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RECORDS.

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MIOCENE FORAMINIFERA FROM THE WIRA ANTICLINE,
PURI-PURARI RIVER AREA, PAPUA

by

D. J. Belford

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Twenty-one samples from the Wira Anticline, Puripurari River area, Papua, were forwarded for micropalaeontological determination by Mines Administration Pty. Ltd. Eleven samples were collected from a 300 ft. section on the north-western flank and four from a 200 ft. section on the south-eastern flank. The position of sample 1 is uncertain but it is thought to be from a horizon equivalent to the top of the section on the north-western flank. Sample 24 is from "Puri limestone" on U Creek. Four other samples - 2, 13, 16 and 22 - were received but are not included on the list of samples forwarded.

Results of the examination are as follows:

North-western flank

Samples 10, 11 and 12

Foraminifera: Orbulina universa
Biorbulina bilobata
Globorotalia menardii
Globigerinoides trilobus
G. sacculiferus
Globigerinella aequilateralis
Globoquadrina altispira
Sphaeroidinella dehiscens
Bolivina alata
B. sp.
Siphonodosaria scalaris
Gyroidinoides soldanii
Anomalina balthica
Rotalia beccarii
Bolivinita quadrilatera
Virgulina schreibersiana
Astrononion sp.
Robulus spp.

Samples 14 and 15

Foraminifera: Orbulina universa
Globorotalia menardii
Globigerinoides trilobus

Globigerinella aequilateralis
Bolivina spp. (abundant)
Bolivinita quadrilatera
Anomalina balthica
Astrononion sp.
Gyroidinoides soldanii
Rotalia beccarii
R. schroeteriana
R. conoides
Indeterminate arenaceous forms.

Sample 3

Foraminifera: Orbulina universa
Globorotalia menardii
Globigerinoides trilobus
G. sacculiferus
Bolivina sp.
Rotalia beccarii
R. schroeteriana
R. conoides
Virgulina schreibersiana
Nonion scapha
Astrononion sp.
Loxostomum sp.

Sample 4

Foraminifera: Orbulina universa
Biorbulina bilobata
Globorotalia menardii
Globigerinoides trilobus
G. sacculiferus
Globigerinella aequilateralis
Sphaeroidinella dehiscens
Globoquadrina altispira
Pulleniatina obliquiloculata
Sphaeroidina bulloides
Virgulina schreibersiana
Siphogrerina indica
Siphonodosaria insecta
Bolivina spp. (abundant large specimens)
B. alata
Loxostomum karrerianum
Nonion scapha
Cassidulina subglobosa
Astrononion sp.

Sample 5

Foraminifera: Orbulina universa
Globorotalia menardii
Globigerinoides trilobus
Globigerina subcretacea
G. bulloides
Globigerinella aequilateralis
Bulimina marginata
Rotalia beccarii
Virgulina schreibersiana
Nonion scapha
Bolivina spp. (abundant large specimens)
Gyroidinoides soldanii
Rotalia schroeteriana
R. conoides

Sample 6

Foraminifera: Globorotalia menardii
Globigerinoides trilobus
Globigerina sp.
Nonion scapha
Rotalia beccarii
R. conoides
Gyroidinoides soldanii
Virgulina schreibersiana
Cassidulina sp.

Sample 7

This sample was examined in thin section and contained only small Globigerinidae and other indeterminate smaller foraminifera.

Sample 8

Foraminifera: Orbulina universa
Globorotalia menardii
Globigerinoides trilobus } Small
G. sacculiferus } specimens
Globigerina subcretacea } common.
Globoquadrina altispira
Rotalia beccarii
R. conoides
Loxostomum sp.
Uvigerina peregrina
Robulus sp.

These samples are regarded as Upper Miocene in age.

