

Cretaceous Mollusca.

Mr. H. Woods, Demonstrator in Palæontology, Cambridge, having kindly volunteered to undertake the examination of the Cretaceous *Pelecypoda*, in addition to the ammonites and belemnites, the best specimens in these groups from the north-east part of the South Island have been sent to him. Two new ammonites and several belemnites were obtained during the year from Coverham, Clarence Valley, and were also forwarded, but were unfortunately involved in a fire on the s.s. "Turakina," and it is not yet certain whether they have been totally destroyed or not. As Mr. Woods did not expect to be able to commence the study of the specimens until March, and as the amount of material is large, considerable time must elapse before any results may be expected.

Professor Otto Wilckens, of Jena, has also kindly volunteered to examine the Cretaceous *Gasteropoda*, and the best specimens of this group have been forwarded to him. He also hoped to commence their study in the (European) spring.

Cretaceous and Tertiary Leaf Fossils.

A catalogue of the type specimens of these fossils was prepared by myself in the early part of the year, but as Professor P. Marshall, of Otago University, desired to revise the generic identifications, publication of it has been withheld for the present, and the greater part of the specimens in the Geological Survey collections have been forwarded to Professor Marshall.

Jurassic and Triassic Faunas.

The late Professor Georg Boehm, of Freiburg i Br., Germany, who has already written papers on Jurassic and Triassic fossils from New Zealand, had volunteered to undertake or to arrange for the examination of all the Jurassic and Triassic shells of the Geological Survey collections. The Jurassic fossils from the Hokanui Hills, first sent to him, proved to be so badly preserved and inconclusive of horizon that at his request a collection of ammonites from all horizons was despatched to him, but did not reach him before his death. Professor Boehm, from his travels in New Zealand, and his researches on the Jurassic of New Guinea and the Moluccas, was particularly well qualified to work out the New Zealand Jurassic, and by his death New Zealand palæontology has lost a keen and interested friend. It is hoped to arrange that the fossils sent to him will be transferred to other specialists on the Continent. Professor Boehm wrote as follows on the type of *Belemnites catlinensis* (Hector): "It belongs to the group *Hastati*; we in Europe would presume that it comes from the Kelloway."

Mesozoic Floras.

Mr. D. G. Lillie has supplemented the collections previously sent to Dr. A. E. Newell Arber, Demonstrator in Palæobotany, Cambridge, by fresh collections from the Clent Hills, Mataura, and Waikawa. It has been arranged that the descriptions of both of these collections, which form a part of the 1910 British Antarctic Expedition collections, and of those previously sent by the Geological Survey, will be embodied in the official report of the Expedition. Dr. Arber has already published a preliminary paper entitled "On the Earlier Mesozoic Floras of New Zealand" in the Proceedings of the Cambridge Philosophical Society (vol. 17, part 1 (1913), pp. 121-131), and has also read a paper before the Royal Society, on the 6th March, 1913, entitled "A Preliminary Note on the Fossil Plants of the Mount Potts Beds, New Zealand, collected by Mr. D. G. Lillie, Biologist to Captain Scott's Antarctic Expedition, in the 'Terra Nova,' in 1911." The most important results yet made known by Dr. Arber are that *Glossopteris* does not occur in the Mount Potts beds, and that consequently New Zealand did not form part of the great Southern Permo-Carboniferous Continent "Gondwanaland"; further, that the Mount Potts plant-beds are either Rhætic or Lower Jurassic in age, and that the other Mesozoic plant localities are of similar age.

Palæozoic Faunas.

Mr. W. S. Dun, Palæontologist to the Mines Department, Sydney, reports that considerable progress has been made with the examination of the fossils from the Baton River beds, but that pressure of other official work has prevented him from completing a memoir on the subject.

RESULTS OF FIELD-WORK.

A great number of detailed observations on the Cretaceous and Tertiary beds of East Marlborough and North Canterbury have been made, but an account of these must wait until the fossils collected have been determined. The following general observations, however, may now be put on record.

The Amuri Limestone of Marlborough.

In the Annual Report for 1912 I stated that "it cannot be asserted on palæontological grounds that any beds above the Saurian beds are of Cretaceous age." In making this statement I overlooked the fact that McKay had obtained a saurian from the Concretionary Greensand of Amuri Bluff, and that Hector and McKay had obtained belemnites, *Inoceramus*, &c., from a tuff in Limestone Creek, Awatere Valley, lying a few feet below the under-surface of the Amuri limestone. In Muddy Creek, a tributary of the Nidd, Middle Awatere Valley, Mr. C. A. Cotton and myself were successful in obtaining *Inoceramus* in the mudstones a few feet below the flint-beds of the Amuri limestone of this locality. There can be no doubt, therefore, that all the beds below the Amuri limestone are of Cretaceous age, and it is probable