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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Report No. 54

CATALOGUE OF TYPE AND FIGURED
SPECIMENS IN THE COMMONWEALTH
PALAEONTOLOGICAL COLLECTION,
CANBERRA

BY

IRENE CRESPIN

Complimentary

Issued under the Authority of Senator the Hon. W. H. Spooner,
Minister for National Development

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COMMONWEALTH OF AUSTRALIA
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Minister : SENATOR THE HON. W. H. SPOONER, M.M.

Secretary : H. G. RAGGATT, C.B.E.

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

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ABSTRACT

The Commonwealth Palaeontological Collection at the Bureau of Mineral Resources, Geology and Geophysics, Canberra, contains more than 3,000 primary or supplementary type specimens. These specimens are listed and arranged herein in alphabetical order in their appropriate larger biological groups. The publications in which these descriptions appear, C.P.C. registered number, character of type, locality (with field number if possible) and geological age are given. The catalogue is completed to December, 1959.

INTRODUCTION

The Commonwealth Palaeontological Collection is incorporated in the Museum of the Bureau of Mineral Resources, Geology and Geophysics in Canberra. The collection had its beginnings in the National Museum, Melbourne, in 1927, when the late F. Chapman was appointed the first Commonwealth Palaeontologist, with the author as his assistant. On the retirement of F. Chapman in December, 1935, the already extensive collection was transferred to Canberra in February, 1936. From the beginning in 1927, Chapman hoped to build the collection up to international standard, but this ambition has been hampered, even up to the present day, by lack of storage and the absence of a permanent home. A major catastrophe befell the collection in April, 1953 when part of it, including type specimens, was destroyed by fire; the original register of type specimens was also lost.

In 1945, the Bureau of Mineral Resources began extensive geological investigations throughout Australia, and since that time large collections of fossiliferous material have become available to palaeontologists of the Bureau. Much of it has proved to be new, and specialists both within and outside the Bureau have described new genera and species. At the present time the collection contains more than 3,000 primary and supplementary types and figured specimens. The present catalogue includes specimens described and figured to the end of 1959.

All types and figured specimens are registered with the prefix "C.P.C." and since the fire have been housed in a fireproof building. Holotypes are distinguished by red discs and paratypes by green ones. The specimens lost in the fire are indicated in this catalogue by the symbol*.

The terminology of type and figured specimens used herein is made as concise as possible. It is based on recommendations by Chapman (1913), Frizzell (1933), Schenck and McMasters (1936 revised by Kean and Muller, 1948) and Singleton (1945). The terms *holotype* and *paratype* are used for primary types. The term *hypotype* is used for supplementary types; a hypotype being regarded as a specimen extending or correcting the knowledge of a previously described species. The term *lectotype* is used for thin sections that elucidate microscopic structure of a genus or species. Singleton (1945) proposed the terms *tectoholotype* and *tectoparatype* for specimens whose original descriptions are based entirely upon thin sections; but the term *tectotype* is regarded here as including both of the above names. The term *figured specimen* is used by some authors for specimens other than the holotype in the original description of a species; it is also applied to specimens referred to indeterminate genera and species, to specimens compared with, or with affinities to, known species, and to unnamed species.

In this catalogue, genera are arranged by Classes, and in alphabetical order within the Class. References are limited to the original description and to that of the described specimens from the collection. The synonymy is followed by the C.P.C. registered number, character of type specimen, locality with field number where possible, formation, and geological age. If possible and necessary, the age determination is brought up to date. The nomenclatorial types—holotype, lectotype, and neotype—are given in **bold face**.

The list of References at the end of the Catalogue is restricted to publications in which the specimens in the Commonwealth Palaeontological Collection have been described and to a few general ones.

Among abbreviations used, "FKO" = Freney Kimberley Oil Company and "AFO" = Associated Freney Oilfields.

FORAMINIFERA

ACTINOCYCLINA cf. **ASTER** Woodring, 1930; Chapman & Crespin, 1935.

Actinocyclus cf. *aster*, Chapman & Crespin, 1935, p. 61, pl. 4, fig. 7.

C.P.C. 72. Tectotype.

E. flank of Giralia Anticline, Carnarvon Basin, W.A., where track to Bullara crosses first low hills.

Middle to Upper Eocene (stage "a-b").

AMMOBACULITES AUSTRALIS (Howchin), 1895; Crespin, 1944, 1953.

Haplophragmium australis Howchin MS. 1894, p. 364; 1895, p. 198, pl. 10, figs. 12, 13.

Ammobaculites australe, Crespin, 1944, p. 18, pl. 1, fig. 1; 1953a, p. 29, pl. 5, fig. 7.

C.P.C. 249. Hypotype.

Bore No. 3785, W. R. Johnston, "Calooma", 4 m. S.E. of Lila Springs and 30 m. N.N.W. of Bourke, N.S.W., at 925 feet.

C.P.C. 892. Hypotype.

Cliff section, Bungeworgorai Ck, 5 m. W. of Roma, Qld, and S. of Great Western railway line; Roma Beds.

Lower Cretaceous (Aptian).

AMMOBACULITES ECCENTRICUS Crespin, 1958.

Ammobaculites eccentrica Crespin, 1958b, p. 73, pl. 14, figs. 4-9.

C.P.C. 2482. Holotype.

C.P.C. 2483, 2484. Paratypes.

Callytharra Springs, Carnarvon Basin, W.A., 180-230 ft. above base of section; Callytharra Fm. (GW138).

Lower Permian (Artinskian).

AMMOBACULITES FISHERI Crespin, 1953.

Ammobaculites fisheri Crespin, 1953a, p. 29, pl. 5, figs. 4, 5.

C.P.C. 893. Holotype.

Bore No. 3752, G. M. Taylor, 3 m. S. of Ford's Bridge, and about 40 m. N.W. of Bourke, N.S.W., at 404 ft.

C.P.C. 894. Paratype.

Outcrop at Flinders R., Hughenden, Central Qld.

Lower Cretaceous.

AMMOBACULITES MINIMUS Crespin, 1953.

Ammobaculites minimus Crespin, 1953a, p. 30, pl. 5, fig. 8.

C.P.C. 895. Holotype.

Kopperamanna Bore, 460 m. N.E. of Adelaide, S.A., at 1907 ft.

Lower Cretaceous.

AMMOBACULITES WANDAGEENSIS Crespin, 1958.

Ammobaculites wandageensis Crespin, 1958b, p. 74, pl. 14, figs. 1-3.

C.P.C. 2485. Holotype.

