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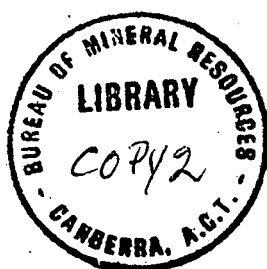
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MICROPALAEONTOLOGICAL EXAMINATION OF ROCK
SAMPLES FROM THE CAPE VOGEL AREA, PAPUA.

I. Crespin and D.J. Belford.

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Micropalaeontological Examination of Rock

Samples from the Cape Vogel Area,
Papua.

by I. Crespín and D.J. Belford.

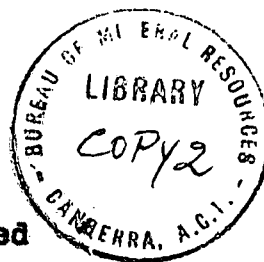
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One hundred and seven rock specimens from the Cape Vogel area, Papua were submitted by J.E. Thompson for micropalaeontological examination. This collection consisted of siltstones, tuffaceous sandstones and limestones. Of these, sixty-two were unfossiliferous and in this report only those which were fossiliferous are described in detail. The majority of specimens were siltstones and tuffaceous sandstones, few of which contained good faunal assemblages. It has, therefore, not been possible to say definitely whether some of them are Pliocene ("h" stage) or Upper Miocene ("g" stage) in age. More definite age could be determined from the assemblage of larger foraminifera found in the few limestones. The places where the samples were taken are shown in the accompanying locality map.

A detailed description of the fossiliferous samples is as follows:

- K.1
(MF.3531) - Ochreous sandstone with abundant tests of Operculinella venosa.
- Foraminifera: Alveolinella sp.
Operculinella venosa (F. & M.)
Rotalia sp.
- LB.4
(MF.3533) - Hard, coral limestone with abundant calcareous algae including Halimeda sp. and foraminifera.
- Foraminifera: Amphistegina sp.
Carpenteria sp.
Elphidium sp.
Lepidocyclina sp.
Miliolidae indeterminate
- LB.34
(MF.3536) - Fawnish siltstone with a few poorly preserved foraminifera ("Rotalia beccarii").
- LB.44
(MF.3537) - Fawnish tuffaceous sandstone with a few poorly preserved foraminifera ("Quinqueloculina sp.).
- LB.52
(MF.3538) - Fawnish siltstone with foraminifera rare (Rotalia conoides d'Orb.).
- LB.55 - Grey tuffaceous sandstone with casts of brackish-water mollusca (cf. Coxiella sp. and Bythinella sp.).
- LB.62 - Chocolate brown siltstone with indeterminate brackish-water mollusca.
- LB.63
(MF.3539) - Chocolate brown siltstone with indeterminate brackish-water mollusca and ? fish remains.
- LB.74
(MF.3541) - Hard, fawnish tuffaceous sandstone with foraminifera chiefly as siliceous casts and indeterminate ostracoda.
- Anomalina sp.
Guttulina regina (Brady, Parker & Jones)
Sphaeroidina bulloides d'Orb.
Spiroloculina canaliculata d'Orb.
- LB.79
(MF.3542) - Hard black to brown, banded chert with small foraminifera and indeterminate ostracoda.
- Globigerinella sequilateralis (Brady)
Globigerina sp.
Orbulina universa d'Orb.



- LB.83 - Fawnish fossiliferous siltstone with brackish-water mollusca (Melania herklotsi, Melania sp.) and fish scales.
- LB.90 - Fawnish shelly siltstone with brackish-water mollusca (Melania spp.) and fish scales.
- LB.96 - Fawnish siltstone with fragments of carbonaceous material and indeterminate brackish-water mollusca.
- LB.97 - Cream to fawnish siltstone with minute foraminifera (MF.3543) and indeterminate molluscan fragments.

Bolivina dilatata Reuss
Bolivina robusta Brady
Cibicides ungerianus (d'Orb.)
Alabamina tuberculata (B. & W.) var. acuta
Sidebottom.
Eponides sp.

- LB.98 - Ochreous tuffaceous sandstone with a few siliceous (MF.3544) replacements of foraminifera. (Globigerina sp., Orbulina universa d'Orb.)
- LB.100 - Pale grey siltstone with cidaroid spines and a few shell fragments.
- LB.101 - Greyish siltstone with fragments of indeterminate molluscan shells.
- LB.102 - Cream siltstone with small foraminifera, (Globigerinoides (M.F.3545) trilobus (d'Orb.) Rotalia schroeteriana Parker & Jones) and casts of mollusca (Lucina cf. simplex Martin.)
- LB.109 - Reddish limestone with calcareous algae including Halimeda sp. and large and small foraminifera.

