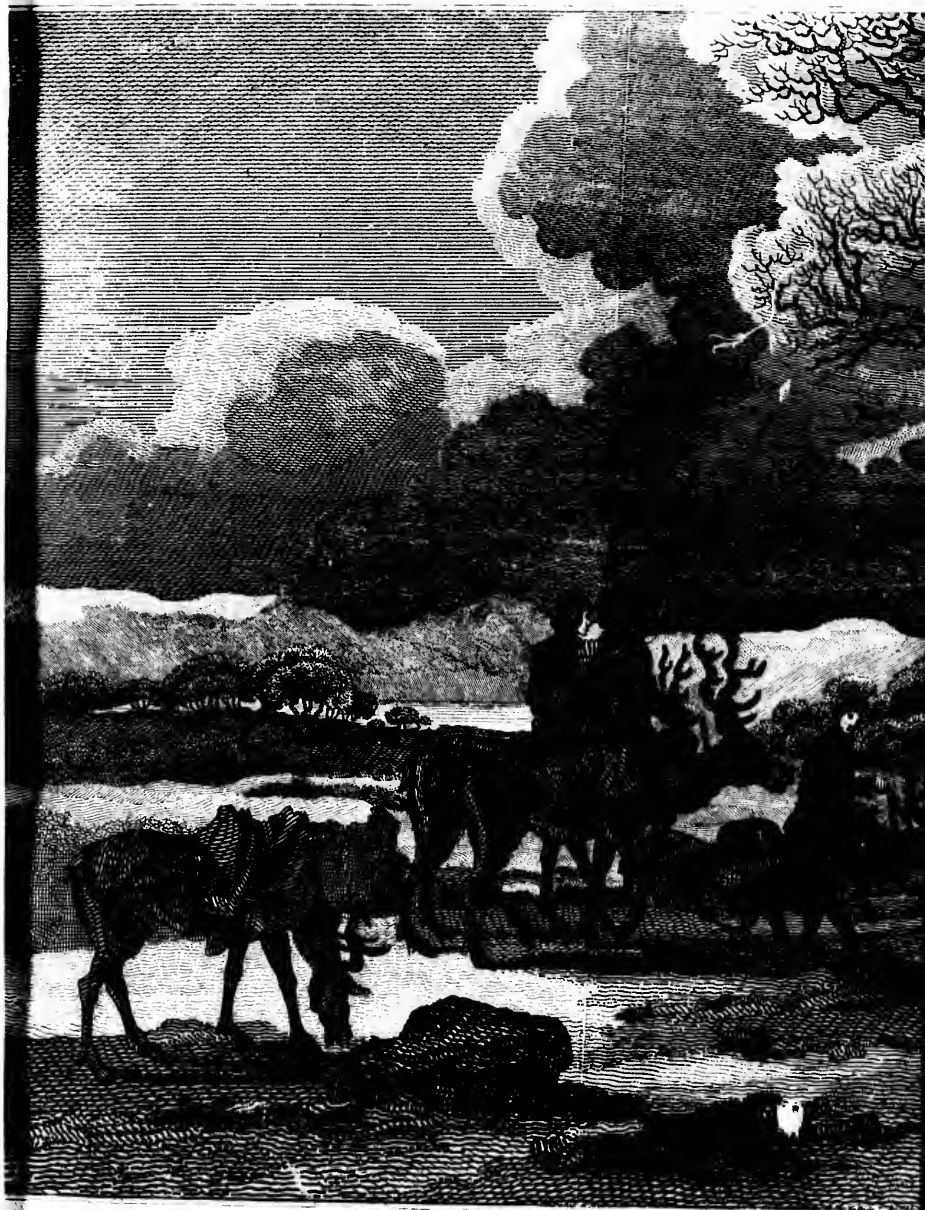
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*Tungusian Reindeer*





*Tungusian Reindeer breeders, erecting*



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vering, the rings in which the poles are fastened, and the curtains used in the place of doors.

These jurts are commonly round, like those of the Calmucks, and conical towards the top, with an opening to give vent to the smoke; which, however, seldom ascends, particularly in severe weather, owing to the fire being made in the centre. The following days we pursued our journey over mountains, woods, and tundern\*, by a rout known only to the Tunguses. On coming up to the tracks of some reindeer, our guides immediately informed us that their countrymen were not a day's distance from us; which proved to be accurate, as we overtook them in the evening at the place where they had encamped for the night. These people are all very clever in ascertaining, from the appearance of the reindeer tracks, both in winter and summer, not only the number of animals that have passed, but the length of time that has elapsed since the tracks were made. The next day they exchanged reindeer with us, giving us fresh ones in the place of our own, that were already jaded.

After some days we reached a spot on the river Ochota, called, by the Tunguses, Uega; where they assemble from all quarters, once a year, and hold a fair. Here the inhabitants of the towns meet the mountaineers, and barter their tobacco, knives, pins, trinkets, and cloths, for reindeer skins and dried meat or fish. The former would be considerable gainers by this exchange, if, instead of throwing away their profits upon spirits, they carried home their merchandizes, and disposed of them at a good market.

The Tunguses are an itinerant people; throughout the whole year incessantly moving with their houses, family, and property, from place to place. Nothing but want, rain, or trade, can detain them a whole week in one spot; but they regard even this restraint as a great punishment. Their reindeer carry the effects, consisting of their clothes, jurts, and eatables; but they never load them with a greater weight than 60 pounds. Infants unable to ride are put in pannels, lined with moss on one side, having an equal weight on the other to preserve the balance. They resemble the Jakuts in their method of pacifying a crying infant, by giving it a piece of fat to suck. The men and women ride, leading the beasts of burden. The riches of the Tunguses consist altogether of reindeer, some of them having upwards of 2000, which usually graze in mossy places, and in great herds; but whatever may be the extent of their possessions, they are very loth to slaughter any of them for

\* Tundern imply marshy, boggy countries, covered only with moss and a few small bushes,

food, unless they be any way damaged; they even prefer to endure hunger for many days, or content themselves with the bark of trees, or old shrivelled skin, which they constantly carry about with them, to serve in case of exigency. They eat up every part of the animal which they kill, not throwing away even the impurities of the bowels, with which they make a sort of black puddings, by a mixture of blood and fat! They eat no raw meat, even when dried, but they are fond of the raw marrow from the bones, which having tasted myself, I did not find offensive.

On the 25th of March, our reindeer carried us to Arka; a place so called from the river of that name running into the Ochota. Here we found some pedestrian Tunguses, who go on foot in summer for want of reindeer. In the winter they harness dogs to their *nartes*, and build their jurts under ground; but in other respects do not differ from the other tribes of their nation.

At this place, I exchanged my reindeer for the dogs and the *nartes*. These are light sledges, about twelve feet long and two broad, and a foot and half high from the bottom. They are of so slight a structure that they may be conveyed by hand. Ten or twelve dogs are harnessed to them by means of small cords, with a large rein between, serving as a pole. The foremost couple are used to turn right or left at a word; but when the driver wishes to stop the *narte* he fixes his *oschtol* in the snow, through the sledge.

The *oschtol* is a thick staff tipped with iron, and having a rattle at one end, by which the pace of the dogs is quickened. Towards the spring this mode of travelling becomes excessively incommodious, for the *nartes* having no indented seats, and the road being often uneven and steep, it is not unfrequent for the traveller to be thrown over, and sometimes pitched on the stumps of trees, or other hard substances; particularly when the dogs get scent of an animal, and become ungovernable. In pursuit of an otter, for example, they are not to be restrained from going into the water, and dragging their *nartes* after them; so that if the driver be not dexterous enough either to turn over the conveyance, or to jump out, his life is in great danger.

Whenever there is a great fall of snow, or it be driven into unusually large heaps, then two or three persons are obliged to go before to make a track, and mark the road, by the position of the trees, mountains, and rivers: the snow, thus trodden, will be sufficiently firm to bear any weight until the return of warm weather.

On the 27th of March I arrived at Ochotsk, situated on the shore of the sea called by its name, close by the mouth and

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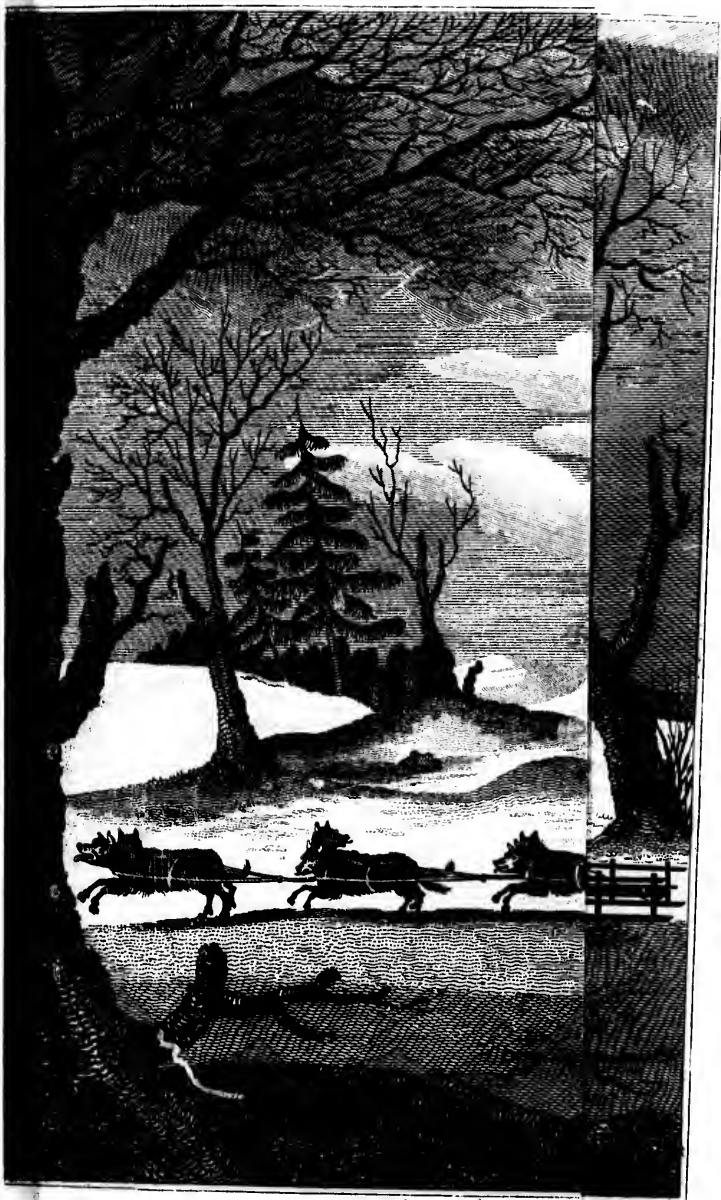
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conflux of the two rivers Ochota and Kuchtui. The Ochota washes its sandy gravelly beach every summer with vehemence, carrying away whole houses with it yearly; so that the town has already lost three streets within a short time; while, on the other hand, the beach receives an annual accession from the stones driven to it by the storms. The government having, therefore, resolved on transplanting the town to a safer situation, no new houses are now erected, and the old ones, which were built upon the establishment of the place, are falling to decay. Ochotsk has a wooden church, a palisadoed fortress, and some magazines. The inhabitants consist mostly of persons in military and civil capacities: the latter of whom principally belong to the lately established judicature in the statholdership of Irkutsk. On this establishment, Ochotsk became a capital, comprehending the peninsulas of Kamtschatka, the Aleutian and Kurilian islands, and the whole coast from Ochotsk to the Tschukatish cape, within its jurisdiction.

The trade of this place is carried on chiefly by merchants from other towns, who bring provisions and other merchandizes, of European or Asiatic manufacture, for the Russians, Tunguses, Jakuts, Kosaks, and Tschukatians; all of whom, except the first, make their payments in skins. There are also trading companies, having their agents, who build small craft at Ochotsk or Kamtschatka, and dispatch them to the Aleutian islands, and North America, for the purpose of collecting furs. The crew are hired from all parts of Russia, and the command of the whole is entrusted to an experienced trader, entitled *peredowschtschik*, or forerunner, who has been on two or three such expeditions before. Besides this, the government provides a mate and steersman to conduct the vessel. Their voyages frequently last ten years, and on their return, the produce is divided into certain portions, called *pai*.

Having made the object of my mission known to the commander, I commenced my examination of the vessels, stores, and building materials; but found every thing so shattered and decayed as to be totally unfit for use. In my rambles among the woods, I was not much more successful, having found, within the compass of above 100 wersts, but few trees sufficiently large for building our vessels. Nothing could exceed the toilsomeness of this research, although it was considerably relieved by the kindness of my worthy friend, the collegiate assessor Koch, who accompanied me purely from the desire of aiding me with his knowledge. We set off in the beginning of April, and were obliged to go 70 wersts in snow-shoes. Of these there are two sorts; those which are broad and covered underneath with reindeer skin, for the soft snow; and the others,

long, narrow, and plain, for the hard snow. From our inexperience in this mode of travelling, we often sprained our ankles, got entangled in the shrubs, or fell into heaps of snow so very deep, that neither of us could have been saved without the assistance of our attendants.

After my return, my first concern was to procure men to fetch the wood; but in this respect the commander was unable to afford me any great assistance; the few men he gave me being so afflicted with the scurvy that they could scarcely walk, much less do any labour. The poorer classes here are very subject to this disorder, owing partly to the damp and cold weather, and partly to their diet, which consists of salt fish and a sour liquid, called burduck. Meat and fresh fish are scarcely to be procured for money; every other kind of provision is to be purchased only at an immoderate price, a pound of butter costing three shillings; the same quantity of flower one shilling; oatmeal ninepence, and other things in proportion. People in any tolerable situation usually lay in their stock for the year at the summer fair, or procure it from Irkutsk; and those who cannot afford to do this must submit to all the hardships of want and bad food. On my arrival here, I might have experienced a similar fate if I had not met with so friendly a reception from the principal persons of the place, who not only invited me to their tables, but exerted their utmost to lessen the difficulties I had to encounter.

At the close of April, the Ochota was cleared from the ice; and the water swelling to an astonishing height, occupied all the lowlands with rapidity, but returned to its boundaries again in the space of ten days, when several sorts of fish, such as malmes\*, kunsches, and kambales, began to make their appearance; which were succeeded by shoals of smelts and herrings, and afterwards by sturgeon and sea-calves. My people now beginning to collect strength from the return of spring and fresh fish, I sent them out after timber, a great quantity of which they felled for me in the summer months.

\* The names of keta and malma are no where to be found, but the others are described as follows in the dictionary of the Russian Academy:—Kunsha, Salmo Cundsha, a sort of salmon. Its usual length is two feet; its tail forked; its scales silver-coloured, with a shade of blue on the side and white at the ends. It is found in the bay of the Northern Ocean, and the White Sea. *Kambala Pleuronectes*. Under this appellation is comprehended many sorts of scaleless fish, with eyes on each side their longish round bodies.—Narka Salmo is a species of salmon about a yard long and the fifth of a yard broad, with a red body, small head, five small reddish teeth on both sides, blue tongue, yet white on the side, a bluish back, with dark spots, and the tail a little arched. Its scales are large and round, and come off the skin very easily. They collect in great shoals in the river from the eastern and Penschinkisch seas.

At the commencement of June, the abovementioned fish disappear, and give place to other sorts, as the keta and the narka, in size and appearance somewhat resembling the salmon, only that the narka has a much redder and firmer flesh; their taste is very pleasant, and in July they are in full season. In August and September, they come in such quantities as to change the quality of the water. The inhabitants at these times lay in a store for the year, both for their own use and that of their dogs, of which each person has one or two team, consisting of 12 or 24. These dogs differ in very few respects from those in Russia, except by barking less and howling more, which they frequently do, particularly towards the dawn of day; one takes the lead and is followed by all the rest in the town, which forms a concert of no very agreeable kind.