C.P.C. 2486, 2487. Paratypes.

Cundlego Crossing, Minilya R., Wandagee Stn, Carnarvon Basin, W.A.; Cundlego Fm.

Lower Permian (Artinskian).

AMMOBACULITES WOOLNOUGH Crespin & Parr, 1941; Crespin, 1958b.

Ammobaculites woolnoughi Crespin & Parr, 1941, p. 40, pl. 12, figs. 2a, b; 3a, b. Crespin, 1958b, pl. 14, figs. 10, 11.

C.P.C. 151. Holotype.

C.P.C. 150. Paratype.

C.P.C. 2488. Hypotype.

Farley Rd, 300 yds. N.E. of Farley Stn, Hunter River area, N.S.W.; Farley Beds, Dalwood Group.

C.P.C. 274. Hypotype.

Cutting, McDougall's Hill, Singleton, Hunter River area; Maitland Group.

C.P.C. 2489. Hypotype.

Bore at Stanford Main Colliery No. 2, Hunter River area, at 769 ft; Cessnock Sdst.

Lower Permian.

AMMOBACULOIDES COONANAENSIS

Crespin, 1953.

Ammobaculoides coonanaensis Crespin, 1953a, p. 30, pl. 5, fig. 11.

C.P.C. 898. Holotype.

Coonana Bore, S.A., 370 m. N.N.E. of Adelaide and 40 m. due E. of Lake Callabonna, at 1185-1310 ft.

Lower Cretaceous.

AMMOBACULOIDES PITMANI Crespin, 1953.

Ammobaculoides pitmani Crespin, 1953a, p. 30, pl. 5, fig. 12.

C.P.C. 899. Holotype.

Cliff section, Bungeworgorai Ck, 5 m. W. of Roma, Qld., on S. side of Great Western Railway line; Roma Beds.

Lower Cretaceous (Aptian).

AMMOBACULOIDES ROMAENSIS Crespin, 1953.

Ammobaculoides romaensis Crespin 1953a, p. 31, pl. 5, figs. 13, 14.

C.P.C. 900. Holotype.

Bungeworgorai Ck, 5 m. W. of Roma, Qld, below the old Mt Abundance Hstd; Roma Beds.

C.P.C. 901. Paratype.

Low cliff section, Bungeworgorai Ck, 5 m. W. of Roma, and 400 yds. S. of Great Western railway line; Roma Beds.

Lower Cretaceous (Aptian).

AMMODISCUS ERUGATUS Crespin, 1958.

Ammodiscus erugatus Crespin, 1958a, p. 66, pl. 12, figs. 1-3.

C.P.C. 2462. Holotype.

C.P.C. 2463. Paratype A.

AFO Bore No. 1 Myroodah, Fitzroy Basin, W.A.; Noonkanbah Fm. Holotype at 870-875 ft., paratype A at 890-895 ft.

C.P.C. 2464. Paratype B.

Outcrop, Jurgurra Creek, Canning Basin, W.A., near BMR. No. 1 Bore; Noonkanbah Fm.

Lower Permian (Artinskian).

AMMODISCUS MULTICINCTUS Crespin & Parr, 1940; Crespin, 1958.

Ammodiscus multicinctus Crespin & Parr, 1941, p. 303, pl. 12, figs. 1a, b; Crespin, 1958b, p. 67, pl. 12, figs. 4-6.

C.P.C. 149. Holotype.

Large railway cutting about 4 ch. W. of Farley Station, Hunter River area, N.S.W.; Allendale Beds, Dalwood Group.

C.P.C. 272. Hypotype.

Cattle Creek, below waterfall, 14 m. S.E. of Springsure, Qld; Cattle Creek Fm.

C.P.C. 2465. Hypotype.

Road cutting, Branxton-Singleton rd, New England Highway, 9 m. from Singleton, Hunter River area; Mulbring Subgroup, Maitland Group.

C.P.C. 2466. Hypotype.

BMR. No. 14 (T), Ponds Creek, Hunter River area, at 53-75 ft; Maitland Group.

Lower Permian (Artinskian).

AMMODISCUS NITIDUS Parr, 1942; Crespin, 1958.

Ammodiscus nitidus Parr 1942, p. 103, pl. 1, figs. 1a, b; Crespin, 1958b, p. 68, pl. 12, figs. 7-9.

C.P.C. 2467. Hypotype A.

E. of Coolkilya Paddock, Wandagee Stn, Carnarvon Basin, W.A.; Wandagee Fm. (type locality).

C.P.C. 2468. Hypotype B.

1.9 m. W. of Merlinleigh Hstd., Carnarvon Basin; Wandagee Fm. (G. 327).

C.P.C. 2469. Hypotype C.

Section S. of Grant Range, Fitzroy Basin, W.A.; 375 ft below top of Noonkanbah Fm. (KNA 39A).

Lower Permian (Artinskian).

AMMODISCUS OONAHENSIS Crespin, 1958.

Ammodiscus oonahensis Crespin, 1958b, p. 69, pl. 12, figs. 10, 11.

C.P.C. 2470. Holotype.

C.P.C. 2741. Paratype.

Oonah, 23 m. N. of Waratah on main Somerset-Waratah rd. N. Tas.; Quamby Mudstone.

Lower Permian (Artinskian).

AMMODISCUS PARRI Crespin, 1950.

Ammodiscus parri Crespin, 1950, p. 71, pl. 10, fig. 2.

C.P.C. 643. Holotype.

No. 1 Bore, Ph. Bengworden South, Gippsland, Vic., at 2538 ft. (Janjukian Stage).

Lower Oligocene or Upper Eocene.

AMMODISCUS ROTALARIUS Loeblich & Tappan, 1949; Crespin, 1953.

Ammodiscus rotalarius Loeblich & Tappan, 1949, p. 247, pl. 46, fig. 1; Crespin, 1953a, p. 29, pl. 5, fig. 2.

C.P.C. 890. Hypotype.

Stevenson's Bore, about 650 m. N.N.W. of Adelaide, S.A., at 824 ft.

Lower Cretaceous.

AMMODISCUS WANDAGEEENSIS Parr, 1942; Crespin, 1958.

Ammodiscus wandageeensis Parr, 1942, p. 102, pl. 2, fig. 1; Crespin, 1958b, p. 69, pl. 12, fig. 12.

C.P.C. 2472. Hypotype.

S. side of Minilya River, Coolkilya Pool, Wandagee Stn, Carnarvon Basin, W.A.; Quinannie Shale.

Lower Permian (Artinskian).

