20. Cosmos, 18 Janvier, 1886.
21. Compte Rendu des Séances de la Commission Centrale de la Société de Géographie, No. 1, '86.
22. Mémoires et Compte Rendu des Travaux de la Société des Ingénieurs Civils, Août, 1885.
23. Bulletin de la Société Royale de Botanique de Belgique, Tome 24me Fascicule 2me, 1885.
24. Cronica Cientifica—Barcelona. Año IX., Num. 194.
25. Monatsblätter des Wissenschaftlichen Club in Wien, VII. Jahrgang, Nr. 4.
26. Wochenschrift des œsterreichischen Ingenieurs und Architekten-Vereines XI. Jahrgang Nr. 3.
27. Journal des Sociétés Scientifiques, 6 et 20 Janvier, 1886.
28. Jahrbücher der K. K. Central-Anstalt für Meteorologie und Erdmagnetismus 1884, N. F. XXI. Band, Wien.
29. Atti del Museo Civico di Storia Naturale di Trieste, Vol. VII., '84.

Total 31.

Mr. R. F. Stupart read the following paper on "The Eskimo of Stupart Bay:"

My paper this evening treats more especially of the Eskimo and their mode of life as observed by myself during a twelve months residence among them on the shores of Hudson's Straits, but, in addition, I have thought it advisable to give a brief outline of a portion of the cruise of the steamship *Neptune* in the summer of 1884, and also of a boat voyage made by myself and three men from Prince of Wales' Sound to Fort Chimo during the latter part of last August. The Canadian Hudson's Bay Expedition of 1884 and 1885 was, as you are all aware, sent out to report on the feasibility of establishing a commercial route to Europe from the Canadian North-West *via* Hudson's Straits. Six observing stations were established at different points along the shores of the Straits, the duties of observers being to watch the movements of the ice and tidal currents and to take meteorological observations. In addition to this, the ordinary work, I made a series of magnetic observations; I had two observatories, one in which I made absolute determinations of the declination, force, &c., while in the other were placed the differential instruments, which were read every four hours, and during days of much disturbance every five minutes. The discussion of results here obtained is, of course, foreign to my subject to-night.

The date of the earliest mention of the Eskimo is about 990 A.D., when some Icelanders exploring Greenland came across men with skin-boats. The Eskimo have therefore inhabited the Western

Continent for at least 1000 years. It has generally been supposed that they originally came across Behring Straits from Asia, but the race is one of which very little is known. Although scanty in numbers, they wander over a larger extent of territory than do any other people. They alone among savage races occupy both the old and the new world; they inhabit the shores of the Arctic Sea from Siberia to Greenland and Labrador, and throughout this vast extent of country the language, appearance and occupation of the natives are very similar. Of course their habits have at some points been modified by contact with the whites; it could scarcely be expected that the untutored savages who inhabit the shores of Hudson's Straits and the Arctic Coast line should entirely resemble the more favored portions of their race, who have been, to a certain extent, educated by the Moravian brethren on the Labrador coast or by the Danish missionaries in Greenland.

In appearance the Eskimo somewhat resemble the Chinese and Tartars; they are generally small in stature, the average height of a man being about 5 ft. 1 in. or 2 in., but I have seen a few who were as much as 5 ft. 9 in. or 10 in. Their features are broad and flat, the hair is very coarse, invariably jet-black and quite straight; few of them have much hair on the face, but there are exceptions. In color they are about as dark as the Indians, but the layer of dirt and oil, which as a rule covers both face and body, makes it rather hard to determine the exact shade.

Sir John Lubbock, in a treatise on the Eskimo, says that the language is akin to the North American Indian in structure. This may be the case, but the two languages are certainly different in sound. The opportunities afforded me of learning the language were very limited, as I and my men were dumped down at the post among the natives but a very short time after the interpreter was taken aboard the ship at Nachvach, on the north coast of Labrador. During the short time I spent with him I obtained the Eskimo words corresponding to certain English sentences, which I thought might come in useful; for instance, "What is the name of this?"—"shoo-now-nah," "Bring me some fox-skins," — "Terry-gyn-yer-mik-p-u-mo-ouma." By means of the former I was enabled to obtain from the natives themselves the names of a large number of things of which I made a vocabulary, and by first guessing at and afterwards asking the meaning of the sentences in most common use among

them I was able, after a few months, to understand them and also to make myself understood.

The costume of an Eskimo usually consists of two suits, the inner always of deer-skin, with the hair next the body, and outer deer-skin in winter, and seal-skin in summer, with the hair out. The men and women dress much alike—a coat, trousers and seal-skin boots; the coat, or "Koalatuck," as they call it, is put on over the head; that of a man has a hood attached large enough to cover the head, if necessary, whilst the hood attached to the woman's coat does double duty, being used both as a covering for the head and as a place in which to carry the babies. The woman's coat has also a long narrow tail behind which ordinarily just touches the ground but is sometimes looped up.

