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THE FIRST LANDING ON WRANGEL ISLAND,

WITH SOME

REMARKS ON THE NORTHERN INHABITANTS.

BY

IRVING C. ROSSE, M.D.

On May 4, 1881, through the courtesy of the Chief of Revenue Marine, Mr. E. W. Clark, I was allowed to take passage from San Francisco, Cal., on board the United States Revenue steamer *Corwin*, whose destination was Alaska and the northwest Arctic ocean. The object of the cruise was, in addition to revenue duty, to ascertain the fate of two missing whalers and, if possible, to communicate with the Arctic exploring yacht *Jeannette*.

Our well-found craft made good headway for seven or eight uneventful days of exceptionally fine weather, while the ocean, somewhat deserving the adjective that designates it, displayed its prettiest combinations of blue tints and sunset effects as we steamed through miles of medusidæ; and had it not been for the sight of occasional whales and the strange marine birds that characterize a higher latitude, we should scarcely have known of our approach to the north. Soon, however, we were beset by pelting hail and furious storms of snow and all the discomforts of sea life, causing a *pénible navigation* in every sense of the term. On May 15 we were somewhat disoriented while trying to make a landfall in a blinding snowstorm, and groped about for several hours before

anchoring under one of the Alp-like cliffs of the Aleutian islands.

* * * * * *

Without going into further details of the cruise, I will state that on the previous year five unsuccessful attempts were made by the *Corwin* to reach Herald island, and that Wrangel island was approached to within about twenty miles. This "problematical northern land," the existence of which the Russian Admiral Wrangel reported from accounts of Siberian natives, and which he tried unsuccessfully to find; a land that Captain Kellett, of Her Britannic Majesty's ship *Herald*, in 1849, thought he saw, but which, under more favorable circumstances of weather and position, was not seen by the United States ship *Vincennes;* a land, in fact, that from the foregoing statements and from the imperfect accounts of whalemen we had begun to regard as a myth, was actually seen; and I shall never forget the tinge of regret I felt when the necessity of the position obliged the withdrawal of the ship and I took a last lingering look at the ice-bound and unexplored coast, fully realizing at the time the joyous satisfaction that must animate the discoverer and explorer of an unknown land.

However, better luck was in store; for Captain Kellett's discovery was afterwards completed by the *Corwin*. I now purpose to narrate a few circumstances attending this first landing on Wrangel island, which may be best told by further reference to Herald island. Captain Kellett, the only person known to have landed at the latter place previously to this account, reports that the extent he had to walk over was not more than thirty feet, from which space he scrambled up a short distance; that with the time

he could spare and his materials "the island was perfectly inaccessible." He expresses great disappointment, as from its summit much could have been seen, and all doubts set aside regarding the land he supposed he saw to westward. An extract from one of Captain De Long's letters, making known his intention to retreat upon the Siberian settlements in the event of disaster to the *Jeannette*, says, in reference to a ship's being sent to obtain intelligence of him: "If the ship comes up merely for tidings of us let her look for them on the east side of Kellett land and on Herald island." Being in a measure guided by this information, the *Corwin* made the forementioned places objective points in the search. It was not, however, till after the coal bunkers were replenished with bituminous coal from a seam in the cliff above Cape Lisburne, that an effort was made to reach the island. During the run westward—a distance of 245 miles—the fine weather enabled us to witness some curious freaks of refraction and other odd phenomena for which the high latitudes are so remarkable. On July 30, the fine weather continuing, everybody was correspondingly elate and merry when both Herald and Wrangel islands were sighted from the "cro'-nest" and, as they were neared, apparently free from ice. This illusion, however, was soon dispelled. On approaching the land strong tide rips were encountered, and finally the ice, the drift of which was shown by the drop of a lead-line to be west-northwest. We steamed through about fifteen miles of this ice before being stopped, less than half a mile from the southeast end of the island by the fixed ice, to which the ship was secured with a kedge. We got off, and after considerable climbing and scrambling up and down immense hummocks, and jumping a number of crevices, finally set foot on the land

we had been so long trying to reach. Our advent created a great commotion among the myriads of birds that frequent the ledges and cliffs, and the intrusion caused them to whirl about in a motley cloud and scream at each other in ceaseless uproar. A few minutes sufficed to survey the situation, before attempting to ascend at a spot that seemed scarcely to afford footing for a goat. Near the foot of the cliffs were seen on the one hand several detached pinnacles of sombre-looking weather-worn granite that had withstood the vigor of many Arctic winters; on the other hand a seemingly inaccessible wall, vividly recalling the eastern face of the Rock of Gibraltar. This sight, strange and weird beyond description, did not fail to awaken odd thoughts and emotions, far removed as we were from all human intercourse, amid solitude and desolation, and for a moment the mind absorbed a dash of the local coloring. Selecting what was believed to be the most favorable spot to ascend the cliff, two of our party in making the attempt would occasionally detach large bowlders, which came bounding down like a bombardment.

The attempt was abandoned after climbing a few hundred feet. In company with several others, I tried what seemed to be a more practicable way—a gully filled with snow—up which we had gone scarcely a hundred feet when it, too, had to be abandoned. In the meantime the skin boat had been brought over the ice, and one of the men pointing out another place where he thought we might ascend, it was the work of but a few minutes to cross a bit of open water which led to the foot of a steep snowbank, somewhat discolored from the gravel brought down by melting snow. Without despairing, and being in that frame of mind prepared to incur danger to a reasonable extent for the sake of

knowledge, we climbed several hundred feet over the snow and ice, having to cut steps with an axe that we had brought along, before reaching the top. The latter stage of this proceeding was like scrambling over the dome of the Washington Capitol with a great yawning cliff below, and was well calculated to try the nerve of any one except a competent mountaineer or a sailor accustomed to a doddering mast. A ravine was next reached, through which tumbled with loud noise and wild confusion, over broken rocks and amid some scant lichens and mosses, a stream of pure water, which had hollowed out a shaft or funnel, forming a glacier mill or moulin. It was over the roof of this tunnel that we had passed, and it caused an awesome feeling to come over one to see the water leap down its mouth to an unseen depth with a loud rumbling noise. After a tiresome ascent of the ravine, this hitherto inaccessible island, like a standing challenge of Nature inviting the muscular and ambitious, was at last climbed to the very summit; and it may be remarked, with pardonable vanity, that the feat was never done before. The view revealed from the top of the island was a veritable apocalypse. There was something unique about the desolate grandeur of the novel surroundings that would cause a man of the Sir Charles Coldstream type to say there "is something in it," and the most hackneyed man of the world would acknowledge a new sensation. It was midnight, and the sun shone with gleaming splendor over all this waste of ice and sea and granite; on one hand Wrangel Island appeared in well-defined outline, on the other an open sea extended northward as far as we were able to make out by the aid of strong glasses. From our position about the middle of the island the two extreme points of Wrangel island bore southwest and west-by-south

respectively. In shape, Herald island is something like a boot with a depression at the instep, and at the western-most extremity, near which it may be climbed with considerable ease, are found a number of jagged peaks and splintered pinnacles of granite, some of which resemble the giant remains of ancient soulpture, all the worse for exposure to the weather. On a promontory 1,400 feet high at the northeast point of the island I placed in a cairn a bottle containing written information of our landing and a copy of the New York *Herald* of April 23.*

Beyond the extraordinary bird life, no signs of life appeared, except a small fox, and a Polar bear. The latter put in an appearance just after we had returned on board at three o'clock in the morning, and the circumstances attending his slaughter, which were about as enlivening as shooting a sheep, put an end to this episode of our mission.

After great difficulty in getting out of the ice we ran all day on Sunday, July 31, along the edge of the pack with Wrangel Island in sight, but were unable to find a favorable lead that would take us nearer the land than twelve or fifteen miles. The principal events that go to make up the record of our cruise for the next ten days were the finding of a ship's lower yard; the fabulous numbers of eider ducks seen off the Siberian coast, and the usual encounters with fogs, bears, and ice.

On the morning of August 11, we were so near the unexplored land that we were most sanguine about getting ashore, although it seemed as if a journey would have first

* In November, 1882, while in London, I met Mr. Gilder, the *Herald* correspondent, who accompanied the U. S. ship *Rodgers*, and he showed me this record and paper which he had taken from the cairn during a subsequent visit to the island.

to be made over the ice. In the afternoon the chances were so good that I volunteered to go ashore on the ice on the morning of the 12th in company with Lieutenant Reynolds, Engineer Owen, and two men. Preparations were made accordingly; the skin boat, rations, etc., being got ready, and we spent a restless night in anticipating the events of the coming day. We were called at five o'clock on the morning of the 12th, and while eating a hurried breakfast the ship steamed inshore. We were fully prepared for the undertaking; but finding the leads in the ice more favorable than on the preceding evening, the little steamer jammed and crashed along in a labyrinthine course not without great difficulty, for at times she was completely beset by great masses of ice, which she steamed against at full speed for several minutes before they showed sign of giving way, and it seemed that all endeavors to get out of the pack would be futile. Happily, all these difficulties yielded, and a clear way being seen to a water hole just off the mouth of a river, we anchored in ten fathoms near some grounded floebergs, about a quarter of a mile off shore. A boat was then got away, and on the calm bright morning of August 12, 1881, the first landing on Wrangel Island was accomplished!