AMMOVERTELLA INCLUSA (Cushman & Waters), 1927; Crespin, 1958.

Psammophis inclusus Cushman & Waters, 1927, p. 148, pl. 26, fig. 12.

Ammoverteilla inclusa, Crespin, 1958b, p. 72, pl. 18, fig. 5.

C.P.C. 2480. Hypotype.

Callytharra Springs, Carnarvon Basin, W.A.; 0-12 ft. above base of Callytharra Fm. (GW74).

Lower Permian (Artinskian).

AMPHISTEGINA LESSONII d'Orb., 1826; Chapman & Crespin, 1932; Crespin, 1936.

Amphistegina lessonii d'Orbigny, 1826, p. 304, no. 3, pl. 17, figs. 1-4; Modèles, no. 98. Chapman & Crespin, 1932b, pl. 1, fig. 3; Crespin, 1936, pl. 1, fig. 9.

C.P.C. 44. Hypotype.

No. 14 Bore, Ph. Stradbroke, Gippsland, Vic., at 935 ft.

C.P.C. 82. Hypotype.

No. 1 Bore, Ph. Nindoo, Gippsland, Vic., at 208 ft.

Lower Miocene.

ANOMALINA MAWSONI Crespin, 1953.

Anomalina mawsoni Crespin, 1953a, p. 36, pl. 6, fig 17a, b.

C.P.C. 921. Holotype.

Marree Bore, S.A., 360 m. N. of Adelaide, at 120 ft.

Lower Cretaceous.

ASTERIGERINA ADELAIDENSIS (Howchin), 1891; Crespin, 1954.

Truncatulina margaritifera Brady var. *adelaidensis* Howchin, 1891, p. 352, pl. 13, figs. 11-13.

Asterigerina adelaidensis, Crespin, 1954, p. 47, pl. 7, figs. 20a, b.

C.P.C. 1976. Hypotype.

Maslin Beach, Aldinga, S.A., near steps leading down to the beach, 12 ft. above top of Maslin Sandstone; Blanche Point Lst.

Upper Eocene.

ASTEROCYCLINA cf. **STELLATA** (d'Archiac), 1850; Chapman & Crespin, 1935.

Asterocyclina cf. *stellata*, Chapman & Crespin, 1935, p. 60, pl. 4, fig. 8.

C.P.C. 71. Figured section.

Bed of creek at track crossing, 9 m. from Bullara, Carnarvon Basin, W.A.

Middle to Upper Eocene (stage "b").

AUSTROTRILLINA HOWCHINI (Schlumberger), 1893; Crespin, 1953, 1954. (see **Trillina howchini** p. 42.)

Trillina howchini Schlumberger, 1893, p. 119, woodcut, fig. 1, and pl. 3, fig. 6.

Austrotrillina howchini, Crespin, 1953b, pl. 9, fig. 4; 1954, p. 40, pl. 7, fig. 14.

C.P.C. 955. Tectotype.

3½ m. E. of Mulyering Well, Yardie Creek Stn, Carnarvon Basin, W. A.; Trealla Lst.

C.P.C. 1969. Hypotype.

Kinnish's Bore, No. 1 Direk, S.A., at 280-310 ft.; Oaklands Lst.

Lower Miocene (f1-f2 stage).

BATHYSIPHON ANGLESEAENSIS Crespin, 1950.

Bathysiphon angleseaensis Crespin, 1950, p. 71, pl. 10, fig. 1.

C.P.C. 656. Holotype.

Lignitic siltstone, Demons Bluff, Anglesea, Otway Coast, Vic.; Demons Bluff Fm.

Eocene.

BIGENERINA LOEBLICHAE Crespin, 1953.

Bigenerina loeblichae Crespin, 1953a, p. 31, pl. 5, figs. 17, 18.

C.P.C. 904. Holotype.

Marree Bore, S.A., 360 m. N. of Adelaide, at 70-110 ft.

C.P.C. 905. Paratype.

Cliff section, Bungeworgorai Ck, Qld, 5 m. W. of Roma, on S. side of Great Western railway line; Roma Beds.

Lower Cretaceous (Aptian).

BIPLANISPIRA MIRABILIS (Umbgrove), 1936; Crespin, 1938.

Heterostegina mirabilis Umbgrove, 1936, p. 155, pl. 1.

Biplanispira mirabilis, Crespin, 1938a, p. 6, pl. 2, figs. 9-18.

C.P.C. 127-136. Tectotypes.

Small creek near Chimbu Aerodrome, N. slope of Waghi Valley, Central Highlands, New Guinea, at elev. 5,100 ft.

Middle to Upper Eocene.

BOLIVINA SPIROPLECTIFORMIS Chapman, 1927.

Bolivina spiroplectiformis Chapman, 1927, p. 131, pl. 12, fig. 4.

C.P.C. 2304. Holotype.

Limestone in deep gorge S. from Northwest Cape, 25 m. N.E. of Exmouth Gulf Stn Hstd, Carnarvon Basin, W.A.

Lower Miocene.

BOLIVINOIDES DECORATA (Jones) **AUS-TRALIS** subspecies Edgell, 1954.

Bolivinoides decorata (Jones) *australis* subsp. Edgell, 1954, p. 68, pl. 13, fig. 5.

C.P.C. 1311. Paratype.

CY Ck, W. flank of Giralia Anticline, Carnarvon Basin, W.A.; Korojon Calcarene (GC304).

Upper Cretaceous (Maestrichtian).

BOLIVINOIDES DECORATA (Jones) cf. **DELICATULA** Cushman, 1926; Edgell, 1954.

Bolivinoides decorata (Jones) var. *delicatula* Cushman, 1926, p. 90, pl. 12, fig. 8.

Bolivinoides decorata (Jones) cf. *delicatula*, Edgell, 1954, p. 71, pl. 13, fig. 7; pl. 14, fig. 7.

C.P.C. 1317, 1318. Figured specimens.

Brickhouse Bore, E. of Carnarvon, Carnarvon Basin, at 935 ft. and 995 ft.

Upper Cretaceous (Basal Campanian).

BOLIVINOIDES DECORATA (Jones)
GIGANTEA Hilterman & Koch, 1950;
Edgell, 1954.

Bolivinoides decorata (Jones) *gigantea*
Hilterman & Koch, 1950, p. 610, pl. 2,
figs. 49-51, 55-57, 61-63; pl. 4, fig.
49-51, 55-57; pl. 5, figs. 50a-1. Edgell,
1954, p. 72, pl. 3, fig. 4; pl. 14, fig. 4.

