

THE CRUISE OF THE "NEPTUNE."¹

THE cruise of the *Neptune* is the official narrative of the voyage of the Dominion Government Expedition to northern parts of Hudson Bay and the north-eastern Arctic islands in 1903-4 in charge of Mr. A. P. Low.

The Dominion Government in the spring of 1903 decided to send a cruiser to patrol the waters of Hudson Bay and those adjacent to the eastern Arctic islands, and to aid in establishing on the adjoining shores permanent stations for the collection of customs, the administration of justice, and the enforcement of the law as in other parts of Canada.

Major J. D. Moodie, of the North-West Mounted Police, was appointed acting commissioner of the unorganised north-eastern territories. The expedition carried a scientific staff.

Dr. L. E. Borden, besides being the medical officer, collected data relating to ethnology, botany, and zoology; Mr. Andrew Halkett, naturalist of the Department of Marine and Fisheries; Mr. C. F. King, who was attached from the staff of the Geological Survey, took charge of the topographical and meteorological work, assisted by Mr. C. F. Caldwell (photographer) and Mr. Ross (purser).

Mr. Low undertook the geological work. The latter writes in the preface to the book:—"The greater part of the credit for the complete and successful accomplishment of all the instructions for the voyage is due to Captain S. W. Bartlett, the officers and the crew of the *Neptune*." The latter was the largest and most powerful ship of the Newfoundland sealing fleet, 465 tons net register and engines 110 nominal horse-power.

Besides the narrative of the voyage during the seasons 1903-4, there is a short historical account of earlier explorations and discoveries in north-eastern Arctic America, a geographical sketch, and chapters dealing with the Eskimo inhabitants and the geological formation of these north-eastern territories, and a description of the important whaling and sealing industries, and opinions as to the possible navigation of Hudson Strait and Hudson Bay.

In the form of appendices are the results of the meteorological observations taken on the voyage, notes on the thickness and growth of ice, and lists of the birds, plants, and fossils collected in these northern regions. The full results, especially with regard to the determination of marine invertebrates, are promised in a future publication.

The *Neptune* wintered in Fullerton Harbour, at the entrance to Roes Welcome (latitude 64° N.). During the winter various tribes of Eskimos congregated about the ship and kept it supplied in fresh caribou meat. The two long chapters on the Eskimos are fascinating reading, and contain a mass of information for the anthropologist. In the form of an appendix there are notes on the physical condition of the Eskimos by the surgeon to the *Neptune*, Dr. L. E. Borden.

The excessive cold of the early spring practically rendered impossible any surveying or other scientific work until the month of April. The minimum temperature observed was -53° F., early in March. The really cold months were January, February, and March, the mean temperatures being respectively -23°·0 F., -27°·0 F., -20°·6 F. The thickness of the ice around the ship continued to increase until April 25, when it attained a maximum of 74 inches.

The *Neptune* broke her way out of Fullerton Harbour on July 18, after having been fast frozen for nine months, and proceeded on her summer cruise to the Arctic islands. Chapter x. contains a great deal of valuable information concerning whales and whaling. Although the capture of a right whale repays the expenditure incurred in outfitting a steam whaling ship, and if more than one is killed on the voyage it means large dividends to the owners, the chase is becoming more and more unprofitable owing to the few whales remaining and to the frequent "empty" voyages made of late years. The future of the whaling industry certainly appears to be very gloomy.

The chapters on geology are perhaps the most valuable portion of the book. Although they contain little that is

absolutely new, the results of former expeditions and work of former geologists have been brought together in a concise and interesting manner.

The work is admirably written, and contains more real information than such narratives usually do. The illustrations are fairly good, and the geological map compiled by the Geological Survey of Canada to illustrate the cruise of the *Neptune* (scale, 50 statute miles to 1 inch) is probably the best of its kind published. L. C. B.

NATURAL HISTORY IN NORTHUMBRIA.¹

THE third and concluding part of the first volume of the new series of the Transactions of the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne has just been issued, and it proves that the district is able to maintain its reputation as a home of eager and distinguished naturalists. In addition to the usual reports on the field meetings and the short notes on local natural history which do not present any noteworthy features, there are six papers of more general interest which may be regarded as serious contributions to knowledge.

Among these we notice a paper by Miss M. Lebour on the larval trematodes of the Northumberland coast. Having chosen for her investigations a field of work that has unfortunately been very inadequately explored, this author is able to contribute more than is really original than her companions. A list of thirteen common littoral mollusca is given in which larval trematodes were found, and of these *Paludetrina stagnalis* was proved to be the host of no less than six different species of trematodes. Although no single complete life-history was worked out, reasons are given for supposing that the first host of *Distomum (Echinostomum) leptosomum* is *Paludetrina stagnalis*, and that encystment may take place in the same species of mollusc or in *Scrobicularia tenuis*, the final host being the dunlin. The bucephalus larva of *Gasterostomum*, the well-known fluke of the angler fish, was found in the cockle, this being only the second time in which the larva has been recorded in British waters. The paper is well illustrated by five plates.

In an interesting paper by Dr. Brady several species of Crustacea new to the district are recorded from a pond at Amble that has been formed by the filling up of an old quarry from the adjacent sea. The occurrence in the pond of a new ostracod for which a new genus (*Proteocypris*) is instituted is of special interest, as, according to the author, it is the only instance of a typically fresh-water cyprid occurring in a truly marine habit. It is to be regretted that Dr. Brady makes no statement of his opinion as to the relations of this genus or of the family to which it belongs.

The longest paper in the part is one by Mr. A. R. Jackson on the spiders of the Tyne valley. This paper will doubtless be of considerable value to arachnologists, but apart from the description of five species new to Britain, of which three species were at the time of their discovery new to science, it does not present any features of general interest.

In some interesting notes on rare local beetles, Mr. Bagnall describes his experiences in proving that the female *Epuraea angustula* enters the bores of different species of Trypodendron in order, as he believes, to deposit her eggs on those of the borer, and suggests that the staphylinid *Acrulia inflata* is similarly parasitic on Trypodendron.

Geology is represented in the part by two papers—one, on the result of the borings in the valley of the Tyne Derwent, by the Rev. A. Watts, and the other by Dr. Woolcott, on the recent landslip at Claxheugh. The photographs that illustrate this last-named paper are of permanent interest and value.

In bringing the first volume of the new series to a conclusion, the society may be congratulated on the evidence it affords of the interest taken in natural history by its members and of the valuable work they are doing.

¹ "Transactions of the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne." Vol. i., parts i.-iii. (1907). Price 5s. 6d.

¹ Report on the Dominion Government Expedition to Hudson Bay and the Arctic Islands on Board the D.G.S. *Neptune*, 1903-1904. By A. P. Low (officer in charge). Pp. xvii+355 and map. (Ottawa: The Government Printing Bureau, 1906.)