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GEOLOGY AND GEOPHYSICS

RECORDS:

1950/4



MICROPALAEONTOLOGICAL EXAMINATION OF ROCK SAMPLES
FROM THE LOWER MINILYA AREA, NORTH WEST BASIN, WESTERN
AUSTRALIA, COLLECTED BY DR. TEICHERT & G. THOMAS 1949.

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by

I. CRESPIN.

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MICROPALAEONTOLOGICAL EXAMINATION OF ROCK SAMPLES FROM

THE LOWER MINILYA AREA, NORTH-WEST BASIN,

WESTERN AUSTRALIA, COLLECTED BY

DR. TEICHERT AND G. THOMAS 1949

Record No. 4.

No. 83. Anticline west of Minilya Homestead

Hard, cream, foraminiferal limestone.

Foraminifera:

Ammobaculites sp.
Austrotrillina howchini
Flosculinella bontangensis
Marginopora vertebralis
Planorbulina mediterraneensis
Sorites marginalis
Numerous miliolidae

No. 85. Anticline on East side of Salt Lake, West of Minilya Homestead.

Hard, cream, foraminiferal limestone, with foraminifera not so well preserved as in No. 83.

Foraminifera:

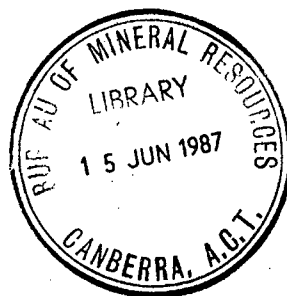
Austrotrillina howchini
Clavulina difformis
Elphidium cf. adelaidensis
Flosculinella bontangensis
Peneroplis planatus
Sorites marginalis
Valvulina fusca
Numerous miliolidae

No. 87. Neemeradbadoo Bore, Miniba Station.

(a) Limonitic grit with numerous foraminifera (Globigerina and Globotruncana very common).

Foraminifera:

Allomorphina sp. nov. (cf. velascoensis)
Ammodiscus cretaceus
Anomalina rubiginosa
Anomalina sp. nov.
Arenobulimina obesa
Arenobulimina obesa
Bolivinosia clotho (Form A and B)
Bulimina proluxa
Dorothia bulletta
Dorothia cf. conula
Dentalina basiplanata
Dentalina catenula
Dentalina cf. gracilis
Dentalina Lorneiana
Dentalina cf. megapolitana
Dentalina cf. solvata
Eponides sp. nov.
Fronidicularia goldfussi
Fronidicularia mucronata



Frondicularia verneuiliana
Frondicularia sp. nov.
Frondicularia sp.
Globigerina cretacea
Globigerinella voluta
Globotruncana canaliculata
Globotruncana marginata
Glomospira charoides var. corona
Guembelina globulosa
Guttulina paalzowi
Gyroidina girardana
Gyroidina nitida
Haplophragmoides cf. glabra
Haplophragmoides sp.
Lagena apiculata
Lagena aspera
Lagena hispida
Lenticulina discrepans
Lenticulina diademata
Lenticulina munsteri
Lenticulina macrodiscus
Lenticulina stephensoni
Lenticulina subalata
Lenticulina williamsoni
Lenticulina spp.
Marginulina cretacea
Marginulina cf. jarvisi
Marginulina cf. texasensis
Marginulina sp.
Marssonella oxycona
Nodosaria affinis
Nodosaria aspera
Nodosaria cf. longiscata
Parrella sp. nov.
Palmula rugosa
Planulina cf. taylorensis
Planularia sp. nov.
Pseudoglandulina manifesta
Saracenaria italica
Saracenaria cf. saratogana
Saracenaria triangularis
Stensioiana sp. nov.
Spiroplectammia dentata
Spiroplectammia sp.
Vaginulina suturalis
Verneuilina parri

- (b) Dark grey siltstone with fragments of carbonaceous material gypsum, foraminifera and radiolaria.

Foraminifera:

Anomalina rubiginosa
Anomalina sp.
Bolivinopsis clotho
Bolivinopsis sp.
Dentalina cf. lorneiana
Dorothia sp.
Epistomina sp.
Eponides sp.
Gaudryina cf. painoides
Globigerina cretacea
Globigerina voluta

Globigerina sp.
Globotruncana canaliculata
Globotruncana cretacea
Globorotalia sp.
Gyroldina girardana
Guembelina globulosa
Haplophragmoides sp. nov.
Haplophragmoides sp.
Lenticulina cf. alexanderi
Lenticulina articulata
Lenticulina oligostegia
Lenticulina secans
Lenticulina stephensoni
Lenticulina cf. rotulata
Lenticulina williamsoni
Lenticulina sp.
Marssonella oxycona
Parrella sp. nov.
Planularia cretacea
Planulina sp. nov.
Spiroplectammina cushmani
Stensioina sp. nov.
Verneuilina parri

Radiolaria:

Astrophacus sp.
Cenosphaera sp. 1
Cenosphaera sp. 2 (cf. C. immanis)
Dictyomitra australis
Dictyomitra multi costata
Dictyomitra triangularis
Lithocampe fusiformis
Porodiscus sp.
Spongodiscus cf. expansus
Spongoprimum sp.
Apongotripus (Spongotripodum) sp.
Stylosphaera sp.
Stylotrochus sp.
Theocapsa (Theocapsomma) sp.