C.P.C. 1312. Hypotypes.

CY Ck, Cardabia, W. flank of Giralia
Anticline, Carnarvon Basin, W.A.; upper part
of Korojon Calcarene (GC301).

Upper Cretaceous (Maestrichtian).

BOLIVINOIDES DRACO DRACO (Marsson),
1878; Edgell, 1954.

Bolivina draco Marsson, 1878, p. 157,
pl. 3, figs. 25a-d.

Bolivinoides draco draco, Edgell, 1954,
p. 73, pl. 13, figs. 1-3; p. 14, figs. 1-3.

C.P.C. 1313. Hypotype.

CY Creek, Cardabia, W. flank of Giralia
Anticline, Carnarvon Basin, W.A.; Korojon
Calcarene, upper part (GC301).

C.P.C. 1314, 1316. Hypotypes.

N. end of Giralia Anticline, Giralia,
Carnarvon Basin; Miria Marl (GE11).

Upper Cretaceous (Maestrichtian).

BOLIVINOIDES STRIGILLATA (Chapman),
1892; Edgell, 1954.

Bolivina strigillata Chapman, 1892,
p. 515, pl. 15, fig. 10.

Bolivinoides strigillata, Edgell, 1954,
p. 70, pl. 13, fig. 8; pl. 14, fig. 8.

C.P.C. 1315. Hypotype.

Brickhouse Bore, E of Carnarvon, Car-
narvon Basin, W.A., at 1015 ft.

**Upper Cretaceous (Upper Santonian-
Lower Campanian).**

BULIMINA PUPULA Stache, 1864; Crespin,
1950.

Bulimina pupula Stache, 1864, p. 265,
pl. 25, fig. 13. Crespin, 1950, p. 74,
pl. 10, fig. 12; in Raggatt & Crespin,
1955, pl. 7, fig. 12.

C.P.C. 652. Hypotype.

Cliff section between Fishermen's Steps
and Bird Rock, Torquay, Vic.; Jan Juc Fm.

Lower Oligocene to Upper Eocene.

CALCARINA VERRICULATA (Howchin &
Parr), 1938; Crespin, 1954.

Rotalia verriculata Howchin & Parr, 1938,
p. 210, pl. 19, figs. 8, 9, 11, 15.

Calcarina verriculata, Crespin, 1954,
p. 48, pl. 17, figs. 19a,b.

C.P.C. 1975. Hypotype.

A.E. Amber's Bore, Netley, near W.
boundary, S.W. corner, Sect. 106, Hd.
Adelaide, S.A., at 362-400 ft.; Oaklands Lst.

Lower Miocene.

CALCITORNELLA ELONGATA Cushman
& Waters, 1928; Crespin, 1958.

Calcitornella elongata Cushman & Waters,
1928, p. 47, pl. 6, fig. 5. Crespin,
1958b, p. 82, pl. 17, figs. 1, 2.

C.P.C. 2511, 2512. Hypotypes.

Fossil Cliff, Irwin R., Irwin Basin, W.A.;
Fossil Cliff Fm.

Lower Permian (Artinskian).

CALCITORNELLA HEATHI Cushman &
Waters, 1928; Crespin, 1958.

Calcitornella heathi Cushman & Waters,
1928, p. 48, pl. 6, figs. 8a, b. Crespin,
1958b, p. 83, pl. 13, figs. 8-11; pl. 19,
fig. 11.

C.P.C. 2512, 2513, 2514. Hypotypes.

Callytharra Springs, Carnarvon Basin,
W.A.; 20 ft. above base of Callytharra Fm.

C.P.C. 2515, 2516. Hypotypes.

BMR. No. 1 Bore, Jurgurra Creek,
Canning Basin, W.A., at 494 ft.; Noonkanbah
Fm.

Lower Permian (Artinskian).

CALCITORNELLA STEPHENSI (Howchin), 1894; Crespin, 1947, 1958.

Nubecularia lucifuga Defrance var. *stephensi* Howchin, 1894, p. 345, pls. 9a, 10a.

Calcitornella stephensi, Crespin, 1947, p. 20, pl. 1, fig. 3. *Ibid.* 1958b, p. 84, pl. 17, figs. 4-8; pl. 32, figs. 1, 2, 4, 9.

C.P.C. 273. Hypotype.

C.P.C. 2890. Tectotype.

Pokolbin, Hunter River area, N.S.W.; Dalwood Group. ("Lower Marine Series".)

C.P.C. 2517. Hypotype.

Fossil Cliff, Irwin R., Irwin Basin, W.A.; Fossil Cliff Fm.

C.P.C. 2518, 2519. Hypotypes.

Callytharra Springs, Carnarvon Basin, W.A.; 10-22 ft. above base of Callytharra Fm.

C.P.C. 2891. Tectotype

Callytharra Springs; Callytharra Fm.

Lower Permian (Artinskian).

CALCIVERTELLA PALATA Crespin, 1958.

Calcivertella palata Crespin, 1958b, p. 85, pl. 18, fig. 6.

C.P.C. 2520. Holotype.

F.K.O. Co. Bore No. 1, Nerrima, Fitzroy Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

CARPENTERIA ALTERNATA Chapman & Crespin, 1930.

Carpenteria alternata Chapman & Crespin, 1930b, p. 99, pl. 5, figs. 9, 10.

C.P.C. 21. Holotype.

C.P.C. 22. Paratype.

No. 5 Bore, Ph. Glencoe, Gippsland, Vic. at 150 ft.

Lower Miocene.

CARPENTERIA CAPITATA Jones & Chapman, 1900; Chapman, 1914.

Carpenteria capitata Jones & Chapman, 1900, p. 246, pl. 20, fig. 7. Chapman, 1914, p. 289, pl. 7, fig. 1.

C.P.C. 97. Tectotype.

Bootless Inlet, Papua.

Lower Miocene.

CARPENTERIA PROTEIFORMIS Goës, 1882; Crespin, 1936.

Carpenteria balaniformis Gray var. *proteiformis* Goës, 1882, p. 94, pl. 6, figs. 208-214; pl. 7, figs. 215-219.

Carpenteria proteiformis, Crespin, 1936, pl. 1, fig. 5.

C.P.C. 78. Hypotype.

No. 1 Bore, Kalimna Oil Co., Rigby Island, Gippsland Lakes, Vic., at 712 ft.

Lower Miocene.

CARPENTERIA ROTALIFORMIS Chapman & Crespin, 1930; Crespin, 1936.

Carpenteria rotaliformis Chapman & Crespin, 1930b, p. 98, pl. 5, figs. 7, 8. Crespin, 1936, pl. 1, fig. 4.

