before 1868 from 1500 to 2000 were killed by hunters in a few weeks of summer.

There are twenty-three species of fishes, but no reptiles. Insects are few. Arachnids, and especially Pantopods, on the other hand, are very common. Molluscs are also numerous. At some places the mussels and univalves reach a large size and appear in great abundance. Of Crustaceans fully 100 species have been recognized in the waters of the archipelago.

The flora is, of course, poor. The only tree is the polar willow, which does not exceed 2 in. in height and bears a few leaves not larger than a man’s finger-nail; and the only bushes are the crow­berry and cloudberry. But at the foot of the warmer cliffs some loam has been formed notwithstanding the slowness of putrefaction, and there, in contrast with the brownish lichens that cover the hills, grows a carpet of mosses of the brightest green, variegated with the golden-yellow flowers of the ranunculus, the large-leaved scurvy grass, several saxifrages, fox-tail grass, &c., with a few large flowers, *Polygona* and *Andromedae;* while on the driest spots yellow poppies, whitlow grasses, &c., are found. Even on the higher slopes, 1500 ft. above the sea, the poppy is occasionally met with. In all over 130 species of flowering plants have been found. Mosses, mostly European acquaintances, cover all places where peat has accumulated. The slopes of the crags and the blocks of stone on the beach are sometimes entirely covered with a luxuriant moss and lichen vegetation, among the. last being the so-called "famine bread ” *(Umbilicaria arctica),*which has maintained the life of many arctic travellers. Although limited in number, the flora is suggestive in its distribution. The vegetation of the south has a decidedly Lappish or European alpine character, while that of the north coast is decidedly American, and recalls that of Melville Island. Many flowering plants which are common in north-west Spitsbergen are absent from the east coast, where the cold climate is inimical to both flora and fauna; but, on the other hand, one moss *(Pottia hyperborea)* and one lichen *(Usnea melaxantha)* are found there which are of American origin and grow both in North America and on the Cordilleras. Algae are most numerous, many, like the brown *Laminaria* and *Nostoc communis,* which fill all pools and are the chief food of many birds, being familiar in Europe. *Protococcus nivalis* covers the snow with its reddish powder.

*History.—*Spitsbergen has never been permanently inhabited, although there are several instances of hunters wintering on the island under stress of circumstances, and several scientific expeditions have done so. A Russian trapper named Starash­chin is said in various accounts to have spent 32 or 39 winters, and 15 consecutive years, in the archipelago; he died there in 1826. Spitsbergen was discovered on the 17th of June 1596, during the expedition under William Barents and Jacob Heem- skerk, which ended with the death of Barents. Barents saw parts of the west and north coasts, and to these he gave the name of Spitsbergen. In 1607 Henry Hudson, after visiting the coast of Greenland, reached Spitsbergen in June. Bear Island, the ice-bound island midway between Spitsbergen and the North Cape, situated on the same submarine platform as the former, had been discovered by Barents, and became important as a hunting-ground (for walrus, &c.) before Spitsbergen began to be visited for this purpose. In 1609 Thomas Marmaduke of the “ Heartsease," proceeding north from Bear Island, reached Spitsbergen, and in the following year the first hunting expedition was despatched thither by the Muscovy Company on board the “ Amitie” of London, Jonas Poole, master, on whose report of the abundance of whales on the coast the Spitsbergen whaling industry, which was to grow to such im­portance, was established in 1611. Very shortly the Dutch began to take a share in this, and there were frequent collisions between the whalers of the two nationalities, while in 1615 the Danes attempted to claim this part of “ Greenland," as Spits­bergen was for a long time considered. England attempted to annex the archipelago, but at length the Dutch became pre­dominant in the whaling industry, and in 1623 founded the summer settlement of Smeerenburg. This became a busy and important centre, but began to decline in about twenty years, as the whales were gradually driven from the bays and must be followed, at first northward along the coast, and later into the open sea. Independently of the English and Dutch, Russians from the White Sea district came to Spitsbergen to hunt walruses, seals, bears, foxes, &c. At what early period they first did so cannot be known, but the industry seems to have gained a certain importance before 1740. The Russians had their own nomenclature for various parts of the archipelago, the whole of which they also called Grumant, a corruption of Green­land. A similar hunting industry was established by Nor­wegians early in the 18th century, but Spitsbergen declined in importance as a hunting-ground owing to the indiscriminate slaughter of game.