The fish are cured in various ways. The narka are stretched out and smoked in a chamber, peculiarly adapted for the purpose, then laid in a box and strewed with dried and powdered keta, which is said to be a good preservative. They are thus sent sometimes to Irkutsk and Jakutsk, but not in great quantities, on account of the difficulty or expence of the carriage. The keta are dried in the sun, the fat in the back-bone having first been taken out, in which state they are called jukol. The inferior of both kinds are given to the dogs. They are also salted in great tubs, either whole, or the spawn alone. Salt is here extracted during the summer from the sea-water, in an office belonging to the crown, situated about twelve versts from the town. At the close of autumn and commencement of September, when the fish are at their full size, they are caught without difficulty, being taken with the hand out of the sea, and thrown into pits fitted for the purpose, where they turn sour, corrupt, and dissolve. These are intended for the dogs in general, but are sometimes eaten by human beings. The Kamschadales, for example, esteem it the best and most delicious of all victuals, although the smell is so strong as to extend many versts distance from a pit newly opened. At the close of September, or the commencement of the frost, the keta, and another fish which comes at that time, called lomki, are left to freeze, and thus preserved in heaps for the winter.

The nets used for fishing are either smaller or larger according to the size of the fish to be caught. The larger nets are thrown out from the shore on long poles. In the fishing season they fill so rapidly that it is scarcely possible to draw them in quick enough to prevent their being overloaded. The Kosaks in particular, with their wives, attend to the nets at this time, indulging their appetites continually with the cartilage of the fishes' heads, which they regard as a great luxury. The dogs

have probably acquired from them the same propensity, for during the season of plenty they go to the water's side in search of fish for themselves, and eat the heads only of whatever they catch.

Birds of passage are very numerous here in spring and autumn. At the close of April and May geese and storks resort to the meadows in immense flocks, and the bays are covered with ducks of every description. In June they leave these parts, and are succeeded by snipes; but in July and August there is no other bird to be seen except sea-ducks, called *turpane*, which assemble here in vast quantities. This being their time of moulting, they are unable to fly, and fall an easy prey to the inhabitants, who surround them in their canoes\*, and driving them into shallow parts of the water, jump in, and either kill or catch them alive in their hands. They then string them by means of an iron or bone skewer, on a long cord that hangs at their backs, which frequently affords an opportunity for those following to practise a theft on their neighbours, while eager in the pursuit, by cutting off their ducks and stringing them to their own.

The Tunguses have a mode of catching these birds by means of an artificial hen-duck, which, when stuck on a long pole, tipped with a sharp iron, and presented to the males, attracts them all towards it, and brings them within the reach of the fowlers. In lakes and standing waters, the ducks are likewise caught by snares, two different ways. They have a method of confining the creatures within a certain space by means of twigs, leaving openings only where the snares are fixed, by which the ducks are caught when they attempt to get out. By another method, they decoy the ducks with the spawn of fish into snares that are concealed under water.

Among the birds which frequent the forests and fields, are white-tailed eagles, woodcocks, and partridges. In the winter there is a remarkable bird called a water-sparrow, which makes its appearance on the open banks of the river. It is the size of a thrush, and has a black plumage: but although there is no web on its feet, it often dives, and continues some minutes under the water; yet it has not been observed to swim on the surface. There are no common sparrows here; and the crows are perfectly black. The mews are of five different sorts; namely, the † *semisashennjaa*, the grey and white spotted, the ‡ *goworuschka*, the § *mortyschka*, and the ¶ *rasboinika*. The first is

\* This canoe is called *odnoderewka*, probably from its being constructed out of one tree only.

† *Semisashennaja*, from *sem*, seven, and *sashena*, fathom.—‡ *Goworuska* prater, from *goworit*, to speak.—§ *Mortyschka sterna*, or sea-swallow.—¶ *Rasboinika*, a plunderer.

unusually large; its outstretched wings, with the feet and head, comprehending an extent of 7 fathoms; and is so ravenous as to eat till it cannot move. The grey with white spots, are like ours in Europe, and resemble the goworuschka, except that they are rather smaller. The latter derive their name from sitting on the water and continually screaming. Mortyschka, the smallest kind, has short red feet, and a forked tail. The last description are black, of a middle size, with two long feathers in their tails. They never catch fish themselves, but plunder them from others; from which circumstance they have received their appellation.

### CHAP III.

MR. BILLING'S ARRIVAL AT OCHOTSK.—MY FARTHER JOURNEY.—DANCE OF THE FOOT TUNGUSES.—ON THE INSTINCT OF THE FISH.—THE DOCTOR'S ASSISTANT LOSES HIS WAY.—DIFFICULTIES ON THE ROAD.—ARRIVAL AT THE FORTRESS OF WERCHNE-KOLYMSK.—JUKAGIRCANS.—THEIR MODE OF LIVING.—UNEXPECTED FIRE.

MR. Billing, our commander, arriving at Ochotsk, in July, with the remainder of the expedition, I was again dispatched to the fortress of Werchne-Kolymsk, and being provided with some attendants and a hundred of the best horses just come from Irkutsk, I set off on the 1st of August.

Our road, for the first 75 versts, to the village of Mundakan, was very good, with the exception of occasional floods, through which we were obliged to wade. It afforded us every where fine prospects. The woods consisted principally of larch-trees, here and there intermixed with beeches and alders. The islands scattered along the rivers are covered with willows, poplars, and pines; the leaves of which latter trees afford a very delightful aromatic odour. The road itself is often lined with eglantine and shimolost, which yields sweet berries that are in great esteem here. The shimolost, or *Lonicera xylosteum*, is a shrub, not exceeding a fathom in height, having a grey smooth bark and spiral leaves. Two white blossoms grow on each stem. The fruit is an orbicular, succulent, red berry, having four small stones, and is the favourite diet of many birds. The wood is used for ram-rods, pipe-tubes, &c. The Tartarian shimolost is a finer species of this kind, which grows much higher, and has smooth leaves in the form of a heart; its double blossom is of a pale flesh colour, and its berries of a pale orange colour. It is a native of Siberia, and is literally a species of wild cherry. Bilberries and knaesheniza are likewise to be found in some

parts; the latter resembling the wild strawberry both in appearance and leaf; but its blossom is rose-coloured. The berries have a very agreeable perfume and fine flavour. It is the pleasantest fruit growing in the northern countries, and is abundant in Sweden, Russia, Siberia, and Canada. From the blossom and leaves the inhabitants make both tea and a decoction, which is in high estimation for pectoral complaints. The richness and verdure of the meadows, every where overspread with luxuriant grass, might be supposed to denote a prolific soil, and yet the repeated experience of the government convinces that it is unfit for the production of grain. This is, perhaps, less attributable to the soil itself than to the shortness of the summer and the depth of the snow, which continues on the ground, in some places, until June. The weather is cold and damp the greater part of the year, and not unfrequently so in that season when heat is indispensable for bringing the corn to maturity. For this reason, the vegetables and garden fruits are far inferior to those in other places lying nearer to the north pole, where, as in Archangel for example, they have a better climate. The cabbage here has no stem whatever, but shoots forth in leaves only. Potatoes, turnips, and radishes, grow but to a very insignificant size.

Our road continued dry and agreeable twenty versts beyond Mundakam, after which we had to pass through marshes and mountains. The moss of these marshes is so entangled with the roots of the trees as to form a tolerably firm, but yet movable ground, which yields to the tread of the horse. Sometimes the traveller sinks in, and requires the assistance of all his companions to help him out; but in such cases it is easy to find a safer way. These treacherous spots are termed *haidaranen*. The moroschka, a fruit peculiar to marshes, is found in great abundance here, particularly in brooks and vallies, which produce also some bilberries. The berries of the moroschka, *Rubus chamaemorus*, are of a yellowish colour, the size of a cherry, and of a semicircular form, composed of many small triangular grains, lying together in double rows. Its pulp is very succulent, inclosed in a thin brittle husk.

After a journey of six days, we arrived at Arka, a place belonging to the pedestrian Tunguses, lying about a hundred versts from Ochotsk, at the mouth of a tolerably large river of the same name, which runs into the Ochota. Our commander overtook us this day with all his attendants, except the boatswain, who had fallen from his horse in crossing a piece of water, and was drowned. We found the inhabitants fishing for the keta, which was very abundant here in this season. The shallowness and clearness of the water afforded them the advantage of distin-

guishing the fattest fish, which they strike so dexterously with their spikes as never to miss their aim. This spike, in Russian babor, is an instrument particularly in use among the Kosaks on the Ural, and at the fishing of the Wolga, consisting of an iron spike, with two points, fastened in a long stick.

After supper our landlords gave us a dance, in which men and women forming a circle, jumped to a tune that consisted of the two words ochur, juchur, continually repeated. However wretched the condition of these people may apparently be, they are incomparably more happy than many of the cultivated sons of fortune, who riot in uninterrupted luxury. To variety and care they are alike strangers. Their wants are extremely limited; an abundance of fish is the height of their happiness, as it constitutes their principal subsistence. They barter it likewise with their reindeer Tunguses for their clothing.

We now pursued our course all together, passing over a diversity of mountains, and through numerous rivers. The weather, which had hitherto been favourable, changed to rain on the 9th, that continued for twenty-four hours without intermission. In addition to which, our guides were now unable to conduct us farther. We fortunately met with some other Tunguses, four of whom we engaged, with twenty-two reindeer. From the river Uega, where we had just been stopping, the road became insupportably tedious, leading perpetually through mountainous and marshy countries, and sometimes being totally blocked up by the trees which had been only half consumed in a conflagration\*. Our horses suffered so seriously from the fatigue, that we were obliged to leave many of them in the wood; and meeting soon after with a convenient place for a night's lodging, which yielded good fodder, we resolved on resting the following day in this place.

We spent this day in shooting and fishing, and caught many of the chariust† in our nets; among which was a marka, in a perfect

\* In the country around Petersburg it is not unfrequent for extensive woods to be consumed. The fire commonly arises from the negligence of the peasantry coming in bodies to the city, whose fires, towards the evening, afford an agreeable prospect.

† Charius, salmo thymallus, a species of salmon; its head is rather small, obtuse, and spotted black, the under part and the sides having a bluish cast; its gills are furnished with two rows of teeth, extended into its throat. Its body is covered with a thick firm scale, its back dark green and rather arched, its sides flattened and of a grey bluish colour. From the head to the tail a bluish stripe runs down on every scale, the middle of which is spotted black. The belly is white, the pectoral fins small and yellowish; those on the side, tail, and belly, reddish; that on its back large, yellowish in the beginning and reddish at the ends, having four rows of round spots. The chariust frequents the rapidly flowing springs of the mountains, and is two feet long. Its flesh is white, firm, delicate, and fat.



state of transformation, having scarcely a single mark of similarity with its kind remaining. Deep red and dark blue spots supplied the place of scales; its gills were quite bent; its teeth grown out long; its body become pulpy and spongy, and on its back it had an excrescence. It had probably strayed into this lake through a brook communicating with the Ochota, notwithstanding the velocity with which it rushed down the mountain. In fact, the keta and narka appear to be impelled by a particular instinct towards the rivers; for they continually force themselves up in spite of every obstacle, and when disabled, from loss of strength, to proceed any farther, they generally perish and moulder away on the shore: few, therefore, ever return to the sea. We should naturally suppose, from the prodigious number of narka and keta continually passing every year from the sea into the rivers, that these species of fish would soon become extinct; but the contrary being the case, we are led to the conclusion, that the spawn of the dead fish is carried back into the sea, and there brought to perfection.

On the 15th, our commander went forward, taking with him the doctor, two chasseurs, and some Tunguses as guides. The second day after the doctor's departure, his assistant, Mr. Main, an Englishman, staying behind to collect stones, missed his way: we did not perceive his absence until the time of our encampment for the night; and were, therefore, obliged the next day to retrace our steps in search of him, when we found him in the afternoon in a wood. His horse having run away, he had missed his road in pursuing him, and not knowing what step to take, resolved on returning to the first Tungusish dwelling: which would, however, have been scarcely practicable, there being no such dwelling within the distance of 100 versts.

After following the course of the Ochota for the distance of 400 versts, we at length turned off to the right, and reached the source of the river Kuidussun; the shallow parts of which are occupied with masses of ice four feet in height, that appear never to be dissolved\*. Here we had the misfortune to lose our Tungusish guide, who absconded with several of the reindeer, and brought us into the most unpleasant dilemma. We were totally unacquainted with the way forward, and had no other alternative than to follow the steps of Captain Billing, whenever we could trace them, which was, unfortunately, but seldom the case, the road generally leading over moss-grown places, and every Tunguse taking the direction which struck him to be the best. By the exercise of our judgment and patience, we,

\* This ice is probably accumulated by the water spouting forth from the springs of the river.

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*A Man & Woman among the Tungusian Reindeer breeders  
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however, succeeded, after a tormenting search for 60 versts, in finding a Jakutish track over meadows, that promised to bring us to an inhabited spot: but in this we were disappointed; for after a journey of 18 versts farther we came to some empty Jakutish jurts, from whence the road took five different directions. I dispatched some of my people in several directions, and obtained the next morning, to my no small satisfaction, a Jakut, who offered to conduct us to the jurts of the Jakutish knask. He fulfilled his promise, and carried us in nine days to the desired spot, where we found Captain Billings waiting for us. Here we were obliged to stop five days for fresh horses, which were to be collected from the distant jurts.

On the 29th, we pursued our journey in two distinct parties; Captain Billings proceeding forwards with one sailor and three chasseurs. The first day we waded through the river Omekon, and passed along two other rivers, until we reached the Atschugui-taryn-urach, or little icy stream, which is so called from its being continually covered with ice of an almost incredible thickness. Sixty versts farther, after wading through the Ulachau-taryn-urach, or large icy river, we had to ascend two high mountains, about a verst distant from each other. The former is covered with small larches, moss, and cedar shrubs, which do not rise above two fathoms in height, and yield fruit but every other year. The latter, which is higher than any in that quarter, extending from south-east to north-west, is covered only half way up with moss, the rest consisting of naked rock. We effected our ascent and descent with the utmost difficulty, being obliged, from its exceeding steepness, to creep rather than walk, for fear of rolling down. The horses, though very tame and accustomed to such roads, were not all able to keep their feet. Our course then led us alternately over beautiful meadows and large rivers, or through woody and mountainous countries. The Tunguses usually repair in the summer to the open summits of these mountains to catch the wild sheep which frequent those parts, or to graze their reindeer, which are here less tormented by the insects than in the forests.

Our guides being unable to conduct us farther, I was obliged to wait some few versts distance from Werchno-kolymsk, until a suitable person could arrive from the neighbouring Jakutish jurts, called Kyssyl Balyktach, after the name of a peculiar fish, which is caught by the inhabitants in their lake. The fatigues of the journey were rather increased than diminished towards the close. The roads, which were either sandy or marshy, exhausted our horses to that degree, that we sometimes despaired of reaching the point of destination. On our arrival we found Captain Billings and his attendants, but none of the

baggage, which had been left behind, owing to the badness of the roads. The greatest part of our horses being totally disabled, it was necessary to procure a fresh set for the purpose of fetching the luggage.

The fortress (Ostrog) of Werchna-kolymsk, is situated on the right bank of the river Jassachna, two versts distance from its conflux with the Kolyma. It consists of five peasants' huts, three jurts, and a separate court surrounded with a paling, in the middle of which is a black log-house (isba) and some granaries. In this narrow spot it was no easy matter to dispose of all our people. Our commander chose the best isba, whilst two of my companions and myself took up our lodging in a yurt. The greater part of the crew were obliged to reside in the woods until a shelter could be made for them, besides which it was necessary to build a forge and an oven for drying the biscuit.

In the mean time the felling and transportation of the timber for our vessels was commenced with vigour, although the passage of the river was rather impeded by the frost, which set in on the 27th of September; yet as soon as it was frozen sufficiently firm to admit of any weight, we conveyed the wood over the ice by means of horses borrowed from a small body of Jakuts, who had lately settled in those parts at a distance from the fortress. These Jakuts have but a small quantity of cattle, and subsist principally by fishing. In the winter they travel only with dogs, by which they are distinguished from the rest of their nation.

