

CHAPTER XXIII.

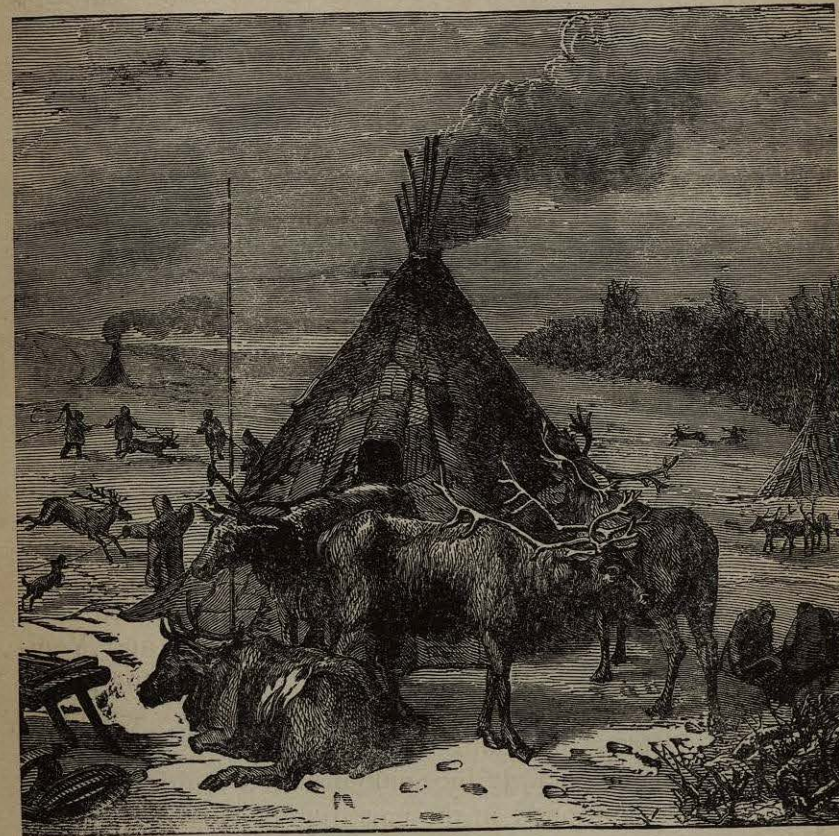
NORDENSKJOLD'S POLAR VOYAGES.

Nordenskjöld's Numerous Polar Voyages—The Vega—An Old Problem Solved—The Northernmost Point of Asia—A Winter in the Land of the Tchuktchi—A Trip around the World—Magnificent Festivities in Honor of Nordenskjöld and his party.

ADOLF ERIC NORDENSKJÖLD is a native of Helsingfort, the capital of Russian Finland. In consequence of a toast given by him at a supper party in 1855, he was deprived by the Russian Governor-General of a small official position he held in the museum of his native city, and consequently left the country, and took service with Sweden, becoming State mineralogist in 1858, and from 1859 to 1878 took part in no less than seven Arctic expeditions, mostly as their leader. These expeditions were, to Spitzbergen in 1861 and 1864; an attempt to reach the Pole, in 1868; to Greenland, in 1870; to Spitzbergen again, in 1872-73; to the Yenisei River in Siberia, in 1875, and again in 1876. Besides these there were two Arctic voyages, in 1868 and 1871. By all these voyages the information in relation to Spitzbergen and Greenland and the adjoining seas was largely increased.

In the voyage of 1875 to the mouths of the Obi and Yenisei, Nordenskjöld landed on the 8th of August on the peninsula of Yalnial, that is, in Samoyed, Land's End, separated from Beli Ostrov or White Island by Malygin Sound. It had been reached in 1737 by Selifontov in a reindeer-sledge, and was first mentioned in the narrative of Skuratov's journey of the same year. A more southerly portion of it was traversed by Sujeff in his overland journey from Obdorsk to the Kara Sea in 1771. In the second voyage of the younger Krusenstern in the Kara Sea in 1862, when the Yermak was abandoned on the coast of this Samoyed peninsula far to the south, in latitude $69^{\circ} 54'$, the commander and crew escaped to the land, destitute of everything, but had the good fortune to fall in with a Samoyed elder, the owner of 2,000 reindeer, who took them to Obdorsk, about 600 miles distant by the

route taken. "We saw no inhabitants," says Nordenskjöld, "but everywhere along the beach numerous tracks of men—some of them barefoot—reindeer, dogs, and Samoyed sledges were visible. On the top of the strand-bank was found a place of sacrifice, consisting of forty-five bears' skulls of various ages placed in a heap, a large number of reindeer skulls, the lower jaw of a walrus, etc. From most of the bears' skulls the canine teeth were broken out, and the lower jaw



SAMOYED ENCAMPMENT.