South-eastern flank:

Sample 17

Foraminifera: Orbulina universa
Biorbulina bilobata
Globorotalia menardii
Globigerinoides trilobus
G. sacculiferus
Globoquadrina altispira
Sphaeroidinella dehiscens
Globigerinella aequilateralis
Globigerina subcretacea
Anomalina balthica
Bolivina spp.
Siphonodosaria scalaris

Sample 18

Foraminifera: Orbulina universa
Biorbulina bilobata
Globorotalia menardii
G. scitula
Globigerinoides trilobus
Globigerinella aequilateralis
Globoquadrina altispira
Sphaeroidinella dehiscens
Virgulina schreibersiana
Siphonodosaria lepidula
S. insecta
Siphogenerina raphanus
Bolivina spp.
Trifarina bradyi
Nonion scapha
Valvulineria sp.
Cassidulina cf. laevigata
Anomalina balthica
Sphaeroidina bulloides
Frondicularia sp.

Sample 19

Foraminifera: Orbulina universa
Biorbulina bilobata
Globorotalia menardii
Globigerinoides trilobus
Globigerina subcretacea
Globoquadrina altispira
Sphaeroidinella dehiscens
Pulleniatina obliquiloculata

Sphaeroidina bulloides
Bolivina spp.
Globobulimina pacifica
Virgulina schreibersiana
Bolivinita quadrilatera
Siphonodosaria lepidula
Cibicides pseudoungerianus
Cassidulina cf. laevigata
Cyclammina sp.

Sample 20

Foraminifera: Orbulina universa
Globorotalia menardii
Globigerinoides trilobus
G. sacculiferus
Sphaeroidinella dehiscens
Gumbelina sp.
Nonion scapha } Abundant
Bolivinita quadrilatera }
Valvulineria sp.
Bolivina sp.
Siphonodosaria insecta
Cyclammina sp.

These four samples are also regarded as Upper Miocene in age.

Sample 1

No microfossils were observed in this sample; the only fossils found are fragments of gastropoda and other mollusca. This sample may be from the lower part of the "Era arenaceous group", where bands with abundant mollusca are known to occur.

Sample 24

This fine grained limestone containing abundant planktonic foraminifera is a sample of the "Puri limestone", which is of Lower Miocene ("f1-f2" stage) age.

Three samples - 2, 13 and 16 - for which no locality is given, have a fauna similar to that occurring in the samples from the Wira Anticline, and are also regarded as Upper Miocene in age. No microfossils were observed in the fourth sample - 22 - and there is no indication of its age.

The section on the north-western flank has been compared with the Puri-Pite standard section and the section penetrated in Wana No. 1 Well (Australasian Petroleum Co. reports LD and KWA). A correlation is made with the upper part of the "Toa mudstones" of the Puri-Pite and Wana sections, and because of the abundant occurrence of large specimens of certain species of Bolivina, with the Bolivina subzone. The distribution of species in the present section is not as restricted as that shown in the distribution chart of species in the Puri-Pite section. One example is the species Loxostomum karrerianum, which in the Puri-Pite section is restricted to the Loxostomum subzone. This subzone was also recognized in the Wana Well; in this case, however, the limits of the subzone were defined by the abundant occurrences of this species, as it occurred rarely for some distance below the subzone. Another example is the species Rotalia schroeteriana, which is also restricted in the Puri-Pite section and gives its name to a subzone. In the Wana Well, R. schroeteriana first appeared in the upper part of the Bolivina subzone. The most important feature of the present samples is the abundant occurrence of large specimens of Bolivina. The small Globigerinidae in samples 7 and 8 suggest that the section may extend above the Bolivina subzone, but again the distribution of these forms is not as restricted as that indicated for the Puri-Pite section.

It is difficult to refer the 4 samples from the south-eastern flank to any of the zones recognized in the Puri-Pite section or the Wana well. They may be from a lower horizon than the samples from the north-western flank, and be equivalent at least in part to the Bolivinita quadrilatera subzone of the Wana well. B. quadrilatera does not occur above this subzone in the Wana well, and is more common in the lower part of the "Toa mudstones" in the Puri-Pite section. The species Nonion scapha which is long ranging in the Wana well is recorded as frequent in the B. quadrilatera subzone; in the Puri-Pite section it is recorded only from the lower part of the "Era arenaceous group" of Pliocene age. Species of Bolivina are not abundant in these samples.

REFERENCES

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