Among the Eskimo, ornaments are not numerous, neither is there a great variety; the outer coat of both men and women occasionally has a border of white bear-skin, but is more often devoid of ornamentation. Sometimes the inner coat, which in the igloos and in warm dry weather is often alone worn, is trimmed with walrus teeth, which are sewn on, an inch or so apart, round the lower edge, or it is trimmed with a fringe made of deer-skin. Glass beads can be obtained from the Hudson's Bay Company at Ungava, and some of the women belonging to the richer Eskimo families are the happy possessors of necklaces and of strings of colored beads which are sewn on to the front part of the inner coat; other favorite ornaments are common metal spoons, with the handles cut off; these sometimes, to the number of seven or eight, are attached vertically at equal distances to the front part of the coat. Women are often, but not invariably, tattooed; a few lines are made on chin and forehead, the former diverging from the lower lip, the latter from the upper part of the nose.

The *Neptune* sailed from Halifax on July the 22nd, 1884. On her way north she touched at the Moravian Mission Station, Nain, on the coast of Labrador. Before the anchor was down we were boarded by the missionaries and many Eskimo. The former were, I fancy, somewhat disappointed at finding that we were not the mail steamer, as they were expecting news from home, but the natives were evidently much pleased at our arrival, and examined the steamer from stem to stern with delighted curiosity. The Eskimo population of Nain is about 200; they live in about 45 log and mud huts, which

are clustered together on a small plateau near the mission buildings. Most of the people are small in stature, and my impression is they were quite as dirty as the completely uncivilized people I afterwards met to the northward, but it may be that a month later I was more accustomed to seeing dirty people. Our ship remained at Nain for a whole day, and as I spent the greater part of the time ashore, I was able to fully inspect the station and also to form some idea of the work performed by these missionary traders of the North. The natives living here are like all other residents of the Labrador coast, generally employed in trapping, hunting and fishing; all the furs, skins and oil they obtain they bring to the missionaries, who, in return, supply them with ammunition, tobacco, and a limited quantity of flour and pork. Attached to the station is a school-house, and be it said to the credit of the missionaries, almost all the natives of sufficient age can read and write in their own language. There is also a chapel, in which service is held every evening. The choir is composed of the families of the missionaries and of the natives, and is assisted by an old-fashioned organ and by eight or ten violins played by music-loving Eskimos. Although the sincerity of the evangelizing efforts of these Moravians has often been called in question, I think that any one witnessing one of the services in the quaint old chapel at Nain will confess that a good work is being done. The gardens are a most pleasing feature of the place; potatoes, turnips, lettuce, spinach and onions are grown, but require an immense amount of attention, as they all occasionally require to be artificially protected from frost.

On August 1st we touched at the Hudson Bay Station, Nachvach, 90 miles south of Cape Chudleigh. Here we obtained an interpreter, who subsequently proved of great value, when we got among the natives on the shores of the Straits. August 5th—We anchored in a little harbour just inside Cape Chudleigh, the Commander of the expedition having determined to here establish an observing station. Codfish were so abundant at this place that we actually, in a very short time, were tired hauling them into the boat. There was an Eskimo family living at a distance of 8 or 10 miles from where the ship was anchored, but I did not see them. Those of the expedition who did pay them a visit describe the tent and its occupants as being villainously dirty, and all seem to have considered it advisable not to venture too close. We left the harbour, called Port Burwell after

Mr. Burwell, the officer in charge, on August 8th, and steamed northward across the Straits. A little snow fell that evening. August 9th.—It was blowing too hard to effect a landing on Resolution Island, so in the afternoon we stood off shore hoping for a fair day on the morrow. The fates were, however, against us. Sunday, Aug. 10th.—At early morning it was blowing a gale from the eastward, and before noon the wind chopped round and blew still harder from the west, and during the remainder of the day we were lying too and making no headway. On Aug. 11th we passed through many miles of loose ice, but none of it was of sufficient size to seriously impede our progress. Late in the afternoon we entered a small inlet in the large Upper Savage Island, where it was decided to establish another station, the officer in charge being Mr. W. A. Ashe, of Quebec. We had scarcely entered the inlet when an Eskimo put out to us in a kyak. He told us, by means of the interpreter, that there were several families camping near by; they had shot two reindeer that day, and their headquarters were near an American trading station, which we knew existed some 30 miles to the westward. On the following day we were visited by about a dozen of the natives, who walked off to us on the ice which had closed in round us with the flood-tide. Some few of them could speak a little English, and possessed a few articles of European clothing. However, from what I saw of them, I should judge that, morally speaking, up to that time they had not benefited by their contact with the whites. Aug. 16th.—Early in the afternoon we left Ashe Inlet in a snowstorm, and steamed slowly south. About 6 p.m. we passed an enormous berg, probably from Fox Channel; it shewed about 50 feet out of water and was fully a quarter of a mile in length. At dark the engines were stopped, and we lay to until daylight, when we again started. At about 10 o'clock we entered a field of loose ice which extended almost to the coast; many walrus were seen playing about among the blocks of ice. Shortly before 1 o'clock we neared a long rocky point, and Lieut. Gordon proposed building my observatory on it if he could find anchorage in the bay beyond. Viewed from the ship the site certainly did not look inviting, but before long we were anchored in a small bay, open only to the S.E., from the end of which a valley, which at places looked green, extended far back into the country, bounded on either side by high rocky hills. After dinner I went ashore with my men

to have a look around. I found a stream of good water and a first-rate site for a house, while, from the top of the rocks, a good view of the Straits could be obtained. We also found traces of reindeer, foxes and ptarmigan. On returning to my boat I found Lieut. Gordon, the officers of the ship and most of the men were ashore. Before long we saw a group of Eskimos, principally women, accompanied by dogs, approaching us over the brow of a hill; they were shouting "Chimo, Chimo," and were evidently very anxious to trade with us. They looked very good-natured and very dirty, and called "tobaccomik, tobaccomik." On obtaining some black tobacco and matches they howled with delight and hugged it. In a short time our interpreter, Lane, who had been down the coast in his kyak, put in an appearance and explained to the people that we were going to build a house; when they heard this they threw up their hands and fairly shrieked with delight.

