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MICROPALAEONTOLOGICAL REPORT ON ROCK SAMPLES FROM PORTUGUESE TIMOR

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Six rock samples from Portuguese Timor were received from Timor Oil Limited, Sydney, for micropalaeontological examination and age determination. Five of the samples were fossiliferous, the foraminifera indicating Eocene and Pliocene ages. Notes on the field relationships were given by the company's field geologist, Ian B. Freytag.

The problem of the age of the allochthonous ophiolites of the "Fatu Complex" of Timor has been discussed by many geologists, the age being from Permian to Mesozoic. Freytag recently found a coarse tuffaceous breccia which he considered to be near the base of the ophiolites; this breccia contained limestone boulders (659-3, 659-4). The foraminifera in those limestones indicated a Middle to Upper Eocene age.

A sample of the so-called Bibileu block clay (659-6), which underlies the Viqueque Formation, which is apparently Middle Miocene in age (I.B.F.), contains a rich assemblage of small Middle Eocene foraminifera.

Two samples (659-1, 659-2) from the boulder beds lying between the Viqueque Formation and the Plio-Pleistocene limestone, are Pliocene in age.

The sample of ? tuffaceous rock from the ophiolites (659-5) was unfossiliferous.

Detailed examination of fossiliferous samples.

Sample No.659-1 (Field No.F4294A), three miles south-west of Dilor Village (Mota Luca).

Field identification - Mud lens in ? Pliocene boulder beds.

The residues after washing contained small foraminifera including many tests of planktonic species.

Amphistegina lessonii
Bulimina marginata
Bulimina ovata
Bulimina striata
Cassidulina pacifica
Ceratobulimina pacifica
Eponides praecinctus
Elphidium macellum
Globigerina subcretacea
Globigerinoides rubra
Globigerinoides trilobus
Globorotalia menardii
Globorotalia sp.
Orbulina universa
Planorbulinella larvata
Rotalia schroeteriana
Uvigerina hispida

This assemblage of species is characteristic of the Pliocene deposits throughout the Indo-Pacific region.

Sample 659-2 (Field No.4287A. Mota La Mare

Field identification - Gritty sand lens in boulder beds.

The residue contained some foraminifera, radiolaria and ostracoda, all tests poorly preserved.

Radiolaria;

Cenosphaera sp.
Carposphaera sp.

Foraminifera:

Ammodiscus sp.
Cyclammina sp.
Globorotalia menardi
Glomospira aff. charoides
Pullenia sp.
Rectoglandulina comata
Operculina sp.

Ostracoda:

Indeterminate.

The age of this rock is Pliocene.

Sample 659-3 (Field No.4283B). Mota Cena (Barique)

Field identification - Limestone boulder in tuffaceous breccia of "ophiolites".

A thin section of this limestone showed a few tests of larger foraminifera and many of small forms.

The larger foraminifera included:

Alveolina cf. timorense
Discocyclina spp. (small tests)
Nummulites pengaronensis
Nummulites sp.
Operculina aff. canalifera

This rock is regarded as Middle to Upper Eocene in age, and equivalent of the "a-b" stage of Indo-Pacific Tertiary stratigraphy.

Sample 659-4 (Field No.4283B). Mota Cena (Barique)

Field identification - Limestone boulder in tuffaceous breccia of "ophiolites".

Thin sections of this rock revealed the presence of abundant tests of larger foraminifera.

Asterocyclina cf.aster
Discocyclina dispansa
Discocyclina douvillei
Discocyclina pratti
Discocyclina papyracea
Nummulites bagelensis
Nummulites pengaronensis

This rock is Middle to Upper Eocene in age and equivalent of the "a-b" stage of Indo-Pacific Tertiary stratigraphy.

Sample 659-6. Half a mile North of Fatu Lulic, on roadside, Viqueque - Beaco Road.

Field identification - "Matrix of true block clay.

The finest residue contained abundant small foraminifera, chiefly crushed or broken.

Angulogerina subangularis
Bolivinopsis sp.
Cibicides umbonifer
Globorotalia cf. spinulosa (common)
Globorotalia sp. (common)
Globigerina spp.
Hantkenina sp. (fragment)

This sample is referred to the Middle Eocene. Numerous specimens of Globorotalia are present and the majority of them closely resemble G.spinulosa but because of the preservation no precise determination could be made. G.spinulosa is not known stratigraphically higher than the Middle Eocene. The genus Hantkenina does not occur below the Middle Eocene. Angulogerina subangularis and Cibicides umbonifer are typical species of the Australian Eocene deposits.