

MAMMALIA.

The classification of the New Zealand Cetacea has undergone revision, and the results so far as they relate to the larger forms, have been published in the Transactions of the Institute (On the Whales of the New Zealand Seas. By Dr. Hector. Vol. X., 331).

The most important addition to the collection in this section has been a fine skeleton of the Whale Killer (*Orca pacifica*), presented by the Royal Society of Tasmania.

BIRDS.

The principal additions to the collection of birds during the year, was obtained by exchange from the private Museum of Mr. Macleay, F.L.S., at Sydney.

FISHES.

Very extensive additions have been made to the alcoholic collections in this department, 360 specimens having been received, including a typical collection of the Australian sea and river fishes; a small collection of Polynesian fish made by Lord Hervey Phipps; and a series of the fishes of the Atlantic Coast of the United States, contributed by the Smithsonian Institute.

The collection of New Zealand fishes has been greatly extended and improved by the substitution of fresh preparations.

INVERTEBRATA.

The additions in this section number 887, and consist chiefly of Australian Crustacea, Echinodermata, and Mollusca, and a large series of preparations of the New Zealand Mollusca to facilitate the study of the soft parts of the animals.

Mention has also to be made of a valuable collection of New Zealand Insects, 37 in number collected and presented by the Rev. Father Sauseau, of Blenheim.

ETHNOLOGICAL.

The only important addition, has been a collection of the weapons of the Isle of Paris, New Caledonian natives, the most interesting of which, are sling-stones made of steatite, which are projected from a sling made of cloth spun from the hair of the flying fox.

MINERALS.

In addition to the various mineral and rock specimens obtained by the Geological Survey, a very valuable series, numbering 400 specimens, illustrating the geology of Canada, from Mr. A. R. C. Selwyn, F.R.S., the Director of the Geological Survey of the Province, have been added, and a few ores of interest collected in Cornwall, have been received from Mr. J. D. Enys, F.G.S.

The collection of New Zealand minerals and ores has been re-arranged and catalogued, and the volcanic and metamorphic rocks are now undergoing a more thorough chemical and microscopical examination than they have hitherto received, while, at the same time, duplicate specimens are being selected for exchange.

PALÆONTOLOGY.

The most important collection of foreign fossils added to the Museum during the past year, is a series illustrating the carboniferous rocks of New South Wales and Tasmania, obtained by the Director during a visit to Australia. This series has proved of great service in comparing the equivalent formations in New Zealand.

GEOLOGICAL SURVEY COLLECTIONS.

These have been very ample and important in their bearing on the geology of the Islands, and especially in relation to the lower mesozoic rocks, which have, until now, been very imperfectly understood.

The chief field work of the year was the detailed survey of the Hokanui range in Southland, which has, for many years, been known to present the most typical development of the formations from Jurassic to Permian.

The results obtained are fully detailed in the Geological Reports for the year, but it may be stated here, that the above formations form a stratigraphical sequence, but were divided into 76 well defined beds, the outcrops of which were traced and studied in section, over an area of 32 square miles.

The fossils, which number over 5,000 specimens, were collected from twenty-five distinct horizons, and form a very large and important addition to the palæontological data now in the Museum, which is only partially arranged and worked out:—

The total thickness of the strata represented in the sections is 21,000 feet, viz.:—

Upper Oolite	...	...	...	...	3,500
Middle Oolite	...	...	...	...	850
Lower Oolite	...	...	...	...	2,200
Lias and Rhœtic	...	...	...	...	2,000
Permian Triassic	...	...	...	...	6,400
Permian Carboniferous	...	...	...	...	6,150

The most remarkable feature is the great development of our Infra-Triassic Marine formation, characterised by a great profusion of Brachiopoda, several of these forms being generically distinct from any hitherto described, while there is a total absence of any true Spirifera. It is thus rendered probable that we have in the New Zealand area, developments of Lower Mesozoic strata, representing gaps in the record elsewhere.

A further examination of the Mount Potts Spirifer beds, during the past year, has afforded a large number of fossils and proved the existence of three marked horizons in that locality,—the Upper Plant beds; the Spirifer beds (although no true Spirifer is present) corresponding to the Lower Triassic of the Hokanui section; and at the base, beds containing Glossopteris, which is a characteristic fossil of the New South Wales Coal Fields.