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MICROPALAEONTOLOGY OF SPECIMENS FROM THE
SALT LAKE ANTICLINES, CARNARVON BASIN,
WESTERN AUSTRALIA

By

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Eight rock samples were received from the West Australian Petroleum Pty. Ltd. for micropalaeontological examination. They came from the Warroora, Gerardi, Chirrida and Yankie Tank Anticlines in the Carnarvon Basin. The sample from the Warroora and Gerardi Anticlines are referable to the Cashin-Pirie Calcareenites; the sample for the Chirrida Anticline is referred to the Giralia Calcareenite and that from the Yankie Tank Anticline to the Trealla limestone.

Warroora Anticline

W.11 187 feet above top of Boongerooda Greensand

Hard cream, bryozoal crystalline limestone with small indeterminate foraminifera and bryozoa infilled with brownish-green glauconite. The foraminifera include *Miliolidae*, *Globigerinidae* and *Rotalidae*. (Registered No. MF.3139).

W.9 118 feet above top of Boongerooda Greensand.

Hard cream bryozoal crystalline limestone with foraminifera and bryozoa infilled with brownish-green glauconite. Foraminifera are difficult to determine (Registered No. MF.3140).

W.5 67 feet above top of Boongerooda Greensand

Hard, cream bryozoal, crystalline limestone with foraminifera and bryozoa infilled with brownish-green glauconite. The foraminifera include *Globigerina* cf. *triloculinoides*, cf. *Guembelina*, and indeterminate rotalines. Cidaroid spines and ostracoda are also present. Numerous rounded bodies probably eolitic in origin are scattered throughout the thin section of the rock. (Registered No. MF.8141).

Samples W.11 and W.9 and W.5. are of the rock types of the Cashin and Pirie Calcareenites. The hardness of the rock prevents specific determination of the small foraminifera and in many cases the tests are infilled with glauconite. The age of these samples is Lower Tertiary and most probably Palaeocene.

W.12 10 feet above top of Boongerooda Greensand

Moderately hard, cream to yellowish bryozoal calcarenite with some glauconite. Foraminifera are fairly common in the washings but are frequently encrusted and not well preserved. The following forms were determined:

- Bulimina* cf. *aspero-aculeata* Bretzen
- Globigerina* *triloculinoides* Plummer
- Globoretalia* sp.
- Lagena* *hexagona* Williamson
- Lenticulina* sp.
- Rebulus* sp.
- Vaginulinopsis* sp.
- Valvulineral* sp. 1
- Verneuilina* sp. nov.

Sample W.12 (Registered No. MF.3142) is regarded as part of the Wadera Calcarenite. The foraminiferal assemblage is typical of that found in sediments in that formation. Valvulineria sp. 1 and Vernenilina sp. nov. are characteristic species in the Wadera assemblages. The age of the rock is considered to be Palaeocene.

Gerardi Anticline

G.1 10 feet below base of Trealla Limestone

Hard, pink to cream bryozoal limestone with ovoid pellets of brownish-green glauconite and glauconitic replacement and infilling of foraminifera and bryozoa. (Registered No. MF.3143).

This rock is the equivalent of the beds comprising the Cashin-Pirie Calcarenites and is probably Palaeocene in age.

Chirrida Anticline

CHIR.3 10 feet below base of Trealla Limestone.

Hard brownish limestone with brownish-green glauconitic replacement and infillings of foraminifera, bryozoa, and cidaroid plates and spines. (Registered No. MF.3144).

The foraminifera include:

Discoevolina spp.
Globigerina sp.
Operculina sp.
Vaginulinopsis sp.

This limestone is referred to the lower part of the Giralia Calcarenite (Condon, 1954). The foraminifera are not well enough preserved for specific determination. The limestone is middle to upper Eocene in age.

Yankie Tank Anticline

YT.1

Pinkish brown, sandy limestone with numerous angular to rounded quartz grains and foraminifera. (Registered No. MF.3145). The foraminifera include:

Austrotrillina howchini (Schl.)
Elphidium sp.
Floresulinella sp.
Markinopora vertebralis Q. & G.
Rotalia sp. (large)
Numerous large miliolidae

The foraminiferal assemblage is characteristic of that found in beds of the basal Trealla Limestone and is equivalent of "f₁-7f₂" stage.