On the beach, composed of black slaty shingle, we found the skeleton of a whale from which the baleen was absent; also a quantity of driftwood, some of it twelve inches in diameter; a wooden wedge; a barrel-stave; a piece of a boat's spar and a fragment of a biscuit-box. The river, which we named *Clark river*, was about one hundred yards wide, two fathoms deep near the mouth, and rapid. From the top of a neighboring cliff, four hundred feet high, it could be seen trending back into the mountains some thirty or thirty-five miles. The moun-

tains, devoid of snow, were seen under favorable circumstances through a rift in the clouds, and appeared brown and naked, with smooth rounded tops. During a tramp of some miles over a muddy way, composed of argillaceous clay and black pebbles, I observed fragments of quartz and granite. Several specimens containing iron pyrites were also found. The cliffs in the vicinity of our landing are composed of slate, and the land over which I travelled seemed almost as barren as a macadamized road; but on searching closely several species of hyperborean plants were found, such as saxifrages, anemones, grasses, lichens and mushrooms. The mosses and lichens were but feebly developed, and the phanerogamous plants were in the same state of severe repression. The following plants were collected; and I am indebted to Professor John Muir for their names:

Saxifraga flegellaris, Willd.
stellaris, L. var. *cornosa*, Poir.
sileneflora, Sternb.
hieracifolia, Waldst. & Kit.
rivularis, L. var. *hyperborea*, Hook.
bronchialis, L.
serpyllifolia, Pursh.
Anemone parviflora, Michx.
Papaver nudicaule, L.
Draba alpina, L.
Cochleria officinalis, L.
Artemisia borealis, Willd.
Nardosmia frigida, Hook.
Saussurea monticola, Richards.
Senecio frigidus, Less.
Potentilla nivea, L.
frigida, Vill. ?

Armeria macrocarpa, Pursh.
vulgaris, Willd.
Stellaria longipes, Goldie, var. *Edwardsii*, T. & G.
Cerastium alpinum, L.
Gymnandra Stelleri, Cham. & Schlecht.
Salix polaris, Wahl.
Luzulu hyperborea, R. Br.
Poa arctica, R. Br.
Aira cæspitosa, L. var. *Arctica*.
Alopecurus alpinus, Smith.

I made a collection of several spiders and of some larvæ. The spider, it appears, is an "undescribed species of *Erigone*," and the larvæ are probably lepidopterous. A small shrike was also secured as a specimen. We saw several species of gulls, a snowy owl—which by the way was very shy—a few lemmings, and the tracks of foxes and of bears.

Microscopic examination of mud obtained from the bottom, in the vicinity of our anchorage, revealed some shells of foraminifera. The density of the sea water, and the dip of the magnetic needle were ascertained here, as well as at other points in the Arctic; and as the observations are entirely new, I give the results in the accompanying tables. The water densities are from observations of Mr. F. E. Owen, Assistant Engineer of the *Corwin*.

The instruments used in obtaining the results were a thermometer and a hydrometer. Water was drawn at about six feet below the surface and heated to a temperature of 200° F., and the saturation or specific gravity is shown by the depth to which the hydrometer sank in the water. As sea water commonly contains one part of saline matter to thirty-two parts of water, the instrument is

marked in thirty-seconds, as $\frac{1}{32}$, $\frac{2}{32}$, etc., and the densities are fractional parts of one thirty-second:

POINTS OF OBSERVATION.	Temperature.	Density.
At Saint Michael's, Bering sea	50	$\frac{1}{4}$
Off Plover bay, Asia	34	$\frac{3}{4}$
Arctic ocean, near Bering straits	32	$\frac{3}{4}$
Arctic ocean, near ice on Siberian coast	32	$\frac{5}{8}$
Bering sea, off Saint Lawrence island	34	$\frac{3}{4}$
Golovine bay, Bering sea, July 10	42	$\frac{1}{2}$
Bering sea between King's island and Cape Prince of Wales, July 12	44	$\frac{3}{4}$
Entrance to Kotzebue sound, July 13	47	$\frac{3}{4}$
Cape Thompson, Arctic ocean, July 17	36	$\frac{3}{4}$
Icy cape, July 24	36	$\frac{3}{4}$
Herald island, in the ice, July 30	31	$\frac{5}{8}$
Cape Wankarem, Siberia, August 5	33	$\frac{3}{4}$
Wrangel island (surface, in ice), August 12	31	$\frac{1}{2}$
Wrangel island (below surface 6 feet), August 12	31	$\frac{5}{8}$

The following table, showing the dip of the magnetic needle, was prepared from observations made by Lieut. O. D. Myrick:

LOCALITY.	LATITUDE, North.		LONGITUDE, West.		DIP.	
	Deg.	Min.	Deg.	Min.	Deg.	Min.
ALASKA—						
Ounalaska	53	56	166	13	66	53.5
St. Michael's	63	27	161	37	75	00.6
Kotzebue sound	66	03	161	47	77	05.0
Cape Sabine	68	50	165	10	78	47.8
Icy cape	70	08	161	58	79	56.3
Point Barrow	71	23	156	15	81	18.6
ASIA—						
Plover bay	64	21	173	11	73	34.7
Cape Wankarem	67	48	175	11	77	09.7
Wrangel island	71	04	177	40	79	52.5

To commemorate our visit, a flag, placed on a pole of driftwood, was erected on a cliff, and to the staff was secured a wide-mouthed bottle and a tin cylinder, in which I enclosed information of our landing, etc. On raising the flag three cheers were given, and a salute was fired from the cutter in honor of our newly acquired territory.

These evidences of our short visit, which was soon afterward supplemented by the more extended exploration of the *Rodgers*, having now become matters of history, it may be remarked with pardonable pride that the acquisition of

this remote island, though of no political or commercial value, will serve the higher and nobler purpose of a perpetual reminder of American enterprise, courage and maritime skill.

General Remarks on the Northern Inhabitants.

From an anthropological point of view the Eskimo coming under observation proved most interesting. The term Eskimo may be held to include all the Innuit population living on the Aleutian islands, the islands of Bering sea, and the shores both of Asia and America north of about latitude 64°. In this latitude on the American coast the ethnical points that difference the North American from the Eskimo are distinctly marked. It cannot, however, be said that the designating marks of distinction are so plain between the American Eskimo and the so-called Tchuktschi of the Asiatic coast. I have been unable to see anything more in the way of distinction than exists between Englishmen and Danes, for instance, or between Norwegians and Swedes. Indeed, it may be said that much of the confusion and absurdity of classification found in ethnographic literature may be traced to a tendency to see diversities where few or none exist. To the observant man of travel who has given the matter any attention, it seems that the most sensible classification is that of the ancient writers who divide humanity into three races, namely, white, yellow, and black. Cuvier adopted this division, and the best contemporary British authority, Dr. Latham, also makes three groups, although he varies somewhat in details from Cuvier. In accordance with the nomenclature of Latham, the Eskimo may be spoken of as

Hyperborean Mongolidæ of essentially carnivorous and ichthyophagous habits, who have not yet emerged from the hunting and fishing stage.

PHYSICAL PECULARITIES.

Their physical appearance and structure having been already described by others, it is unnecessary to mention them here, except incidentally and by way of noting a few peculiarities that seem to have been heretofore overlooked or slightly touched upon by other writers. Although as a rule they are of short build, averaging about five feet seven inches, yet occasional exceptions were met with among the natives of Kotzebue sound, many of whom are tall and of commanding appearance. At Cape Kruzenstern a man was seen who measured six feet six inches in height. This divergence from the conventional Eskimo type, as usually described in the books, may have been caused by intermarriage with an inland tribe of larger men from the interior of Alaska, who come to the coast every summer for purposes of trade.

The complexion, rarely a true white, but rather that of a Chinaman, with a healthy blush suffusing each cheek, is often of a brownish-yellow and sometimes quite black, as I have seen in several instances at Tapkan, Siberia. Nor is the broad and flat face and small nose without exception. In the vicinity of East cape, the eastermost extremity of Asia, a few Eskimo were seen having distinctive Hebrew noses and a physiognomy of such a Jewish type as to excite the attention and comment of the sailors composing our crew; others were noticed having a Milesian cast of features and looked like Irishmen, while others resembled several old mulatto men I know in Washington. However, the

Mongoloid type in these people was so pronounced that our Japanese boys on meeting Eskimo for the first time took them for Chinamen; on the other hand the Japs were objects of great and constant curiosity to the Eskimo, who doubtless took them for compatriots, a fact not to be wondered at, since there is such a similarity in the shape of the eyes, the complexion, and hair. In regard to the latter it may be remarked that scarcely anything on board the *Corwin* excited greater wonder and merriment among the Eskimo than the presence of several persons whom Professor Huxley would classify in his Xanthocroic group because of their fiery red hair.

The structure and arrangement of the hair having lately been proposed as a race characteristic upon which to base an ethnical classification, I took pains to collect various specimens of Innuit hair, which, in conjunction with Dr. Kidder, U. S. N., I examined microscopically and compared with the hair of fair and blue-eyed persons, the hair of negroes, and as a matter of curiosity with the reindeer hair and the hair-like appendage found on the fringy extremity of the baleen plates in the mouth of a "bowhead" whale. Some microphotographs of these objects were made but with indifferent results.

To the man willing and anxious to make more extended research into the matter of race characteristics, I venture to say that a northern experience will afford him ample opportunity for supplementing Mr. Murray's paper on the Ethnological Classification of Vermin; and he may further observe that the Eskimo, whatever may be his religious belief or predilection, apparently observes the prohibitions of the Talmud in regard both to filth and getting rid of noxious entomological specimens that infest his body and habitation.

Whatever modification the bodily structure of the Eskimo may have undergone under the influence of physical and moral causes, when viewed in the light of transcendental anatomy, we find that the mode, plan, or model upon which his animal frame and organs are founded is substantially that of other varieties of men.

Some writers go so far, in speaking of the Eskimo's correspondence, mental and physical, to his surroundings as to mention the seal as his correlative, which, in my opinion, is about as sensible as speaking of the reciprocal relations of a Cincinnati man and a hog. Unlike the seal, which is preëminently an amphibian and a swimmer, the Eskimo has no physical capability of the latter kind, being unable to swim and having the greatest aversion to water except for purposes of navigation. He wins our admiration from the expert management at sea of his little shuttle-shaped canoe, which is a kind of marine bicycle, but I doubt very much the somersaults he is reported to be able to turn in them. In fact, after offering rewards of that all-powerful incentive, tobacco, on numerous occasions, I have been unsuccessful in getting any one of them to attempt the feat, and when told that we had heard of their doing it they smiled rather incredulously. The Eskimo are clearly not successes in a cubistic or saltatorial line, as I have had ample opportunities to observe. They seem to be unable to do the simplest gymnastics, and were filled with the greatest delight and astonishment at some exhibitions we gave them on several occasions. Receiving a challenge to run a foot-race with an Eskimo, I came off easy winner, although I was handicapped by being out of condition at the time; a challenge to throw stones also resulted in the same kind of victory; I shouldered and carried some logs of driftwood

that none of them could lift, and on another occasion the captain and I demonstrated the physical superiority of the Anglo-Saxon by throwing a walrus lance several lengths farther than any of the Eskimo who had provoked the competition. As a rule they are deficient in biceps, and have not the well-developed muscles of athletic white men. The best muscular development I saw was among the natives of Saint Lawrence island, who, by the way, showed me a spot in a village where they practiced athletic sports, one of these diversions being lifting and "putting" heavy stones, and I have frankly to acknowledge that a young Eskimo got the better of me in a competition of this kind. It is fair to assume that one reason for this physical superiority was the inexorable law of the survival of the fittest, the natives in question being the survivors of a recent prevailing epidemic and famine.