C.P.C. 20. Holotype.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 1020 ft.

C.P.C. 77. Hypotype.

No. 1 Bore, Kalimna Oil Co., Rigby Island, Gippsland Lakes, Vic., at 950 ft.

Lower Miocene.

COSKINOLINA sp., Crespin, 1938.

Coskinolina sp., Crespin, 1938a, p. 7, pl. 1, fig. 13.

C.P.C. 126. Figured section.

Creek near Chimbu Aerodrome on N. side of Waghi Valley, Central Highlands, New Guinea.

Middle to Upper Eocene.

COSKINOLINA sp., Chapman & Crespin, 1935.

Coskinolina sp., Chapman & Crespin, 1935, p. 57, pl. 3, fig. 1.

C.P.C. 64. Figured section.

Bed of creek at track crossing, 9 m. from Bullara, Carnarvon Basin, W.A.

Middle to Upper Eocene.

CRESPINELLA UMBONIFERA (Howchin & Parr), 1938; Crespín, 1954.

Operculina? umbonifera Howchin & Parr, 1938, p. 309, pl. 18, figs. 3, 4, 13, 14.

Crespinella umbonifera, Crespín, 1954, p. 46, pl. 7, fig. 21.

C.P.C. 1974. Hypotype.

No. 1 Bore, A. H. Kinnish, Direk, Sect. 3076, Hd. Muna Para, S.A., at 280-281 ft.; Oaklands Lst.

Lower Miocene.

CRIBROBULIMINA POLYSTOMA (Parker & Jones), 1865; Crespín, 1954.

Valvulina spp. Parker & Jones, in Carpenter, Parker, & Jones, 1862, p. 147, pl. 11, figs. 1-121, 24-26.

Valvulina polystoma Parker & Jones, 1865, p. 437.

Cribrobulimina polystoma, Crespín, 1954, p. 39, pl. 6, fig. 4.

C.P.C. 1960. Hypotype.

Bore No. 69, Royal Park, Old Port Rd., Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

CYCLAMMINA INCISA (Stache), 1864; Chapman & Crespín, 1932; Crespín, 1950.

Haplophragmium incisum Stache, 1864, p. 165, pl. 21, fig. 1.

Cyclammina incisa, Chapman & Crespín, 1932b, pl. 1, fig. 6. Crespín, 1950, p. 72, pl. 10, fig. 3.

C.P.C. 45. Hypotype.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic. at 1320 ft.

C.P.C. 644. Hypotype.

Demon's Bluff, Anglesea, Otway Coast, Vic.; Demon's Bluff Fm.

Lower Oligocene; Eocene.

CYCLAMMINA LONGICOMPRESSA Chapman & Crespín, 1930.

Cyclammina longicompressa Chapman & Crespín, 1930b, p. 97, pl. 5, figs. 3, 4.

C.P.C. 16. **Holotype.**

C.P.C. 17. **Paratype.**

No. 4 Bore, Ph. Glencoe, Gippsland, Vic. at 230 ft.

Oligocene.

CYCLAMMINA PAUPERA Chapman, 1904; Crespín, 1950.

Cyclammina paupera Chapman, 1904, p. 229, pl. 22, fig. 6. Crespín, 1950, p. 72, pl. 22, fig. 6.

C.P.C. 645. Hypotype.

Demon's Bluff, Anglesea, Otway Coast, Vic.; Demon's Bluff Fm.

Eocene.

CYCLAMMINA ROTUNDATA Chapman & Crespín, 1930; Crespín, 1950.

Cyclammina rotundata Chapman & Crespín, 1930b, p. 96, pl. 5, figs. 1, 2. Crespín, 1950, p. 72, pl. 10, figs. 5, 5a.

C.P.C. 14. **Holotype.**

C.P.C. 15. **Paratype.**

No. 1 Bore, Ph. Bumberrah (Metung), Gippsland, Vic., at 1165 ft.

C.P.C. 646. Hypotype.

Demon's Bluff, Anglesea, Otway Coast, Vic.; Demon's Bluff Fm.

Oligocene; Eocene.

CYCLOCYPEUS COMMUNIS Martin, 1880; Chapman & Crespín, 1930a, 1932; Crespín, 1936 (see also *Cyclocypeus victoriensis* p. 14).

Cyclocypeus communis Martin 1880, p. 154, pl. 27, figs. 1, 2. Chapman & Crespín, 1930a, p. 112, pl. 7, figs. 7, 8; pl. 8, figs. 9-13; 1932b, pl. 1, fig. 4. Crespín, 1936, pl. 7, figs. 10, 11.

C.P.C. 7, 9. Hypotypes.*

C.P.C. 10. Tectotype.*

Le Grand's Upper Quarry, near Longford, Ph. Glencoe, Gippsland, Vic.

C.P.C. 8, 11-13. Tectotypes.

Batesford Quarry, near Geelong, Vic.

C.P.C. 83. Hypotype.

No. 1 Bore, Ph. Yulecart (Hamilton Bore), Vic. at 48-53 ft.

Lower Miocene.

CYCLOCLYPEUS EIDAE Tan, 1932;
Crespin, 1953.

Cycloclypeus eidae Tan, 1932, p. 50, pl. 5, fig. 6; pl. 12, figs. 2, 3; pl. 13, figs. 1, 2, 4-6. Crespin, 1953b, p. 66, pl. 9, fig. 1; pl. 10, fig. 3.

C.P.C. 992. Tectotype.

Badjirrajirra Ck., 4 m. upstream from mouth, 11 m. N. of Learmonth, Exmouth Gulf, Carnarvon Basin, W.A.; Mandu Lst.

Lower Miocene ("e" stage).

CYCLOCLYPEUS INDOPACIFICUS Tan, 1932; Crespin, 1953.

Cycloclypeus neglectus Martin var. *indopacificus* Tan, 1930, p. 5.

Cycloclypeus indopacificus Tan, 1932, p. 66, pl. 15, fig. 7; pl. 18, fig. 3; pl. 19, fig. 1; pl. 22, fig. 10; pl. 23, figs. 1, 2. Crespin, 1953b, p. 66, pl. 9, figs. 2, 3.

C.P.C. 993, 994, 1319. Tectotypes.

Badjirrajirra Ck., 4 m. upstream from mouth, 11 m. N. of Learmonth, Exmouth Gulf, Carnarvon Basin, W.A.; Tulki Lst.

Lower Miocene ("f₁-f₂" stage).