At the commencement of the frost, and previous to the closing of the river, the people were busy with their nets in catching a particular sort of fish called tschirai. Afterwards they made openings in the ice, in order to catch eelpouts; the largest of which weighed 25 pounds. The cold at this time, in the middle of October, was 30 deg. Reaumur.

In this month, Mr. Billings and the doctor went a journey of 40 versts up the river, to a little place inhabited by some families of the Jukagirens. This was formerly a very rich tribe, who had kept their neighbours in awe, and possessed dominion over a vast extent of territory, until the greater part of them being swept away by the small-pox, and another contagious disorder, called here kilikiuska, the Kosaks and Tunguses, their ancient enemies, gained the upper hand, and retaliated on them by every act of oppression in fishing and hunting; which gave rise to a war that exterminated almost entirely the little residue of their people. The stragglers who had escaped this last ravage sought protection from the Russians, and took up their residence in the proximity of the fortress. The close intercourse thus

arising between the Jukagirens and the Kosaks gradually assimilated the customs and dress of the former to those of the latter. But previously to this, their way of living entirely resembled that of the Tunguses; having, like them, their reindeer and their jurts, with which they strolled from place to place. At present they live in hovels, and make use of dogs in lieu of reindeer, for their winter excursions. Their food consists of fish and the flesh of elks, which are very abundant in the islands and rivers; particularly of the river Korkodon, which flows into the Kolyma 200 versts distant from the fortress. Thither the Jukagirens usually repair in April with their dog-sledges to hunt not only elks, but also sables, foxes, reindeers, and every species of animals which afford fur. They pursue the elks in snow-shoes, and run them down, until they are so perfectly enfeebled as to fall an easy prey to the huntsman. In this pursuit the latter have every advantage; for the immensely deep snows and the NASTEN\*, so frequent in that season, which are no impediments to them or their dogs, continually stop the creatures in their career, and combine with their natural unwieldiness to prevent their escape. They cut the flesh into long thin slices, and dry them in the air. As soon as the river is free from ice they swim on floats to the fortress, where a festivity and carousal commences among the Kosaks, with whom they barter their spoil for the necessaries fetched from the town, but above all for tobacco, to which they are immoderately attached. This fair commonly lasts until the river, which has overflowed the country, returns to its bounds, when they separate and take various directions for the purpose of fishing.

Since their connexion with the Kosaks, the Jukagirens have made a profession of Christianity, blended, indeed, with their own superstitions; particularly the incantations of the Schamans. In this particular the Kosaks, who cannot boast of a much brighter illumination, have but too faithfully adopted their errors. They ascribe every sickness to witchcraft, and even imagine themselves sometimes to be under the influence of some evil spirit. For which reason they have a peculiar dread of one female Jakut, named Agraphenna Schiganska, a xhaman of great influence, who died thirty years ago. They fancy that she visits the people in order to torment them, and must therefore receive their homage and sacrifices. Active as the government of Jakutsk has been in their endeavours to destroy this superstition, they

\* The hardened surface of the snow, occasioned only in spring by its thawing in the day and freezing again at night.

have hitherto been very unsuccessful. They even sent an order to the town of Schigansk, for search to be made after the body of this Agraphenna, that it might be consumed; but this was equally inefficacious in its influence on the superstitious multitude. Their Jakutish schamans spare no pains to preserve the credit of the witch, declaring that they could never venture to lay any spirit without first offering a sacrifice to her. For were she in the slightest degree to be neglected, she would make her appearance among them and exercise her vengeance.

In January the cold rose to 43 degrees, and was so severe as to impede respiration. The very vapour from the breath was converted into icicles, which, from continual attrition, were incessantly crackling. The power of the sun was then too feeble to communicate any warmth to the atmosphere, making its appearance only a short time at noon, on the summit of the horizon, and sending forth its rays in an oblique direction. It is worthy of observation at the same time, that the most perfect calm attends an extreme state of cold, which subsides instantly on the least motion of the wind. The thermometer, with quicksilver, was now rendered perfectly useless, the purest kind of quicksilver being frozen by a cold of 33 degrees; we were therefore obliged to content ourselves with spirits in its stead.

Whilst the weather permitted it, we had made some sporting excursions into the woods in pursuit of partridges and woodcocks, but now it was scarcely possible to pass from one dwelling to another. Our provisions, therefore, began to fall short, the season for fish being over, which had constituted our principal subsistence. Had we in this moment of plenty adopted a system of precaution and economy, we need not have aggravated the sufferings from cold by those of hunger. We had then thrown away the head of an eelpout, which we now gladly scratched up from the snow, and eat with avidity. In addition to this, the scurvy, the common attendant on want, began to make its appearance.

During the month of November we had nearly finished one of our vessels, which was 45 feet in length, and received the name of *Pallas*. In the month of April we renewed our labours with a second, which was only 28 feet long, and named *Jasachna*. The ignorance of our carpenter, combined with the total inexperience of all the rest in every thing relative to the building of a vessel, naturally retarded our progress in this business; nor would it, perhaps, have ever been brought to bear, if the more intelligent of the party had not exercised their ingenuity in contrivance. The tar not being of a proper consistency which was procured at Jakutsk, we were obliged to mix

sulphur with it, that was obtained from the larch-trees, which, when boiled together, produced a composition not inferior in quality to the best sort of pitch.

In the night of the 13th of May, a fire broke out in the habitation of the doctor and mechanic, owing, probably, to some negligence in extinguishing the coals on the hearth. The flames spread over the whole house in an instant, and extended to an adjacent store-house, in which the spirituous liquors belonging to the crown were preserved. Not the slightest article in the house could be saved, but happily no lives were lost.

According to several observations, we fixed the latitude of Werchne-kolymsk at  $60^{\circ} 21'$  north, and the deviation of the compass at  $70^{\circ}$ .

The river being now perfectly clear of ice, our vessels, which were in an entire state of readiness, were launched in very high water on the 5th of May. After every necessary arrangement was made for our voyage, in which the command of the second vessel was consigned to me, we weighed anchor on the 22d, and were carried down by the stream with immense rapidity to the river Kolyma, which branches out into many smaller streams, that are lost in it again at the distance of a few versts. Many of these arms are perfectly dried up at the fall of the water.

About noon we passed the mouth of the river Magaseika, flowing to the left, which received its name from the circumstance of magazines being built at its source not far from Saschiwersk, in which the provisions were formerly kept; that were afterwards conveyed by Saschiwersk to the fortress of Anadyrsk. The passage by the Kolyina not being then known, it was necessary to take the circuit of the two arms Magaseika and Oshogina.

Towards evening we received a visit of curiosity from a knask, residing on the banks of a little lake, who paddling towards us in his canoe, seemed very desirous to take a nearer survey of our vessel. Learning from him that the Pallas had not yet sailed past, we cast anchor until midnight, when it overtook us.

After passing on the 27th the *Cluster of Islands*, as they are termed, which are seven in number, we reached the *Trinity Islands*, and river of the same name; probably so called from the hunters, who were going to erect a church here in the name of the Holy Trinity; but opinions being divided between this and another place, it was decided by lot, which fell upon the



spot where Sredne-kolymsk now stands. The church, therefore, and soon after that the fortress, were there erected.

By Kamenka, a considerable river issuing from the mountains, which we left to the right on the 28th, as well as by the Troizka, the Jakuts and Tunguses catch many foxes, otters, unicorns, and sometimes sables, which are said to have been formerly very abundant in these parts.

Here, from the mouth of the Sranka to the fortress of Sredne-kolymsk, the Kosaks of Werelme and Sredne-kolymsk, have their summer encampments, for the purpose of providing themselves and their dogs with fish. They catch them with nets, and cure their jukol as usual by drying. The neolma, muksun, tschira, and, towards the autumn, herrings, are the most abundant here. In the evening we stopped at Sredne-kolymsk, a wooden fortress, situated on the left bank of the Kolyma, having a church and some houses. It was formerly called Jarmanka, (fair) because all the inhabitants from an immense distance, as Tunguses, Jakuts, and Jukagirens, assembled here for the purposes of trade. They bartered their skins with the Jakutish and Kosak merchants, for tobacco and other trifling articles. The quantity of skins, particularly from the sables, taken near the river Kolyma, was so considerable as to furnish a yearly revenue of 4000 to the crown, being a tenth of the whole amount; from whence this tax had the name of a tythe. The sables having all now disappeared from this quarter, the fair has, of course, been totally abandoned.

On the 17th of June, we stopped at the mouth of the Omelon, on the left bank of which we discovered the summer encampment of the peasants of Omelon. During this season they are engaged in fishing until autumn, when they return to their village, lying about 20 versts distance from the river. On the other side of this village there are Jakutish kagirens still remaining.

The river Omelon, together with the Inshiga and the Oensina, issues from a chain of mountains, and receives the addition of five rather inconsiderable rivers; three from the right and two from the left; one of which is the Magaseika above-mentioned. Four hundred versts up the Omelon is an old wooden structure, erected probably on the discovery of the river by the Russian hunters, who had undertaken their excursion in *kotschen*\*, from the river Lena into the Frozen Ocean, and from thence to the mouth of the Kolyma, which leads to the Omelon.

\* A flat-bottomed vessel very similar to a barge,

In a summer residence on this river, we found Captain Inshiginsk Schmalew Satnik Kobolew, and the Tschukotish interpreter, Daurkin, waiting for us agreeable to appointment. They were to act as our interpreters with the savage people, called Tschukschens, whom we might chance to meet in the Frozen Ocean. Mr. Schmalew, who was destined for my vessel, was a man well qualified for this situation, having been some years commander of Inshiga, where, by his suavity and presents, he had gained the confidence and good will of the Tschukschens, who yearly resort thither for purposes of trade.

After lying at anchor but three hours, we followed the course of the river and reached Nisma-kolymsk, situated on the left bank of the Kolyma, in 24 hours. The fortress includes within its wooden barricade, one church and 33 houses; together with 33 Kosak inhabitants. Opposite to this fortress, the two large rivers, the *Great Anui* and the *Dry Anui*, run, at an inconsiderable distance, into the Kolyma. The former of these extends 809, and the latter 500 versts. The banks of both are inhabited by Jukagirens.

The swimming of the reindeer across the Omelon and the two Anuis affords an extraordinary spectacle twice a year; viz. at the close of May, when the wild reindeer abandon the woods in great herds, probably with a view of seeking shelter from the gnats within the neighbourhood of the sea, and afterwards in autumn, on their return; in both which cases they are obliged to pass these rivers. The Kosak and Jukagiren inhabitants of these parts, who know the favourite haunts of these creatures, repair then in their canoes to the spot, and pierce them in the water with the greatest facility, sometimes to the number of 60 in a day. They do not swim over all together in a body, but one after another; and as soon as their leader has reached the opposite shore, they are not to be diverted from following him by any prospect of danger: if he, however, be interrupted in his course, he instantly returns, and the whole herd after him.

The flesh of reindeer forms a principal article of diet for the people of this country. They cut it into thin slices, and dry it after the manner of their fish. The marrow and tongue are esteemed as delicacies. Another luxury which they have, is red bilberries mashed with dried fish, and the fat of fish, with which they make their most costly entertainments in the summer. In the winter they eat frozen and raw fish in its stead, particularly tshirens, which they mince very small, and then give the name of strogannoi. It is reputed to be very salutary against the scurvy, for which reason we adopted it as a regular remedy during our winter stay at Werchue-kolymsk.

We were detained four days at Nishne-kolymsk for the repairs of our vessels; the smaller one in particular, which, for want of ballast, was frequently in danger of being upset. We took in likewise 30 puds of dried reindeer's flesh, and 150 puds salted; which the Jukagirens cured for us with the salt we gave them, for this is a scarce article with them, and is obtained from Jakutsk at an exorbitant price. Whilst lying at anchor, we had clear warm weather and scarcely any wind, but were tormented with gnats to so immoderate a degree, that we were obliged to protect our faces and hands from them by a constant covering.

On the 19th, the Pallas weighed anchor and proceeded down the river. My ship not being ready, I could not sail until the third day after its departure. We had not proceeded 20 versts before we discovered three lofty mountains on the right bank of the Kolyma; one of which is called Pointelegews, the other Sorowsberg, and the third Belaga Jopka. The Kosaks from Nishned-kolymsk have their summer encampment at the foot of the first, by the river Ambonicha. Sixty versts from this fortress, the river Kolyma divides and falls by two branches into the sea. The course we took, which bore to the east, is called the *Stony Way*, probably from its right bank being occupied by stony precipices and stupendous crags.

In the afternoon of the next day we passed the winter residence of the merchant Schalaurow, situated on the right bank. He undertook a voyage in the Frozen Ocean, but finding too many obstacles to oppose his progress, passed the winter season here. The next year he made another trial, that proved fatal to the vessel and himself with his whole crew. The former being dashed to pieces by the ice, was thrown on the shore, and the latter perished by hunger, according to the account of the Tschukschens.

We descried likewise, at a distance of five versts, in a straight line before us, the lighthouse which Lieutenant Laptzew built in 1755, as he was surveying the shore of the Frozen Ocean. Not very far to the left of this lighthouse we observed an island not marked in Laptzew's map, which he most probably overlooked from its low situation, unless we are to suppose that it has made its appearance since that period. It is, however, at least fair to conclude, that the water has undergone some change within these late years, for otherwise he could not have gone on land to build the sheds for his people, which are still remaining. At present its depth in full tide is not sufficient to admit the smallest craft, and at ebb it leaves the bottom of the river dry for the space of three versts.

Misty and stormy weather prevented us from making any great progress for three days. On the fourth we descried the ocean, covered with immense sheets of ice, that, at a distance, appeared to be one compact mass; but were, as we discovered on a nearer view, driven together towards the shore by a north-east wind and the tide. We endeavoured to penetrate betwixt the ice and the shore, but were compelled, towards evening, to give up the attempt, and seek a shelter under the projecting rocks of a little river flowing from the mountains. The shore extended by an ascent of four fathoms above the surface of the water to the rock of Baranow. It was covered with moss and sea-weeds, having here and there a scattered flower, willow, or shrub, that was almost too small to be distinguishable. The summits of the mountains, and even the declivities of the rocks below, were incrustated with congealed snow. During the three days spent here, we discovered four bears and a whole herd of reindeer.

The wind changing on the fourth day, and driving the ice more directly towards us, we were compelled to weigh anchor, and, with infinite difficulty as well as danger, to force our way close by the pendant rock. We succeeded very soon in finding a retreat near the opening of a mountain, from which issued a spring of pure water. Here we caught a vast quantity of herrings in nets, and saw some sea-calves.

From different observations we fixed the latitude of this place at  $69^{\circ} 29'$ , although all maps have hitherto assigned to the shore of the Frozen Ocean a position two degrees more northerly.

#### CHAP. V.

FRUITLESS ATTEMPTS TO FIND A PASSAGE TO THE NORTH AND EAST.—ANCHORAGE OFF THE ISLAND OF BARANOW—REINDEER—WILD GESE CHACE—THEIR PRESERVATION.—THE INHABITANTS OF THIS PART—REMARKS ON THE FROZEN OCEAN.—RETURN TO SREDNE-KOLYMSK.

ON the first of July we weighed anchor, and made two trials to proceed, first in a northerly, and afterwards in an easterly, direction; but the mist and the ice were each time unfavourable to our designs. My little bark was frequently in danger of being shattered to pieces by the masses of ice which were driving around us with impetuosity, and at length our safety obliged us to retreat towards the shore of the rock of Baranow.

During our stay here we sent our steersman up the rock to take a survey of the ocean. He brought us the intelligence, that he had observed, from the summit of the loftiest mountain,

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but one sheet of ice, which extended as far as his eye could reach to the east. We were satisfied, by this information, of the impossibility of taking an easterly direction, but desirous of obtaining ocular demonstration, the commander, doctor, and myself, set off for the same route. On our passage over the smaller mountains we met with several reindeer, which differ from the rest of their species by never leaving the sea-side winter or summer. They never associate with the others, whose tracks were likewise every where discernible. The lakes of these parts abound with wild geese of a large species, and a grey colour, called *gumaniken*: it being their season for moulting, they could not easily escape our pursuit. The Kosaks here catch them with great facility, by driving them in vast flocks to the most distant shallow spots they can find, where they knock them down with clubs, and throw them into pits dug for the purpose. Here they lie for years without suffering the slightest change: for the earth with which the geese are covered, does not thaw even in summer to the depth of above half a yard. By this means, human bodies are kept in a higher state of preservation than by the method of embalming; for not only the component parts of the frame, but the very clothing will thus remain unimpaired.