ESKIMO APPETITES.

As far as my experience goes the Eskimo have not the enormous appetites with which they are usually accredited. The Eskimo who accompanied Lieutenant May, of the Nares Expedition, on his sledge journey, is reported to have been a small eater, and the only case of scurvy, by the way; several Eskimo who were employed on board the *Corwin* as dog-drivers and interpreters were as a rule smaller eaters than our own men, and I have observed on numerous occasions among the Eskimo I have visited, that instead of being great gluttons, they are, on the contrary, moderate eaters. It is, perhaps, the revolting character of their food—rancid oil, a tray of hot seal entrails, a bowl of coagulated blood, for example—that causes overestimation of the quantity eaten. Persons in whom nausea and dis-

gust are awakened at tripe, putrid game, or moldy and maggotty cheese affected by so-called epicures, not to mention the bad oysters which George I. preferred to fresh ones, would doubtless be prejudiced and incorrect observers as to the quantity of food an Eskimo might consume. From some acquaintance with the subject I therefore venture to say that the popular notion regarding the great appetite of the Eskimo is one of the current fallacies. The reported cases were probably exceptional ones, happening in subjects who had been exercising and living on little else than frozen air for perhaps a week. Any vigorous man in the prime of life who has been shooting all day in the sharp, crisp air of the Arctic will be surprised at his gastronomic capabilities; and personal knowledge of some almost incredible instances amongst civilized men might be related, were it not for fear of being accused of transcending the bounds of veracity.

ORIGIN AND DEVELOPMENT.

There is so much about certain parts of Alaska to remind one of Scotland that we wonder why some of the more southern Eskimo have not the intrepidity and vigor of Scotchmen, since they live under almost the same topographical conditions amid fogs and misty hills. Perhaps if they were fed on oatmeal, and could be made to adopt a few of the Scotch manners and customs, religious and otherwise, they might, after infinite ages of evolution, develop some of the qualities of that excellent race. It is probably not so very many generations ago that our British progenitors were like these original and primitive men as we find them in the vicinity of Bering straits. Here the mind is taken back over centuries, and one is able to

study the link of transition between the primitive men of the two continents at the spot where their geograpical relations lead us to suspect it. Indeed, the primitive man may be seen just as he was thousands of years ago by visiting the village perched like the eyry of some wild bird about 200 feet up the side of the cliff at East cape, on the Asiatic side of the straits. This bold, rocky cliff, rising sheer from the sea to the height of 2,100 feet, consists of granite, with lava here and there, and the indications point to the overflow of a vast ice sheet from the north, evidences of which are seen in the trend of the ridges on the top, and the form of the narrow peninsula joining the cliff to the mainland. From the summit of the cape the Diomedes, Fairway Rock, and the American coast are so easily seen that the view once taken would dispel any doubts as to the possibility of the aboriginal denizens of America having crossed over from Asia, and it would require no such statement to corroborate the opinion as that of an officer of the Hudson Bay Company, then resident in Ungava bay, who relates that in 1839 an Eskimo family crossed to Labrador from the northern shore of Hudson's straits on a raft of driftwood. Natives cross and recross Bering straits to-day on the ice and in primitive skin canoes, not unlike Cape Cod dories, which have not been improved in construction since the days of prehistoric man. Indeed, the primitive man may be seen at East cape almost as he was thousands of years ago. Evolution and development, with the exception of firearms, seem to have halted at East cape. The place, with its cave-like dwellings and skin-clad inhabitants, among whom the presence of white men creates the same excitement as the advent of a circus among the colored population of Washington, makes one

fancy that he is in some grand prehistoric museum, and that he has gone backward in time several thousand years in order to get there.

While we may do something towards tracing the effects of physical agents on the Eskimo back into the darkness that antedates history, yet his geographical origin and his antiquity are things concerning which we know but little. Being subjects of first-class interest, deserving of grave study and so vast in themselves, they cannot be touched upon here except incidentally. Attempting to study them is like following the labyrinthal ice mazes of the Arctic in quest of the North Pole.

We may, however, venture the assertion that the Eskimo is of autocthonic origin in Asia, but is not autocthonous in America. His arrival there and subsequent migrations are beyond the reach of history or tradition. Others, though, contend from the analogy of some of the western tribes of Brazil, who are identical in feature to the Chinese, that the Eskimo may have come from South America; and the fashion of wearing labrets, which is common to the indigenous population both of Chili and Alaska, has been cited as a further proof.

Touching the subject of early migrations, Mr. Charles Wolcott Brooks, whose sources of information at command have been exceptionally good, reports in a paper to the California Academy of Sciences a record of sixty Japanese junks which were blown off the coast and by the influence of the Kuro-Shiwo were drifted or stranded on the coast of North America, or on the Hawaiian or adjacent islands. As merchant ships and ships of war are known to have been built in Japan prior to the Christian era, a great number of disabled junks containing small parties of Japanese must

have been stranded on the Aleutian islands and on the Alaskan coast in past centuries, thereby furnishing evidence of a constant infusion of Japanese blood among the coast tribes.

Leaving aside any attempt to show the ethnical relations of these facts, the question naturally occurs whether any of these waifs ever found their way back from the American coast. On observing the course of the great circle of the Kuro-Shiwo and the course of the trade winds, one inclines to the belief that such a thing is not beyond the range of possibility. Indeed, several well-authenticated instances are mentioned by Mr. Brooks; and in connection with the subject he advances a further hypothesis, namely, the American origin of the Chinese race, and shows in a plausible way that—

> The ancestry of China may have embarked in large vessels as emigrants, perhaps from the vicinity of the Chincha Islands, or proceeded with a large fleet, like the early Chinese expedition against Japan, or that of Julius Cæsar against Britain, or the Welsh Prince Madog and his party, who sailed from Ireland and landed in America A. D. 1170; and, in like manner, in the dateless antecedure of history, crossed from the neighborhood of Peru to the country now known to us as China.

If America be the oldest continent, paleontologically speaking, as Agassiz tells us, there appears to be some reason for looking to it as the spot where early traces of the race are to be found, and the fact would seem to warrant further study and investigation in connection with the indigenous people of our continent, thereby awakening new sources of inquiry among ethnologists.

LINGUISTIC PECULIARITIES.

The sienite plummet from San Joaquin Valley, California, goes back to the distant age of the Drift; and the

Calaveras skull, admitting its authenticity, goes back to the Pliocene epoch, and is older than the relics or stone implements from the drift gravel and the European caves.

It is doubtful, though, whether these data enable us to make generalizations equal in value to those afforded by the study of vocabularies. It is alleged that linguistic affinities exist between some of the tribes of the American coast and our Oriental neighbors across the Pacific. Mr. Brooks, whom I have already quoted, reports that in March, 1860, he took an Indian boy on board the Japanese steam corvette *Kanrin-maru*, where a comparison of Coast-Indian and pure Japanese was made at his request by Funkuzawa Ukitchy, then Admiral's secretary; the result of which he prepared for the press and published with a view to suggesting further linguistic investigations. He says that quite an infusion of Japanese words is found among some of the Coast tribes of Oregon and California, either pure or clipped, along with some very peculiar Japanese "idioms, constructions, honorific, separative, and agglutinative particles"; that shipwrecked Japanese are invariably enabled to communicate understandingly with the Coast Indians, although speaking quite a different language, and that many shipwrecked Japanese have informed him that they were enabled to communicate with and understand the natives of Atka and Adakh islands of the Aleutian group.

With a view to finding out whether any linguistic affinity existed between Japanese and the Eskimo dialects in the vicinity of Bering straits, I caused several Japanese boys, employed as servants on board the *Corwin*, to talk on numerous occasions to the natives both of the American and Asiatic coasts; but in every instance they were unable

to understand the Eskimo, and assured me that they could not detect a single word that bore any resemblance to words in their own language.

The study of the linguistic peculiarities which distinguish the population around Bering straits offers an untrodden path in a new field; but it is doubtful whether the results, except to linguists like Cardinal Mezzofanti, or philologists of the Max Müller type, would be at all commensurate with the efforts expended in this direction, since it is asserted that the human voice is incapable of articulating more than twenty distinct sounds, therefore whatever resemblances there may be in the particular words of different languages are of no ethnic value. Although these may be the views of many persons not only in regard to the Eskimo tongue but in regard to philology in general, the matter has a wonderful fascination for more speculative minds.

Much has been said about the affinity of language among the Eskimo—some asserting that it is such as to allow mutual intercourse everywhere—but instances warrant us in concluding that considerable deviations exist in their vocabularies, if not in the grammatical construction. For instance, take two words that one hears oftener than any others: On the Alaska coast they say "na-koo-ruk," a word meaning "good," "all right," etc.; on the Siberian coast "mah-zink-ah," while a vocabulary collected during Lieutenant Schwatka's expedition gives the word "mah-muk'-poo" for "good." The first two of these words are so characteristic of the tribes on the respective shores above the strafts that a better designation than any yet given to them by writers on the subject would be *Nakoorooks* for the people on the American side and *Mazinkahs* for those

on the Siberian coast. These names, by which they know each other, are in general use among the whalemen and were adopted by every one on board the *Corwin*.