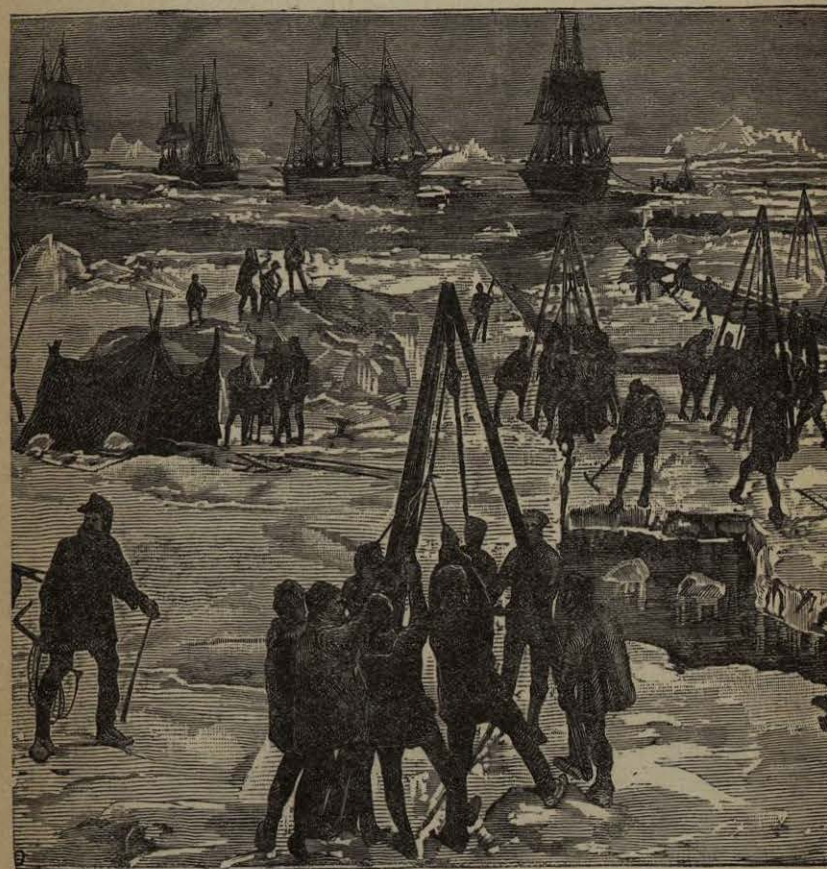
was frequently entirely wanting. Some of the bones were overgrown with moss, and lay sunk in the earth; others had, as the adhering flesh showed, been placed there during the present year. In the middle of the heap of bones stood four erect pieces of wood. Two consisted of sticks a metre (3.28 feet) in length, with notches cut in them, serving to bear up the reindeer and bears' skulls, which were partly placed on the points of the sticks, or hung up by means of the notches,

or spitted on the sticks by four-cornered holes cut in the skulls. The two others, which clearly were the proper idols of this place of sacrifice, consisted of driftwood roots, on which some carvings had been made, to distinguish the mouth, eyes, and nose. The parts of the pieces of wood intended to represent the eyes and mouth had recently been besmeared with blood, and there still lay at the heap of bones the entrails of a newly killed reindeer. Close beside were found the remains of a fire-place, and of a midden, consisting of reindeer bones of various kinds, and the lower jaws of bears. Sailing on at some distance from the coast, and at one place passing between the shore and a long series of blocks of ground-ice, which had stranded along the coast in a depth of nine to sixteen metres ($29\frac{1}{2}$ to $52\frac{1}{2}$ feet), during the night we passed a place where five Samoyed tents were pitched, in whose neighborhood a large number of reindeer pastured."