From the summit of the rock we also beheld the whole sea to the east covered with nothing but ice. The shore which bounds this glassy surface is not much elevated, but its extremity appeared to be a mountainous head of land, about 50 versts distance, which I take to be what is designated on Schaulaurov's map by the appellation of Keschtschennoi (sandy), that terminates at the bay, where he looked for the river Tschaun. It is possible for this to be the dwelling-place of the well-known Tschukotian, prince Kopai, from whom the Kosak Wiligin received the first jassak in the year 1723\*.

On my return from the rock, I found an old wooden cross lying on the ground, with its underside perfectly decayed. The inscription, if there ever had been one, was now entirely effaced. From its apparent age, I should date the erection of it as far back as the year 1640, when this place was visited in cotschen (barges). I saw another old cross by the summer encampment on the Omelon, on which the date of the year 1718 was still visible. The inhabitants of that part directed my attention to some holes supposed to have been pierced by the arrows of the Tschukschens, who sometimes used to attack the Russian establishments.

On the 17th we made another effort to put to sea, but had

\* This jassak is an impost in kind, consisting mostly of furs, which is every year demanded of the tributary nations in Siberia.

not proceeded 50 versts before an indescribably thick mist impeded our advance, and the ice perpetually accumulating, so as to heighten our danger every moment, we came to the unanimous resolution of returning to the Kolyma, and directed our course round the rock of Baranow. This rock is formed by many contiguous mountains projecting with a cape into the sea, which describes a semicircle. On its summit there are many stone pillars, some resembling the rubbish of a ruined fortress, others bearing the appearance of remains of buildings falling to decay, and of the images of men. While lying at anchor, we could distinguish on one of the lower mountains a pillar of this description, which seemed to represent two women in conversation, and holding a child between them. These pillars are in fact nothing but solid stone, from which the external incrustation of marl has fallen off. Besides a number of sturgeon and sea-calves, we saw a whale here, an incontrovertible proof, that the Frozen Ocean has some connection with another sea to the north or the east.

In the afternoon of the 22d we waited at anchor for the Pallas, in a little nook of the shore on the north side of the rock, where two projecting cliffs sheltered us against the winds and floating masses of ice.

The shore in the middle of this nook, which is steep and sandy, is enclosed on both sides by lofty mountains, from which issue many springs of pure water. Although this little vale afforded nothing more remarkable than a weed, with some unusually beautiful blossoms, yet the prospect of vegetable nature, even in her humblest attire, was truly gratifying to us, after having witnessed nothing but dreary objects for such a length of time.

At the brink of one spring, I discovered, at no great distance from each other, two subterraneous jurts in a ruinous state. On turning over the earth, they appeared to be round, and about three yards in circumference. In the interior we found the bones of reindeer and sea-calves, as also several earthen potsherds, and two stone knives with three edges, one of which was crooked and sharp, the other two straight and blunt. One of these knives I gave to the captain, and the other to the doctor. The Kosaks of Kolymsk informed us, that the former inhabitants of this place, who must have been unquestionably Tschukschians, called themselves Schalags, and on the settlement of the Russians here, moved farther to the west, and took up their residence near the northern cape, from that time denominated Schalagian.

Of the wood, which is driven in great quantities to this shore, we raised a cross, and specified on it the day and year of its erection. During the time of our lying at anchor here, the ice

perpetually drifted towards the east. The tide along the shore changed every day, or every other day, and the water sometimes gained the height of a foot, but never exceeded it, and even that occurred without any regularity; which circumstance has given rise to the suggestion, that this sea cannot be of great extent, being bounded at no great distance by land to the north, and connected by a straight to the Northern Ocean. It is otherwise not easy to account for this deviation from the universal law of nature with regard to great seas.

The opinion that the continent lay in a northerly direction, was confirmed by a high south wind, on the 22d of June, which continued with the greatest violence for 48 hours. Had there then been no hinderance, the ice must have been necessarily driven very far towards the north: instead of which, we found the sea next morning quite covered. Captain Schmalew also informed me, that the Tschukschians had spoken to him of a continent towards that point, not very distant from the Schlagian promontory, which was inhabited; and at the same time they observed, that the Schlagian Tschukschians used in winter to cross over to that place in a day.

The wind becoming favourable on the 26th of July, we weighed anchor, and bore away, with a gentle breeze, to the mouth of the Kolyma, and from thence to the e-Kolymsk, where we landed in safety; and thus terminated our excursion in the Frozen Ocean, which was no less fatiguing than dangerous.

From the foregoing it is manifest, that any farther trial to cross the Frozen Ocean would have been fruitless. Mr. Billings therefore assembled the officers to consult on the easiest and least dangerous method of encompassing, either by land or sea, the Ichlagian and Tschukotian promontory. The way by the mouth of the Kolyma had already been proved by experience to be blocked up by the immense masses of ice. For although the sea has been found by preceding navigators to be sometimes clear, yet none of these enterprising mariners have succeeded in opening the passage to the Eastern Ocean, except Deshnew, a single Kosak, who made the experiment in 1648, in a barge. Great doubts, however, are entertained of his veracity, and it is strongly suspected, that Deshnew collected most of his information respecting those shores from the Tschukschians, and supplied the rest by his own invention.

But granting the truth of Deshnew's narrations, it only evinces that Nature may once in a hundred years deviate from her established rule. The Kosaks here assured us, that such quantities of ice are always in the sea as to prevent any one from going even out of the river, and they considered this summer as having been unusually favourable for such an enterprise. But if we judge from

the trifling warmth of this summer, and the faint influence of the sun's rays through the impenetrable mists, we may fairly conclude, that not half the ice is thawed in summer, which is formed in winter; not to mention, that the sea is the common reservoir for the ice of the surrounding rivers. From whence it follows, that the difference in the quantity of ice is not so much to be ascribed to any variations of the summer heat, as to the direction of the winds for impeding or assisting its passage out of the ocean.

One measure we had still in reserve, namely, that of going round the abovementioned cape in sledges; but this was rejected as impracticable, from the circumstance of not being able to supply the dogs with provisions for above 200 versts. At length we came to the resolution of giving up all farther thoughts on the matter until after our intended examination of the Eastern Ocean. For which purpose, Solnik Kobelew, and the interpreter Daurkin, were ordered to go to Inshiginsk, and from thence to accompany the Tschukschians, who frequent that place every year for the purposes of trade, to Tsukotskoi-nos, in order to apprise the various inhabitants of our arrival, and wait for us in Behring's straits. The cold in this climate now commencing, we found it prudent to lose no time in making arrangements for our departure to Sredne-Kolymsk by water. Our vessels being accordingly unrigged, and consigned to the care of the governor, Martianow, the commander, with part of the crew, took boats and were rowed up the river, leaving me with the remainder behind to store the Jassuchna with provisions for four months. The day after the captain's departure, a barge arrived at Nishne-Kolymsk with the necessary stores: this vessel I judged would be better for towing along the shoals of the coast than the large vessel; and packing therefore all my baggage in it, divided the crew into two parties, which were alternately to relieve each other. Thus disposed, we reached Sredne-Kolymsk in twenty days. The only circumstance worthy of note which occurred in this interval, was an aerial combat betwixt an eagle and two hawks, which was both an extraordinary and interesting spectacle. The two hawks first took a sweep in the air above the eagle; one of them then darted down with the intent of commencing the attack, but intimidated by the display of the eagle's talons, turned off, and shot past him. The other in the mean time seized the moment in which the eagle was off his guard to give him a blow so violent that we distinctly heard the sound of it; which was repeated by the first hawk, before the eagle could place himself in a state of defence. Feeling his inferiority against two such powerful enemies, the eagle retired



from the contest, and descending in haste, was closely pursued by the two hawks until he had alighted.

The roads to Jakutsk being impassable on our arrival at Sredne-Kolymsk, we were obliged to wait for the frost, which sets in in September. On the 18th the Kolyma was covered with ice, and the inhabitants were engaged in their usual occupation of catching fish at the different openings they had made.

## CHAP. VI.

JOURNEY FROM SREDNE-KOLYMSK TO JAKUTSK.—A  
MAMMOTH'S BONE FOUND ON THE SHORE OF THE  
FROZEN OCEAN.—LUDICROUS INCIDENT WITH THE  
DOCTOR.—ARRIVAL AT JAKUTSK, AND DEPARTURE  
FROM THENCE FOR THE MAIA.—BREAKING UP OF  
THE ICE IN THE RIVER ALDAN.—FLOATING ISLAND  
AND EXTRAORDINARY FLOOD.—RETURN TO JAKUTSK.

ON the 24th a part of the expedition was dispatched under the direction of Mr. Bakow, the master, whom I followed on horseback four days after, in company with the doctor, first surgeon, and mechanic. For the first 90 versts to Alascisk, on the river Aleseja, we had to pass through woody marshy countries, and a number of lakes, three of which were not less than twenty versts in extent.

Alascisk consists of a chapel and two isbens, inhabited by a merchant and a citizen, with their families. The neatness of their little dwellings, and the hospitable reception we experienced from them both, were matter of surprise and gratification for us. We had not been prepared for meeting happiness, content, and good humour in this rugged and barren clime. But nature has amply supplied their want of corn, by fish, game, and cattle. The lakes abound with geese, ducks, and other species of wild fowl in summer, and in winter their habitations are encompassed by immense flocks of woodcocks. The fish of this part are reckoned of superior quality, and the tchirens from the lake, are sent to all fortresses on the Kolyma, on account of their quality for keeping.

The river Alascja flows very close by this hamlet, and falls immediately into the Frozen Ocean. The inhabitants informed us, that about a hundred versts distance from hence, the river had washed against its sandy bank the skeleton of a great animal, of which only one half was visible. It was apparently about the height of an elephant, in an upright direction, and in an entire state, still retaining its skin, and in some places, its hair. Mr. Merk had a strong desire to see this creature, but

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was prevented from gratifying his wish by a heavy fall of snow that had just taken place, combined with the immense circuit it would have occasioned in our journey. The circumstance of a whole animal having been found on the coast of the Frozen Ocean, was a great curiosity, as we had hitherto never heard of any thing more than single bones and tusks, which are frequently collected, and form a branch of commerce for a company of Russian merchants, who call them by the name of mammons knocken (mammoth bones). They are found in the greatest quantities on the Laccherishli Islands in the Frozen Ocean, opposite to the mouth of the river Jana. A natural question here arises, which is entitled to consideration. How could these animals have inhabited a dreary climate, so ill suited to them, where the cold is intense?—Some are of opinion, that they are not natives of this place, having been brought hither from warmer countries in early ages for military purposes; others conjecture, that they were transported hither in the universal deluge: but both suppositions appear to me untenable. Such marshy, unfruitful, and mountainous countries as these are, could never have been witness to any warfare in which elephants or the like unwieldy animals were used; since the horses here, which are inured to every species of fatigue, are frequently unequal to the task of travelling in these uneven and slippery tracks. Nor is it more probable, that any deluge (particularly at the very remote period of the universal deluge), could have carried animals with it to the distance of 5000 versts, which now separate this country from a warmer climate. For my own part, I am rather inclined to attribute this phenomenon to some extraordinary change in the globe, and suppose, that the elements in this quarter of the world were once more congenial to those animals than at present; and with this suggestion I shall leave the matter to the decision of the naturalist.

The road as far as Saschiwersk led us through a succession of woods, marshes, and lakes; two of which latter were nearly thirty versts in circumference. These lakes are in general all connected together by brooks and rivulets which run into the Alaseja.

On the 10th of October, the cold became severe in the extreme, insomuch, that an old man in our company of above sixty, master of our baidars, who had not our youth and vigour of constitution, to shield him from the inclemency of the weather, sunk into despair, and resolved on meeting his fate in the woods. With the utmost difficulty I persuaded him to go on a little way farther, promising to leave him behind at the next habitation we came to. We very fortunately reached two isbens the next day,

at the mouth of the river Ujandina, inhabited by two citizens, with whom I left our old man, to his no small satisfaction.

The town of Saschiwersk, lying on the right bank of the Indigerka, is newly erected, having formerly been nothing more than a commissariat. Every thing therefore at present is in its infancy; but it has already its court of judicature and the necessary appurtenances. It consists of a church, and thirty wooden houses. The marshy hilly country in which it is situated, the barrenness of the soil, and the want of every necessary, render it a gloomy residence; and when to this is added the exorbitant price of provisions, it becomes insupportable. Whatever is not procured from Jakutsk at the proper season, is not to be had for money.

We continued three days at Saschiwersk, and were entertained by the counsellor Sampsonow, bailiff of the town, and by judge Banner, with so much cordiality and kindness, that I should charge myself with ingratitude were I to pass it over in silence. They furnished us likewise with provisions by the way, which we could not have procured at any rate without their aid, a favour not to be estimated by any pecuniary calculation.

Mr. Banner informed us, that on a mountain situated opposite to the town on the other side the river, there were fine crystals. At the desire of Mr. Merk, therefore, we repaired thither, but found only some small ones, owing probably to the quantity of snow that had fallen. He shewed us, however, a remarkable breach in the declivity of this steep mountain. Immediately after our return from thence, Mr. Billings made his appearance at Saschiwersk, which retarded our departure for another day.

We set off on the 22d of October, and for the first days were continually crossing the brooks which run into the Indigerka, or passing over hilly countries covered with small larch-trees. On the 5th day, at the distance of 120 versts from the town, we got among lofty open mountains, running in a chain from south-east to north-west, and separating the rivers that fall into the Indigerka from those that flow into the Jana.

We now followed the course of the river Russkaja Rossocha, upwards, which intersects these lofty mountains, and is bordered on both sides by steep crags that have the appearance of walls—a majestic spectacle! the banks of the river seeming to be one perpetual street of lofty buildings.

The passage along this river is, however, never perfectly safe. In winter, violent storms or whirlwinds sometimes bury the travellers in snow; and in summer they are in danger of being drowned by a sudden swell of the water. These mountains are inhabited by foxes and wild sheep in abundance. One which we had the good fortune to kill, afforded us many pleasant meals: its flesh was peculiarly tender and delicious, or at least seemed so

to us. Twenty-five versts farther carried us beyond these mountains, over a rivulet to the tolerably large river Dogdo, down which we proceeded for four versts, almost to its junction with another river, from whence it derives the name of Tostach, and soon after falls into the Jana. Our road now led us along the Jana itself.

On the 30th we spent the first night, since our departure from the town, in a warm Jakutish jurk, after having passed eight very cold nights in the wood. Captain Billings overtook us this night.

On the 3d of November we stopped at the jurts of Barizlech, the last dwelling-place on our road, from whence we had to travel 400 versts as far as the river Aldan, on the same horses, through uninhabited tracks. We of course took fresh horses here.

Such a distant journey in weather that threatened to be daily more severe, was no pleasant reflection. The prospect of what we had still to endure, with which our former sufferings bore no comparison, inspired the most courageous of us with a species of fear. We proceeded towards the source of the Jana betwixt open mountains, where the cold received a double edge, from the strong and piercing current of wind which they occasioned. Our treble clothing of skins was of little avail against the cutting air, which seemed to congeal one's whole mass of blood. We were every half hour obliged to alight, and relax our stiffened limbs by walking. Our faces were perfectly disfigured by the cold, and we should probably have lost our noses and cheeks, if we had not hit upon the idea of making ourselves masks of bog, which were very serviceable, but at the same time no less inconvenient; for they stiffened and wadded us very seriously. Our breath was likewise instantly turned to ice, from the confinement. In this half ludicrous and half terrible disguise, we had more the appearance of scarecrows, than of human beings.