Cycloclypeus cf. indopacificus Tan
Katacycloclypeus sp.
Lepidocyclina cf. dehiscens Scheffen
Lepidocyclina cf. hotzi Rutten
Miocypsinia polymorpha Rutten (c)
Miocypsinia excentrica Tan
Miocypsinia cf. kotoi Tan
Numerous small Globigerinae
Orbulina universa d'Orb.

- LB.113 - Black to brown carbonaceous siltstone with indeterminate mollusca and fish remains.
- LB.114 - Hard, cream, shelly limestone with brackish (MF.3547) water mollusca (Coxiella sp.)
- LB.115 - Fawnish siltstone with foraminifera. (MF.3548)

Bolivina dilatata Reuss
Eponides preaecinctus (Karrer)
Guttulina problema d'Orb.

- LB.120 - Grey siltstone with numerous small thin shelled mollusca, indeterminate.
- LB.121 - Greenish grey siltstone with a few indeterminate mollusca and fish remains.
- LB.122 - Hard, cream coralline limestone with calcareous algae (MF.3549) and a few foraminifera,

Operculinella venosa (F. & M.)
Rotalia cf. schroeteriana Parker & Jones
Sorites sp.

LB.123 - Hard tuffaceous sandstone with foraminifera rare
(MF.3550) (Discorbis cf. rosacea (d'Orb.) and a few cidaroid spines.

LB.125 - Hard, tuffaceous sandstone with poorly preserved
(MF.3551) foraminifera, cidaroid spines and molluscan shell fragments.

Amphistegina cf. lessonii d'Orb.
Operculinella venosa (F. & M.)
Planorbulinella larvata (P. & J.)
Pyrgo sp.
Quinqueloculina sp.
Rotalia schroeteriana P. & J.

LB.126 - Fawnish siltstone with small foraminifera, fragments of
(MF.3552) thin-shelled mollusca, ostracoda and fish otoliths.

Foraminifera:

Bolivina striatula Cushman
Globigerinoides trilobus (d'Orb.)
Nonion scapha (F. & M.)

Ostracoda:

Cythere gougoni G.S. Brady

LB.127 - Shelly mudstone with foraminifera and mollusca somewhat
(MF.3553) decomposed.

Foraminifera:

Elphidium advenum Cushman
Elphidium crispum (Linne)
Globigerinoides trilobus (d'Orb.)
Orbulina universa d'Orb.
"Rotalia" beccarii d'Orb. (c)

Mollusca:

Arca nodosa (Martin)
Cerithium sp.

LB.128 - Grey shelly mudstone with foraminifera rare and
(MF.3554) mollusca usually decomposed.

Foraminifera:

Lagena sp.
Orbulina universa d'Orb.

Mollusca:

Conus sp.
Melania herklotsi Martin
Melania sp.

LB. 131 - Grey tuffaceous siltstone with indeterminate plants
remains,

LB.132 - Grey siltstone with a few foraminifera and fragments of
thin shelled indeterminate. mollusca.

Epistomina elegans (d'Orb.)
Globigerina bulloides d'Orb.
Rotalia schroeteriana P. & J.

LB.133 - Grey siltstone with foraminifera rare (Rotalia conoides
(MF.3556) and R. schroeteriana and thin shelled mollusca.

LB.134 - Greenish silty sandstone with minute foraminifera
(MF.3562) (Globigerina cf. trilocularis d'Orb. and Globigerinoides trilobus (d'Orb.)) and radiolaria (Porodiscus sp.)

LB.137 - Hard, brownish fragmental limestone with calcareous
(MF.3557) algae and numerous foraminifera.

Amphistegina lessonii d'Orb. (c)
Acervulina inhaerens Schultz
Calcarina cf. verriculata (Howchin & Parr)
Cycloclypeus cf. indopacificus Tan
Elphidium cf. hispidulum Cushman
Eponides cf. praecinctus (Karrer)
Globigerinoides trilobus (d'Orb.)
Gypsina globula Reuss
Lepidocyclina angulosa Provale
Lepidocyclina borneensis Provale
Lepidocyclina cf. dehiscens Scheffen
Lepidocyclina cf. martini Schlumberger
Lepidocyclina cf. parva Oppenorth
Lepidocyclina sp.
Linderina sp. nov aff. L. brugesii Schlumberger
Operculinella sp.

LB.138 - Dark greenish tuffaceous mudstone with numerous small
(MF.3558) foraminifera, bryozoa, cidaroid spines and indeterminate molluscan shells.