During the stay of the *Neptune* at my station, which was from Sunday till Friday, the Eskimos were continually loitering about. There were at this time four families living in tents about two miles distant to the westward and several more families still further away. Sunrise each morning brought the majority of them to the place where our men were building the house; they generally had some small articles for trade, such as sealskin mittens and boots, for which they almost invariably wanted tobacco. Scarcely ever did they offer to assist in carrying up the material for the house or the coal, and if by chance any of them did lend a hand, they expected to be well paid with tobacco and matches. The sealskin tents (called by them "toopicks,") in which these people live from about the middle of May to the beginning of November, vary from about twelve to twenty feet in length; they are spread on a ridge and are further supported by several upright and slanting poles; the latter have, as a rule, been obtained from a long distance to the southward. I do not think any wood large enough for tent-poles can be obtained within 250 miles of Prince of Wales' Sound. The skins of which the tents are formed are those of the large harp-seal; the hair is scraped off, and they are stretched out in the sun by means of pegs driven into the ground. The beds are ordinarily laid in the inner end of the tent, but sometimes when there are many occupants also extend round the sides. A layer of dry moss is first spread on the ground and over this are spread deerskins and sealskins, which have been softened by working

them with the hands and teeth. The Eskimo of Hudson Straits seem to have no method of tanning skins.

The ship left us Aug. 22nd, and we all settled down to work getting things into shape, I and my assistant, Mr. Bennett, adjusting the instruments, the men making the house as snug and comfortable as circumstances would admit of. During the latter part of August and early part of September the weather was generally unsettled, with a preponderance of easterly winds and a good deal of light snow. Aug. 23rd and 25th were the only really warm pleasant days we had; on these days there was bright sunshine, and the temperature rose to between 45° and 50°, but clouds of mosquitoes ("Kitorraya," the natives call them) rather interfered with the enjoyment of the fair weather. Until after the 6th of Sept. there was a good deal of drift ice off the coast, and whenever the wind was from the S. E. our little bay was quite blocked up with it. Almost every day we were visited by a large number of women and children, who continued bringing all sorts of things to trade for tobacco, but we saw but little of the men, who were generally out hunting in their kyaks.

On Sept. 23rd the *Neptune* returned from her trip across Hudson Bay. She remained a day and a half, and during the time she lay at anchor every man, woman and child who could possibly get there was either loitering about near the house or hovering round the ship in kyaks, calling out for tobacco and matches. From the time the ship left us, on the 24th Sept., until about the middle of November, we were not much troubled by the natives. They were still living in their toopicks, and I fancy that almost all of them having obtained a fair amount of tobacco from the men on board the ship were contented to leave us in peace for a time. On Oct. 24th the temperature fell to zero, and the Bay and Straits as far as I could see were frozen over.

Without seals and deer, the Eskimo could not exist. Their food is seal's meat and venison, both generally eaten raw but occasionally cooked; their dress is of the skins of seals and deer; their habitation is for at least a portion of the year formed of sealskin, and their boats are of the same material.

The kyak is a most ingenious contrivance, and, I believe, peculiar to the Eskimo. A framework of small wood is formed, from 15 to 20 feet long, about 18 inches broad in the middle, tapering to both ends, and not over a foot in depth; the whole is covered with seal-

skin with the exception of a space in the centre just large enough for a man to sit in. As to stability it would compare favourably with a small Indian birch-bark canoe. It is propelled by a double-bladed paddle, in fact in much the same manner as a Rob Roy canoe. I have often read that the Eskimo can, if capsized, right his kyak again ; I have never seen it done, nor have I ever come across any-one who has seen it. Perhaps this skilful feat has been forgotten. I certainly think it would require an immense amount of practice, and I can scarcely imagine anyone, unless by accident, taking a bath in water of temperature near the freezing point. The "umiak," or woman's boat, is much larger than the kyak, and has a flat bottom. It is made of slender sticks fastened together with whalebone and covered over with seal-skins. It will sometimes hold as many as twenty or thirty people, is propelled by rudely made oars, and is steered with a rudder.