We chose the most shady places possible for our nocturnal stay, not forgetting, however, fodder for the horses, and dry wood for fuel. Our fire served both for warming us, and dressing our food. We never changed our clothes, and after supper, which was our principal meal in the day, we laid ourselves down in the cavities of snow. Happily for us all, not one of the party was assailed by illness; for in that dreadful extremity, death must have been the inevitable consequence.

In ten days we arrived at the source of the river Jana, and at an unusually lofty, open mountain, called the *Wercho-Janish*, or Upper Janish, from whence the rivers issue that run into the Frozen Ocean and the Aldan. The ascent of this mountain was much more gradual than its descent, which presented to our

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view a hideously steep precipice that made us giddy, and obliged us to crawl on our hands and feet when we could not take an oblique direction.

Proceeding along the river Tukan, betwixt lofty mountains, we soon were cheered with the sight of poplars and larches. A few rods farther the scene was still more agreeably diversified by the evergreen of pines and firs, a rarity in nature which we had not enjoyed since our departure from Jakutsk; for neither of these trees is to be found from the Vercho-Janish chain of mountains to an immense extent northward, and from Jakutsk to Ochotsk eastward.

On the 19th of November we reached the river Aldan, and the first Jakutish jurts. On our entrance, a ludicrous scene ensued, which was not so perfectly agreeable to the poor doctor, who felt himself violently assailed in the face, without being able to discover through his mask the quarter from whence he received the assault. From the shrieks, he doubtless conjectured it to be a female, as it in reality was, who, in a species of frenzy, had flown at the doctor to tear off his mask. After we had forcibly released him from her rude embrace, she continued screaming until she fell exhausted and senseless to the ground. The Jakuts regard such fits as a species of disorder attributable to terror, to which their women, particularly those in years, are very much subject. The patients in this case, have the name of miratschkens. Miserable as our jurt was we enjoyed a night of sweet repose; under other circumstances, the stench alone from the cattle would have rendered this place insupportable, but now a warm shelter compensated for the want of every other convenience.

The distance from hence to Jakutsk was 150 versts; a comparatively agreeable journey for us, with a constant change of horses, and succession of villages. We accordingly reached our point of destination on the 24th, and experienced that heartfelt satisfaction at the termination of our toilsome and painful journey, which is conceivable by none who have not endured similar fatigues.

Mr. Billings had arrived there some days earlier, and Mr. Behring had been occupied, during the summer, with dispatching the materials for Ochotsk. They had prepared us warm rooms, which were altogether commodious, though without any elegance. The reception we met with from the inhabitants, and the commander Marklowski, contributed no less to render our stay in this city perfectly agreeable.

There was at this time in Jakutsk, an English traveller of the name of Ledyard, whose eccentric conduct excited considerable attention. He was known to Mr. Billings, from having

been with him in the capacity of a corporal in Captain Cook's last voyage; after which he is said to have been a colonel in the army of the United States during the war. He had formed the design of going round the world in the literal sense of the word, and for that purpose went to Petersburg, in order to begin with Russia; and on reaching the eastern boundaries of Asia, to wait for some vessel in which he might pass over to the English settlements. The absurdity of this enterprize is sufficiently manifest, from the circumstance of his intending to travel through a civilized country, without money or letters of recommendation; and afterwards to cross those boundless tracks on foot, thinly clad in winter, through which we had laboured with infinite difficulty on horseback, and in the warmest clothing. Where would he have found an opportunity of being conveyed over the water to the place of his destination? and supposing that he could have ingratiated himself with the savages, yet what endless mountains and deserts lie between Russia and the single inhabited coast in those regions! He was relieved from the necessity of walking as far as Jakutsk, by the civility of the Russian travellers, whom he met on the road, who carried him from place to place without any recompence. Here he met with still greater kindness, being admitted to the house and table of the commander, and receiving as a present from him a warm dress, more fitted for the cold season, which had commenced; and yet, the only return which Mr. Ledyard made for this extraordinary hospitality, was to calumniate and abuse every one; and finally challenge his benefactor for remonstrating with him on the impropriety of his behaviour. The arrival of Mr. Billings, at this moment, prevented any farther serious consequences from this affair, by his taking this man with him to Irkutsk on his departure for that place. The commander wrote a letter of accusation against him to the governor-general, in consequence of which he was taken into custody on his arrival at Irkutsk, and sent from thence to St. Petersburg, on the charge of disorderly conduct.

In Mr. Billings's absence I was commissioned to set off to the mouth of the river Maia, for the purpose of building there 50 canoes. I therefore first dispatched the steersman with some of the people, and followed him as soon as I had collected the building materials. After crossing the Lena, we passed through woods, meadows, and lakes, in the course of which we occasionally met with scattered jurts; these were, however, quickly succeeded by bare mountainous countries.

On the fourth day of our journey, about 169 versts distance from Jakutsk, we came to the slobode Amginsk, which was remarkable for having been formerly the seat of the wogewodship.

or bailiwick of Aldan. The buildings of this slobode consist of a church, and 20 farm-houses, belonging to Russian settlers. As winter grain does not thrive here, the peasants only sow summer corn, which answers very well. A tchetwerick, or 360 pounds of barley, formerly cost only eight kopecks; but the neglected state of agriculture at present, has more than trebled this price. The peasants, allured by the easy lives of the Jakuts, attend to the breeding of cattle, in preference to the culture of corn; and attach themselves daily more and more to their barbarous neighbours, whose manners and even language they have adopted. Four versts from this slobode, is a village of 15 jurts, inhabited by Russian peasants, who have laid aside their native language entirely. Five versts from the slobode, we crossed the Amga, flowing from the mountains on the right side, which it had washed away, and converted into huge precipices. On the left, were spacious fields, interspersed with little woods, or almost imperceptible ascents.

From the Amga, the road led by a little brook upwards, betwixt the mountains, on the plains of which we proceeded 15 versts to the river Notora, which, winding through a succession of fields, groves, marshes, and lakes, is finally lost in the Aldan. Descending by this river, to the distance of 28 versts, we turned off to the right, and proceeded by an insignificant chain of mountains, up to the source of the river Mukua, which falls through a number of lakes and marshes into the Aldan. We pursued the course of this river downwards, which ran betwixt mountains that gradually diminished as they approached the Aldan, until they terminated in simple rising ground. The mountains were all covered with larches.

On the 28th I reached the haven of Elssmaia, where magazines and two barracks had been erected in the former expedition of commodore Behring. They stand on the left bank of the Aldan, opposite to the mouth of the river Maia, that flows into the former on the other side.

The distance from Jakutsk to here, is reckoned to be 360 versts. The northern latitude of this place, according to my observation, is  $60^{\circ} 17'$ , and the declination of the compass,  $2^{\circ}$  westward. Agreeably to my instructions, I begun immediately to collect wood for our canoes, and found a sufficient quantity of good materials on the banks of the Aldan. I preferred, however, the firs to the larches, on every ground.

The water commenced to rise on the 1st of May, and was 11 feet on the 9th, when the ice on the river Maia broke, and occasioned also a fracture in that of the Aldan, towards the lower part.

The swell increasing on the 13th to twelve feet, the whole of

the Aldan was released from its confinement. The ice drifted with extraordinary impetuosity, and in immense quantities, for three days; and in this universal agitation of ice and water, we perceived a floating island, about 70 fathoms in circumference, bearing with it a quantity of little birch shrubs, larch under-wood, and cut wood; a considerable number of little birds, hopping from tree to tree, increased the singularity of the scene. As this island passed very near our shore, we could distinguish very clearly that it consisted of turf, and probably of a fen torn away by the water, which, in its present congealed state, had no effect in dissolving it.

The rise of the water continued till the 17th, and concealed every thing for an immense distance from the eye, that was not above 38 feet in height. For seventy versts up the Aldan, by the way to Udskoi, the inundation was dreadful in the extreme, as we learned from a man who had been to Udskoi, for Captain Fomin. He assured us, that some places, 60 feet high, were buried under water.

The Jakuts, and all in that road, were material sufferers by this deluge; more than three hundred pack-horses, with a number of other things, being lost in the water. Captain Fomin, of the navy, who was just come from Petersburg with a special commission, experienced the loss of all his provisions.

On the fall of the water, we caught pike and sturgeon of different kinds with nets; perch and plotwen (*Cyprinus idus*) with the rod. The latter is a very scaly fish, weighing a pound at the utmost. Its head and fins are very large; its cirri close by its eyes, which have a broad rim round them; its whole body is covered with thick scales; its back round and dark green, but the sides and belly silver-coloured. Its pectoral, dorsal, and anal fins are dark; its lateral ones purple. It has an extraordinary quantity of spine, is found in pure sweet waters, and is very prolific and cheap.

On the 28th of May, the canoes being finished, Mr. Fomin proceeded up the Maia with two of them. A week after, Captain Behring came with his people to me, and taking the rest of the canoes, went up the river, in order to convey to Judomskoi-Krest the baggage which had been left the preceding year on the bank of the Judoma. Having consigned the crew, hitherto under my orders, to Mr. Behring, I returned to Jakutsk, in order to observe the state of the roads. I found them totally ruined by the rain and floods; and all the bridges which had been erected over the smaller rivers carried away.

I arrived on the 12th of June at Jakutsk, three days later than our commander. I informed him of the state of the roads, and pointed out to him the repairs which I conceived necessary.



As our baggage was already at Jakutsk, we hastened to send the order of the magistrate to the Jakutish Kuasks on the Amga, to have the roads mended without delay.

### CHAP. VII.

TRANSPORT OF THE BAGGAGE TO JUDOMSKOI-KREST.—  
DIFFICULTIES ON THE PASSAGE.—RIVER-TUNGUSIANS.  
—GLUTTONY OF THE JAKUTS.—ARRIVAL AT OCHOTSK.

THE conveyance of the baggage to Judomskoi-krest being confided to me, I proceeded on the 14th of July to Usmaïash Pristan, where I found a vast quantity of stores, which had been transported upon telegas, or four-wheeled carriages, drawn by oxen. The next day I disposed all the luggage in 17 canoes, and attended them myself down the river. Each canoe held 70 poods, and the whole burthen, of which our ordnance and anchors formed the principal part, amounted to 1300 poods. Each canoe drew three feet of water, and the whole was dragged along by 120 men, who were principally Jakuts, hired for the purpose.

We set off at midnight from the above-mentioned place, and crossing the Aldan, came to the mouth of the Maia, which is 300 fathoms broad, and nine feet deep in the middle. But we soon found places where the river in its whole breadth is not above five feet deep. The water was then likewise two foot higher than ordinary.

At first the stream was so gentle as to admit of our rowing, but the tide gradually gained strength as we went on farther. Both sides were covered with small larch-trees, and occasionally with shrubs of different kinds. The right bank is so low, as to be continually overflowed; but the left bank is in some parts 20, in others 60 and 80 toises high. It is also very rocky in many places. Farther on, the mountains of the left bank gradually decline so low as to leave the shore under water; while on the other hand, the right side begins to rise, and is continued by a rocky declivity for some distance.

Here we found some River-Tungusians, so called from their having no reindeer, and paddling incessantly about the river in their birch canoes, which serve at the same time for their habitations. These canoes are very small, and much in use among the Jakuts, in lakes and rivers. They are composed of twigs, plaited round long poles, which answer the purpose of ribs, and are altogether covered with the bark of the birch tree. The cavities are filled up with a sort of cement, which the Jakuts extract from boiled cream. These people, who live entirely on

fish, are denominated Tungusians, but are in reality of Jakutish extraction, and very rarely speak Tungusian. I took one of them as my guide, to tell me the names of every river, cliff, or island we might pass.

After we had gone 36 versts, on our way to the Judoma, the left shore began again to be mountainous, and we found by the river Ilshikit, a rocky declivity called Elslank, about 60 toises in height; where we discovered for the first time lofty firs among the larch trees.

On the 9th day of our journey, we turned to the left from the river Maia up the Judoma, the breadth of which was 150 fathoms at the mouth. At a short distance from hence, it is only three feet deep, and has a very gravelly bottom. The stream is at the same time so strong, that thirty men could not tow a single canoe along, without the greatest difficulty. Such places in rivers have the name of Schewera.

We were obliged to stop about a verst and a half from the mouth of the river, to repair a canoe which had struck upon a stone. We kept close to the right shore, which was very long, and covered with all sorts of bushes, among which we found the currant and white vine; the latter beautiful shrub has the name of dikuschac in Siberia. The opposite shore had a large rock in one place, called Sourdschag.

Twenty-four versts farther, we had to drag up a schewer with still greater difficulty. The tow to one of the canoes breaking, and unfortunately just above the place where the girdle of a Jakut was tied, he was thrown by a jerk into the water, out of the reach of all assistance.

We experienced the inconvenience of shallow water for some time after, and as soon as this evil was removed, it was succeeded by one equally serious, namely, the sickness of our men. The greater part of our labourers had such bad feet, that I almost despaired of reaching Judomskoi-krest this summer. Their disorder consisted in a swelling of the toes and heels, and a chapping of the hands. A regular application of tar and grease was found to be of immediate efficacy. The principal cause of this evil, was the sharpness of the water in the Judoma, in which the men were obliged to be continually wading. I observed, however, that the Kosaks were not so seriously affected in this way, as the Jakuts, and particularly those who had consumed their portion of fat and butter, and were now confined to their burduck.

This failure in the stock of their provisions originated with the intemperance of the Jakuts, who seized every opportunity that offered for devouring their allowance as long as it lasted. We no sooner stopped to rest, or spend the night, than they had

their kettle on the fire, and did not leave it until we pursued our journey. They spent the intervals of rest in eating; and practised petty thefts on each other, when their own stock was exhausted. Thus they passed the whole night without sleep, and were drowsy throughout the next day.

It might naturally be expected, for such extraordinary voracity to be attended with ill consequences; and yet this was by no means the case. What they made a practice of devouring at one meal, would have killed almost any other person; but on them it had no visible effect. Their stomachs seemed to be of the ostrich kind; well fitted for the task of perpetual digestion.

One of our men had an allowance of four poods of butter and fat, (above 100 English pounds) and two poods of rye-flour, an ample provision for the heartiest labourer; and yet a fortnight had not elapsed, before he began to complain of having nothing to eat. I could not credit what he said, until the other Jakuts informed me, to my infinite astonishment, that this man occasionally consumed at home, in the space of 24 hours, the hind-quarter of a large ox, and half a pood of fat, with a proportionate quantity of melted butter for his drink. But the appearance of the man did not bear them out in their assertions; for he was small of stature, and very meagre. Having therefore a mind to make the trial of his gormandizing powers, I had a thick porridge of rice boiled with three pounds of butter, weighing together 28 pounds. Although the glutton had already breakfasted, yet he sat down with great eagerness, and, to my perfect amazement, consumed the whole without stirring from the spot. The extension of his stomach betrayed indeed a more than ordinary fullness, but otherwise, he discovered not the slightest symptom of having been injured or molested by it; and would in fact have been prepared for the renewal of his gluttony the next day. I advised our comorant, however, to practise a little forbearance in future, and portion out the allowance given him for the time appointed. He now abstained from making himself any more porridge, and mixing his flour alone with cold water, ate it in that raw state, that he might be the sooner satisfied.

The banks of the river continued, as before, to be partly so low as to admit the water over them, and partly mountainous, according as the river itself wound through a high or low country. The wood consisted principally of larches, with here and there of poplars, alders, and others. For the distance of 250 versts both the banks were enclosed by, or ran parallel with mountains, from whence this track is called *Stscheki*, (cheeks). On the 7th of August the water rose within 24 hours so high as to break its bounds, and by the violence of its stream, brought a quantity of wood into the river. I should conclude from this

extraordinary swell, that there must have been very heavy rains at the source of the river. We were compelled to stay three days in one place, to wait for the fall of the water. I fixed the latitude of this place at  $59^{\circ} 29'$ .