The results of those several voyages are thus summed up by Nordenskjöld: "The exploring expeditions, which, during the recent decades, have gone out from Sweden toward the north, have long ago acquired a truly national importance, through the lively interest that has been taken in them everywhere, beyond as well as within the fatherland; through the considerable sums of money that have been spent on them by the state, and above all by private persons; through the practical school they have formed for more than thirty Swedish naturalists; through the important scientific and geographical results they have yielded; and through the material for scientific research, which by them has been collected for the Swedish Royal Museum, and which has made it, in respect of Arctic natural objects, the richest in the world. To this should be added discoveries and investigations which are, or promise in the future to become, of practical importance; for example, the meteorological and hydrographical work of the expeditions; their comprehensive inquiries regarding the seal and whale fisheries in the Polar seas; the pointing out of the previously unsuspected richness in fish of the coasts of Spitzbergen; the discoveries on Bear Island and Spitzbergen of considerable strata of coal and phosphatic minerals, which are likely to be of great economic importance to neighboring countries; and, above all, the success of the two last expeditions in reaching the mouths of the large

Siberian rivers—the Obi and Yenisei—navigable to the confines of China, whereby a problem in navigation, many centuries old, has at last been solved."

On the 22d of June, 1878, the steamer Vega, purchased at Bremerhaven, for the seventh and most celebrated Arctic voyage of Professor Nordenskjöld, left the harbor of Karlskrona. Besides the Vega, with her company of thirty per-



CUTTING ICE-DOCKS.

sons, of whom only four were seamen, the others being officers, engineers, and scientists, three other vessels which belonged to the merchant, Sibiriakoff, were at the disposal of the commander of the expedition, consisting of quite a little fleet, with the Vega as a sort of flag-ship. They were the steam-tender Lena, Christian Johannesen, captain; the steamer Fraser, Emil Nilsson, captain, and the sailing-vessel Express, under Captain Gunderson, with their respective corps of petty

officers and crews, and S. J. Seribrienkoff as supercargo, and representative of the commercial interests of the owner. The two merchantmen were to meet the Vega and her tender at Chabarova on Yugor Schar or Vaigats Sound, lying between the island of that name and the Russian mainland, which was also the appointed rendezvous of the Lena, should she get separated from the Vega. The name Yugor is derived from the old name of the adjoining portion of the continent, Jugaria, or Yugaria, the supposed intermediate seat of the Hungarians, between their departure from their original Tartar home in Central Asia and their migration southward to their present location, toward the close of the ninth century of our era.

On the 4th of July the Vega left Gothenburg, but encountering head-winds off the west coast of Norway her progress was slow, and it was not until the 17th that she reached Tromsøe, where she was to take aboard the commander, and be joined by the Lena. Here they shipped three walrus-hunters, and such special Arctic equipments as reindeer skins, besides coal and water. On the 21st, about fifteen days later than intended, they set out on the regular voyage, making for Maossoe, a small island of the Northern Archipelago, where they were to have their last mail facilities. Here they were detained three days by adverse winds, instead of that many hours, as anticipated.

Leaving Maossoe on the 25th, they steamed through Margeroe Sound, between the island of that name, the northern extremity of which is known as North Cape, and the mainland of Norway. The Vega and Lena parted company the first night in a fog, but each proceeded on its way to Chabarova. The Vega was steered due east to within a few miles of the west coast of Nova Zembla, which they sighted on the 28th at $70^{\circ} 33'$ by $51^{\circ} 54'$ east, in about seventy-five hours from Maossoe. This was about midway between the Matotschin Schar, or Sound, and Yugor Schar. The Matotschin Sound divides Nova Zembla into two large islands of unequal size, the larger terminating at Barentz Land away to the north, in latitude 77° , the chief interest in which is connected with the fate of the early navigator, thus commemorated. An account of his voyage has been given in its proper place; but a fresh interest has been awakened by the recent discovery of the winter-house erected by him and his companions at Ice Haven, in Barentz Bay, on the east coast of Barentz

Land, a few minutes north of latitude 76° . On the 9th of September, 1871, Captain Carlsen, a Norwegian, while circumnavigating Nova Zembla, discovered the house, with many interesting relics, in a remarkable state of preservation, and brought them home, whence they found their way, through the zeal of Barentz's countrymen, to the Hague, where they are carefully preserved. "No man," says Markham, "has entered the lonely dwelling where the famous discoverer sojourned during the long winter of 1596, for nearly three



BARENTZ' HOUSE.

centuries. There stood the cooking-pans over the fireplace, the old clock against the wall, the arms, the tools, the drinking-vessels, the instruments, and the books that beguiled the weary hours of that long night 275 years before. Perhaps the most touching relic is the pair of small shoes. There was a little cabin-boy among the crew, who died, as Gerrit de Vere tells us, during the winter. This accounts for the shoes having been left behind. There was a flute, too, once played by that poor boy, which still gives out a few notes."