CYCLOCLYPEUS VICTORIENSIS Crespin, 1941.

Cycloclypeus victoriensis Crespin, 1941, p. 305, pl. 12, figs. 1-3, 5-8; pl. 13, fig. 9, 17; pl. 14, figs. 20-24; pl. 15, figs. 26-28, 31-32.

C.P.C. 157. Holotype (form A).

C.P.C. 159. Paratype (form A).

N. end of tunnel, New Quarry, Australian Portland Cement Works, Batesford, near Geelong, Vic.

C.P.C. 158, 161. Paratype (form A).

C.P.C. 184. Paratype (form B).

C.P.C. 175, 178. Tectotypes (form B).*

Upper Quarry, Batesford, near Geelong.

C.P.C. 172, 173. Tectotypes (form A).

New Quarry, Batesford, near Geelong.

C.P.C. 162, 83 (see *C. communis*). Paratypes (form A).

No. 1 Bore, Ph. Yulecart (Hamilton Bore), western Vic. at 48-53 ft.

C.P.C. 7 (see *C. communis*). Paratype (form A).

Le Grand's Quarry, near Longford, Ph. Glencoe, Gippsland, Vic.

C.P.C. 170. Paratype (form A).

No. 1 Bore, Ph. Nindoo, Gippsland, at 190 ft.

Lower Miocene.

CYCLOCLYPEUS VICTORIENSIS Crespin var. **GIPPSLANDICA** Crespin, 1941.

Cycloclypeus victoriensis Crespin var. *gippslandica* Crespin, 1941, p. 309, pl. 12, fig. 4; pl. 13, figs. 10-16; pl. 14, figs. 19, 24, 25, 29, 30.

C.P.C. 163. Holotype of var.

C.P.C. 166. Paratype.

C.P.C. 176. Tectotype.

No. 5 Bore, Ph. Glencoe, Gippsland, Vic., at 50 ft.

C.P.C. 164. Paratype.

C.P.C. 182. Tectotype.

Le Grand's Quarry, near Longford, Ph. Glencoe, Gippsland.

C.P.C. 160. Paratype.

New Quarry, Batesford, near Geelong.

C.P.C. 166. Paratype.

No. 1 Bore, Ph. Nindoo, Gippsland, at 190 ft.

C.P.C. 167. Paratype.

No. 7 Bore, Ph. Colquhoun (Lake Bunga), Gippsland, at 620 ft.

C.P.C. 168, 171. Paratypes.

Skinner's section, Mitchell River, Ph. Wuk Wuk, Gippsland.

C.P.C. 169.

No. 3 Bore, Ph. Darriman, Gippsland, at 439 ft.

C.P.C. 172. Tectotype.

No. 4 Bore, Ph. Colquhoun (Pilot Station), Gippsland, at 855 ft.

C.P.C. 177. Tectotype.*

No. 6 Bore, Ph. Colquhoun (Kalimna), Gippsland, at 887 ft.

C.P.C. 181. Tectotype.*

No. 6 Bore, Ph. Woodside, Gippsland, at 32 ft.

Lower Miocene.

DENTALINA GRAYI Crespin, 1945, 1958.

Dentalina grayi Crespin, 1945, p. 27, pl. 3, fig. 8; 1958b, p. 97, pl. 24, figs. 4, 5.

C.P.C. 278. Holotype.

Lower part of Permian exposure on Argus Selection, Springsure, Qld; Ingelara Fm.

C.P.C. 2537. Hypotype.

FKO. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 69 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

DENTALINA HABRA Crespin, 1958.

Denalina habra Crespin, 1958b, p. 98, pl. 24, figs. 6, 7.

C.P.C. 2538. Holotype.

FKO. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 69 ft.; Noonkanbah Fm.

C.P.C. 2539. Paratype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 560-570 ft. (core 14); equivalent of Byro Group.

Lower Permian (Artinskian).

DENTALINA NERRIMAENSIS Crespin, 1958.

Dentalina nerrimaensis Crespin, 1958b, p. 98, pl. 24, figs. 10, 11.

C.P.C. 2540. Holotype.

C.P.C. 2541. Paratype.

FKO No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 69 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

DIGITINA RECURVATA Crespin & Parr, 1941; Crespin, 1958.

Digitina recurvata Crespin & Parr, 1941, p. 307, pl. 12, figs. 9a, b; 10a, b. Crespin, 1958b, p. 79, pl. 15, figs. 10, 11.

C.P.C. 154. Holotype.

C.P.C. 155. Paratype.

C.P.C. 2499, 2500. Hypotypes.

Foot of Victoria Pass section, Mitchell Highway, N.S.W.; Capertee Group.

Lower Permian.

DIMORPHINA JANJUKENSIS Crespin, 1950.

Dimorphina janjukensis Crespin, 1950, p. 73, pl. 10, fig. 11. Raggatt & Crespin, 1955, pl. 7, fig. 11.

C.P.C. 650. Holotype.

Base of Bird Rock Cliff, Torquay, Vic.; Jan Juc Fm.

Lower Oligocene or Upper Eocene.

DISCOCYCLINA DISPANSA (Sowerby) var.

MINOR Rutten, 1915; Chapman & Crespin, 1935.

Orthophragmina dispansa (Sowerby) var. *minor* Rutten, 1915, p. 9, pl. 1, figs. 4, 5.

Discocyclina dispansa var. *minor*, Chapman & Crespin, 1935, p. 60, pl. 3, fig. 5.

C.P.C. 2538. Tectotype.

E. flank of Giralia Anticline, where track to Bullara crosses first low hills, Carnarvon Basin, W.A.

Middle to Upper Eocene (stage "a-b").

DISCOCYCLINA DOUVILLEI (Schlumberger), 1903; Chapman & Crespin, 1935.

Orthophragmina douvillei Schlumberger, 1903, p. 283, pl. 9, figs. 21-24.

Discocyclina douvillei Chapman & Crespin, 1935, p. 60, pl. 4, fig. 9.

C.P.C. 69. Tectotype.

E. flank of Giralia Anticline, where track to Bullara crosses first low hills, Carnarvon Basin, W.A.

Middle to Upper Eocene (stage "a-b").

DISCOCYCLINA PRATTI (Michelin), 1846;
Chapman & Crespin, 1935.

Orbitulites pratti Michelin, 1846;
p. 278, pl. 68, figs. 4a, b.

Discocyclina pratti, Chapman & Crespin,
1935, p. 59, pl. 3, fig. 6; pl. 4, fig. 10.

C.P.C. 68. Tectotype.

