

was to follow with a store of provisions, to be deposited near the Ice Cape, on the north of Nova Zembla, in case the expedition should be compelled to turn back.

Of the outfit and plan of the Swedish expedition we gave an account in NATURE for August 29. It left Tromsø on the 31st of July, and when last heard of was off the north-west point of Spitzbergen.

We are also favoured with a letter from Dr. Petermann, dated Gotha, October 11, from which we learn that the land on the east of Spitzbergen, which for the last 355 years has had a varying position on the map, has this year for the first time been reached by Captain Altmann of Hammerfest, and again on August 16 last by Captain Nils Johnsen of Tromsø, in his little sailing yacht the *Lydeana*, who landed and explored it. Captain Johnsen saw the island first when in N. lat. $78^{\circ} 18' 46''$, and E. long. 30° ; in the maps of 1617 it was marked as Wiche Land, between $78\frac{1}{3}^{\circ}$ and $75\frac{1}{4}^{\circ}$ N. lat. On the 17th of August he anchored near to the north point in $79^{\circ} 8' N.$ lat. and $30^{\circ} 15' E.$ long., for the purpose of landing and exploring the place. What Captain Altmann, looking from a distance, took to be three islands, Johnsen found in reality one, the high hills being connected by low lying land, with several outlying islets. On no part of the land has he found extensive snow-fields, and saw only one small glacier on the south-east coast, while, on the contrary, there are many large streams entirely free from ice. The greatest length of the land Captain Johnsen has found to be 44 geographical miles. Large quantities of driftwood extended here and there to about 100 feet from the coast, and rose to the height of at least 20 feet. The island abounds in the usual Polar fauna, the plentifulness of seals, especially *Phoca Groenlandica*, being noted by Johnsen. The reindeer on the island are spoken of as the largest and fattest which anyone on board the *Lydeana* had ever seen. The rocks seem to be principally of the quartz and argillaceous kind, and some fossils have been sent to Sweden and to Zurich. Captain Johnsen explored the east, south-east, and north-east coasts, and so far as his observations went, ice is to be found only on the north coast.

The fact of greatest significance in this latest news from these quarters is that for many months in the year the sea around Spitzbergen is almost entirely free from ice; a position long and sagaciously maintained by Dr. Petermann.

"Of interest," says the *Academy*,¹ "in connection with this subject is an account of the finding of the relics of Barents' expedition of 1597 to Novaia Zemlia, by Captain Carlsen in 1871, prepared by M. de Jonge, and newly published under the auspices of the Dutch government at the Hague. The pamphlet contains the journal kept by Carlsen, and a minute description of the relics, accompanied by a photograph of these in a group, and charts comparing the Novaia Zemlia of Barents with the island as mapped from our present knowledge of it."

RESEARCHES IN GREENLAND*

WHEN I wrote to you last from Copenhagen, I anticipated that my season would be very short; and my anticipations were correct. The season, however, in Greenland has been long and brilliant. In the middle of May floe ice disappeared in Umenak Fiord, which was fully six weeks earlier than usual; and in April, in Godhavn men went about in summer attire. When I arrived (on July 6) the land was covered with flowers, the butterflies were beginning to appear, and almost all snow had vanished from the sea-level up to 2,000 ft. Since then, with the exception of a bad week in the Waigat, I have enjoyed the most exquisite weather that it is possible to imagine. In this arctic region it has only frozen on two nights, and during the daytime the thermometer has

* Copy of a letter addressed to Mr. R. H. Scott, F.R.S., and kindly forwarded by him to us.—ED.

ranged from 50° to 70° . Until recently we have also had a high barometer; and, upon the whole, very little wind.

I have been upon Hare Island for three days, and have also been to Umenak, but the chief part of my time has been spent in the Waigat, where you would be surprised, perhaps, to find that a great deal remains to be done. I have found a great valley leading into the interior of Disco, and have gone up it a hard day's march. I have ascended one of the highest of the peaks on the Noursoak side of the Waigat, and looked down upon the great valley which occupies almost the whole of its interior. The lakes, as given upon Rink's map from reports of Eskimo, do not exist, but there is one very large lake which has a glacier or glaciers coming into it at perhaps 2,000 ft. above the sea. This valley is the most important one hitherto discovered in North Greenland. The river flowing down it has the character of a river, and not of a torrent; and, after descending through many windings a course of at least 100 miles, it pours into the sea a volume of water equal to that of the Rhone at the Lake of Geneva. At half a mile from the shore I found the water fresh.

In Umenak Fiord I ascended a mountain of about 7,000 ft. with five Greenlanders, and took my theodolite to the top. As you know the weight of the instrument, you will be partly able to appreciate this performance. The ascent, first over swamp, then over basalt *débris* which reposed insecurely upon solid basalt, and finally, at the top, up columnar basalt, was a sweet thing of its kind. The picture of your humble servant being lowered by a rope, dangling like a bundle from a crane, will, perhaps, to some people, be more interesting than the results obtained by the theodolite. These, however, were not unimportant. My peak, an isolated one, commanded a view of almost the whole of the Umenak district (which contains the highest mountains of Greenland proper), and a magnificent view of the "inland-ice." I found the general elevation of the mountains exceeded by about 2,000 ft. the height previously assigned to them. Of the altitude of the "inland ice" I shall write on a subsequent occasion.

A large part of my time in the Waigat was occupied by the measurement of a base line. This was the most important piece of work that I undertook, and it was successfully executed. I find the Waigat to have in some places scarcely half the width which our maps give it. I find its mountains to be about double the altitude that they have been supposed to be; and Hare Island I find to be twice the length represented upon the Admiralty Chart; Hare Island has some points of particular interest. I got from it a rather large collection of fossil plants, and went to its top (1,800 ft.). From the summit, at midnight, I distinctly recognised the mountain called Sanderson's Hope, near Upernavik, which was distant from me 140 miles!

I have made an excellent journey, full of interest. My collections are at least as valuable as those of 1867, though, as far as I know, they do not contain anything of the importance of the *Magnolia*. I have, however, even larger collections of fossil plants than before, and from localities which I did not visit in 1867. My stone implements are very numerous, and of good quality, and the natural history specimens are not few in number. Altogether I am very well content.

EDWARD WHYMPER

Written on board the brig *Hvalfisker* as it proceeded out of the harbour of Godhavn, Sept. 10, 1872.

THE HELVETIC SOCIETY OF NATURAL SCIENCES

THE 55th Session of this Society was held at the ancient city of Fribourg on the 19th, 20th, and 21st of August last, and of it we have again to tell of an overwhelmingly hospitable reception by "our hosts of Fribourg;" a well-attended opening address by the President, Dr. Thurler; sectional *séances*, at which