During November it became evident, from the number of new faces we saw, that the natives from other parts of the coast were congregating in our neighborhood. About the middle of the month my two men paid a visit to the encampment, and found that instead of five scattered tents there were about ten snow igloos, all close together. As each igloo is generally inhabited by from ten to twelve people, this meant a population of over a hundred. In building their snow igloos the Eskimos take advantage of the fact that, owing to the intense cold, with no thaws and continual drifting, the snow becomes quite hard and compact and can be cut into blocks and slabs. The igloos are generally built on the shore, not far from high water mark ; a tolerably level spot where the snow is, say, about a foot and a half deep, is chosen. The builder first marks out a circle of about twelve feet in diameter ; he then goes to work with a long knife, called by the Hudson Bay Co. a snow-knife, and hollows out the circle, cutting the snow into blocks about a foot square or of a rectangular shape of say 1 × 1·5 feet, and from 4 to 6 inches thick. With the blocks thus obtained, together with others cut near by, a circular wall is built by putting one block on top of another. As the construction proceeds the wall is made to gradually curve inward until finally an almost perfect dome is formed of about 12 feet diameter and 8 feet high in the centre. The door, a hole about 2 ft. broad and 3 in height, always faces the southward. The inner half of the igloo is built up with blocks of snow to the height of about 2½

feet, and on the raised part is spread a lot of dry moss and sea-weed to form the beds. Two smaller igloos are built to the south of that in which the people live and do double duty as porches and kennels for the dogs; there is also generally a small igloo built with an opening into the porch, which is used as a storehouse for any surplus supply of meat they happen to have. The number of people inhabiting an igloo varies from about 8 to 14; it ordinarily comprises an elderly man—the head of the family—and his wife and one or two married sons with their wives and children. It seemed to me that the boys far exceeded the girls in numbers, but of this I cannot be certain.

The worldly possessions owned in common by the members of a family are not numerous. They ordinarily consist of a tent for summer use, a few small tin-pails, used for melting ice during the winter, one or more lamps, according to the number of women in the tent each grown-up woman having a lamp, a few stone dishes and pots, and some skins used as bed-covering. Each individual, as a rule, has two suits of clothing; a man generally but not invariably owns a kyak, a muzzle-loading gun, obtained in trade with the Hudson Bay Co., together with caps, powder and bullets, knives and a spear, a lance-head with a long coil of walrus-line and a bladder used as a float for the harpoon-line, when a seal or walrus is struck. A woman has a semi-circular knife used for scraping skins, a few needles, some sinew for thread, a bone thimble, and, if lucky, some ornaments in the shape of beads. Belonging to each family is generally a team of from five to ten dogs and two sleighs, called by them commatiks, one of which, about 8 feet long, is used with all the dogs when moving their quarters, and the other, just large enough for one man, is drawn by two dogs and is used for hunting on the ice. The dogs are generally a trifle smaller in size than our English setter and in color vary almost from black to a dirty yellow; they have sharp pointed snouts and bushy tails which curl over the back; they are vicious and savage but, I think, great cowards. The Eskimo would be lost without dogs, all travelling is done by means of them, and they are good scavengers. An igloo and its vicinity is always filthily dirty, but were it not for the dogs it would be ten times worse.

The men spend the greater part of their time hunting. In summer they sleep but little; in winter they often hunt during the short period of daylight, but they sleep a great deal. On the women

devolve the cares of the household, they make all the clothes and boots, melt ice over their lamps and do whatever little cooking there is to be done. They all go in for some amusements, a sort of foot-ball is played on the ice; wrestling is a favourite amusement with the men. The children romp and play about, in fact have games very similar to those played by white children. It is quite marvellous the amount of cold these people can endure, they are inured to it from infancy. Many and many a time I have known women spend a whole day loitering about near the house with the temperature 10 and 20 below zero, their necks uncovered, nothing on their heads, and stark naked babies sprawling half out of the mother's hoods; how the children stand it I cannot tell, but that the poor little youngsters do feel the cold I am convinced, as they often cry most piteously. Both men and women sometimes are cold; they would often stand at my door and beg for admission saying they were cold. E-ke is their word for cold.

The marriage laws are very simple, in fact as far as I could learn the woman, without form or ceremony, takes up her abode in the igloo of her intended. Neither are the funeral obsequies elaborate, the body being carried to a distance from the tents and covered with stones. On top of the grave are placed the man's hunting implements together with a cup and a knife. This would seem to imply that they have some idea of a future state; but what their religion, if any, really is, I was unable either to discover from the natives or to learn from the Hudson's Bay Company, men who have lived among them for years.

Two days after Christmas I paid a visit to the Eskimo igloos; I and one of my men started at seven o'clock in the morning, long before daylight, and walked across the ice, following the path beaten by the natives in their daily visits to the house; the temperature was 23° below zero, and it was blowing fresh and drifting in our faces. After having walked about two miles we met two Eskimos; one of them, an old man named Pugweek, put his hand over my cheek, giving me to understand that it was freezing. In about a quarter of an hour we arrived at the snow houses, all of which were quite new, and removed about half a mile from those the natives occupied during the early part of the month. Let me describe some of the people. I first visited Pugweek's residence; stooping down and entering almost on hands and knees I found myself in a passage about twelve

feet long, dogs were lying and running about in all directions and until quieted by their master seemed rather disposed to resent my intrusion. Having passed through the passage, I crawled through another hole and found myself in the dwelling of and among an Eskimo family. The stench was frightful. Cries of "Chimo," intermingled with those of "tobaccomik," greeted my entrance. On the right of the raised portion of the house squatted Pugweek's wife. She might have had on more clothing, but I presume she had not yet made her morning toilet. She was very ugly, astonishingly dirty, and had no teeth. I gave her half a plug of tobacco, for which she said Ne-cook-a-mik, and immediately asked for matches—"matchemik." Pugweek's sister, Polin-a-chuor, was squatting close by; she too set up a howl for tobacco and I gave her a piece. She proved the most inveterate beggar and greatest nuisance among the women. Children of all sizes were lying on the bed covered up with dirty skins, they too asked for tobacco, but did not get any.