On the 29th of August we were obliged to stem the tide below a waterfall, which extended two fathoms, and in which both banks were filled with pointed projecting stones. It cost us no small trouble to drag our canoes against the stream betwixt these stones. In the middle of the river, we could see nothing but foaming and dashing waves, instead of stones. Two versts farther brought us to the proper cascade, which falls perpendicularly from a height of six feet. It does not extend over the whole bed of the river, but only from the right shore to a little stony island in the middle. But although there was no waterfall on the left side, where we were, yet the stream was so powerful, and the water so shallow, that we were under the necessity of lightening our canoes. Beyond this cascade the river was clothed with islands, and after running, as it were, in a channel betwixt mountains, it was divided into a number of arms. The number of scheweras and dry places now increasing, we could not tow the canoes any longer, but were obliged to push them forward with our hands. To complete our misfortune, the cold weather now commenced. The morning frosts chilled the water to such a degree, that no one could endure to stand in it for any length of time. The people, particularly the Jakuts, grew impatient and rebellious, obstinately refusing to labour any more. Finding that neither threats nor intreaties were of any avail, I was obliged to try the power of example. I waded therefore myself for 25 versts through the water, and thus succeeded in bringing us out of this difficulty.

All these arms are again united at the distance of seven versts from Judomskoi-krest. Here my steersman had the misfortune of oversetting one of the canoes in towing round the point of an island, by which a part of the lading was lost.

On the 27th we arrived safe at our journey's end, and unloading our stores immediately into the magazines, I dismissed the labouring Jakuts, that they might return home in the empty canoes. The latitude of this place, according to my observation, was  $59^{\circ} 53'$ .

As there were no horses here for conveying our goods, I was obliged to leave them in the care of a Kosak, and proceed, with the few horses we could get, towards Ochotsk.

On the 31st of October, we passed two isbens, and magazines, called the faehrbaute (ferry-dock) of Elrak, which were erected on the former expedition of Behring; for here the ferries and canoes were built that served for carrying the provisions

down the river Elrak, which were afterwards transported to Ochotsk in larger craft. But now the water in the Elrak was much too shallow to admit of any navigation with the smallest canoes, even when empty. Nor would it ever be practicable at any other time than in the spring, when there is an extraordinary swell of the water. All the rivers in these parts issue from the mountains, and are in connection with springs and rivulets that have also the same source, by which they receive extraordinary supplies of water, that are with equal rapidity carried off through other channels.

Keeping along the right bank of the river Elrak, we continually observed poplars, birches, and every sort of shrub intermixed with the larches, which cover its islands and shores. The former serve as a haunt for the woodcocks, which feast here, in great numbers, on the berries in this season, which render their flesh very delicious. In the spring they lose their fine flavour, and contract both a taste and smell from the buds of the larches, which is their only nutriment.

Eighty versts from the ferry-docks, we had to cross the Elrak, and turn off to the left over hills which brought us to the Jakutish place called Meta, on the Ochota. The remaining part of our journey, which was 70 versts, we went in birch canoes down the Ochota, with an immensely rapid stream, in six hours.

Mr. Billings staid but ten days at Ochosk, from whence he returned to Jakutsk. Our luggage, which had been left at Judomskoi-krest, was brought here in nartes, drawn by dogs, and we spent the remainder of the winter in ship-building.

At the commencement of spring, I surveyed the mouths of the Ochota and Kuchtui, and sketched a plan of the city Ochotsk, the northern latitude of which I fixed at  $59^{\circ} 18'$ . The easterly inclination of the compass was  $0^{\circ} 40'$ .

## CHAP. VIII.

VOYAGE FROM OCHOTSK TO THE RIVER ULKAN.—DREADFUL STORM.—THE ISLAND OF NANSEKAN.—THE BAY OF ST. THEODOR.—PASSAGE FROM ULKAN TO ALDOMA.—OBSERVATIONS ON THE ESTABLISHMENT OF A HARBOUR ON THE ALDOMA.—ON THE RIVER AMUR.—RETURN TO OCHOTSK BY THE ULKAN.

**O**N the return of spring I proceeded, agreeably to my commission, to survey the south-western shore of the Ochota, as far as the river Ulkan. My wooden baidar, which was about 25 feet in length, was finished in April, but the ice prevented me

from setting out before the 31st of May. The crew consisted of ten men, and two subalterns.

The first day we had both wind and tide against us. The following day we passed the river Ullrak, which we could not enter on account of the boisterous weather, and rapidity of the stream. Not far beyond the Ullrak, two rivers of no remarkable magnitude, namely, the Tschitschikonka and the Chomot, fall into the sea. They both take their source from the Ullrakish mountains, at the distance of 30 versts.

We were prevented by the storm for two days, from approaching the shore. On the third we were carried with the stream, to the entrance of the united brooks Mariakanka and Andytsha, which flow about 40 versts from the adjacent mountains. Between the Mariakanka and the Chomot, is a lake ten versts long and one and a half broad, running in a parallel line with the sea.

Notwithstanding the violence of the stream with which we had to contend, we managed to enter the river Ulga the next morning, which is about 75 fathoms broad. We observed no sand-banks at its entrance, and no shoals where the water was not two feet in depth. On the right side of the river is a bay, which extends from thence seven versts close by the sea, and is about half a verst broad. The left bank runs near the brook Elgan, which occupies nearly 150 versts in extent of country, and flows also for seven versts close by the sea. It receives the addition of several other smaller brooks.

The river Ulga springs from the same mountain as separates the Ulkan from the Maia. Two hundred versts from its mouth, it has a cataract of such an extraordinary height and steepness, as to prevent any canoe from passing by it. According to the assertion of the Tungusians, this river affords a great quantity of timber, at a considerable distance higher up.

We were detained here a whole day by bad weather, in which we had a succession of rain and snow. The surrounding mountains were entirely covered with the latter.

The shore, from Ochotsk to this place, is remarkably low; but rises at the distance of 15 versts by a chain of mountains, that gradually approach the river as you proceed farther, and form several rocky declivities. In this country we found three jurts of Reindeer Tungusians, who were settled here, for the purpose of catching bears, which are allured by the sea-weed that is thrown up, to frequent this shore in vast herds. They are very quiet, and even afraid of men, who kill them without any difficulty.

The next day we passed the river Guntshi, which is eleven fathoms broad at its mouth, and has its source in the southwestern chain of mountains. The two rivers, Nandakau and

Elba, flow into it, the one from the right, and the other from the left. Among the stupendous crags which extend along this river was one called Chanandga, which projected at the height of 100 fathoms into the water, and attracted our attention from the number of sea-lions which were lying on the stones under the declivity. The summit of this rock is a haunt for birds of various species, as the tschaika or mew, the urila or *Pelaeus ir lacens*, ara, alca torda or penguin, toporka or *Alca arctica*, and the kamenuschka, *Anas histrionica*, or fendluck.

Near this promontory we were overtaken by a violent storm, which dashed up the waves mountains high in its violent contention with the opposing tide, and threatened every moment to swallow up our little bark; but the wind being favourable, the baidar sailed with such immense rapidity, as to escape every overwhelming billow, and brought us in a short time to a less dangerous spot: but on approaching the shore, betwixt the rocky precipices, our baidar received a violent shock, by which it was thrown on its side, and many of us compelled to wade through the water to the shore for our own safety.

While we were drying our clothes and provisions, the storm subsided, and enabled us to pursue our course, which led us <sup>su</sup>ast the steep mountain Enkan, that projects into the sea. At its extremity there was a stone pillar, about seven fathoms distant, which was nearly the height of the mountain itself, and had the appearance of a tower. Seven versts beyond this mountain the brook Kekra falls into the sea, after having received two other rivulets.

Shortly after we discovered on a small island, opposite to the cliff Odshan, four jurts of Reindeer Tungusians, who are settled here for the purpose of hunting bears on the sea-shore, and wild sheep on the mountains. In the summer they collect vast quantities of eggs from the sea-birds that frequent this coast, and nest in the hollows of the rock.

The next day we reached the river Ulkan, which was appointed by Captain Billings as our place of rendezvous. The breadth of this river at its mouth is nine fathoms, and its depth at low water, three feet; but farther on, only a foot and a half. The latitude of this place is  $57^{\circ} 0'$ , the elevation of the tide, six or seven feet, and at the new moon, nine or ten feet.

I was induced, from the short distance of the river Aldoma, and from what I had heard of it, to embrace this moment of leisure to pay it a visit, and accordingly set off on the 13th of June. We arrived towards noon at the Aldonish bay, which takes its name from the above river, with which it combines towards the west. The greater part of this bay is dry at low water, and the rest is not above  $5\frac{1}{2}$  fathoms.

The Aldoma has two sources, namely on the Jablonish mountains, and on those from whence the Ulkan springs. At its mouth we found three jurts of Tungusians, who subsist alone on fish, which are similar to those at Ochotsk. The Reindeer Tungusians come also here to fish at the close of June.

Although they assured me that the banks of the Aldoma produced no timber, yet I observed among the floating wood some pieces four yards in thickness, and twelve or fourteen in length.

During my stay in the Uldoma, I had the unexpected pleasure of meeting with Mr. Fomin, who was just come from the Uda. Whoever has experienced the agreeable surprise of meeting a friend or acquaintance in a savage and desert quarter of the globe, will fully enter into our feelings on this occasion.

Mr. Fomin was commissioned to plan a harbour on the Uda, but its entrance being too shallow, and otherwise inconvenient for the reception of vessels, he had surveyed the whole of the Uda as far as the Chinese frontiers to the east, and the Aldoma to the north-east, but found nothing worthy of his attention, except a bay in the latter river, which was perfectly sheltered on all sides, except towards the south. Besides these two rivers, there is only the famous Amur, which after passing through 400 versts of the Chinese territory, falls into this sea.

This river formerly belonged to Russia, and between the years 1664 and 1689, attracted the Kosaks and hunters from the different nations in the Russian dominions, to its borders. Cities, fortresses, and villages, were built, and agriculture introduced. The land is fruitful, and the water abounds in fish; the inhabitants therefore lived in opulence, and would in time have converted this tract of country into the most flourishing part of Russia, if the envy and jealousy of the Chinese had not been roused against these new settlers, to impede their farther establishment. They sent a considerable force for the purpose of destroying their cities, and although they met with a stout resistance, yet by a treaty concluded between them and the Russians, the latter retained only the upper part of the Amur, under the name of the rivers Schilka and Arguka, the confluence of which forms the new frontier. All beyond this point was ceded to the Chinese, and the Russian city Albasin, together with the Argunsk on the southern side of the Arguna, and adjacent places, were destroyed. The city of Nertochinsk only was saved, and afterwards another fortress of the same name was built, on the north side of the Arguna.

The Chinese have not derived the smallest advantage from this possession of the river, which, by remaining in the hands of the



Russians, would have made them masters of the Eastern Ocean, and secured to them an extensive trade in those seas.

Having sent our people forward with the baidar, I staid two days longer with Mr. Fomin, in order to accompany him on reindeer to the Ulkan, where he arrived after a journey of 30 versts in six hours, and found a tent erected for our reception. Mr. Fomin did me the kindness of stopping with me two days, at the end of which he set off again for the Alduma.

The interval of waiting for our commander, was employed by the men in the pursuit of sea-lions near the promontory of Enkan, two of which they succeeded in shooting, after two days chase. They are commonly shot as they lie extended on the rock, and at so short a distance, that they may be hit on the crown or temples, the only two parts in which they are to be mortally wounded. On receiving a wound in any other place, they spring into the water, and sink to the bottom the instant they die. The flesh of these two animals, which weighed nearly 80 poods, was a sufficient load for my whole baidar; the men ate of it with much avidity, and esteemed it a great luxury, although I did not find it equally delicious. The paws, marrow, and kidneys, indeed, were free from any offensive smell, and had a tolerable flavour.

In consequence of a counter order from Captain Billings, not to wait for him here, but to return to Ochotsk, I set off from this place on the 27th of June. In my way thither I passed the mouth of the river Ulga, and entered the Urak. The breadth of this river is 70 fathoms at its mouth; its depth, at the fall of the water, five or six feet, and higher up, two feet, or a foot and a half. Three years ago the Urak fell into the sea farther towards the west; but the small neck of land, which separated it from the sea, being washed away by a flood, it forsook its former mouth, and took this new course.

The bank of the Urak is inhabited by some Jakuts, who have removed from Jakutsk. The merchant Ichelechov has also erected some barracks here, and a dock-yard, in which he built three vessels.

On the 7th of July, we arrived at the mouth of the Ochota, where we were received by almost all the inhabitants of the city. Our commander, and the rest of the expedition, were at Ochotsk. I presented him with my journal and map of my late excursion, and received the command of the ship *Slava Rossii* (the Fame of Russia) which was already launched and equipped. The length of its deck was 86 feet 6 inches; its depth, 9 feet 6 inches; and its breadth, twenty feet eight inches. The second vessel, which was  $5\frac{1}{2}$  feet smaller than the former, and received the name of the *Dobroe Namerenic*, was launched the next

day. Both vessels were laid at anchor in Ochota, opposite the town, and the utmost exertions possible used to fit them out complete for sailing; but this was attended with infinite difficulty for want of proper hands to execute the business. The Kosaks, who had been sent us instead of sailors from all parts of Siberia, were not only total strangers to the sea, but to every thing belonging to a vessel; and were not very expert in learning this new calling. Nor did we derive much greater assistance from the sailors in the haven of Ochota, who were altogether unused to the equipment of vessels like ours.

### CHAP. IX.

THE TWO VESSELS GO INTO THE ROADS.—DESTRUCTION OF THE DOBROE NAMERENIE. — SAILING OUT OF THE OCHOTSK ROAD.—DISCOVERY OF THE ISLAND JONAS.—NAVIGATION BETWIXT THE KURILIAN ISLANDS.—ARRIVAL AT THE BAY OF AWATSKA.—ENTRANCE INTO THE HARBOUR OF PETROPAULOWSK.

THE ship *Slawa Rossii* was, notwithstanding every impediment, completely equipped in August; but we could not load her deeper than  $8\frac{1}{2}$  feet, as there are many sand-banks at the mouth of the Ochota, which are not above nine feet deep. These sand-banks, which we were obliged to pass, extended a verst and a half, and although we could have easily effected this in half an hour with a good wind and full sails, yet we were obliged to tow the ship along the shore for some days, and to stop twice a day, about eleven o'clock, by the shallow places. Not to mention that our towing was sometimes of no avail, when the bottom was extremely uneven, and the tide very strong.

After we had succeeded in getting the vessel over the sands, we turned off from the shore of the river Kuchtin, to the other side of the two united rivers, where we found it a suitable depth.

We threw out all our anchors for the sake of security, and thus, for two days, remained quiet; but on the third, as the tide fell, the stream was so violent as to tear the vessel from its anchors, although it was fastened by a cable to the shore. We were accordingly obliged to remain 12 hours lying on a shoal, from which we were released by the return of the tide on the following day, and cast anchor against the side of the river.

On the 27th of August, this vessel went out, with a favourable wind, into the roads, and anchored four versts from the shore, in six fathoms. The captain went on land, consigning the management of the landing, and every thing else, to my care.

In the mean time, the final equipment of the Dobroe Name-  
renie being completed, it set sail from the city to the mouth of  
the river, where, on the 8th of September, we witnessed the  
beginning and end of its navigation. As we were on the point of  
carrying her out of the river, the wind, which had filled our sails  
with a favourable gale, suddenly dropped, and was succeeded by  
an extraordinary swell of the sea, which drove a-head of us, and  
occasioned a horrible reeling of the vessel. It scarcely moved  
forwards, and was with difficulty kept off a sand-bank, against  
which it was perpetually forced by the towering billows. To-  
wards eleven o'clock, the beating of the waves increased, and  
the shallops, with which the vessel was towed on, being thrown  
into disorder, were thus rendered disserviceable. The next in-  
stant the ship lay on its beam ends, fast in a sand-bank. It was  
now enveloped in a furious vortex of billows, that dashed with  
indescribable vehemence and velocity from side to side, and car-  
ried away all its masts. In this distress it was impossible to af-  
ford any assistance. The inhabitants of the town, who had  
flocked to the shore, were obliged to stand as idle spectators.  
raging of the waves equally prevented any one from rowing  
up to the vessel, as it did the crew from getting on land. The  
one now beheld the dreadful spectacle with heartfelt compas-  
sion, and the other awaited their inevitable fate in despair.  
With every wave that followed in rapid succession, the ship was  
heaved backward or forward with such violence, as to shake the  
men from the cable on which they hung. Some were even  
hurled into the water, while others were threatened with being  
dashed to pieces by the broken masts. In this dreadful and pit-  
iable condition they were obliged to spend four hours, until the  
return of the ebb, which appeased the fury of the waters. We  
immediately cleared the ship of the cargo and provisions, and  
made every endeavour to drag it to the shore, but were twice  
prevented by the tide setting in more impetuously than before.  
Finding therefore, on examination, that the vessel was too much  
damaged to admit of repair, Mr. Billings, and the officers,  
unanimously resolved on having it burnt, in order, at any rate,  
to preserve the iron. On the evening of the 9th, therefore, we  
had the mortification of seeing our vessel, the Dobroe Name-  
renie, which had cost us so much pains, anxiety, and money,  
consumed by the flames.