Anomalinella rostrata (Brady)
Alveolinella quoyi
Amphistegina lessonii d'Orb.
Bulimina inflata Seg.
Bulimina ovata d'Orb.
Borelis melo (F. & M.)
Calcarina calcar (d'Orb.)
Calcarina sp. aff. C. tectoris (Todd)
Cibicides mundulus (P. & J.)
Discorbis patelliformis (d'Orb.)
Eponides praecinctus (Karrer)
Epistomina elegans (d'Orb.)
Elphidium craticulatum (F. & M.)
Ehrenbergina serrata Reuss
Gaudryina (Siphogaudryina) sphonifera (Brady)
Gaudryina sp.
Globigerinoides trilobus (d'Orb.)
Globigerinoides sacculiferus (Brady)
Gypsina globula Reuss
Loxostomum karrerianum (Brady)
Lenticulina calcar (Linne)
Operculinella venosa (F. & M.)
Orbulina universa d'Orb.
Pyrgo sp.
Quinqueloculina reticulata (d'Orb.)
Quinqueloculina parkeri (Brady)
Quinqueloculina sp.
Rectobolivina biformis (Brady) var. striatula
Cushman
"Rotalia" beccarii Linne
Sigmoilina schlumbergeri Silvestri
Sorites marginalis Lam.
Sphaeroidinella dehiscens (P. & J.)
Stilostomella insecta Schw.
Textularia sp.
Uvigerina hispida Schwager
Vulvulina pennatula (Batsch)
Uvigerina nomlandi Le Roy

- LB.139 - Fawnish siltstone with numerous foraminifera and
(MF.3559) indeterminate thin-shelled mollusca.

Rotalia catelliformis Thalmann
Rotalia conoides (Reuss)
Rotalia schreoteriana P. & J.

- LB.140 - Hard, cream, crystalline coralline limestone with occasional foraminifera (Lepidocyclina sp.) and fragments of molluscan shells.

- LB.142b - Hard, cream, crystalline limestone with calcareous algae and foraminifera.
(MF.3560)

Amphistegina lessonii d'Orb.
Carpenteria sp.
Cycloclypeus sp.
Cypsinia globula Reuss
Lepidocyclina ferreroi Provale
Lepidocyclina cf. dehiscens Scheffen
Lepidocyclina cf. sumatrensis (Brady)
Numerous small foraminifera including Orbulina universe and rotalines.

- LB.143 - Brownish marl with numerous small foraminifera.
(MF.3561)

Anomalina cicatricosa Schwager
Amphistegina lessonii d'Orb.
Bolivina hantkeniana Brady
Bolivina sp.
Cassidulina subglobosa d'Orb.
Ceratobulimina pacifica Cushman & Harrid
Cibicides ungerianus (d'Orb.)
Ehrenbergina pacifica Cushman
Globigerina bulloides d'Orb.
Globigerina sp.
Globorotalia menardi (d'Orb.)
Loxostomum cf. amygdaloidaeforme (Brady)
Orbulina universe d'Orb.
Osangularia culter (P. & J.)
Rectobolivina bifrons (Brady) var. striatula C
"Rotalia" beccarii Linne
Siphonodosaria bradyi (Cushman)
Siphogenerina striata (Schwager)
Siphonina tubulosa Cushman
Uvigerina schwageri Brady

Notes on the Samples.

Samples which are unfossiliferous are K.9, 11, 12, LB.1, 5, 7.16, 18, 23, 25, 21b, 38, 39, 30, 31, 32, 33, 35, 37, 38, 35, 39, 40, 41, 42, 43, 54, 56, 57, 58, 59, 60, 61, 64, 65, 67, 68, 69, 71, 72, 75, 77, 78, 80, 88, 89, 91, 92, 93, 94, 95, 99, 103, 104, 106, 110, 112, 116, 117, 118, 119, and 129.

Samples referred to the Pliocene ("h" stage) are K.1, LB.34, 44.52, 62, 63, 83, 90, 96, 102, 113, 114, 122, 123, 125, 126, 127, 128, 131, 132, 133, and 139. Of these LB.34, 62, 63, 83, 90, 113 and 114 contain mollusca which belong to brackish water genera. In the remaining samples, the foraminifera, Operculinella venosa, Elphidium crispum, Rotalia conoides, R.schreoteriana and R.catelliformis are the dominant forms. They are common in K.1, LB.52, 102, 122, 125, 127, 133, and 139.

Samples referred to the Upper Miocene ("g" stage) are LB.74, 79, 97, 98, 100, 101, 115, 120, 121, 134, 138, and 143. Some samples such as LB.97, 138 and 143 contain characteristic "g" stage assemblage of smaller foraminifera. In other cases the small assemblage of foraminifera present makes it difficult to assign a definite age. Although we have placed these samples in "g" stage, it is possible that some may be as young as "h" stage.

Samples LB.4, 109, 137, 140 and 142b are referred to the Lower Miocene. All but LB.109 contain a "f₂" stage assemblage of larger foraminifera while LB.109, with Katscycloclypeus belongs to "f₁" stage.