I afterwards discovered in a very practical way that Pugweek was a great thief. I also discovered that about 1860 he had taken part in the massacre of a boat's crew. The Hudson's Bay Co.'s ship "Kitty" was wrecked near Cape Wolfstenholme; out of a crew of about seventeen, ten were killed by the Eskimo while endeavoring to land from the wreck, the remainder, escaping down the coast in a boat, were massacred while asleep by the Eskimo of Prince of Wales' Sound. Two others of the murderers besides Pugweek were my near neighbors, Cowjut and Ne-bo-cart. These men are not permitted to visit the Hudson's Bay post at Ungava.

The next igloo I went into was that belonging to Cowk-to-wayo, a quiet old man who had welcomed us when the steamer first arrived; we all then thought that he was a chief among his people, but I subsequently discovered that there is no chief; all members of a family to a limited degree owe obedience to the head of that family, but as far as I could learn no common chief is recognized by different families; the most successful hunters are as a rule the men who are most respected.

Cowk-to-wayo's igloo was very like that of Pugweek. The old man was sitting next to his wife, a very talkative little woman, who evidently thought that the one thing worth living for was smoking, and further that the whites having been sent to Hudson Straits to keep the Innuit (Eskimo) supplied with tobacco, it was my bounden duty to

see that she was never in want of it. A son, Kish-a-watch-Kia, and his wife Poon-elly and several young children, besides two fairly good-looking daughters, aged 14 or 16, were living with the old man. I gave each a pipeful of tobacco. Poon-elly's baby, which was sprawling over its mother's shoulder, began to cry, and, I suppose by way of a treat, the mother took the short clay pipe from her own mouth and placed it in her baby's. I thought the poor little thing would have choked, but have no doubt that being now a year older, it can duly appreciate a whiff of tobacco smoke.

I visited all the igloos in turn, those of Cowjut, Padliat, Neecook, Owbrook, Ne-bo-cart, Eat-wor-buckeye, Atchick, and several others; last of all I paid a visit to the igloo of U-a-luck, a man whom I always called and considered to be my special friend. U-a-luck is a mighty hunter, very good looking and well built; height 5 feet, 7½ inches; very broad in the chest and a perfect Hercules as regards strength. From the very first he evinced a desire to imitate the whites (Cublunac) in every way possible. He tried to master English and learned many words. I have no doubt but that when he next visits Fort Chimo he will say, please—give—me—a—pipe, and receiving it, will say, thank-ou. U-a-luck's wife, Chi-u-cudelow, is a good-natured looking middle-aged woman; she has two children by her present husband and two by a former. U-a-luck also has a boy by a former wife. His mother and grandmother, together with a second wife and two children, complete the family. I was informed at Ungava that in the winter of 1883 Ualuck, after a visit to the post, when gone about twelve miles on his homeward journey, had found that his grandmother was a great inconvenience and straightway left her out in the snow. The Hudson's Bay Chief was informed of this and sent after Mr. Ualuck, telling him that he must take care of the old lady. In the spring Ualuck was the happy possessor of three shirts, a blue, a grey, and a white, all of different lengths; he generally wore these over all, the longest one underneath, by which means he could show a portion of each; later on he had five shirts and his costume then became ludicrous in the extreme.

Having completed my round of visits, Ualuck hitched up his dogs and drove me home, accompanied by half the population. Arrived at my shanty they all seemed to think that, they having entertained me in their houses, I ought to return the compliment, but I failed to see it in the same light as they.

In the beginning of February the Eskimo again moved their dwellings, Ualuck, Owbrook and Cowjut building close to my house, and the others at points not far distant. About the middle of the month three heavily laden commatiks arrived from about 150 miles, to the westward, the people wishing to trade. I told them to go to Ungava as I had but little powder and tobacco; they refused, however, to go, preferring rather to take small prices, and five temporary igloos were in the course of an hour erected close to the observatory. They remained five days and then departed.

During the winter I occasionally went seal hunting with the natives. We used to start out about nine in the morning with a commatik and five or six men. It was very cold work sitting round a space of open water watching for the seals, the temperature perhaps 25° below zero. With my little Ballard rifle I could often pick off a seal at two or three hundred yards; their guns were only good at a very short range, and they thought my breech-loading rifle a marvellous machine.

As the spring advanced, seals and walrus became scarce, and by the beginning of April many of the people began to show signs of hunger and came begging food from me.

On April 11th the first bird, a bunting, appeared. On April 12th Ualuck, Owbrook and Annoushook left to hunt deer; in nine days they returned with three carcases. A few days afterwards they again went away and, in a fortnight's hunting, secured six deer. During May many families were thoroughly famine-stricken. On May 18th a man named Narluck tried to break open the storehouse; failing in that he began rolling away a barrel of pork which had been buried in the snow outside the house. Unfortunately for him one of our regular observations was always taken at 3 a.m., and one of my men on going out discovered what was taking place. We gave the man a thrashing, and I told him that if he tried to break my storehouse-lock again I would shoot him. He gave but little trouble after this, but always looked ripe for mischief. About this time, also, a woman and a boy arrived from the West; they could scarcely crawl along on account of weakness from starvation. They reported that out of seven in their igloo five had died of starvation. Our neighbors happened to have some venison, and the poor wanderers immediately began feasting. Early on the following morning, May 24th, I think it was, a man came to tell me that the boy was pu-une-i-acput, which

means "no good." I went over to the igloo and found that the youngster had, after weeks of starvation, eaten enough for two or three boys; he died a few minutes after I arrived. No one seemed to care; another boy took the body on his back, carried it back about a quarter of a mile, put it down and covered it up with stones.