The agitation of the water continued for three days, particu-  
larly at the mouth of the river, where the surge beat with such  
vehemence against the breakers, as to prevent our getting on  
land. I now expected that a high wind would have succeeded  
from the quarter where the sea had been so tumultuous: but,  
on the contrary, it continued a perfect calm for eight days, from

whence we naturally concluded, that the storm had remained at a distance. During the whole of this time we received all sorts of utensils and materials from the wreck.

On the 16th the sea was again very boisterous, and our vessel dragged her anchor very much. The captain, Mr. Hall, and myself, who were on land, passed a very uneasy night, as we knew the river to have a bad bottom, consisting of pebbles and apprehended that our vessel might experience a similar fate with many transports which had been driven aground.

In the year 1787, we were witness to a case of this kind here, with a ship arrived from Inshiga, which was unable to enter the river at low water, and anchored off the reef. The wind rising, and the sea becoming rough, the ship was driven into a shoal, and struck on the shore.

We happily escaped this danger, and embraced the first favourable wind on the 20th to put to sea, in order to sail to Kamtschatka by the way of the Kurilian islands, and spend the winter in the harbour of the Petropaulowsk. The favourable wind lasted but twenty-four hours, and was succeeded by a squall, which disturbed the sea so much that we were obliged to haul in all the sails, except the mizen-sail, and leave the ship to the mercy of the waves.

The greater part of the people who were with us had never been to sea, and were of course continually sick from the extraordinary rocking of the vessel, which was not a little increased by the force of their imaginations; for they fancied, that every wave, which towered mountains high towards our vessel, would assuredly swallow them. Some of the sailors from Ochotsk, who had been at sea before, whispered to the others, that the storm arose from the eagle which Captain Billings had caught alive and taken with him. They accordingly entreated that it might have its liberty, and although this request was not complied with, yet the wind dropped in two days, and we steered with a favourable gale and full sails S. E. directly towards the second Kurilian island.

Although we had no idea of a new discovery in this well known sea, through which many vessels pass from Ochotsk to Kamtschatka, yet we sent a person to the top-mast to take a survey of the country around, who called to us at ten o'clock in the morning, that he discovered land. We assured ourselves of the reality by means of our telescopes, and in order to remove every possible doubt, directed our course that way. After an hour's sailing, we stood in near enough to distinguish a little island, about half a mile in extent, and elevated more than a hundred fathoms above the water. It appeared to be encompassed on

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all sides with lofty perpendicular rocks and cliffs, concealed under the water, and resembled a haystack at a distance.

This island, hitherto unknown, must have been very dangerous at night and in misty weather for the navigators of this ocean; and, if I conjecture rightly, the vessel which went in the September of the preceding year from Ochotsk to Kamtschatka, and was never heard of after, was lost on this shore: for a boisterous wind and a thick mist arose on the third day from the south-east, which drove the ship perhaps this way, and dashed it on the rock. Such an accident might indeed have happened on the shores of the continent or the Kurilian islands, but in that case it must have been discovered. We gave this land the name of Jonas, in honour of the saint whose feast was commemorated on this day. The latitude of this place, by my observation, was  $56^{\circ} 53'$ ; the depth 37 fathoms, and the bottom gravelly. The island was then fifteen miles towards the south-west of our course.

While lying in the roads I observed that the sea-birds, and particularly the mews, flew every evening from the shore to the sea southward, and returned every morning early. From whence it is fair to conclude, that they staid for the night on the island of Jonas, or some other rocky islets lying still nearer, where they find a secure retirement, free from every molestation.

The wind continuing fair, we came in sight of the Alaid, the first of the Kurilian islands, on the twenty-seventh, lying rather sideways, and, on that account, not properly belonging to the cluster. It consists of a single mountain, whose hoary head, eternally covered with snow, is concealed in the clouds. To us it had the appearance of a sugar-loaf, but from a south-east direction it seemed to extend itself more into a flat surface. It is said to smoke occasionally. Beyond the Alaid, the second Kurilian island breaks forth from its cloud of mist.

Unacquainted as we were with this sea, we found it prudent to remove towards night from land islands, and on the dawn of day, approached the third Kurilian island, Schirinki, the left shore of which we passed towards noon. It is about two miles in extent, and encompassed with steep rocks, consisting of tall cliffs, covered with moss. From these we were visited by a number of urilas. They all flew alternately, one after the other, very close round our ship, not less than three times, as if they would eye us with proper attention; after which they returned to their nests. This curious bird is said to be a certain indication in a storm, that land is not far off, because it never goes any distance from the shore.

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second and fifth, which is called Quekotan. In the middle of this straight we were becalmed towards noon. We heaved the lead, but found no bottom. Its breadth, which is 27 miles, makes it one of the largest, and least dangerous among the Kurilian islands. In addition to which, it has no swampy places, and the tide is less impetuous here than at the others.

The third and fourth Kurilian islands have neither wood nor inhabitants, but the second and fifth yield an inconsiderable number of birch-shrubs, and are thinly inhabited by a people, who, in appearance, and mode of living, resemble the Kantschadales more than the southern Kurilians. They have received the name of hairy Kurilians, from the long beards by which they are distinguished. The northern Kurilians derive their origin, if we may judge by the resemblance, from the Kantschadales; but from whence these hairy ones are derived, it is difficult to decide: for scarcely any people in this quarter, either Chinese, Japanese, or, in fact, any northern nation on the shores of Asia, have any beard; except the Gilaks, living near the mouth of the Amur.

The 28th of September was the finest day since our departure from Ochotsk. The sun shone till the very evening, with a warmth little inferior to that in the middle of summer. After the cold weather, which we had hitherto had for a constancy, it now seemed as if we were transported all at once from the frigid to the torrid zone, although we were only ten degrees more to the south. The mildness of the air, the aspect of the shore, and the glittering surface of the unruffled ocean, all inspired us with a vivacity, to which we had long been strangers. During this day we were all constantly on deck, but, usually, no one would leave the cabin who was not on duty.

On the first of October, we deserted the mountainous shore of Kantschatka, by which we pursued our course, until we arrived off the haven of Petropaulowsk. At a distance we perceived five lofty and distinct mountains, one of which is called Wilnit-Schinskaja, and has the bay of Awatska to the right; three others lie together on the right hand, about 50 versts from the sea; of these the western, which is called Streloschnaia, has a loftier and more peaked summit than the others. The Awatskinskaia, otherwise called Gonelaia, which lies adjacent to it, is volcanic, and emits fire; the third is nameless, and lower than the two others. The last, denominated Schupanowna, lies more northerly, and more remote than the rest: it appears also at a distance to be more level. Although these mountains are situated far inland, yet, on account of their extraordinary height, they are very conspicuous even above the shore, which is rather elevated. A very exact drawing of this

view is to be found in Cook's voyage, which differs from mine only from the slight difference of position.

At the entrance of the bay of Awatska, we passed a light-house, erected on a lofty rocky prominence, on the left of which was an insular mountain of stone, called Staritschkow, after the name of a bird that frequents it in great abundance. The staritschkow is a bird about the size of a pigeon, with a bluish bill, and small feathers, of a bristly kind; its head is of a purple colour, having a circle of white feathers in the middle, which are thinner and longer than the rest. Its neck is black above, with white spots underneath. Its body is white, the short large feathers of its wings blackish, and the rest blue; its sides and tail black; its feet red, and trebly indigited with a web between each, and its claws black. On the little islands of Kamtschatka they are found in vast numbers, and are caught by the Kamtschadales with great facility. Besides this bird, there are also sea-parrots, mews, and urilas, the latter of which paid us a visit of curiosity as before, and then disappeared.

The entrance of the bay by the light-house, has 13 fathoms water, and a sandy bottom. The banks on both sides are peaked and stony, having occasionally windings, in and out. Not far beyond the light-house, stand three lofty isolated rocks in the form of pillars, close by each other; on which account they are denominated the *Three Ribbons*. Very near these pillars is a little creek called the *Saline*, from the salt-works which exist on its banks. On one side of the creek, lies a little stony island, called the *Traitor's Island*, from its having been the place of concealment for the ringleaders of the Kamtschadale insurrection against the Russians. On the other side is a lofty rock, called the *Grandmother's Rock*.

The entrance into the bay extends two leagues beyond these, and terminates with the commencement of the bay itself, which is 26 leagues in extent, and loses itself in three creeks, running parallel with each other: one of which is called Tarjinskoi, the second Rakowoi, and the third forms the harbour of Petropaulowsk, which was the object of our destination. It lies more to the north of the entrance, in the middle of which is a sand-bank, where the depth of the water is scarcely  $1\frac{1}{2}$  fathom. The creek itself is from six to fifteen fathoms deep, and affords a good anchorage every where in its muddy bottom. The shore and surrounding country are mountainous, except towards the north-west, where there are some plains and low-lands. From this side also, flow the rivers Awatska and Paratunka, into the creek.

Towards evening we came to anchor near the harbour of Petropaulowsk, which is above a verst in circumference. On the

west side, it is sheltered by a mountainous narrow peninsula, and on the south side, by a small gut of land, consisting of pebbles, and called Koschka. Between that peninsula, and Koschka, one must run into the harbour. The breadth of this straight is 40, and the depth, from seven to nine fathoms. The bottom is muddy.

On the Koschka there are eight dwelling-houses, interspersed with several buloganen; or log-houses, and on the north shore of the haven are four, together with a wooden building for an hospital, and the store-houses built during the expedition of Commodore Behring, which are still in good condition. The number of the inhabitants is limited to eleven Kamschadales, one ensign from the army, and 23 Kosaks. The country around the haven is mountainous, but the north and east sides have sufficient level ground for 300 houses.

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## CHAP. X.

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ARRANGEMENTS FOR WINTERING IN PETROPAULOWSK.  
 —REMARKS ON THE FISHERY, AND THE CATTLE OF  
 KAMSCHATKA.—JOURNEY WITH DOGS TO THE FOR-  
 TRESS OF BOLSCHERESK.—KAMTSCHADALE DANCE.—  
 PRESENT CONDITION OF THE KAMTSCHADALES.

WE entered the haven of Petropaulowsk on the 5th of October, and moored our vessel by the magazines, in which all our stores and provisions were deposited. We were distributed in the dwellings, as well as the smallness of the place would admit. Mr. Billings took possession of the imperial building, which was spacious and commodious. Lieutenant Hall, Bakow, and I, took up our lodgings at no great distance, in a Kosak's house; but it was so narrow, as to hold little more than our hammocks at night. The height was proportionable to the size; for we could scarcely stand upright without striking our heads against the ceiling. The doctor and the surgeon resided in an adjoining house, and the others were accommodated on the Koschka.

For the relief of the inhabitants, we resolved on building a large jurt, a bathing-room, and a forge, on the north side of the haven. The only timber we could find for this purpose was birch, which grows very abundantly in the surrounding country. Our undertaking, which was commenced and executed in a short time, was greatly favoured by the weather, that remained very warm to the first of November. We had hitherto seen no snow, but what had been lying on the mountains.

The shore, indeed, had lost the enchanting verdure of spring



and summer, and the trees were entirely stript of their leaves; but there were some cedar or birch shrubs still remaining in the hollow windings of the mountains, that afforded us many agreeable walks, until the snow fell so heavily as to block up our passage. We had now only one narrow path in the declivity towards the Koschka, and another between the mountains towards a lake situated 300 furlongs to the north of our dwelling-place. Near this latter path, on the right hand bank of a rivulet running into the haven, lie two remarkable persons, close to each other, namely, the Professor de l'Isle de la Croÿère, who accompanied Commodore Behring, as astronomer, and Captain Clarke, who succeeded Captain Cook in the command. From the lake just noticed, you may, at low water, walk round the mountainous peninsula which encloses the haven on the western side, and the extent of the town will not exceed two versts; but this path is very stony and fatiguing, it is therefore little frequented, except by sportsmen, who go in search of mews, or sawkas, (*Anas hiemalis*), a species of ducks.

By some beds of rock in this peninsula, we discovered green jasper marl, on which were the representations of shrubs or trees; we also found, in the crevices of the rocks, some layers of anaranth, not very large, and remarkably thin.

For some time after our arrival, there was no fresh fish to be had. In the beginning of November, we began to catch wachna in abundance, and occasionally herrings. The wachna, (*Gadus aeglesinus*), is a sort of stock-fish, about half a yard in length, with a roundish body, and three dorsal fins. When taken out of the water, it is perfectly of a copper colour, but soon turns quite pale. Its flesh is white, but soft, and not pleasant to the taste. The roe is, however, of a fine texture, and has the best flavour. It is an inhabitant of the European Ocean, but most frequently found in Kamtschatka. We were now enabled to provide ourselves with fresh and healthy food, but on the failure of this resource, we should have been compelled to live on salt provisions alone, if we had not persuaded a Kosak to sell us a cow for 65 rubles: the animal was not very large, and yielded but an inconsiderable quantity of meat, yet we contrived to eke it out as long as possible. The whole haven of Petropaulowsk, could not produce more than this cow and seven oxen, belonging to the crown, which had been driven hither from the fortress of Werchné-Kamtschatk for the expedition that was to have gone out, under the command of Captain Molówsky. But it was prevented by the breaking out of the Swedish war, in which this estimable officer fell, and if I mistake not, in the first engagement under Admiral Greig, in 1788; otherwise the Russian flag would probably have waved 14 or 15 years earlier under

the equator. At the period of the first Kamtschatkish expedition, about 50 years ago, some horned cattle were transported hither, which we might suppose would have considerably multiplied with proper care. It is impossible to find a place more fitted for breeding cattle than Kamtschatka. It has a number of enclosures, particularly in the vicinity of Petropaulowsk, by the rivers Awatska and Paratunka, which yield an excellent pasture of tall and nutritious grass, well calculated to give the flesh a delicious flavour.

On the approach of winter, the inhabitants are busied with putting their sledges in order, and tying up their dogs, to fit them for drawing, as they are in fine weather allowed to run loose. Sledges and dogs are in general use here, both for travelling and conveyance. Mr. Hall, and I also, furnished ourselves with one, taking at first only small journies with three dogs; but growing bolder afterwards, as our skill increased, we ventured with five dogs over the mountains, to the dwelling-place of Paratunka, 25 versts distant from Petropaulowsk.

The sledges here differ very considerably from those of Ochotsk, being shorter, smaller, lighter, and much higher. They will scarcely hold two, and are very unsteady on account of their monstrous height. In descending any hill, the utmost care and dexterity is requisite, to keep the feet and the oschtol in the proper direction; for the smallest oversight of this kind may cost a person his life, as has been the case with even experienced drivers, who have been dashed to pieces against the trees lying in the way.