Again, on the American coast "Am-a-luk-tuk" signifies plenty, while on the Siberian coast it is "Num-kuck-ee." "Tee-tee-tah" means needles in Siberia, in Alaska it is "mitkin." In the latter place when asking for tobacco they say "te-ba-muk," while the Asiatics say "salopa." That a number of dialects exists around Bering straits is apparent to the most superficial observer. The difference in the language becomes apparent after leaving Norton sound. The interpreter we took from Saint Michael's could only with difficulty understand the natives at Point Barrow, while at Saint Lawrence island and on the Asiatic side he could understand nothing at all. At East cape we saw natives who, though apparently alike, did not understand each other's language. I saw the same thing at Cape Prince of Wales, the western extremity of the New World, whither a number of Eskimo from the Wankarem river, Siberia, had come to trade. Doubtless there is a community of origin in the Eskimo tongue, and these verbal divergencies may be owing to the want of written records to give fixity to the language, since languages resemble living organisms by being in a state of continual change. Be that as it may, we know that this people has imported a number of words from coming in contact with another language, just as the French have incorporated into their speech "le steppeur," "l'outsider," "le high life," "le steeple chase," "le jockey club," etc.—words that have no correlatives in French—so the Eskimo has appropriated from the whalers words which, as verbal expressions of his ideation, are undoubtedly better than anything in his own

tongue. One of these is "by and by," which he uses with the same frequency that a Spaniard does his favorite *mañana por la mañano.* In this instance the words express the state of development and habits of thought—one the lazy improvidence of the Eskimo, and the other the "to-morrow" of the Spaniard, who has indulged that propensity so far that his nation has become one of yesterday.

The change of the Eskimo language brought about by its coming in contact with another forms an important element in its history, and has been mentioned by the older writers, also by Gilder, who reports a change in the language of the Iwillik Eskimo to have taken place since the advent among them of the white men. Among other peculiarities of their phraseology occurs the word "tanuk," signifying whiskey, and it is said to have originated with an old Eskimo employed by Moore as a guide and dog-driver when he wintered in Plover bay. Every day about noon that personage was in the habit of taking his appetizer and usually said to the Eskimo, "Come, Joe, let's take our tonic." Like most of his countrymen, Joe was not slow to learn the meaning of the word, and to this day the firm hold "tanuk" has on the language is only equalled by the thirst for the fluid which the name implies. Among the Asiatic Eskimo the word "um-muck" is common for "rum," while "em-mik" means water. Even words brought by whalers from the South Sea islands have obtained a footing, such as "kow-kow" for food, a word in general use, and "pow" for "no," or "not any." They also call their babies "pick-a-nee-nee," which to many persons will suggest the Spanish word or the Southern negro idiom for "baby." The phrase "pick-a-nee-nee kowkow" is the usual formula in begging

food for their children. An Eskimo, having sold us a reindeer, said it would be "mazinkah kow-kow" (good eating), and one windy day we were hauling the seine, and an Eskimo seeing its empty condition when pulled on to the beach, said, "'Pow' fish; bimeby 'pow' wind, plenty fish."

The fluency with which some of these fellows speak a mixture of pigeon English and whaleman's jargon is quite astonishing, and suggests the query whether their fluency results from the aggressiveness of the English or is it an evidence of their aptitude? It seems wonderful how a people we are accustomed to look upon as ignorant, benighted and undeveloped, can learn to talk English with a certain degree of fluency and intelligibility from the short intercourse held once a year with a few passing ships. How many "hoodlums" in San Francisco, for instance, learn anything of Norwegian or German from frequenting the wharves? How many "wharf rats" or stevedores in New York learn anything of these languages from similar intercourse? Or, for that matter, we may ask, How many New York pilots have acquired even the smallest modicum of French from boarding the steamers of the Compagnie Générale Transatlantique?

From a few examples it will be seen that the usage followed by the Eskimo in its grammatical variations rests on the fixity of the radical syllable and upon the agglomeration of the different particles intended to modify the primitive sense of this root, that is to say upon the principle of agglutinative languages. One or two instances may suffice to show the agglutinate character of the language. Canoe is "o-me-uk;" ship "o-me-uk-puk;" steamer "o-me-uk-puk-ignelik;" and this composite mechanical structure

reaches its climax in steam-launch, which they call "o-me-uk-puk-ignelik-pick-a-nee-nee."

For snow and ice in their various forms there are also many words which show further the polysynthetic structure of the language—a fact contrary to that primitive condition of speech where there are no inflections to indicate the relations of the words to each other. It will not do to omit "O-kee-chuck" from this enumeration—a word signifying trade, barter, or sale, and one most commonly heard among these people. When they wish to say a thing is bad they use "A-shu-ruk," and when disapproval is meant they say "pe-chuk." The latter word also expresses general negation. For instance, on looking into several unoccupied houses a native informs us "Innuit pechuk," meaning that the people are away or not at home; "Allopar" is cold, and "allopar pechuk" is hot. Persons fond of tracing resemblances may find in "Ignik" (fire) a similarity to the Latin *ignis* or the English "ignite," and from "Un-gi doo-ruk" (big, huge) the transition down to "hunky-dory" is easy. Those who see a sort of complemental relation to each other of linguistic affinity and the conformity in physical characters may infer from "Mikey-doo-rook" (a term of endearment equivalent to "Mavourneen" and used in addressing little children) that the inhabitants within the Polar Circle have something of the Emerald Isle about them. But no, they are not Irish, for when they are about to leave the ship or any other place for their houses they say "to hum"; consequently they are Yankees.

I do not wish to be thought frivolous in my notions regarding the noble science of philology; but when one considers the changes that language is constantly undergoing, the inability of the human voice to articulate more than

twenty distinct sounds, and the wonderful amount of ingenious learning that has been wasted by philologists on trifling subjects, one is disposed to associate many of their deductions with the savage picture-writing on Dighton Rock, the Cardiff Giant, and the old wind-mill at Newport.

ESKIMO DIETETICS.

Attempts to trace or discover the origin of races through supposed philological analogies do not possess the advantage of certainty afforded by the study of the means by which individuals of the race supply the continuous demands of the body with the nutriment necessary to maintain life and health.

Everybody has heard of the seal, bear, walrus, and whale in connection with Eskimo dietetics, and doubtless the stomachs of most persons would revolt at the idea of eating these animals, the taste for which, by the way, is merely a matter of early education or individual preference, for there is no good reason why they should not be just as palatable to the northern appetite as pig, sheep, and beef are to the inhabitants of temperate latitudes. As food they renew the nitrogenous tissues, reconstruct the parts and restore the functions of the Eskimo frame, prolong his existence, and produce the same animal contentment and joy as the more civilized viands of the white man's table. There are more palatable things than bear or eider duck, yet I know many persons to whom snails, olive oil, and *pâté de fois gras* are more repugnant. A tray full of hot seal entrails, a bowl of coagulated blood, and putrid fish are not very inviting or lickerish to ordinary mortals, yet they have their analogue in the dish of some farmers who eat a preparation of pig's bowels known as "chitterlings,"

and in the blood-puddings and Limburger cheese of the Germans. Blubber-oil and whale are not very dainty dishes, yet consider how many families subsist on half-baked saleratus biscuits, salted pork, and oleomargarine.

On the mess table of the Fur Company's establishment at St. Paul island, seal meat is a daily article of consumption, and from personal experience I can testify as to its palatability, although it reminded one of indifferent beef rather overdone. Hair seal and bear steaks were on different occasions tried at the mess on board the Corwin, but everybody voted eider duck and reindeer the preference. It is not so very long since that whale was a favorite article of diet in England and Holland, and Arctic whalemen still, to my personal knowledge, use the freshly tried oil in cooking; for instance in frying cakes, for which they say it answers the purpose as well as the finest lard, while others breakfast on whale and potatoes prepared after the manner of codfish balls. The whale I have tasted is rather insipid eating, yet it appears to be highly nutritious, judging from the well-nourished look of natives who have lived on it, and the air of greasy abundance and happy contentment that pervades an Eskimo village just after the capture of a whale. Being ashore one day with our pilot, we met a native woman whom he recognized as a former acquaintance, and on remarking to her that she had picked up in flesh since he last saw her, she replied that she had been living on a whale all the Winter, which explained her plumpness.

It must not be supposed, however, that the whale, seal and walrus constitute the entire food supply of the Arctic. There is scarcely any more toothsome delicacy than reindeer, the tongue of which is very dainty and succulent.

There is one peculiarity about its flesh—in order to have it in perfection it must be eaten very soon after being killed; the sooner the better, for it deteriorates in flavor the longer it is kept. Indeed, the Eskimo do not wait for the animal heat to leave the carcass, as they eat the brains and paunch hot and smoking.

While our gastronomic enthusiasm did not extend this far, we dined occasionally on fresh trout from a Siberian mountain lake, young wild ducks as fat as squabs, and reindeer, any of which delicacies could not be had in the same perfection at Delmonico's or any similar establishment in New York for love or money. There is scarcely any better eating in the way of fish than *coregonus*—a new species discovered at Point Barrow by the *Corwin*—and certainly no more dainty game exists than the young wild geese and ptarmigan to be found in countless numbers in Hotham inlet. At the latter place, doubtless the warmest inside the straits, are found quantities of cranberries about the size of a pea, which not only make a delicious accessory to roasted goose, but act as a valuable antiscorbutic. These berries and a kind of kelp, which I have seen Eskimo eating at Tapkan, Siberia, seem to be the only vegetable food they have. The large quantities of eggs easily procurable, but in most cases doubtful, also constitute a standard article of diet among these people, who have no scruples about eating them partly hatched. They seemed never to comprehend our fastidiousness in the matter and why our tastes differed so much from theirs in this respect. They will break an egg containing an embryonic duck or goose, extract the bird by one leg and devour it with all the relish of an epicure. Gull's eggs, however, are in disrepute among them, for the women—who, by the way,

have the same frailties and weaknesses as their more civilized sisters—believe that eating gull's eggs causes loss of beauty and brings on early decrepitude. The men, on the other hand, are fond of seal eyes, a tid-bit which the women believe increases their amorousness, and feed to their lords after the manner of "Open your mouth and shut your eyes."