The more southern of the twin islands of Nova Zembla is separated from Vaigats Island to the south by the Kara Part, or passage to the Kara Sea. The part of this island which was now sighted by the Vega's company is known as Ganse-land, because of the great numbers of geese and swans which breed there. By the end of June, or early in July, the greater part of Gooseland is free of snow, and soon the Arctic flora discloses all its splendor for a few weeks. Giving themselves plenty of sea-room, but in the main following the trend of the land, they proceeded to the southeast, and farther on, east-southeast, to Vaigats Island, of which they had an excellent view, the air being exceptionally clear. From the Murman Sea to the west it seemed a level, grassy plain, but on approaching the sound, low ridges were seen on the east side, which were regarded by Nordenskjöld as the last spurs of the great Ural range. They found the merchantmen awaiting them when they arrived at Chabarova on the 30th, and the Lena put in an appearance the next day. The Fraser and Express had left Vardoe Island off the northeast coast of Norway on the 13th, and had been in harbor since the 20th.

Nordenskjöld's expedition quit their anchorage off Chabarova on the 1st of August, and steamed through the sound, the Fraser towing the Express into the Kara Sea, which extends from Nova Zembla to Taimur Peninsula, receiving the waters of the Kara, Obi, Taz, and Yenisei, through the gulfs bearing the same names. It was found that "no notable portion of the mass of fresh water which these great rivers pour into the Kara Sea flows through Vaigats Sound into the Atlantic Ocean; and that, during autumn, this sea is quite available for navigation." On the 2d they met no ice; on the 3d only ice that was very open and rotten, presenting no obstacle, and in the evening arrived in sight of the large island of Beli Ostrov. The Lena had been despatched ahead with three of the naturalists, under orders to pass through the sound which separates it from the peninsula of Yalmal. On the 6th, passing Sibiriakoff Island in the mouth of the Yenisei, they anchored in Port Dickson, on Dickson Island, where they were rejoined by the Lena on the 7th.

They finally reached Taimur Sound, and on the 19th they steamed by a large, high, unbroken field of ice, extending from a small bay on the west side of the peninsula. A little farther on, they had the good fortune to find, just west of the low-

jutting promontory—or rather in the fork of it—an open bay which they named King Oscar, and in which both steamers came safely to anchor in the evening. They had nowhere met such old drift-ice as is encountered north of Spitzbergen. "We had now reached a goal," says Nordenskjöld, "which for centuries had been the object of unsuccessful struggles. For the first time a vessel lay at anchor off the northernmost cape of the Old World. No wonder, then, that the occurrence was celebrated by a display of flags, and the firing of salutes, and when we returned from our excursion on land, by festivities on board, by wine and toasts. The north point of Asia forms a low promontory, which a bay divides into two, the eastern arm projecting a little farther to the north than the western."

Both the cape and the immediate tongue of land back of it are now distinctively known as Cape Chelyuskin and Chelyuskin Peninsula, both in the honor of the Russian explorer of that name. The great Taimur Peninsula, of which this tongue and cape form the extreme northern projection, is now further divided geographically into a West and East Taimur Peninsula by the Taimur Lake and river; and it is to the eastern half that Chelyuskin Peninsula belongs.

On the night of the 28th of August the Vega and Lena parted company in the open sea, in about longitude $128^{\circ} 30'$, off Tumat Island. While they followed the coast they found open water, always at a safe distance from the land on the one hand, and the ice-pack on the other. It was therefore demonstrated that, at least in seasons as favorable as 1878, the whole voyage may be made without meeting any serious obstruction from ice. The Lena reached Lakoutsk on the 21st of September amid great rejoicings, being the first ocean steamer that had ever reached that far inland city, about 800 miles from the sea.

After parting with the Lena, as stated, the Vega kept on to the east, reaching 132° at noon, and sighting Stolbovoi Island in the afternoon. On the 1st of September they were at 150° , about one degree north of the mouth of the Indigirka, and on the 2d the temperature fell to one degree below zero. On the 3d snow began to fall, and when they arrived off Bear Islands, north of the mouth of Kolyma, both vessel and land were lightly covered with it. The channel west and south of the islands, through which they passed, was almost free of

ice, but a little farther out ice was abundant, and on the 4th, east of the islands, heavy masses were found to have drifted south, compelling the Vega to bear down nearer the coast toward the Greater Baranow Rock. Indeed, ever since doubling Sviatoi Noss, the ice seen was more like that to be met off Spitzbergen, than any they had hitherto encountered on this voyage; but no icebergs or large glacier blocks had been met or sighted. On the 5th they were off the mouth of the Baranicha, so often mentioned in the account of Wrangell's sledge-journeys. Passing the entrance to Tchaun Bay in the night, they reached Cape Schelagskoi at four o'clock on the afternoon of the 6th.