Bed of Ck at track crossing, 9 m. from
Bullara, Carnarvon Basin, W.A.

Middle to Upper Eocene (stage "a-b").

EARLANDIA CONDONI Crespin, 1958.

Earlandia condoni Crespin, 1958b, p. 58,
pl. 23, figs. 6-8.

C.P.C. 2433. Holotype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 3,115-3,120 ft. (core 66); equivalent
of Callytharra Fm.

C.P.C. 2434, 2435. Paratypes.

Callytharra Springs, Carnarvon Basin,
22 ft. above base of Callytharra Fm. (GW84).

Lower Permian (Artinskian).

ELPHIDIUM ADELAIDENSIS Howchin &
Parr, 1938; Crespin, 1954.

Elphidium adelaidensis Howchin & Parr,
1938, p. 300, pl. 18, fig. 7; pl. 19,
figs. 5, 6. Crespin, 1954, pl. 6, fig. 11.

C.P.C. 1966. Hypotype.

Sandstone overlying Aldinga Limestone in
road cutting leading down to Port Willunga
Jetty, Aldinga Bay, S.A.

Lower Pliocene.

ELPHIDIUM ROTATUM Howchin & Parr,
1938; Crespin, 1954.

Elphidium rotatum Howchin & Parr,
1938, p. 229, pl. 17, figs. 1, 2, 4.
Crespin, 1954, pl. 6, fig. 12.

C.P.C. 1967. Hypotype.

Bore No. 69, Royal Park, Old Port Rd.,
Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

EPISTOMARIA POLYSTOMELLOIDES
(Parker & Jones), 1865; Crespin, 1954.

Discorbis polystomelloides Parker &
Jones, 1865, p. 421, pl. 19, figs. 8a-c.
Epistomaria polystomelloides, Crespin,
1954, p. 45, pl. 6, figs. 8a, b.

C.P.C. 1963. Hypotype.

Bore No. 69, Royal Park, Old Port Rd.,
Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

EPISTOMINA AUSTRALIENSIS Crespin,
1953.

Epistomina australiensis Crespin, 1953a,
p. 35, pl. 6, figs. 14a, b.

C.P.C. 918. Holotype.

Mirra Mitta Bore, S.A., 490 m. N. of
Adelaide, at 1830-1980 ft.

Lower Cretaceous.

FLECTOSPIRA PRIMA Crespin & Belford,
1957; Crespin, 1958.

Flectospira prima Crespin & Belford,
1957, p. 76, pl. 12, figs. 11-19. Crespin,
1958b, p. 88, pl. 20, figs. 14-17.

C.P.C. 2275. Holotype.

C.P.C. 2276, 2277. Paratypes.

C.P.C. 2278, 2279. Tectotypes.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 560-570 ft. (core 14); equivalent of
Byro Group.

Lower Permian (Artinskian).

FLINTINA INTERMEDIA (Howchin) 1889;
Crespin, 1954.

Hauerina intermedia Howchin, 1889,
p. 4, pl. 1, figs. 6a, b.

Flintina intermedia, Crespin, 1954, p. 46,
pl. 6, figs. 11a, b.

C.P.C. 1956. Hypotype.

Bore No. 69, Royal Park, Old Port Rd.,
Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

FLINTINA TRIQUETRA (Brady), 1879;
Crespin, 1954.

Miliolina triquetra Brady, 1879, p. 268;
1884, p. 181, pl. 8, figs. 8-10.

Flintina triquetra Crespin, 1954, p. 41,
pl. 6, fig. 2.

C.P.C. 1957. Hypotype.

Salisbury Bore, Adelaide Plains, S.A., at
330 ft.

Lower Pliocene.

FLOSCULINELLA BONTANGENSIS
(Rutten), 1913; Crespin, 1953.

Alveolinella bontangensis Rutten, 1913,
p. 221, pl. 14, figs. 1-3.

Flosculinella bontangensis, Crespin,
1953b, p. 66, pl. 9, fig. 5.

C.P.C. 996. Tectotype.

2½ m. N. 49° W. of No. 1 Well, Exmouth
Gulf Stn, Carnarvon Basin, W.A.; Trealla Lst.

Lower Miocene (f₁-f₂ stage).

FRONDICULARIA AULAX Crespin, 1958.

Frondicularia aulax Crespin, 1958b,
p. 109, pl. 28, figs. 1-4.

C.P.C. 2571. Holotype.

C.P.C. 2572, 2573. Paratypes.

Watershed between Little Gorge and Cab-
bage Tree Cks, Springsure area, Qld; Cattle
Ck Fm.

C.P.C. 2574. Paratype.

Section N. bank of Cattle Ck, below
waterfall, S.E. of Springsure; Cattle Ck Fm.

Lower Permian (Artinskian).

FRONDICULARIA HILLAE Crespin, 1958.

Frondicularia hillae Crespin, 1958b,
p. 110, pl. 28, figs. 5-8.

C.P.C. 2575. Holotype.

C.P.C. 2576. Paratype.

N. bank of Cattle Ck, below waterfall,
S.E. of Springsure, Qld; Cattle Ck Fm.

C.P.C. 2577. Paratype.

3 m. W. of Coordewandy Hstd, Wooram-
mel area, Carnarvon Basin, W.A.; 132 ft.
above base of Callytharra Fm. (WB206).

Lower Permian (Artinskian).

FRONDICULARIA IMPOLITA Crespin,
1958.

Frondicularia impolita Crespin, 1958b,
p. 111, pl. 28, figs. 9-12.

C.P.C. 2578. Holotype.

C.P.C. 2579, 2580, 2592. Paratypes.

FKO. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

FRONDICULARIA LIMPIDA Crespin, 1958.

Frondicularia limpida Crespin, 1958b,
p. 112, pl. 29, figs. 1, 2.

C.P.C. 2581. Holotype.

N. bank, Cattle Ck, below waterfall, S.E.
of Springsure, Qld; Cattle Ck Fm.

C.P.C. 2582. Paratype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 3115-3120 ft.; equivalent of Cally-
tharra Fm.

Lower Permian (Artinskian).

FRONDICULARIA PARRI Crespin, 1945;
Crespin, 1958.

Frondicularia parri Crespin, 1945, p. 27,
pl. 3, figs. 9, 10, 11; 1958b, p. 113,
pl. 29, figs. 3-7.

C.P.C. 279. Holotype.

C.P.C. 280,* 281. Paratypes.

C.P.C. 2586. Hypotype.

Kulnura Bore, Ph. Kooree, Cty North-
umberland, N.S.W., at 4203 ft.