Many expeditions have made Spitsbergen their base for polar exploration. The Russian admiral Chichagov visited it twice, in 1765 and 1766, and reached 80° 28' N. The expedition sent from England in 1773 at the instigation of Daines Barrington under the command of Constantine John Phipps, was the first having a purely geographical purpose. It consisted of two vessels, the “ Racehorse ” and the “ Carcass,” on the first of which Horatio Nelson was a midshipman. Phipps mapped the north of Spitsbergen, and reached 80° 48' north. In 1818 David Buchan and John Franklin reached 80° 34' to the north of the archipelago. Captain D. C. Clavering and Sir Edward Sabine in 1823 explored the islands, and Sabine made his remarkable magnetic observations, while Clavering reached 80° 20' N. Sir William Parry, shortly after his return from his third voyage, went to Spitsbergen and reached 820 40' north on sledges, while other members of the expedition were occupied with scientific work in the archipelago. In the same year the Norwegian geologist Balthasar Mathias Keilhau visited the group and related his experiences in a remarkable book, *Resa i Ost og West Finmarken* (Christiania, 1831). The Swedish pro­fessor Sven Loven was the first to undertake, in 1837, dredging and geological explorations in Spitsbergen and its vicinity. Next year a body of French, Swedish, Danish, and Norwegian naturalists, among whom was Charles Martins, visited the western coast. In 1858, at the suggestion of Loven, Otto Torell, accompanied by A. E. Nordenskiöld and A. Quennerstadt made many important observations and brought home rich geological collections. In 1861 a larger expedition led by Torell, Nordenskìöld, A. J. Malmgren, and Karl Chydenius, set out with the object of finding how far it was possible to obtain a measurement of an arc of meridian of sufficient extent. This aim was only partly accomplished, but the expedition returned with an invaluable store of various observations. The work of the measurement of the arc was completed in 1864 by another expedition conducted by Nordenskìöld, assisted by Malmgren and N. Dunér. This expedition was followed in 1868 by that of the "Sofia,” under Nordenskìöld, which, in the words of Oswald Heer," achieved more and gave a wider extension to the horizon of our knowledge than if it had returned merely with the information that the "Sofia" had hoisted her flag on the North Pole.” In the same year the German arctic ex­pedition under Karl Koldewey circumnavigated West Spits­bergen. In 1870 two young Swedish savants, Drs Nathorst and Wilander, visited Spitsbergen in order to examine the phosphoric deposits, and two years later a colony was formed in Ice Fjord, and a small tramway constructed to work the beds. The attempt, however, did not prove successful. Leigh Smith and the Norwegian Captain Ulve visited and mapped parts of East Spitsbergen in 1871, returning with valuable information. They reached 81° 24' north. In the same year the first tourist steamer visited the archipelago. In 1872 a great polar expedition under Nordenskìöld set out to winter on Spitsbergen with the intention of attempting in the spring to advance towards the pole on sledges drawn by reindeer. But the expedition encountered a series of misfortunes. The ships were beset in the ice very early in Mussel Bay, and, six Nor­wegian fishing vessels having been likewise overtaken and shut in, the expedition had to feed the crews on its provisions and thus to reduce the rations of its own men. The reindeer all made their escape during a snow-storm; and when the sledge party reached the Seven Islands they found the ice so packed that ali idea of going north had to be abandoned. Instead of this, Nordenskìöld explored North-East Land and crossed the vast ice-sheet which covers it. The expedition returned in 1873 with a fresh store of important scientific observations, especially in physics and submarine zoology. In 1873 R. von Drasche- Wartinberg, the geologist, paid a short visit to Spitsbergen,