

North West Greenland. I suppose these build their igloos of stone because they have no wood, and prefer this kind of house to a snow hut, because the walrus which they kill in great numbers, and which, according to Drs. Kane and Hayes, forms their principal food, affords abundance of fat for fuel. A stone house with fire is warmer than a snow hut without it.

As the Esquimaux, of all people I have ever met with, most readily adapt themselves to circumstances at very short notice, I believe that these Arctic Highlanders could under every difficulty build kayaks for themselves, were they absolutely necessary, otherwise how can we account for the Esquimaux in the south of Greenland (whom Mr. Howorth believes to be the descendants of these Arctic Highlanders) having built both kayaks and oomiaks almost identical in form and construction with those in use among the "American Esquimaux" of Behring Strait and the Mackenzie, several thousand miles distant, with whom they could have no direct communication? This has always appeared to me a very curious circumstance difficult of solution, except by supposing that the "Skrelings" crossed Davis' Strait at its narrowest part from Cumberland Island to Greenland, a distance of 200 geographical miles—a theory which I do not think so probable as the one I have already advanced.

"The Arctic Highlanders have become alarmed at the rapid diminution of their numbers through famine and disease."

This feeling is not peculiar to the Arctic Highlanders, for both at Repulse Bay and at the Coppermine River a very similar story was told me.

Between 1847 and 1854, the dates of my two visits to Repulse Bay, forty or fifty of my old friends in that neighbourhood—men, women, and children—had died in one season, and nearly all from starvation, caused, I was told, by one of those erratic migrations of animals I have already mentioned.

Although there is every probability that the musk cattle, of which skulls are found scattered along the shores of Smith Sound, had been killed by the Esquimaux, the "absence of the lower jaws" is no proof that they were so killed. Wolves, foxes, or bears, would carry off these lowerjaws and very likely "break them up," but the head itself would be rather an uncomfortable burden for the two first-named animals, and would not afford much nourishment to Bruin, and even his strong teeth would find an old musk bull's skull rather a hard nut to crack if he did attempt it.

"The American Esquimaux never go from their own hunting-range for any distance to the inhospitable north."

It is very difficult to define what "any distance" may mean, but I have known them go several hundred miles in one season to look out for fresh hunting-grounds or seas, either north or south, and if they find game they remain there. If the game moves away, the Esquimaux will follow it, whether north or south, if not stopped as trespassers by some of their own countrymen who have had previous occupation.

When I went to Repulse Bay in 1853, I was surprised and disappointed at finding no Esquimaux—for we wanted dogs from them—where a very considerable number had been in 1846-7. In the spring (1854) we found that none had wintered, as far as we could learn, within 200 miles of our winter quarters. The Chippewyan legend told by Sir John Franklin is well known to the Hudson's Bay Company's people.

The Indians resorted in old times to the deposits of native copper on the Coppermine River to obtain that useful metal, with which to make spear and arrow heads, &c.; and it was probably on one of these occasions that an Indian woman may have been carried off "across the sea" to Victoria on Wollaston Land," some points of which are within sight of and at no great distance from the Continent. Very likely, instead of being kept in slavery, some good fellow made her his wife, and treated her as such, much more kindly than she would have been treated among her own countrymen.

In fact, although the habits of the Esquimaux near the Coppermine have nothing of the Indian in them, the face and form of several that I have seen differ widely from the true Esquimaux type, thereby indicating a mixture of blood or races.

That admirable traveller and keen observer, Mackenzie, "certainly knew the country well," but he did not know much of the Esquimaux, for the simple reason that he had very little opportunity of becoming acquainted with them. As an authority on anything relating to the Indians, either east or west of the Rocky Mountains, no man could be more reliable.

Mackenzie says at p. 406 of his book, "They (the Esquimaux) never quit the coast." I think Sir Alexander Mackenzie meant by this that they never went inland; the only interpretation

which would, I think, give his opinion any weight. If in saying "they never quit the coast," he meant that they never crossed the sea or ice to other lands or islands to the north, which he by his own observation could not possibly have known, it would be in perfect contradiction to the Chippewyan legend of the woman being carried across the sea, &c., and to our present knowledge.

It is not at all necessary for the American Esquimaux to cross Behring Strait to enable them to obtain articles of Russian manufacture from the Tchuktchi, nor for these to cross over to America for this purpose. A number of Russian trading-posts have for very many years been established in Russian America (now Alaska), and these traders have carried on a large and direct traffic in articles of Russian manufacture with the Tchuktchi and Esquimaux.

It is that very "fragment" of so-called Tchuktchi, of Tchuktchi Ness, found in the extreme north-eastern part of Asia, and a few of the Kamtskatkans, whose language, custom, or physique resemble, to some extent, those of the Esquimaux, which I humbly think give strength to my belief in the original eastward migration of those curious people.

That there may have been a subsequent re-migration, so to speak, of Tchuktchi from America westward across Behring Strait to Asia, is, I think, very probable.

The Esquimaux and Tchuktchi of America, although they meet to trade for mutual advantage, are by no means friends, for they are (or were very recently) often at war with each other.

I can scarcely think that the American Esquimaux have been "sophisticated" by contact with the Indians. At the present time they differ from the Indians in every particular. In their dress, in their manners, in their mode of pitching their tents, of cooking and eating, fishing and hunting, in the form of their fish spears and hooks, in sewing, in the way of treating their wives, &c. Indeed, even at Churchill, where they come much in contact with the Indians, they seem to have acquired none of their habits or customs.

This letter has increased in length far beyond the limits I had contemplated, and I am almost ashamed to forward it to you with any hope of its finding a place in the columns of NATURE, but I felt almost bound to write something: first because an answer of some kind was required to the several arguments so well and ably used by Mr. Howorth, and secondly because I wished to comply with the hope he so pleasantly expressed that I would bring forward some more facts on my side.

JOHN RAE

#### The Aurora of Feb. 4

In the February number of NATURE just to hand I find an interesting account of this aurora. It may interest your readers to know that a very fine aurora was visible at Eden, 230 miles south of Sydney, at the same time. The notice sent me states that the aurora was visible from 1 A.M. to daylight of Feb. 5 (*i.e.* from 3 P.M. to 7 P.M. Feb. 4, Greenwich time); the auroral light extended from S.E. to S.W., and to an altitude of 60°. No other particulars were sent by the person who saw it; but it would appear that the auroral display must have commenced before it was observed in Europe.

H. C. RUSSELL

Sydney Observatory, May 15

#### THE ZOOLOGICAL STATION AT NAPLES

LETTERS from Naples inform us that the construction of the building for the Zoological Station is now advancing rapidly. As the building is close to the sea, the foundations had to be laid with especial care, the more so as the heavy pressure of the aquarium tanks, the laboratory tanks, the library and the collections, would require even on ordinary ground some precaution.

We are glad to hear besides that Dr. Dohrn is most effectively assisted in the technical parts of the construction by Mr. W. A. Lloyd, of the Crystal Palace Aquarium, Sydenham. This gentleman, having been in friendly relations to Dr. Dohrn some years ago, when still in Hamburg, has obtained from the Board of the Crystal Palace Aquarium permission to render all possible help to the Naples station, as to an institution of a purely scientific character. Whoever knows the technical difficulties of