Game is, as a rule, very tame, and during the moulting season, when the geese are unable to fly, it is quite possible to kill them with a stick. At one place, Cape Thompson, Eskimo were seen catching birds from a high cliff with a kind of scoop-net, and I saw birds at Herald island refuse to move when pelted with stones, so unaccustomed were they to the presence of man. In addition to being very tame, game is plentiful, and it is not uncommon, off the Siberian coast, to see flocks of eider ducks darkening the air and occupying several hours in passing overhead. It was novel sport to see the natives throw a projectile known as an "apluketat" into one of these flocks with astonishing range and accuracy, bringing down the game with the effectiveness of a shotgun.

Game keeps so well in the Arctic that an instance is known of its being perfectly sweet and sound on an English ship after two years' keeping, and whalemen kill a number of pigs, which they hang in the rigging and keep for use during the cruise. It is also noticeable that leather articles do not mildew as they generally do at sea, some shoes kept in a locker on board the *Corwin* having retained their polish during the entire cruise.

The food of the Eskimo satisfies their instinctive craving for a hydrocarbon, but they do not allow themselves to be much disturbed or distracted in its preparation, as most of

it is eaten raw. They occasionally boil their food, however, and some of them have learned the use of flour and molasses, of which they are very fond.

Their aversion to salt is a very marked peculiarity, and they will not eat either corned beef or pork on this account. It may be that physiological reasons exist for this dislike.

SOCIAL AND DOMESTIC RELATIONS.

Omitting other ethnographic facts relative to the Eskimo, which might be treated in a systematic way except for their triteness, we pass from the means of the renewal of the animal economy to its reproduction. Courtship and marriage, which, it is said, are conducted in the most unsentimental manner possible, are for that reason not to be discussed; and for obvious reasons many of the prenatal conditions cannot here be dwelt upon. Having never witnessed the act of parturition in an Eskimo my knowledge of the subject is merely second-hand, and consequently not worth detailing. It appears, though, that parturition is a function easily performed among them, and that it is unattended by the post-partum accidents common to civilization. As a rule the women are unprolific, it being uncommon to find a family numbering over three children, and the mortality among the new-born is excessive, owing to the ignorance and neglect of the ordinary rules of hygiene. They seem, however, to be kind to their children, who in respect to crying do not show the same peevishness as seen in our nurseries; indeed, the social and demonstrative good nature of the race seems to crop out even in babyhood, as I have often witnessed under such circumstances as a baby enveloped in furs in a skin canoe which lay along side the ship during a snowstorm; its tiny hands protruding held

a piece of blubber, which it sucked with apparent relish, the unique picture of happy contentment. It was quick to feel itself an object of attraction, and its chubby face returned any number of smiles of recognition.

The manner of carrying the infant is contrary to that of civilized custom. It is borne on the back under the clothes of the mother, which form a pouch, and from which its tiny head is generally visible over one or the other shoulder, but on being observed by strangers it shrinks like a snail or a marsupian into its snug retreat. When the mother wants to remove it she bends forward, at the same time passing her left hand up the back under her garments, and seizing the child by the feet, pulls it downward to the left; then, passing the right hand under the front of the dress, she again seizes the feet and extracts it by a kind of podalic delivery. Another common way of carrying children is astride the neck. The subject is one that the Chucki artist often carves in ivory.

The play-impulse manifests itself among these people in various ways. They have such mimetic objects as dolls, miniature boats, etc. I have seen a group of boys, sailing toy boats in a pond, behave under the circumstances just as a similar group has been observed to do at Provincetown, Cape Cod, and the same act, as performed in the Frog Pond of the Boston Common, may be called only a differentiated form of the same tendency. Their dolls, of ivory and clothed with fur, seem to answer the same purpose that they do in civilized communities—namely, the amusement of little girls—for at one place where we landed a number of Eskimo girls, stopping play on our approach, sat their dolls up in a row, evidently with a view to giving the dolls a better look at the strange visitors. Spinning

tops, essentially Eskimo and unique in their character, are held in the hand while spinning; on the Siberian coast foot-ball is played, and among other questionable things acquired from contact with the whalemen, a knowledge of card-playing exists. We were very often asked for cards, and at one place where we stopped and bartered a number of small articles with the natives they gave evidence of their aptitude at gaming. The game being started, with the bartered articles as stakes, one fellow soon scooped in everything, leaving the others to go off dead-broke, amid the ridicule of some of our crew, and doubtless feeling worse than dead, for among no people that I have seen, not even the French, does ridicule so effectually kill.

PERSONAL ORNAMENTATION.

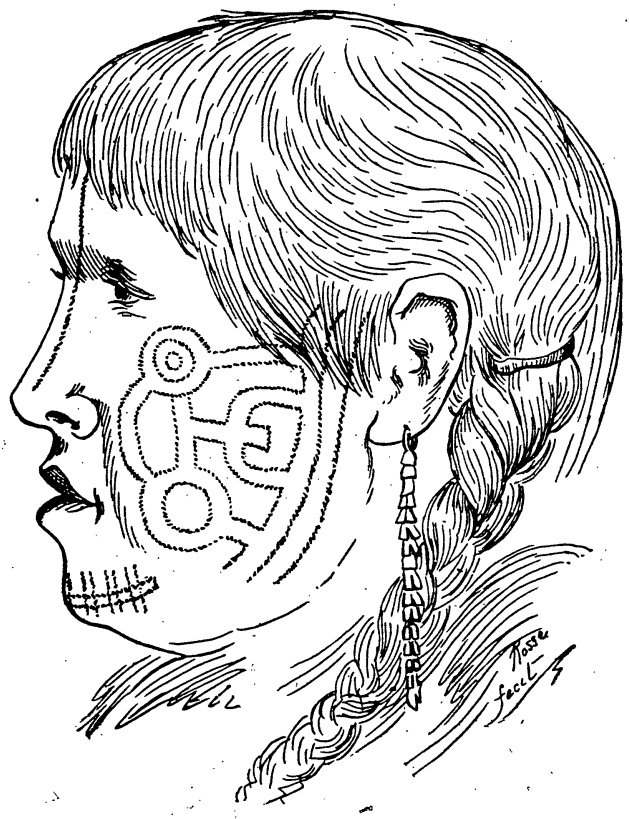
Among the means taken by these people to produce personal ornamentation that of tattooing the face and wearing a labret is the most noticeable. The custom of tattooing having existed from the earliest historical epochs is important, not only from an ethnological but from a medical and pathological point of view, and even in its relation to medical jurisprudence in cases of contested personal identity.

Without going into the history of the subject, it may not be irrelevant to mention that tattooing was condemned by the Fathers of the Church, Tertullian, among others, who gives the following rather singular reason for interdicting its use among women: "Certi sumus Spiritum Sanctum magis masculis tale aliquid subscriberé potuisse si feminis subscripsisset." *

In addition to much that has been written by French and

* De Virginibus velandis. Lutetiæ Parisiorum, 1675 f°., p. 178.

German writers, the matter of tattoo-marks has of late claimed the attention of the law courts of England, the Chief-Justice, Cockburn, in the Tichbourne case, having described this species of evidence as of "vital importance," and in itself final and conclusive. The absence of the tattoo-marks in this case justified the jury in their finding that the defendant was not and could not be Roger Tichbourne, whereupon the alleged claimant was proved to be an impos-



Style of personal ornamentation adopted by the women of Saint Lawrence island.

tor, found guilty of perjury, and sentenced to penal servitude.*

Why the ancient habit of tattooing should prevail so extensively among some of the primitive tribes as it does, for instance, in the Polynesian islands and some parts of Japan, and we may say as a survival of a superstitious practice of paganism among sailors and others, is a psychological problem difficult to solve. Whether it be owing to perversion of the sexual instinct, which is not unlikely, or to other cause, it is not proposed to discuss. Be that as it may, the prevalence of the habit among the Eskimo is confined to the female sex, who are tattooed on arriving at the age of puberty. The women of Saint Lawrence island, in addition to lines on the nose, forehead and chin, have uniformly a figure of strange design on the cheeks, which is suggestive of cabalistic import. It could not be ascertained, however, whether such is the case. The lines drawn on the chin were exactly like the ones I have seen on Moorish women in Morocco. Another outlandish attempt at adornment was witnessed at Cape Blossom in a woman who wore a bunch of colored beads suspended from the septum of her nose. These habits, however, hardly seem so revolting as the use of the labret by the "Mazinka" men on the American coast, of whom it is related that a sailor seeing one of them for the first time, and observing the slit in the lower lip through which the native thrust his tongue, thought he had discovered a man with two mouths. The use of the labret, like many of the attempts at primitive ornamentation, is very old, its use having been traced by Dall along the American coast from the lower part of Chili

*See Guy's Hospital Report, XIX, 1874; also "Histoire Médicale du Tatouage," in Archives de Médecine Navale, Tom. 11 and 12, Paris, 1869.

to Alaska. Persons fond of tracing vestiges of savage ornamentation amid intellectual advancement and æsthetic sensibility far in advance of the primitive man, may observe in the wearers of bangles and earrings the same tendency existing in a differentiated form.

DIVERSIONS.

I doubt whether Shakespeare's dictum in regard to music holds good when applied to the Eskimo, for they have but little music in their souls, and among no people is there such a noticeable absence of "treason, stratagem and spoil." A rude drum and a monotonous chant, consisting only of the fundamental note and minor third, are the only things in the way of music among the more remote settlements of which I have any knowledge. Mrs. Micawber's singing has been described as the table-beer of acoustics. Eskimo singing is something more. The beer has become flat by the addition of ice. One of our engineers, who is quite a fiddler, experimented on his instrument with a view to seeing what effect music would have on the "savage breast," but his best efforts at rendering "Madame Angot" and the "Grande Duchesse" were wasted before an unsympathetic audience, who showed as little appreciation of his performance as some people do when listening to Wagner's "Music of the Future."

Where they have come in contact with civilization their musical taste is more developed. At Saint Michael's I was told that some of their songs are so characteristic that it is much to be regretted that some of them cannot be bottled up in a phonograph and sent to a musical composer. On the coast of Siberia I heard an Eskimo boy sing correctly a song he had learned while on board a whaling vessel, and

on several of the Aleutian islands the natives play the accordeon quite well; have music-boxes, and even whistle strains from "Pinafore."