C.P.C. 2583, 2584. Hypotypes.

FKO. No. 1 Bore, Nerrima, Fitzroy
Basin, W. A., at 129 ft.; Noonkanbah Fm.

C.P.C. 2585. Hypotype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 620-630 ft. (core 15); equivalent of
Byro Group.

Lower Permian (Artinskian).

FRONDICULARIA SEMICOSTULA Crespin, 1958.

Frondicularia semicostula Crespin, 1958b, p. 113, pl. 29, figs. 8, 9.

C.P.C. 2587. Holotype.

C.P.C. 2588. Paratype.

AFO. No. 1 Bore, Myroodah, Canning Basin, W.A., at 1,585-1,590 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

FRONDICULARIA VICTORIAE Crespin, 1950.

Frondicularia victoriae Crespin, 1950, p. 73, pl. 10, fig. 10.

C.P.C. 651. Holotype.

Cliff section between Fisherman's Steps and Bird Rock, Torquay, Vic.; Jan Juc Fm.

Lower Oligocene or Upper Eocene.

FRONDICULARIA WOODWARDI Howchin, 1895; Crespin, 1945, 1958.

Frondicularia woodwardi Howchin, 1895, p. 197, pl. 10, figs. 4-6. Crespin, 1945, p. 28, pl. 3, figs. 12 (non 13); 1958b, p. 115, pl. 29, figs. 10-12.

C.P.C. 282. Hypotype.*

Cattle Ck, below waterfall, S.E. of Springsure, Qld; Cattle Creek Fm.

C.P.C. 283. Hypotype.

Mt. Hope section, 24 m. S.E. of Springsure; Aldebaran Creek Group.

C.P.C. 2591. Hypotype.

N. bank, Cattle Ck, S.E. of Springsure; Cattle Creek Fm.

C.P.C. 2589. Hypotype.

Fossil Cliff, Irwin R., Irwin Basin, W.A.; Fossil Cliff Fm.

C.P.C. 2590. Hypotype.

FKO. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

GEINITZINA CASEYI Crespin, 1958.

Geinitzina caseyi Crespin, 1958b, p. 116, pl. 30, figs. 1-3.

C.P.C. 2593. Holotype.

C.P.C. 2594, 2595. Paratypes.

BMR. Bore No. 1, Jurgurra Ck, Fitzroy Basin, W.A., at 494 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

GEINITZINA STRIATOSULCATA Crespin, 1958.

Geinitzina striatosulcata Crespin, 1958b, p. 116, pl. 30, figs. 4-7.

C.P.C. 2596. Holotype.

C.P.C. 2597, 2598. Paratypes.

FKO. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 129 ft.; Noonkanbah Fm.

C.P.C. 2599. Paratype.

BMR. No. 1 Bore, Jurgurra Ck, Canning Basin, W.A., at 494 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

GEINITZINA TRIANGULARIS Chapman & Howchin, 1905; Crespin, 1945, 1958.

Geinitzina triangularis Chapman & Howchin, 1905, p. 16, pl. 2, figs. 9a, b; 10. Crespin, 1945, p. 29, pl. 3, figs. 14, 15; 1958b, p. 118, pl. 30, figs. 8-11.

C.P.C. 284, 285. Hypotypes.

Pokolbin, Hunter River area, N.S.W.,; Dalwood Group ("Lower Marine Series").

C.P.C. 2601. Hypotype.

Reid's Dome, 2.3 m. S.S.W. of Springsure, Qld; Mantuan *Productus* Bed.

C.P.C. 2601. Hypotype.

C.P.C. 2901. Tectotype.

Fossil Cliff, Irwin R., Irwin Basin, W.A.; Fossil Cliff Fm.

C.P.C. 2602. Hypotype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,220-3,240 ft. (core 67); equivalent of Callytharra Fm.

Lower Permian (Artinskian).

GIRALIARELLA ANGULATA Crespin, 1958.

Giraliarella angulata Crespin, 1958b, p. 56, pl. 9, figs. 1-5.

C.P.C. 2428. Holotype.

C.P.C. 2429. Paratype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

Lower Permian (Artinskian).

GIRALIARELLA RHOMBOIDALIS Crespin, 1958.

Giraliarella rhomboidalis Crespin, 1958b, p. 58, pl. 9, figs. 9, 10.

C.P.C. 2432. Holotype.

1.9 m. W. of S. of Merlinleigh Hstd, Carnarvon Basin, W.A.; Wandagee Fm. (G.327).

Lower Permian (Artinskian).

GIRALIARELLA TRAVESI Crespin, 1958.

Giraliarella travesi Crespin, 1958b, p. 57, pl. 9, figs. 6-8.

C.P.C. 2431. Holotype.

AFO. No. 1 Bore, Myroodah, Fitzroy Basin, W.A., at 2,140-2,145 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

GLOBIGERINA CRETACEA d'Orbigny, 1826; Crespin, 1953.

Globigerina cretacea d'Orbigny, 1826, p. 34, pl. 4, figs. 13, 14. Crespin, 1953a, p. 35, pl. 6, figs. 15a-c.

C.P.C. 919. Hypotype.

Patchawarra Bore, S.A., 540 m. N. of Adelaide, at 4,906 ft.

Lower Cretaceous.

GLOBIGERINA PLANISPIRA Tappan, 1940; Crespin, 1953.

Globigerina planispira Tappan, 1940, p. 112, pl. 19, figs. 12a-c. Crespin, 1953a, p. 35, pl. 6, fig. 16.

C.P.C. 920. Hypotype.

Kopperamanna Bore, S.A., 430 m. N. of Adelaide at 1,907 ft.

Lower Cretaceous.

GLOBOTRUNCANA (GLOBOTRUNCANA)

ARCA (Cushman), 1926; Edgell, 1957.

Pulvinulina arca Cushman, 1926, p. 23, pl. 3, figs. 1a-c.

Globotruncana (Globotruncana) arca, Edgell, 1957, p. 110, pl. 1, figs. 10-12; pl. 3, figs. 4-6.

C.P.C. 1979, 1980, 1999. Hypotypes.

Giralia Range, Carnarvon Basin, W.A.; Korojon Calcarene (GC307).

Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)

CITAE Bolli, 1951; Edgell, 1957.

Globotruncana citae Bolli, 1951, p. 197, pl. 35, figs. 4-6.

Globotruncana (Globotruncana) citae, Edgell, 1957, p. 111, pl. 1, figs. 13, 15.

C.P.C. 1981. Hypotype.

Giralia Range, