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FOSSILIFEROUS ROCKS FROM THE CAPE RANGE STRUCTURE WESTERN AUSTRALIA

by

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Records No. 1955/77.

Nine rock samples numbered CRP. 9-12, 14-18 from the southern part of the Cape Range Structure were submitted for palaeontological examination by West Australian Petroleum Pty. Ltd. It was not possible to determine the macrofossils in some of the limestones because of poor preservation but the majority of the thin sections prepared contained a microfauna. A detailed description of the samples is given below.

CRP. 9 (MF.3638) - Hard, pinkish to cream, slightly cavernous crystalline limestone. A thin section showed the rock to consist almost entirely of rhombs of calcite and it was impossible to determine the few organisms present.

This rock is identical with a specimen previously examined from near the mouth of Yardie Creek which was considered to be part of the Tulki Limestone.

CRP.10 (MF.3639) - Hard cream calcareous sandstone with no fossils visible in thin section.

This rock with its apparent absence of fossils may belong to the Flaming Formation.

CRP.11 (MF.3640) - Hard reddish, sandy limestone with veins of travertinous material. A thin section showed numerous angular quartz grains, calcareous algae, foraminifera and fragments of bryozoa.

Foraminifera:
- Anomalina sp.
- Cibicides sp.
- Elphidium sp.
- Lepidocyclina sp. (fragment)
- Orbulina universa
- Planorbulina sp.
- Rotorbinella sp.

This rock belongs to the Pilgrammuna Formation. It contains a foraminiferal assemblage such as is found in the lower Trealla.

CRP.12 (MF. 3641) - Hard, cream, calcareous sandstone with calcareous algae and a few foraminifera seen in thin sections.

Foraminifera:
- cf. Calcarina
- Elphidium sp.
- Lepidocyclina sp. (fragments)
- Small rotalines
- Textularia sp.

This calcareous sandstone is typical of the Pilgrammuna Formation.

CRP.14 - Grey quartzite with casts of indeterminate mollusca.

This rock has not been met with in previous work in the area. It is most probably part of the Pilgrammuna Formation.

CRP.15 (MF.3642) - Hard, dense sandy limestone with casts of indeterminate molluscs. Thin sections of the rock contain calcareous algae, foraminifera and cidaroid spines.

Foraminifera: Acervulina inhaerens
Elphidium sp.
Marginopora cf. vertebralis
Sorites sp.
Numerous small miliolidae

This rock is included in the Pilgramunna Formation. An identical rock was previously examined from near Tulki Well, Yardie Creek Station.

CRP.16 (MF.3643) - Whitish crystalline limestone with a few casts of molluscan shells. In thin section the rock contains calcareous algae and foraminifera.

Marginopora cf. vertebralis (common)
Sorites sp.
Triloculina tricarinata.
Numerous small miliolidae

This rock is a typical example of the upper part of the Trealla Formation in which Marginopora and miliolidae are very common.

CRP.17 (MF. 3644) - Hard, cream crystalline limestone with foraminifera and bryozoa seen in thin section.

Foraminifera: Gypsina globulus
Gypsina howchini
Lepidocyclina spp.
Marginopora cf. vertebralis
Triloculina tricarinata

The foraminiferal assemblage in this limestone indicates that it belongs to the lower part of the Trealla Formation.

CRP.18 (MF. 3645) - Hard, dense crystalline limestone with veins of calcite. Thin sections contain calcareous algae (large fronds of Halimeda) and small foraminifera chiefly indeterminate.

Foraminifera: Acervulina inhaerens
Carpenteria sp.
Lepidocyclina sp. (fragment)

This rock is characteristic of the limestone found in the lower part of the Trealla Formation.