From music to dancing the transition is obvious, no matter whether the latter be regarded in a Darwinian sense as a device to attract the opposite sex or as the expression of joyous excitement. This manifestation of feeling in its bodily discharge, which Moses and Miriam and David indulged in, which is ranked with poetry by Aristotle, and which old Homer says is the sweetest and most perfect of human enjoyments, is a pastime much in vogue among the Eskimo, and it required but little provocation to start a dance at any time on the *Corwin's* decks when a party happened to be on board. The dancing, however, had not the cadence of "a wave of the sea," nor was there the harmony of double rotation circling in a series of graceful curves to strains like those of Strauss or Gungl. On the contrary, there was something saltatorial and jerky about all the dancing I saw both among the men and women. It is the custom at some of their gatherings, after the hunting season is over, for the men to indulge in a kind of terpsichorean performance, at the same time relating in Homeric style the heroic deeds they have done. At other times the women do all the dancing. Being stripped to the waist they are more *décolleté* than our beauties at the German, and the men take the part of spectators only in this choregraphical performance.

ART INSTINCT.

The aptitude shown by Eskimo in carving and drawing has been noticed by all travellers among them. Some I have met with show a degree of intelligence and appreciation in regard to charts and pictures scarcely to be expected from such a source. From walrus ivory they sculpture

figures of birds, quadrupeds, marine animals, and even the human form, which display considerable individuality notwithstanding their crude delineation and imperfect detail. I have also seen a fair carving of a whale in plumbago. Evidences of decoration are sometimes seen on their canoes, on which are found rude pictures of walruses, etc., and they have a kind of picture-writing, by means of which they commemorate certain events in their lives, just as Sitting Bull has done in an autobiography that may be seen at the Army Medical Museum.

When we were searching for the missing whalers off the Siberian coast, some natives were come across with whom we were unable to communicate except by signs, and wishing to let them know the object of our visit, a ship was drawn in a note-book and shown to them, with accompanying gesticulations, which they quickly comprehended, and one fellow, taking the pencil and note-book, drew correctly a pair of reindeer horns on the ship's jib-boom—a fact which identified, beyond doubt, the derelict vessel they had seen. At Point Hope an Eskimo, who had allowed us to take sketches of him, desired to sketch one of the party, and taking one of our note-books and a pencil, neither of which he ever had in his hand before, produced the accompanying likeness of Professor Muir:

At Saint Michael's there is an Eskimo boy who draws remarkably well, having taught himself by copying from the *Illustrated London News*. He made a correct pen-and-ink drawing of the *Corwin*, and another of the group of buildings at Saint Michael's, which, though creditable in many respects, had the defect of many Chinese pictures, being faulty in perspective. As these drawings equal those in Dr. Rink's book, done by Greenland artists, I regret my inability to reproduce them here. As evidences of culture they show more advancement than the carvings of English rustics that a clergyman has caused to be placed on exhibition at the Kensington Museum.

Sir John Ross speaks highly of his interpreter as an artist; Beechy says that the knowledge of the coast obtained by him from Innuit maps was of the greatest value, while Hall and others show their geographical knowledge to be as perfect as that possible of attainment by civilized men unaided by instruments. I had frequent opportunities to observe these Eskimo ideas of chartography. They not only understood reading a chart of the coast when showed to them, but would make tracings of the unexplored part, as I knew a native to do in the case of an Alaskan river, the mouth only of which was laid down on our chart.

Manifestation of the plastic art, which is found among tribes less intelligent, is rare among the Eskimo. In fact, the only thing of the kind seen was some rude pottery at Saint Lawrence island, the design of which showed but crude development of ornamental ideas. The same state of advancement was shown in some drinking cups carved from mammoth ivory and a dipper made from the horn of a mountain sheep.

COMBATIVENESS.

In one of the acts of Shakespeare's "Seven Ages" the Eskimo plays a very unimportant *rôle*. Perhaps in no other race is the combative instinct less predominant; in none is quarrelling, fierceness of disposition, and jealousy more conspicuously absent, and in none does the desire for the factitious renown of war exist in a more rudimentary and undeveloped state. Perhaps the constant fight with cold and hunger is a compensation which must account for the absence of such unmitigated evils as war, taxes, complex social organization and hierarchy among the curious people of the icy north. The pursuits of peace and of simple patriarchal lives, notwithstanding the fact of much in connection therewith that is wretched and forbidding to a civilized man, seem to beget in these people a degree of domestic tranquility and contentment which, united to their light-hearted and cheery disposition, is an additional reason for believing the sum of human happiness to be constant throughout the world.

MENTAL CHARACTER AND CAPACITY.

The intellectual character of the Eskimo, judging from the information which various travellers have furnished, as well as my personal knowledge, produces more than a feeble belief in the possibility of their being equal to anything they choose to take an interest in learning. The Eskimo is not "muffled imbecility," as some one has called him, nor is he dull and slow of understanding, as Vitruvius describes the northern nation to be "from breathing a thick air"—which, by the way, is thin, elastic and highly ozonized—nor is he, according to Dr. Beke, "degenerated almost to the lowest state compatible with the retention of

rational endowments." On the contrary, the old Greenland missionary, Hans Egede, writes: "I have found some of them witty enough and of good capacity;" Sir Martin Frobisher says they are "in nature very subtle and sharp-witted;" Sir Edward Parry, while extolling their honesty and good nature, adds, "Indeed, it required no long acquaintance to convince us that art and education might easily have made them equal or superior to ourselves;" Sauer tells of a woman who learned to speak Russian fluently in rather less than twelve months, and Beechy and others have acknowledged the intelligent help they have received from Eskimo in making their explorations.

Before going further, it may not be amiss to speak in a general way of the bony covering which protects the organ whose function it is to generate the vibrations known as thought. Of one hundred crania, collected principally at Saint Lawrence island, a number were examined by me at the Army Medical Museum, through the courtesy of Dr. Huntington, with the result of changing and greatly modifying some of the previous notions of the conventional Eskimo skull as acquired from books on craniology. Perhaps after the inspection and examination of a large collection of crania, it may be safe to pronounce upon their differential character; but whether the differences in configuration are constant or only occasional manifestations, admits of as much doubt as the exceptions in Professor Sophocles's Greek grammar, which are often coextensive with the rule.*

The typical Eskimo skull, according to popular notion, is one exhibiting a low order of intelligence, and characterized by small brain capacity, with great prominence of the

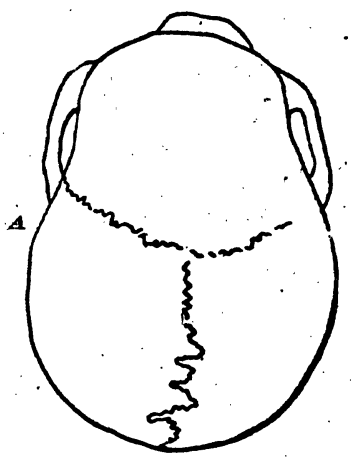
*Retzius, Finska Kranier, Stockholm: 1878.

superciliary ridges, occipital protuberance and zygomatic arches, the latter projecting beyond the general contour of the skull like the handles of a jar or a peach basket; and lines drawn from the most projecting part of the arches and touching the sides of the frontal bone are supposed to meet over the forehead, forming a triangle, for which reason the skull is known as pyramidal.

The first specimen, examined from a vertical view, shows something of the typical character as figured in A, and when viewed posteriorly there is noticed a flattening of the parietal walls with an elongated vertex as shown in D; while a second specimen, represented by B, shows none of the foregoing characteristics, the form being elongated and the parietal walls so far overhanging as to conceal the zygomatic arches in the vertical view, so that if lines be drawn as previously mentioned, instead of forming a triangle they may, like the asymptotes of a parabola, be extended to infinity and never meet:

For purposes of comparison a number of orthographic outlines, showing the contour of civilized crania from a vertical point of observation, are herewith annexed. No. 1 is that of an eminent mathematician who committed suicide; No. 2, a prominent politician during the civil war; No. 3, a banker; and No. 4, a notorious assassin. Nos. 5 and 6 are negro skulls. Further comparison may be made with the Jewish skull, as represented in No. 7, in which the nasal bones project so far beyond the general contour as to form a bird-like appendage.

