

A NEW GEOLOGICAL DEPARTMENT

SIR,—A department of geology is being established at this University College, and the geological section of the library needs strengthening. One of the best ways of doing this would be the establishment of a “separate collection”. Would authors and readers of this Magazine be prepared to help by sending separates of their own papers, and including any other separates for which they have no further use? Any such help would be gratefully received.

GEOFFREY BOND.

DEPARTMENT OF GEOLOGY,
UNIVERSITY COLLEGE, HULL.
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REVIEWS

TWO PROBLEMS OF MARINE GEOLOGY: ATOLLS AND CANYONS. By PH. H. KUENEN. 4 plates and 28 text-figures. Kon. Ned. Akad. Wet., Verh. (Tweede Sectie) Dl. XLIII, No. 3, pp. 1–69. 1947.

Here are two independent papers, combined only by a joint title, table of contents, and juxtaposition in the same journal. The two approaches are similar in giving a general classified review of the various evidence and arguments put forward to account for atolls and submarine canyons. Both problems involve the consideration of Pleistocene changes of sea level.

“The borings on Maratoca Atoll and the coral reef theory of glacially controlled subsidence” is the subtitle of the first paper. After a description of Maratoca (E. of Borneo), the hypotheses of atoll formation without relative movement of sea level are discussed and rejected. The arguments for and against the subsidence theory (Darwin) and the glacial control theory (Daly) are enumerated and discussed. Two well logs, detailed in an appendix, show coral limestone to a depth of 500 m. below the raised rim of the atoll of Maratoca. Seismic data from Bikini (1947) are supposed to show coral formation to a horizontal boundary 600 m. below sea level. These are just two more recent and more powerful arguments for subsidence. The case for glacial eustatic control is also convincing in accounting for the present form of atolls, particularly the constant depth of the lagoons and passes. Emphasis is placed on marine corrosion of reefs by a lowered glacial sea level. Both glacial control and subsidence are shown to be necessary, compatible, and complementary; the eustatic change superimposed and standardizing structures due to larger and longer differential movements of the crust. It is surprising, however,