- (c) Friable sandstone with abundant foraminifera (Globigerinidae rare) and Inoceramus prisms.

Foraminifera:

Ammodiscus cretaceus
Anomalina rubiginosa
Anomalina sp. nov.
Arenobulimina preslei
Bolivinaopsis clotho
Dentalina sp.
Dorothia cf. bulletta
Ellipsoglandulina sp. nov.
Eponides sp. nov.
Frondicularia cf. cordata
Frondicularia franki
Frondicularia verneuilina
Frondicularia sp.
Gaudryina laevigata
Globorotalia micheliniana
Globotruncana canaliculata
Globotruncana marginata
Gyroldina girardana
Lagena apiculata
Lagena aspera
Lenticulina diademata
Lenticulina macrodiscus

Lenticulina cf. pondi
Lenticulina stephensoni
Lenticulina subalata
Lenticulina williamsoni
Lenticulina sp. nov. 1.
Lenticulina sp. nov. 2
Marginulina cf. cretacea
Marginulina cf. jarvisi
Marginulina cf. texasensis
Marssonella cf. indentata
Marssonella oxycona
Palmula rugosa
Parrella sp. nov. 1.
Parrella sp. nov. 2.
Planularia sp. nov.
Planulina sp. nov.
Saracenaria italica
Spiroplectammina laevis var. cretosa
Vaginulina suturalis
Verneuillina parri
Verneuillina triquetra

- No. 88. Approximately 1 mile W.S.W. of Neemerabadoo Bore
Cream, chalky limestone with small foraminifera.

Foraminifera:

Sorites marginalis
Numerous small miliolidae

- No. 89. Approximately 7/8 mile south of Neemerabadoo Bore
Shale with abundant gypsum and a few foraminifera.

Foraminifera:

Ammodiscus cretaceus
Dorothia bulletta

- No. 90. 1 mile south of Neemerabadoo Bore
Cream limestone with foraminifera and bryozoa

Foraminifera:

Discorbis cycloclypeus
Marginopora vertebralis
Sorites marginalis

- No. 91 1 1/8 mile south of Neemerabadoo Bore
Cream, foraminifera limestone.

Plantae:

Lithothamnium ramosissimum

Foraminifera:

Austrotrillina howchini
Flosculinella bontangensis
Marginopora vertebralis
Planorbulina mediterraneensis
Sorites marginalis
Valuylina davidiana
Numerous miliolidae

No. 95. East Limb of Anticline, 3/4 mile E. of Neemerabadoo Bore.

Cream, foraminiferal limestone, with fragments of molluscan shells.

Plantae:

Lithothamnium ramosissimum

Foraminifera:

Flosculinella bontangensis

Marginopora vertebralis

Planorbulina mediterraneensis

Sorites marginalis

Numerous miliolidae

Stratigraphic Notes

The samples from the Lower Minilya River area, North-West Basin, consist of limestones, gypseous shale, limonitic grit and friable siltstone. The ages represented are Upper Middle Miocene Upper Cretaceous and Lower Cretaceous.

Upper Middle Miocene

Nos. 83, 85, 88, 91 and 95 all of which are limestones, are referred to this age. Typical zonal forms such as Austrotrillina howchini and Flosculinella bontangensis are present in many of the samples. Neither of these forms were found in No. 88, which is a chalky limestone but the general lithology and assemblage of smaller foraminiferal forms suggest that it should be included in this group. The lithology shown in thin section and foraminiferal content of these limestones, is widespread in the Northwest Basin.

Cretaceous

Samples 87 and 89 are Cretaceous in age.

No. 87 is represented by three samples, from the Neemerabadoo Bore. No. 89 was taken from an outcrop near the latter bore.

The three samples from the Neemerabadoo Bore, which is about 1,000 feet deep, are of different lithology. Samples (a) and (c) which are regarded as representing the upper part of the bore section, consist of limonitic grit and friable sandstone respectively and contain numerous well preserved foraminifera of Upper Cretaceous age and in which Globotruncana canaliculata is common. A detailed study of the Upper Cretaceous microfaunas of the North-West Basin is now in progress but at present this assemblage from the Neemerabadoo Bore with the abundance of Globotruncana and the absence of certain species found in other samples in the area, suggest its correlation with Condon's samples Nos. 30 and 31 from the West Limb of the Giralia Anticline, North of Remarkable Hill (reported on 18.1.50).

The lower sample (b) is regarded as Lower Cretaceous in age. It is represented by a dark, grey siltstone in which numerous well preserved radiolaria are present as well as a few tests of Lower Cretaceous foraminifera. Also associated are some species of Upper Cretaceous foraminifera, but this is not unexpected as the samples were collected from the surface near the bore head.

This radiolaria-bearing siltstone was found in outcrop by Dr. Fisher (reported on 21/6/49) on the East bank of a tributary of Cardabia Creek, 2 miles E.S.E. of "Photo Butte". Condon also found it in outcrop on the west limb of the Giralia Anticline, North of Remarkable Hill.

No. 89 is a gypseous shale containing two species of foraminifera both of which occur in the Upper Cretaceous sample from the Neemerabadoo Bore.

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Canberra. A.C.T.

17th February, 1950.