A collection of Aleutian heads, as seen from a vertical point of observation, when I looked down from the gallery of the little Greek church at Ounalaska, presented at first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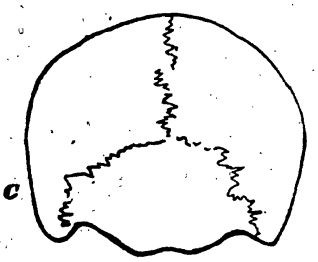
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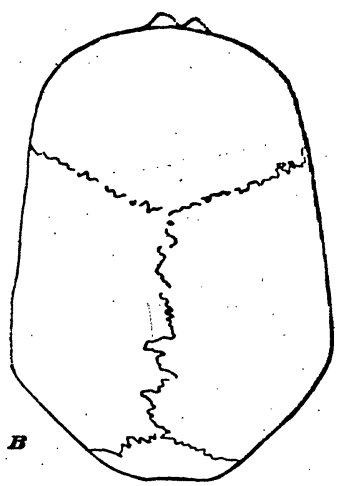
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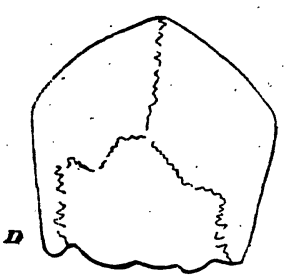
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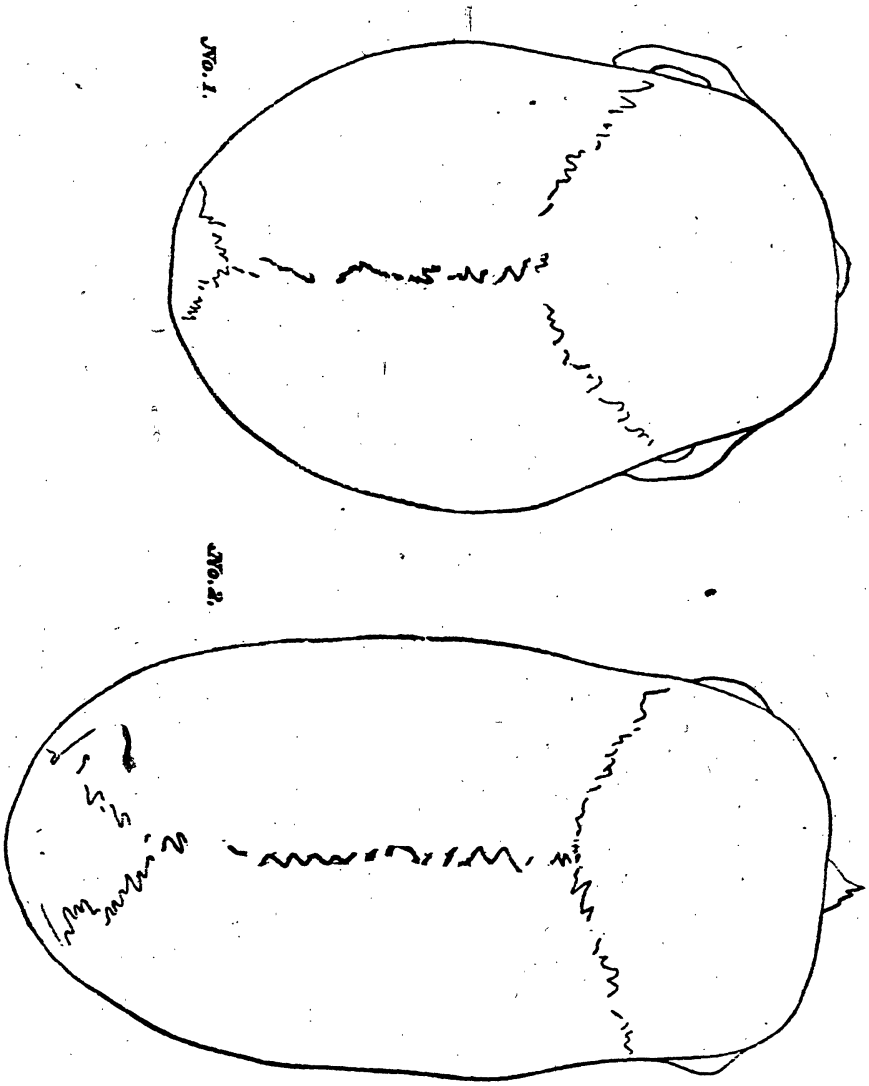
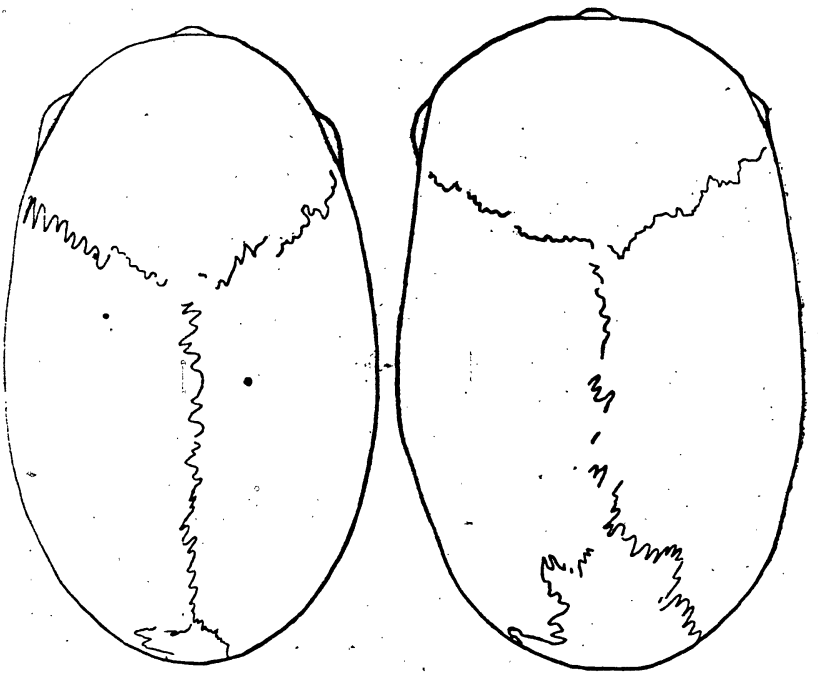

No. 1.
No. 2.

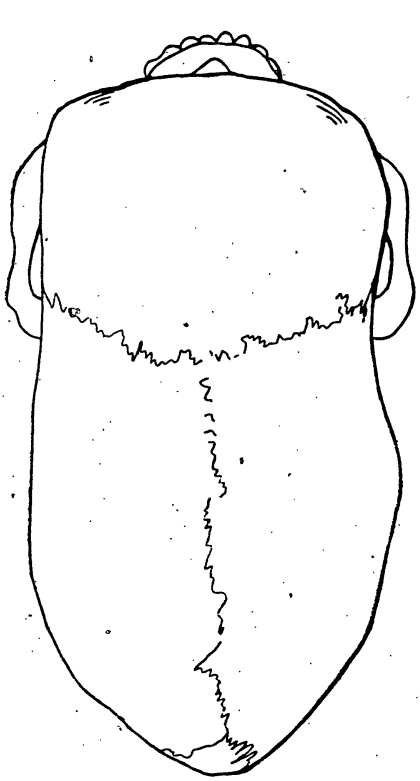


No. 3. No. 4.

certain collective characters by which they approach one another. But anatomists know that a careful comparison of any collection will show extremely salient differences. In fact, individual differences, so numerous and so irregular as to prevent methodical enumeration, constitute the stumbling-block of ethnic craniology. Take, for instance, a number of the skulls under consideration: in proportions they will be found to present very considerable variations among themselves. The skulls figured by A and B are respectively brachycephalic and dolichocephalic. The former has an internal capacity of 1,400, the latter 1,214 cubic centimeters; but the facial angle of each is 80°, and in one Eskimo cranium it runs up to 84°. If the facial

angle be trustworthy, as a measure of the degree of intelligence, we have shown here a development far in excess of the negro, which is placed at 70°, or of the Mongolian at 75°, and exceeding that observed by me in many German skulls, which do not, as a rule, come up to the 90° of Jupiter Tonans or of Cuvier, in spite of the boasted intelligence of that nationality.

In none of the skulls of the collection is there observable the heavy superciliary ridges alleged to be common in lower races, but which exist in many of the best-formed



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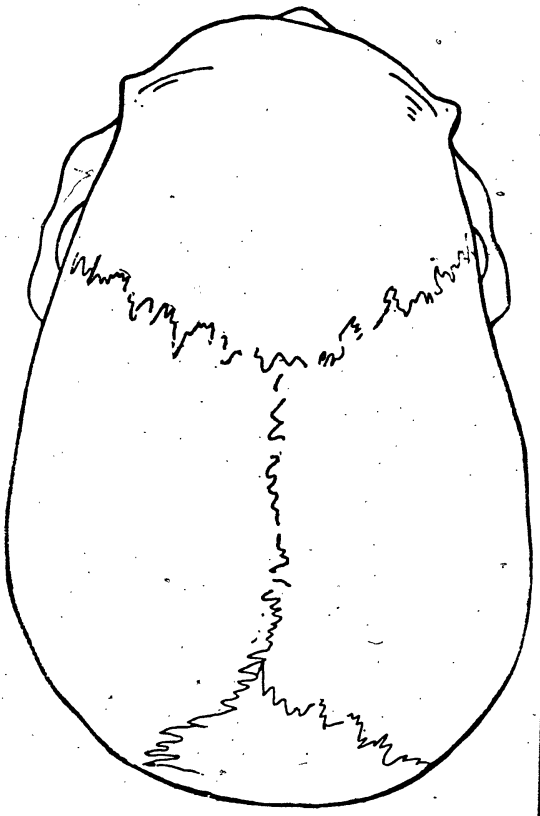


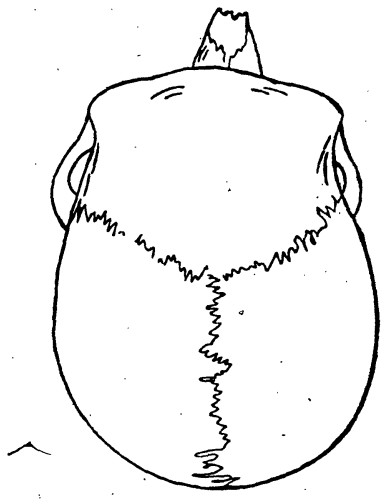
No. 6.

European crania—shall we say as anomalies or as individual variations? Nor is the convexity of the squamo-parietal suture such as characterizes the low-typed cranium of the chimpanzee or the Mound Builder. On the contrary, the orbits are cleanly made and the suture is well curved. Besides, a low degree of intelligence is not shown by observing the index of the foramen magnum, which is about the same as that found in European crania; and the same may be said of the internal capacity of the cranium. To illustrate the latter remark is appended a tabular statement made up from Welcker, Broca, Aitken and Meigs:

	Cubic centimeters.
Australian	1,228
Polynesian	1,230
Hottentot	1,230
Mexican	1,296
Malay	1,328
Ancient Peruvian	1,361
French	1,403 to 1,461
German	1,448
English	1,572

An average of the Eskimo skull, some of which measure as much as 1,650 and 1,715 c. c., will show the brain capacity to be the same as that of the French or of the Germans. None of them, however, approaches the anomalous capacities of two Indian skulls on exhibition at the Army Medical Museum, one of which shows 1,785 c. c., and the other the unprecedented measurement of 1,920 c. c.