Towards the end of May, at a distance of about two miles from my house, was a snow igloo in which resided an old man and his wife, a son and his wife, a sister and three children. This was the poorest family I ever knew; their worldly possessions consisted of the clothes they wore, a rusty gun—half the barrel had been cut off—only a few charges of powder and shot, two tin-pails, one of which had a hole in it, and a few dirty deer-skins for bedding. They literally had nothing to eat. On May 19th the young man and his wife were out on some rocks on a shoal about three miles out in the Straits, gathering sea-weed, which they often eat when food is scarce; it was low water at the time, and a large block of ice which had been left high and dry by the tide fell on them. The woman was crushed to pieces and the man fearfully bruised. I heard of the accident, and with one of my men and some of the women from the neighborhood, went to the scene of the disaster; the man was moaning piteously, and lying just where he had been thrown down. The tide was rising, and now partially covered the remains of the woman. Some women and children were sitting about wondering, I presume, what ought to be done, but doing nothing. I put the invalid on a sleigh and told some of the girls to pull him to his igloo while I went home for some bandages. Off they started in one direction, I in another, old women accompanying me. When about a quarter of a mile apart I heard the girls calling, and leaving the sleigh on which the man was lying moaning in agony, they came leisurely towards us; it turned out they wanted a pinch of snuff from one of the older women, who had a good supply. This showed me how devoid these people are of all sense of feeling for the misfortunes and suffering of their neighbors.

Sixteen deaths occurred among our neighbors during the spring, and I believe that fully thirteen were caused by starvation.

By the second week in June we had fully 150 natives living within half a mile of the house; they bothered us very much; they insisted on peering in at the windows; it was very annoying having half a dozen dusky faces at each window. We had long since been short of

black tobacco—the natives had none and were longing for a smoke. We could not leave the house without being assailed with cries for tobacco and questions as to when the steamer would arrive. Polulick is the Eskimo word for steamer. Not being able to obtain tobacco they would beg for the ash out of our pipes ; this they used as snuff, which they consider the next best thing to tobacco for smoking.

The summer wore on. I had expected the steamer about July 10th ; by 15th she might have forced a passage, but the ice did not really move until 18th. July passed and no steamer. By August 4th there was scarcely a piece of ice visible—all seemed clear. I discussed the pros and cons of the question with my assistant and the men, and we unanimously concluded that should relief not arrive by August 21st we would start for Ungava in the boat. It would have been impossible to have remained another winter. Very little provisions and no fuel was left. The winter might set in in September, and as I could not be certain that the Hudson Bay officers at Ungava could keep four men for a whole year, time had to be allowed for a boat voyage to Nain, on the Labrador Coast. We of course inferred that the steamer had come to grief and had perhaps been wrecked.

During my stay on the shore of the Straits I saw many beautiful Auroras, which in nearly all cases were accompanied by great magnetic disturbances. The mean temperature of the year was 12.5 ; that of January was 23° below zero, and of July 43° above ; the lowest temperature registered during January was 35° below zero, and the highest 5° below. The daily range of temperature was at all times small, but more especially in the winter months. The mean temperature for February was, compared with other winter months, very mild, probably unusually mild, the mean temperature being but 3° below zero ; the same month in Toronto the mean temperature was the lowest, but one, that had occurred in forty-five years. Scattered drift ice was plentiful in the Straits until the end of the first week in September, 1884 ; from that until the end of October we saw a few "bergs," but no field ice. On the 24th October the Straits froze over, and few days after that date navigation would have been well nigh impracticable. On the bays and inlets of the sea, ice formed to a thickness of 5½ feet. Until after July 18 last summer we saw scarcely any signs of water in the Straits, but by August 4th the ice had almost all disappeared. We crossed the ice in the bay on July

26th, when it was all honeycombed and in a rotten condition ; it went out with the ebb-tide on the morning of July 28th. The most severe storm we experienced occurred on March 21st, the temperature being 20° below zero, and the wind blowing at an average rate of 62 miles per hour, with squalls of over a hundred.

BOAT VOYAGE TO UNGAVA.

Friday, August 21st.—Left station at 4.30 a.m. No wind ; rowed all day, course S. by W. ; failed to make the land on other side of Bay ; lay out all night ; calm water.

Saturday, August 22nd.—Started to row again at 8 a.m. ; occasionally light air from N. E. and E. ; took many hours to recover ground lost by drifting last night ; at 6.30 p.m., got into cove where I hope shall be comfortable till morning ; not sheltered from E. and N. ; heavy surf on rocks.

