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RECORDS.

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LOWER CRETACEOUS FOSSILS FROM PAPUA AND NEW
GUINEA.

by

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1. A Neocomian Holaster of the H. cordatus group from near Mullens Harbour, Papua.

No Mesozoic fossils have as yet been recorded from the area of the southern Owen Stanley Ranges in Papua. J. Thompson's find of this echinoid is therefore of considerable importance. The preservation of the specimen suggests that the rocks from which it was washed out are not metamorphosed. In other words, the southern Owen Stanley Ranges must have a mantle of Mesozoic rocks of similar age and type as those found farther north. Most of that mantle appears to have been eroded away, of course, but further field work should discover remnants of it. The Holaster described here was found "as a pebble in a feebly lateritized piedmont residual fanning from the southern foothills of the Owen Stanleys behind Mullens Harbour and partly inundated by Recent delta deposits of the latest subsidence" (Letter J. Thompson of 28th September, 1953, file No. 198 PNG/1.)

The Holaster specimen is well enough preserved to show the characteristics of the cordatus group of the genus. It is of small size (21 mm long, 20 mm wide, 16 mm high), globose, fairly steeply truncate posteriorly. The anterior sulcus is hardly noticeable. The periproct is rather large and subcircular. The most important feature for specific identification, however, is the type of pores and their arrangement in the ambulacral areas. In this case there is no doubt that the specimen before us is one of the early, i.e. primitive representants of the genus. The pores are round and set quite closely together; they show no chevron arrangement.

Since the appearance of oblong pores and their arrangement in chevrons is observed in Aptian (Middle Cretaceous) species of the H. cordatus group, (and well established in the contemporaneous H. intermedius group) but is absent from the Neocomian forms, I have no hesitation to suggest that in the Owen Stanleys there must be formations (probably limestone formations) of Neocomian (Lower Cretaceous) age.

2. Lamellibranchia from Wapenamanda, Western Highlands District, Territory of New Guinea (Letter W.J. Perry of 16th December, 1953, file 151 PNG/1).

Half a dozen specimens were found at a locality "near the Lai River about 40 feet above the present water level". The formation appears to consist of calcareous siltstone or mudstone.

Four of the six lamellibranchs are of the same species. They belong to the genus Inoceramus; the outline and the fine and closely set concentric ribbing is reminiscent of the concentricus group of the genus. However, the specimens may not show the real exterior surface of the shell. Moreover, details of the hinge area cannot be seen.

In addition to the Inocerami there is a poorly preserved cast of a Panopaea and another of what may be a Macrocallista.

If the Inocerami really belong to the group of I. concentricus Parkinson the age of the respective formation is either Middle Cretaceous or early Upper Cretaceous (Albian or Cenomanian). Conclusive evidence may be obtained by more careful collecting at this locality. It seems quite likely that this formation contains a good fossil fauna. It may be good to advise the Patrol Officer at Wapenamanda to search for Ammonoidea.