On the 12th, beyond Cape North, the Vega at last found her way blocked by the ice-pack, and turning back, found temporary refuge near the cape, where they were detained by the untoward condition of the ice until the 18th.

On the 29th, finding no lane, lead, or outlet through the pack, the Vega was moored to a mass of ground-ice, 130 feet long, 80 wide, and 20 high, which afforded a fair shelter, but no proper haven. This, however, proved to be the winter-quarters, except that later on ship and shelter were pushed by the outer ice to within seven-eighths of a mile of the coast. Soon the ice-belt which had obstructed their advance grew from six or seven to eighteen or twenty miles wide, and there was no longer any hope of getting away until the ensuing summer. Their exact position was ascertained to be in latitude $67^{\circ} 4' 49''$ north, and longitude $173^{\circ} 23' 2''$ west— 180° east, half the circumference from Greenwich, had been passed at Cape North.

During the winter months many excursions to interesting points were made by members of the expedition, by which valuable information was obtained about the country and its inhabitants, the Tschuktchi.

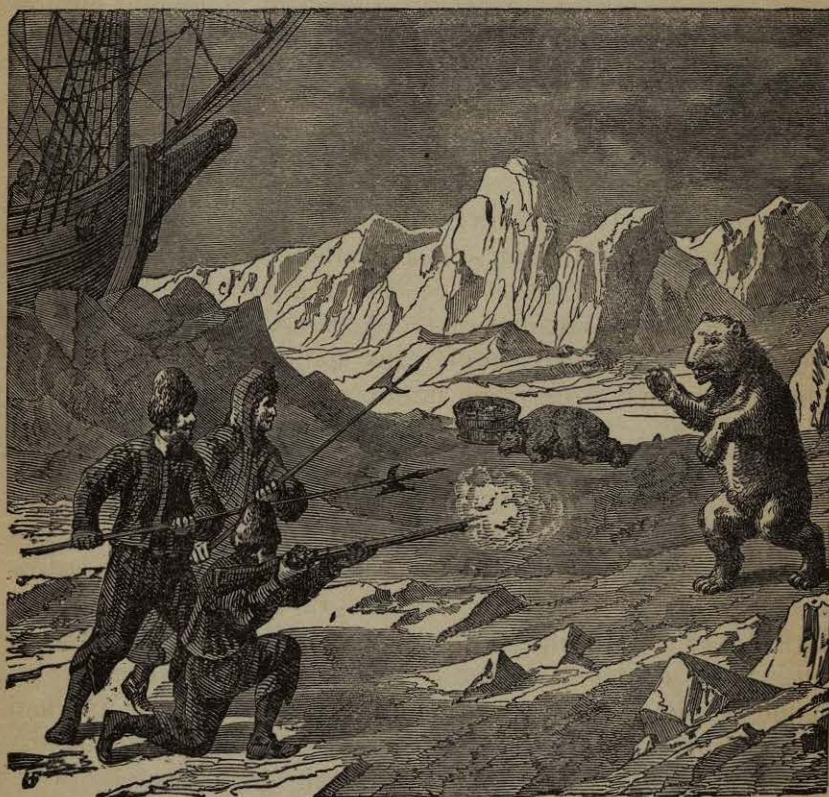
At length the moment of release approached. The temperature had remained below freezing point to the middle of June. On the 14th, however, there was a sudden change to milder weather. A heavy thaw set in, and the coast land was so covered with mud and slush that all excursions had to be discontinued. But the ice which bound the ship was still so strong that the explorers did not expect to be able to leave before August. Throughout their stay there had been open water seaward, but usually at a great distance from the ship.