If the foregoing means for estimating the mental grasp and capacity for improvement be correct, then we must accord to the most northern nation of the globe a fair



No. 7.

degree of brain energy—potential though it be. Aside from the mere physical methods of determining the degree of intelligence, it is urged by some writers, among them the historian Robertson, that tact in commerce and correct ideas of property are evidence of a considerable progress toward civilization. The natural inference from this is that they are tests of intellectual power, since mind is a combination of all the actual and possible states of consciousness of the organism, and an examination of the Eskimo system of trade draws its own conclusion. Their fondness for trade has been known for a long time, as well as the extended range of their commercial intercourse. They trade with the Indians, with the fur companies, the whalers and among themselves across Bering straits. Many of them are veritable Shylocks, having a through comprehension of the axiom in political economy regarding the regulation of the price of a thing by the demand.

THE MORAL SENSE AND THE RELIGIOUS INSTINCT.

With the aptitudes and instincts of our common humanity Eskimo morals, as manifested in truth, right and virtue, also admit of remark. Except where these people have had the bad example of the white man, whose vices they have imitated, not on account of defective moral nature, but because they saw few or no virtues, they are models of truthfulness and honesty. In fact their virtues in this respect are something phenomenal. The same cannot be said, however, for their sexual morals, which, as a rule, are the contrary of good. Even a short stay among the hyperboreans causes one to smile at Lord Kames's "frigidity of the North Americans," and at the fallacy of Herder who says, "the blood of man near the pole circulates but slowly, the heart beats but languidly; consequently the married live chastely, the women almost require compulsion to take upon them the troubles of a married life," etc. Nearly the same idea expressed by Montesquieu, and repeated by Byron in "happy the nations of the moral North," are statements so at variance with our experience that this fact must alone excuse a reference to the subject. So far are they from applying to the people in question that it is only necessary to mention, without going into detail, that the women are freely offered to strangers by way of hospitality, showing a decided preference for white men, whom they believe to beget better offspring than their own men. In this regard one is soon convinced that salacious and prurient tastes are not the exclusive privilege of people living outside of the Arctic Circle; and observation favors the belief in the existence of pederasty among Eskimo, if one may be allowed to judge from circumstances, which it is not necessary to particularize, and from a word in their language signifying the act.

Since morality is the last virtue acquired by man and the first one he is likely to lose, it is not so surprising to find outrages on morals among the undeveloped inhabitants of the north as it is to find them in intelligent Christian communities among people whose moral sense ought to be far above that of the average primitive man in view of their associations and the variations that have been so frequently repeated and accumulated by heredity; and where there is no hierarchy nor established missionaries it is still more suprising to find any moral sense at all among a people whose vague religious belief does not extend beyond Shamanism or Animism, which to them explains the more strange and striking natural phenomena by the hypothes is of direct spiritual agency.

It must not be understood by this, however, that these people have no religion, as many travellers have erroneously believed; that would be almost equivalent to stating that races of men exist without speech, memory or knowledge of fire. A purely ethnological view of religion which regards it as "the feeling which falls upon man in the presence of the unknown," favors the idea that the children of the icy north have many of the same feelings in this respect as those experienced by ourselves under similar conditions, although there is doubtless a change in us produced by more advanced thought and nicer feeling. On the other hand, how many habits and ideas that are senseless and perfectly unexplainable by the light of our present modes of life and thought can be explained by similar customs and prejudices existing among these distant tribes. Is there no fragment of primitive superstition or residue of bygone ages in the supposed influence of the "Evil Eye" in Ireland, or in the habit of "telling the

bees" in Germany? Is there not something of intellectual fossildom in the popular notion about Friday and thirteen at table, and in the ancient rite of exorcising oppressed persons, houses and other places supposed to be haunted by unwelcome spirits, the form of which is still retained in the Roman ritual? And is not our enlightened America "the land of spiritualists, mesmerism, soothsaying and mystical congregations"?

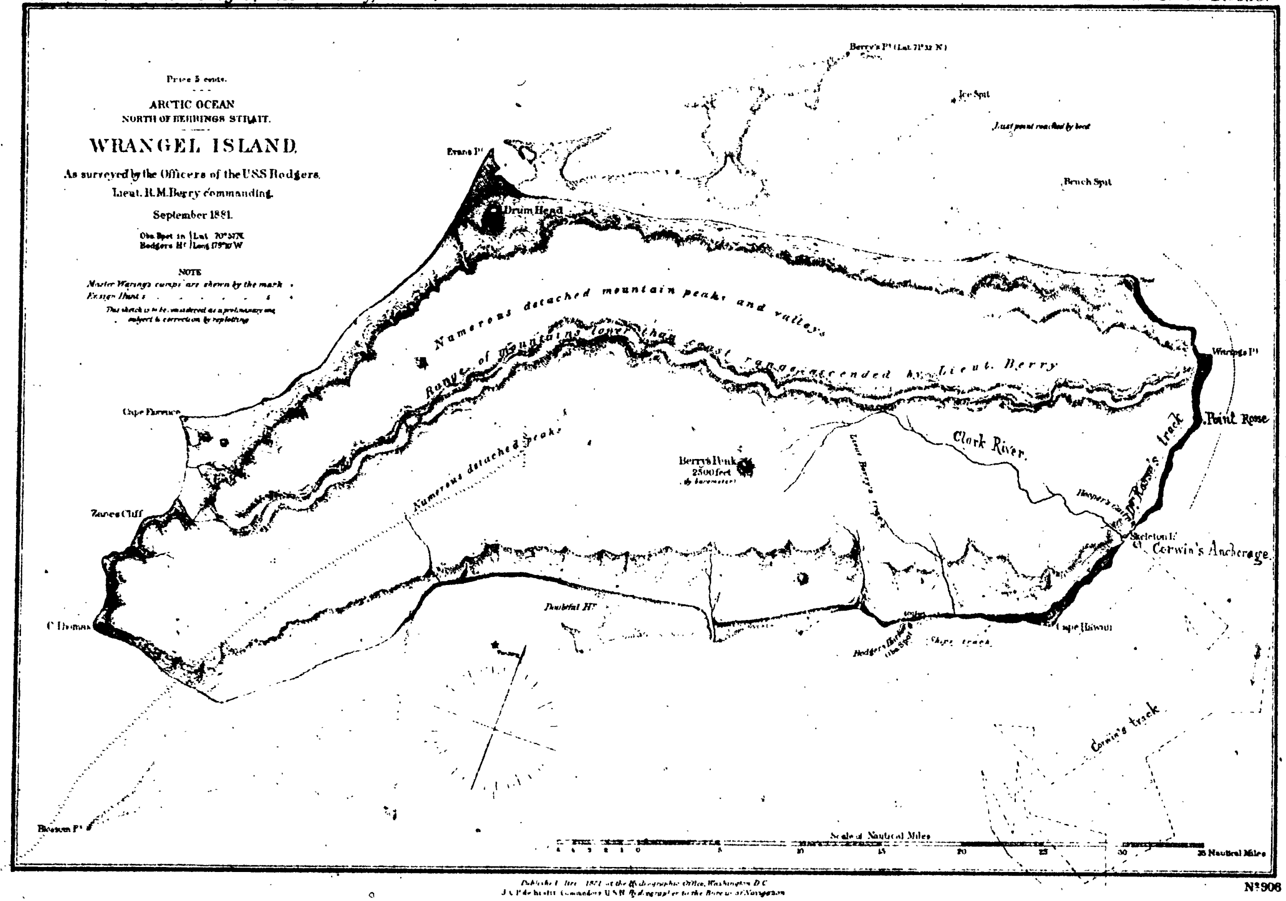
When the native of Saint Michael's invokes the moon, or the native of Point Barrow his crude images previously to hunting the seal, in order to bring good luck, is not the mental and emotional impulse the same as that which actuates more civilized men to look upon "outward signs of an inward and spiritual grace," or not to start upon any important undertaking without first invoking the blessing of Deity? And are not the rites observed by the natives on the Siberian coast, when the first walrus is caught, the counterpart of our Puritan Thanksgiving Day?

Perhaps the untutored Eskimo has the same fear of the dangerous and terrible, the unknown, the infinite, as ourselves, and parts with life just as reluctantly: but it cannot be said that our observation favors the fact of his longevity, although long life seems to prevail among some of the circumpolar tribes, the Laps, for instance, who, according to Scheffer, in spite of hard lives enjoy good health, are long-lived, and still alert at eighty and ninety years.—(De Medecina Laponum.)

Owing to his hard life, the conflict with his circumstances and his want of foresight, the Eskimo soon becomes a physiological bankrupt, and his stock of vitality being exhausted, his bodily remains are covered with stones, around which are placed wooden masks and articles that

have been useful to him during life, as I have seen at Nounivak island, or they are covered with driftwood as observed in Kotzebue sound, or as at Tapkan, Siberia, where the corpse is lashed to a long pole and is taken some distance from the village, when the clothes are stripped off, placed on the ground and covered with stones. The cadaver is then exposed in the open air to the tender mercies of crows, foxes and wolves. The weapons and other personal effects of the decedent are placed near by, probably with something of the same sentiment that causes us to use chaplets of flowers and immortelles as funeral offerings—a custom that Schiller has commemorated in "Bringet hier die letzen Gaben."

The future destiny of these people is a question in which the theologian and politician are not less interested than the man of science. Some observers seem to think that their numbers are diminishing under the evil influence of so-called civilization. But as every race participates in the same moral nature, and the entire history of humanity, according to Herder, is a series of events pointing to a higher destiny than has yet been revealed, there is no reason why the sum of human happiness, under proper auspices, should not be increased among the Innuit race. Archdeacon Kirkby, a Church of England clergyman who has lately visited them in a missionary capacity as far as Boothia, speaks in the highest terms of their intelligence and capacity for improvement. Here, then, is a brilliant opportunity for some one full of propagandism and charity to repeat the acts of the modern apostles and extend the influence of civilization to the gay, lively, curious and talkative hyperboreans whose home is under the midnight sun and on the borders of the Icy Sea.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Point Rosse
Clark River.
Berry's Peak
2500 feet
Cape Florence
Numerous detached peaks
Zanes Cliff
C. Thomas
Doubtful Hr
Skeleton Pt
Corwin's Anchorage
Cape Hawaii
Corwin's track
Beacon Pt
Scale of Nautical Miles
35 Nautical Miles
Nº 906