Sunday, August 23rd.—We lay quiet last night, and this morning, as the wind was unfavourable for rounding far-off point, I contented myself with bringing my boat to an inlet where she would be safe, storm as it may. We are now lying between precipitous cliffs, and within 100 yards of a waterfall of certainly 400 feet, and I think more, in height. At entrance of inlet I estimated the cliffs to be about 2000 feet. The wind keeps easterly and is fresh, threatening rain ; weather cold and raw ; I intend making a push to-morrow at daybreak.

Monday, August 24th.—Went out this morning but found the wind strong and dead ahead, so put back. I sprained my foot badly this afternoon ; any one may imagine my present frame of mind ; I am chilled through and through ; weather is cold and a drizzling rain is falling ; my foot tortures me ; four days out and only progressed about 30 miles ; quite 250 miles to go.

Tuesday, August 25th.—The easterly wind died out this morning, leaving a heavy sea ; started with a light N. W. wind and a terrible jumble of a sea, which made two men sick. About 3 p.m. the wind increased to a fresh breeze, and having come some 15 miles I am now anchored for night in a little cove and under a cliff of nearly 1500 feet ; by swell that is rolling in I judge that it is blowing almost a gale outside ; the clouds are drifting fast from the N. W. ; weather very cold.

Wednesday, August 26th, (noted some days after).—Left anchorage at daylight. When we got clear of cove and bay, found it to be blowing half a gale from N.N.W., and heavy sea running. Kept her full and by until about 7 o'clock in order to round a headland ; got very wet ; sheet in hand ; man bailing all the time ; sometimes had to luff to squalls ; 7 to 8.30 wind on quarter ; now thought we were clear of large bay and course would be about S.S.W. $\frac{1}{2}$ W. down Ungava Bay shore, so kept her away almost dead before it. After about an hour's run it began to dawn upon me that I was running into another long bay as faintly through the mist I could see land abeam on port side, and at times thought I could discern it ahead many miles distant. Thinking it better to be on the safe side I determined to round the Point to E.N.E., and again hauled my wind, laying up for a small island off Point. What a sail that was, 8 miles, close-hauled, a very strong breeze and heavy sea ; the water poured in. I had to keep a man bailing all the time ; everything was soaking wet in no time. Near the Point wind and tide made a tremendous sea, so heavy, indeed, that for some time after passing the Point I was afraid of keeping away for fear of being swamped. We now had the wind almost dead aft, and until about 4 p.m., and made good way. From 4 to about 6.30 it was abeam and blowing a moderate gale ; we fairly hummed along and shipped lots of water. I thanked my stars I had obtained a new mast ; the old one would not have stood with half the wind. Anchored for night in a cove ; landed and tried to dry some of the things. The two men slept ashore, Bennet and I on board ; about 3 a.m. boat grounded, luckily no rocks ; at this place managed to make a fire of moss and cooked some Johnson's fluid beef ; this hot drink went well after the thorough soaking we had got.

Thursday, August 27th.—Started again when boat floated at 5 a.m. ; wind moderate from N.W. ; had made good about 10 miles when fell calm. 9 a.m—Passed some Eskimo tents, three men came out in kyaks and wanted to barter for powder and tobacco ; they said in going by commotik to where we had come from we would have to sleep two nights. We rowed until late in afternoon and then obtained a good harbour, anchoring behind an island in a perfectly sheltered spot. Waters in these parts alive with seals and porpoises ; saw one immense walrus ; I had a shot at him, and hit him hard, but did not kill him.

Friday, August 28th.—We grounded last night again for about two hours ; tide like a mill-stream. Started at 5 a.m. ; tide coming in ; foolishly did not keep near shore and got into current ; took two hours going less than a mile, sail set, wind fresh and fair, three men rowing ; wind moderately fresh and fair all day ; made run of, I suppose, 40 miles, but by dark had failed to find harbour ; had to anchor in an exposed place ; saw two Eskimo ; they say 8 days by commatik from this to Ungava.

Saturday, August 29th.—Under way again at daylight ; scarcely any wind all day ; by rowing and sailing may have made 15 or 20 miles ; shore continues low. No harbour again to-night ; turned in about 7 o'clock. Half an hour after one of the men called out that boat was half full of water, and so it proved ; everything wet, instruments, chronometer, bags—everything. In trying to find plug-hole shoved both my arms with shirt and coat-sleeves into water. Slept in wet things as I had not a change ; miserable night. How the plug came out I cannot imagine.

Sunday, August 30th.—Wind light from E. ; no use trying to get on, so sought a harbour in order to dry some of the things. Found what seemed to be good one ; 25 feet water at flood-tide, but a few hours after anchoring we were high and dry with no water to be seen in any direction ; day raw and cold, threatening rain ; very unsuccessful as to drying clothes. Tide came in again at 7 o'clock ; just getting dark ; saw boat safely anchored, and turned in prepared to turn out again about one o'clock in order to see that she landed on a sandy spot when the tide went out. At 2 a.m. she grounded satisfactorily, and I slept soundly until the water returned at 8 a.m. Tide here runs like a sluice ; spring tides, I suspect, about 40 feet.

Monday, August 31st.—Under weigh at 8 a.m. ; good N.N.E. wind all day ; must have made between 40 and 50 miles. No harbour at night ; anchored in two fathoms at low water, about a mile from shore ; spent sleepless night, as wind freshened from N.E., and sea began to rise. At 11 p.m. thought myself in fix, but wind again fell light.