The management of the dogs is no less difficult and dangerous here than at Ochotsk; for they are equally apt to become ungovernable on the scent of any animal. In order to stop them, they drive the oschtol between the front sledge of the conveyance as far into the snow as possible, and always keep the two fore dogs in a tight rein, that none may be able to run away. When the declivity of any mountain is unusually steep and dangerous, they bind birch-twigs round the bottom of the sledge, to impede its course. The cry of ko ko ko stops the dogs; aach aach drives them on; chna chna chna, turns them to the right; and uga uga uga, to the left. Hunters do not make use of these words, for fear of frightening their game, but strike gently with the oschtol on the right side of the sledge, when they should turn to the right, and bend them down to the snow to the left, when they should go to the left. Besides the danger in this mode of travelling, it is attended with many inconveniencies. You must never let your dogs go loose. If ever you are overturned, you must rather be dragged along in the snow than leave your hold, for it is a great disgrace to lose your

dogs, and be obliged to wade through the snow on foot; not to mention that the dogs very often entangle themselves in their harness, in which case, the driver must take off his gloves in the cold to put them to rights, and is often in danger of being soiled with their dung. The worst trick you can play a driver, is to cast a piece of jukol among his dogs, who fight for it until they are thrown into the utmost confusion. If he be in company with others, he is thus prevented from keeping up with them, and exposed to all the inconveniencies of going behind; the principal of which is, that the dung of the other dogs is continually freezing on his sledge, and requires him every moment to clear it away with his knife. When you get to a public-house, you are not free from your dogs. The instant they are unharnessed, they must be tied to a post. Nor can they be immediately fed, for they must wait until the sweat is dried off. A whole or half a jukol is then given them, but the master must stand by to see that every dog gets his part, and also to drive away the crows, which are not very shy in this country. They will collect in great quantities round the dogs if not thus guarded, and snap up all their allowance.

Captain Billings going with Mr. Hall, the surgeon, at the close of November to the fortress of Bolscherezsk, Mr. Behring and I followed him, agreeable to his request, at the end of December. We set off with our dogs from Petropaulowsk, and proceeded by the bay of Awatska, over little acclivities covered with birch-wood. On the summit of one we saw a loose stone thoroughly burnt, about five yards in circumference. It appeared to have been thrown out from some volcanic mountain; but as that of Awatska, the very nearest, is certainly 40 versts distant, it is not probable for a stone of that weight to have been hurled so far on any eruption, however violent. It is a far more feasible conjecture, that the explosion formerly took place in a quarter nearer this spot. It is in fact not altogether improbable, that the place now occupied by the bay of Awatska, was formerly a volcanic mountain, which fell in and formed this harbour. It retains at least many traces of having originated from a convulsion of the earth. Seven versts from the harbour we left the above heights and descended into a plain that extends for 20 versts, and is intersected by the two rivers Awatska and Paratunka. We stopped at the Kamtschadale place, of the same name with the latter river, which lies seven versts distant from its mouth, and has a wooden church, the remains of what had been built on the expedition of commodore Behring.

From the fortress of Paratunka, the way leads up the river Awatska, where we found many otters, and discovered the traces of sables and foxes.

The sables of this place are not esteemed the best, but the Kamtschadale red foxes are superior to any of their kind, and are sold at remarkably high prices when they are of a fiery red colour. From this particular they have received the name of Ognenken. Besides these animals, there are, as we learn from the Kamtschadales, wild sheep, reindeer, bears, and wolves, in the mountains. The last are the most dangerous, and frequently make fierce attacks on travellers in the winter. But the bears are so peaceable, as even to be afraid of human beings, and run away at the sight of them.

After travelling three and thirty versts, we took up our night's lodging at the little fortress of Koratchin, so called from its having been first founded and inhabited by the Koraks. This dwelling-place was separated by 30 versts of mountainous country from the fortress of Natschinsk or Natcheecken.

Two versts distant from here is a hot spring, called Natschinskish. We turned a little out of the road to visit this water, which, notwithstanding the severity of the cold, was still remarkably tepid, having a sulphureous smell and a bitter taste. We threw in some pieces of money, which, in a few hours, received the light grey colour of tin. The Kamtschadales make very frequent use of this spring for a bath; on which account it was paled in, in two different places, one above, at its source, for the winter, and the other below, for the summer. We wished to see the rise of this spring, but were prevented by the swampiness of the ground from approaching sufficiently near.

We set off from hence before day-break, in order to reach the little fortress of Apatschinsk, 95 versts distant, in one day. Our way led over lofty mountains that stretch in a continued chain from the interior of Kamtschatka to the shore; where they are lost in rocky declivities. Apatschinsk lies on the river Bolschaja, as you descend from these mountains. From here to the fortress of Bolscherezsk were only 40 versts, which we went by a direct and even road in less than four hours.

The fortress of Bolscherezsk, situated on the banks of the Bolschaja, has a church and thirty habitations. Its inhabitants consist principally of Kosaks, with a few merchants and citizens. Before the advancement of the fortress Nishue-Kamtschatzk to the rank of a town, the first magistrate of Kamtschatka made this his place of residence; but now a serjeant is commander of the fortress. The Kosaks here are much more opulent than those of Petropaulowsk, almost all of them having their cattle and a good domestic economy. Their gardens are stocked with excellent turnips and potatoes. For the introduction of the latter vegetable they are indebted to counsellor Reinecke, the former commander of Kamtschatka.

All the inhabitants here are usually dressed like the Kamtsarytschew.]

schadales, in *narkas* and *kamlegas*. The former are the skins of reindeer, cut into shirts; and the latter are skins of any kind, stripped of their hair, and made quite pliant. On holidays, the women wear a sort of silk gown of an old Russian shape, which was fashionable 60 years ago. They have also a speckled silk handkerchief about their heads.

In the first days of the new year, the inhabitants assembled every evening for the purpose of dancing. The women understood Russian dances very well, and what was still more surprising, could dance in the Polish fashion, and very passably even à la Grecque. The music consisted of three fiddles, played by Kosaks.

I did not see the Kamtschadale dance here, but among the Kosaks of Petropaulowsk, who give it the preference, it is so indecent, that every modest woman would blush to be a spectator, much more a partner in it. A woman makes the commencement by stepping forward into the middle of the *Isba*, and holding a cloth spread out before her in a transverse direction. She shifts her feet slowly, making a variety of motions with her hands, head, and body. Her head sinks alternately on one shoulder or the other, on her back or on her breast. She then at length advances to a man, and renews this gesticulation close before him, which implies as much as soliciting his hand to the dance. He accordingly takes hold of the cloth in the same manner, and rising from his seat, they both commence the distortion of all their limbs together. The woman turns every now and then away from the man, but returns to him instantly again, sinking gradually upon her knees, and then bending herself backward with a similar gesticulation; the man also in the mean time falling down and reclining himself over her, the dance is concluded with the most obscene gestures. While it lasts, both dancers and spectators all sing to one song, consisting of the words *an-kelle*, *an-kaget*, incessantly repeated: but they have a variety of such monotonous ditties, adapted to the same species of dancing. In some of their dances, they imitate birds and beasts; the man for example representing the male, and the woman the female-bear; and sometimes there is a company of these imitators, who amuse themselves together, either in running like partridges, gabbling like geese, or in aping some other animal.

After a fortnight's stay at Bolscherezsk, Mr. Billings and Mr. Hall went to Nishne-Kamtschatsk, while Mr. Behring and I returned to Petropaulowsk, which we reached in five days.

On our journey thither and back, we experienced the most friendly treatment from the Kamtschadales, who not only entertained us with the utmost cordiality, but made us liberal presents of partridges, fresh fish, frozen keta, ju'ol, berries, and roots,

which are collected in great quantities from the mouse-holes, and form one of their principal aliments.

In autumn, they go into the fields in search of these roots, and as soon as they find hollow ground, by stamping, they dig down, and lay open the store-rooms of these animals. They do not, however, empty them entirely, but leave the mice a third at least of their provision, probably with a view of not driving away such useful creatures. They terrify each other, indeed, with the saying, that the mouse which is deprived of all its sustenance, will hang itself in despair on the next tree; a tale which may perhaps have originated in the circumstance of a mouse having been entangled by accident in the branches of a tree, and having hung there till it died.

On comparing the present condition of the Kamtschadales, and their way of living, with Krascheninikow's description of them, we find them to have undergone a remarkable change. They have now almost entirely renounced their former superstitious customs, and submitted to baptism. Jurts, or subterraneous dwellings, are now vanished, and their place is every where supplied by Russian isbas. The female Kamtschadales have a dress for holidays very similar to those of the female Kosaks, for they wear stomachers and petticoats, and bind a handkerchief round their heads. The abundance of fish, and the facility with which they procure a subsistence, now grown pleasant by habit, are probably the causes why they make no exertions in agriculture, or the breeding of cattle. It is much more remarkable, that their long and close intercourse with the Russians should not have given them a little more worldly wisdom; for they continue to this moment to barter their sables and foxes skins for the merest trifles. With this deficiency in cultivation, they retain, however, their good qualities, and are just as good-hearted, sincere, peaceable, obliging, and hospitable as before. Their prominent faults are uncleanness and idleness. Thieving is very rare, and murder still more rare. Some travellers charge them with the vice of drunkenness, but I cannot confirm this with my testimony; whatever bad exceptions there may be, they cannot serve as a general rule.

Notwithstanding the Kamtschadales have renounced most of their former superstitions, they still retain a firm belief in the supernatural powers of the schamans. A Kosak once profited by this credulity to regain his stolen property in a very ingenious manner. While on a journey with several Kamtschadales, he had some of his tobacco stolen from him, and, after questioning every individual separately, he was unable to discover who was the thief. He accordingly took some sticks, and making them of equal lengths, gave each of them one, with the assurance, that the stick of the thief would infallibly grow longer by the

power of schamanary. This unpleasant intelligence had such an effect on the imagination of the thief, that he actually conceived that his stick did increase in length, and thought to relieve himself from this dilemma by breaking a piece off. The next morning, every Kamtschadale carrying back his stick, the thief was instantly discovered. He was now obliged to confess the theft, and make restoration. His apology was, that all his own tobacco being gone, he had no money to buy more, and could not dispense with this necessary. Tobacco was remarkably dear at that time in Kamtschatka, a single pound costing a hundred rubles; and yet the inhabitants of this place sacrificed every thing to the indulgence of their passion for this intoxicating herb. Its ordinary price on a fresh supply is only two rubles and a half.

Tobacco is one of the most lucrative branches of trade in these parts, and always finds a ready sale; for there is not a tribe or nation having any intercourse with the Russians, which does not smoke, chew, and take snuff. The Burats, Jakuts, Koraks, Jakugirens, and Tschukschens, like the strong Tscherkapian tobacco, and are not fond of that which grows in the country of Irkutsk. They smoke it with a mixture of half saw-dust; but the Kamtschadales and Aleutians only chew tobacco and take snuff.

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## CHAP. XI.

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WINTER OCCUPATION ON BOARD THE SHIP.—TREM-  
BLINGS OF THE EARTH, AND ERUPTION OF THE KULT-  
SCHEWISH CRATER.—SCURVY AMONG THE MEN.—  
EQUIPMENT OF THE VESSEL.—DESCRIPTION OF THE  
BAY AWATSKA.—HINTS ON THE FACILITY OF ESTA-  
BLISHING A TRADE FROM KAMTSCHATKA TO THE  
EAST INDIES.

THE winter afforded us a good opportunity for completing what had remained unfinished at Ochotsk. We built another cutter with six oars of alder-wood, fetched from the banks of the Paratunka, at thirty versts distance. We had, indeed, birch-wood in the vicinity of the harbour, which served for many useful purposes, but was not close enough for vessels of any magnitude. For shallops and other small craft, however, this wood is in general use here, and always found to answer. The double-built shallop of Kamtschatkish birch, which was used on the first expedition, not only lasted the time required, but was afterwards employed as a victualling barge from Ochotsk to Kamtschatka. Judging from the richness of the soil, I should be inclined to think, that oaks might be introduced here by acorns, and would thrive remarkably well.

On the 25th of February, we observed an evident agitation of the earth, which is very frequent and strong, owing to its

proximity with the volcanic mountain of Awatska; but this was the first of the kind during our stay here. This mountain was likewise perfectly quiet, and emitted nothing but smoke; while the Klutschewish summit, on the other hand, sent forth, in January, flames, stones, lava, and a quantity of black sand, with which the whole circumjacent country was covered.

Captain Billings returned from Nisne-Kar tschatsk at the end of March. By the middle of April, our cutter was in a sufficient state of readiness to receive its tackling and other appurtenances. About this time, the bay of Awatska became perfectly free from the ice which had collected near its banks during the winter; but the sideward bays, the Rakowoi, Targinskoi, and Petropaulowsk harbours, continued under ice until the 1st of May.

Many of our people were afflicted with the scurvy this winter, owing to the want of proper nutriment. On the approach of spring, the evil gained ground rather than otherwise; but as soon as they had an opportunity of getting fresh fish, they mended daily, so that in the beginning of May they were almost entirely recovered. The malmas, herrings, kambalas, and keuschens, now came in shoals into the rivers, and the green of a species of garlic, began to make its appearance.

Our vessel being perfectly ready for sailing on the 1st of May, our people were all assembled on board. We brought it out of the harbour and anchored at its mouth, in expectation of a favourable wind for running out. I sailed about in the mean time for the purpose of surveying the bay of Awatska, and the two side bays. Rakowoi is three leagues long, and half a league broad; its depth is from 6 to 13 fathoms, and its bottom is muddy. The other, Targinskoi, situated on the north-west side of the Awatska bay, is five miles in length, and half a mile in breadth. Its north-east bank consists of a narrow mountainous promontory, which separates it from the Awatska bay. It has 13 fathom of water in the middle, which diminishes as you proceed downwards. Its bottom is likewise muddy.

The two rivers, Awatska and Paratunka, flow into the northern part of Awatskish bay, after running down the mountains through several low lands. From the mouth of these rivers upwards, there is a dry place half a mile broad; but elsewhere, the whole bay is tolerably deep, and would admit of large vessels to lie at anchor in 14 fathoms water. The bottom in the deepest places is muddy, but in the shallower parts is sandy.

This and the other bays would serve as good anchoring grounds for the most numerous fleet. It is truly lamentable, that a harbour so well formed by nature, should remain unused. In a short time it might become an important station, if our merchants paid due attention to the advantages they could derive from their trade with China, Japan, and the East Indies.



The bay of Awatska might then be the principal rendezvous for all vessels going on the chase, to the Islands and America, or trading to the East Indies; for on all the shores belonging to Russia in this quarter, there is not a securer and more commodious place for the mooring of ships. In this case it would be necessary to build warehouses for the merchandise.

With regard to the commodities that might constitute our trade with China and Japan, the products of these parts, independent of those from Russia, would amply suffice, as sea-beavers, sea-lions, otters, foxes, minevers, and above all the fangs of the walrus or river-horse. But the most important commerce might be carried on with train-oil and whalebone, whenever proper arrangements could be made for catching the whales which frequent these seas in vast numbers. Not to mention, that the shoals of other fish which are to be found in Kamtschatka, would prove no inconsiderable source of advantage when salted and dried.

The conveyance of East India products into the interior of Russia by the bay of Awatska, might be greatly facilitated by carrying them from hence in small craft to the Aldomish bay, and then by the river Maia to the Jakutsk.

If in addition to the advantages resulting from this trade, a colony were raised here, agriculture extended, the breeding of cattle encouraged, and all sorts of manufactures established, Kamtschatka would in a short time rival the greatest part of Europe in affluence and cultivation. The climate is temperate, and the soil prolific in whatever is essential for living. Agriculture has been attended to with tolerable success for some time on the river Kamtschatka by the upper fortress, and in the village of Klutschewsk, which is inhabited by Russian peasants; but with so small a number of labourers the progress is not visible.

Provisions for the military are imported from Ochotsk. A pood of rye-flower (about forty pounds), costs the government 3 dollars 75 kopeks. The tselietwerik (360 pounds) of buck-wheat and barley grits, six rubles. Potatoes, which have been introduced here about 10 years, thrive very well, and increase particularly in Bolscherezsk, where the greatest care is taken of them. It is also very certain, that flax and linen might be produced here, which would be cheaper than what is imported, the coarsest of which is sold at 70 kopeks, or a dollar, (3s. 6d.) a yard.

The spirits here are extracted from a sweet herb, and are equally offensive both in taste and smell. They cost 40 rubles a pail.

Copper money is scarcely known in Kamtschatka, silver coin only being in use; but small notes or assignations are beginning to get introduced.