"On the 16th of July," says Nordenskjöld, "a heavily laden double sledge could still be driven from the vessel to the shore;" and the next day the year's ice around them began to break up, but the ground-ice was still undisturbed, and it was judged that several days would elapse before they could get clear. So the commander determined to take the steam-launch to sea, and visit some whalers reported by the natives to be off Serdze Kamen. But by 1.30 on the 18th, when almost ready to set out, there was noticed a movement of the ice which held the Vega. An hour later Palander, who was prepared for every emergency, had steam up, and in another hour the ship was free. At 3.30 she steamed away, first a little to the west to get clear of the floe, and then in the right direction, eastward for Serdze Kamen and Behring Strait, encountering no further obstruction from the ice thenceforth to the close of the voyage. The detention in winter-quarters had lasted 293 days.

In ten hours they passed Serdze Kamen, and steering thence southeast, they arrived off Cape East in Behring Strait on the morning of the 20th, and at eleven o'clock, being about midway between the Arctic and Pacific Oceans, "the Vega greeted the Old and New Worlds by a display of flags, and the firing of a Swedish salute." Thus finally was reached the goal toward which so many nations had struggled, all along from the time when Sir Hugh Willoughby, with the firing of salutes from cannon, and with hurrahs from the festive-clad seamen, in the presence of an innumerable crowd of jubilant men, certain of success, ushered in the long series of north-east voyages 326 years before.

The prevalence of fog rendered inadvisable a landing, otherwise much desired, at Diomedé Island, the famous market-place of the polar tribes, situated in the narrowest part of the straits, nearly half way between Asia and America, and probably before the time of Columbus, a station for traffic between the "Old and New Worlds." They first cast anchor in St. Lawrence Bay, where various expeditions and investigations among the tribes on the east coast of the Tchuktchi Peninsula were zealously taken up, but only for a single day, as the commander was anxious to reach a telegraph station to communicate the safety of the expedition to the king and people of Sweden, and the world at large. Steaming across to the American side they anchored in Port

Clarence, where they were soon called upon by the Esquimaux for interchange of civilities, gifts, and barter. Here they remained until the 26th, when the Vega recrossed to the Tchuktchi Peninsula, farther to the south than before, and anchored in Konyam Bay on the 28th. The mountains were high and split up into pointed summits with deep valleys still partly filled with snow; but no glaciers were seen. The inner bay was still covered with an unbroken sheet of ice, which



ATTACKED BY POLAR BEARS.

suddenly breaking up on the 30th, they beat a rather precipitate retreat, just in time to escape the last chance of conflict with the great enemy of Arctic expeditions.

Steaming away to St. Lawrence Island the Vega anchored in an open bay on the northwest coast on the 31st. Notwithstanding its very considerable size, eighty by thirty miles, the island has no good harbor, and the Vega left her exposed situation on the 2d of August. The next anchorage was made on the 14th in an almost equally exposed bay on the

west of Behring Island. In the dreary, treeless land, where Behring and companions met nothing but desolation, sand-hills, and ravenous foxes, Nordenskjöld and party found a thriving colony of American and Russian traders, with dwelling-houses, official buildings, storehouses, a school-house, and church. Behring, Copper, and Toporkoff Islands, besides several islets and rocks, constitute the group known as Commander's Islands. "The part of Behring Island which we saw," says Nordenskjöld, "forms a high plain resting on volcanic rocks, which, however, is interrupted at many places by deep kettle valleys, the bottoms of which are generally occupied by lakes, which communicate with the sea by large or small rivers. The banks of the lakes and the slopes of the hills are covered with a luxuriant vegetation, rich in long grass and beautiful flowers; and might without difficulty feed large herds of cattle, perhaps as numerous as the herds of sea-cows that formerly pastured on its shores."

Finding here a steamer of the Alaska Company bound for Petropaulovsky, Nordenskjöld was somewhat relieved of his anxiety to reach a telegraph station, whence to despatch news of the safety of the expedition. After a short but pleasant sojourn at the civilized colony, they left their moorings on the 19th, and on the 25th struck the Gulf Stream of the Pacific. On the 2d of September, at 9.30 in the evening, the Vega anchored in the harbor of Yokohama, Japan; and Nordenskjöld at length had access to a telegraph station, and also a little experience of official obstruction in getting his messages off. Here he learned that a relief steamer, called by his name, had been sent forward by his friend Sibiriakoff, and had been stranded on the coast of Yesso, fortunately without loss of life, and with a fair prospect of being got off safely.

From here the expedition returned to Sweden *via* Ceylon, Point de Galle, Aden, the Suez Canal, Naples, Gibraltar, Boulogne, Paris, and Copenhagen, where they were honored by magnificent receptions and festivities.