Tuesday, Sept. 1.—Started at daybreak ; very light N.W. wind until about 10 o'clock ; after this it freshened from N.E. with a threatening sky and occasional showers. Determined to seek a harbour early, so headed for a point which I judged could be made by 4 p.m. What a very lucky hit ; this Point had a beacon on it, and

proved to be at the entrance to the Ungava River. Round the Point we came to a cove on the shore of which was a log-fishing shanty, A man—a white man—the first we had seen since last September. came out to us in a boat. He proved to be an employee of the Hudson Bay Co., and was attending a salmon net. He informed us that the Hudson Bay Co's steamers *Labrador* and *Diana* were both at the post, which was 25 miles up the river. He showed us where to anchor, telling us it was useless trying to ascend against the ebb-tide. We went ashore to his shanty; he cooked us some fresh salmon and gave us some hot coffee with biscuit and butter. Never in my life had I enjoyed a meal so much before; never do I expect to enjoy one more thoroughly in the future. I turned in after this delightful supper, but did not close my eyes.

The south side of Prince of Wales' Sound is high and precipitous. In a fjord where I lay, 22nd to 24th, fair anchorage about two miles up near a waterfall of over 400 feet.

From Cape Hope to about lat. 60°; high land back in interior, but coast line low; rocky islands, reefs and shoals for many miles out.

On 30th passed inside some much larger and bolder islands, Ackpatok lying outside, and from this to Ungava River the shore seemed more open and clear of reefs. We saw a few bergs on 26th and again on 28th. I consider that the west coast of Ungava Bay is quite unfit for purposes of navigation, owing to the numberless reefs and rapid tidal currents. The spring tides are over 30 feet in northern portion and about 60 feet near the mouth of the Ungava River. We saw a few natives at different points along the coast.

I append the following list of Eskimo words, which I picked up, with their English equivalents:—

English.	*Eskimo.*	*English.*	*Eskimo.*
One	At-ousik	Coat	Koal-a-tuk
Two	Ma-cook	Skin	Kesheke
Three	Ping-ushoot	Small seal	Netchik
Four	Sheetimut	Large seal	Oog-duke
Five	Dudlimut	Seal oil	ook-chuk
Six	Pinga-she-ook-took	Island	Kik-it-tuk
Seven	do. atousicklou	White bear	Nan-ook
Eight	Sheetimaooktook	To-day	Ooblumie
Nine	do. atousiclou	Yesterday	Ik-buk-chuk
Ten	Dudlimaooktook	Me	Oovenir
No	Ow-kuk	You	Igvete
Yes	A-hi-lah	Yet	Suly
I don't know	Ah-chuke	Only	Keshani
Water	E-muk	House	Igloo

English.	*Eskimo.*	*English.*	*Eskimo.*
Ice	Nee-luck	Tent	Toopik
Deer	Took-too	Gun	Cook-e-ook
White people	Cublunac	Powder	Ogjid
Eskimo	Inhuit	There	Tomahny
Snow	Ah-poot	What	Chu-ah
Rain	Cheila-lou	Duck	Meet-uk
Fog	Duck-took	Gull	Now-yer
Broken ice	Chik-oo	Ptarmigan	Ah-hag-yer
Spring	Oopin-uk-chuk	A hill	Kuk-kuk
Summer	Oopin-ark	Land	Noon-ah
Autumn	Ook-e-ark	Sun	Chuk-in-uk
Winter	Ook-e-ook	Moon	Tukir
Good	An-an-uk	Sister	Na-yung-a
Bad	Pu-ūn-eakput	To-morrow	Cowkput
Death	To-ko	Day after to-morrow	Cowk-put-a-lou

ELEVENTH MEETING.

The Eleventh Meeting was held on 13th February, 1886, the President in the chair.

The following list of Donations and Exchanges was read :

1. Journal of the New York Microscopical Society, Vol. I., No. 8.
2. School of Mines Quarterly, Vol. VII., No. 2.
3. Science, Vol. VII., No. 157.
4. From the New Jersey Historical Society :
   (1) New Jersey Archives. First Series, Vol. I. to VIII.
   (2) Proceedings of the New Jersey Historical Society. First Series, I., III., IV., VI. to X. Second Series, I. to VII.
5. Harvard University Bulletin, No. 33.
6. Electrical Review, February 13, 1886.
7. Appleton's Literary Bulletin, No. 43.
8. The Chemical News, January 29, 1886.
9. Imperial Federation, February 1, 1886.
10. Transactions of the Manchester Geological Society, Vol. XVIII., Parts XII. and XIII.
11. Cosmos, 25 Janvier, 1886.
12. Electricité, 23 Janvier, 1886.
13. Revuede Linguistique et de Philologie comparée, Tome 19^{me}, Fascicule 1er.
14. Bullettino della Sezione Fiorentina della Società Africana d' Italia, Vol. I., Fas. 6°.
15. Wochenschrift des oesterreichischen Ingenieur und Architekten Vereines, 22 Januar, 1886.
16. Annales des Mines, 8^{me} Série Tome VIII, 5^{e} Livraison de 1885.
17. Atti della R. Accademia di Belle Arti in Milano, 1884.
18. Journal für Praktische Chemie, 1886, No. 1 u. 2, Leipzig.