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Micropalaeontological examination of samples from a bore at Lake Macdonnell, south-eastern S.A.

by

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MICROPALAEONTOLOGICAL EXAMINATION OF SAMPLES FROM A BORE AT LAKE MACDONNELL, SOUTHEASTERN SOUTH AUSTRALIA.

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The samples received for examination came from the depth of 26 feet down to 293 feet and consisted of greyish calcareous sandstones, yellowish sandstones, carbonaceous sandstones and basement rock. Fossils were few and poorly preserved.

The following stratigraphic sequence is suggested from the poor microfaunal evidence available:

Pleistocene - 26 feet down to 110 feet.
Lower Pliocene - 113 feet down to 149 feet.
? Miocene - 160 feet down to 236 feet.
? PreCambrian - 238 feet down to 293 feet.

Pleistocene.

The samples from 26 feet down to 110 feet are regarded as Pleistocene in age. They consist of calcareous sandstones, with a dark grey pyritized sandstone at 80-82 feet. A few poorly preserved foraminifera are present in all samples and include Recent shallow water species as Triloculina tricarinata, Peneroplis planatus, Sorites marginalis, Discorbis australis, Rotalia beccarii, Elphidium macellum and E. rotatum.

Lower Pliocene

It is suggested that the samples from 113 feet down to 149 feet are Lower Pliocene and represent the Adelaidean stage. The sediments consist of yellowish green, calcareous sandstones, the sample at 148-149 feet containing glauconitic replacement of fossils. Foraminifera are present but are very poorly preserved. Fragments of large tests of Marginopora vertebralis could be recognised, but fragments of bryozoa and molluscan shells are indeterminate.

? Miocene.

At 160 feet the bore passes into carbonaceous sandstones which continue down to 236 feet and which are tentatively referred to the Anglesean stage.

? PreCambrian

From 238 feet down to 293 feet, the samples consist of grains of clear and milky quartz, chlorite, chalcopyrite, and mica which possibly represent comminuted particles of bedrock.

No attempt is made to correlate beds in this bore with deposits elsewhere in southeastern South Australia because of the poor preservation of the fossils present.

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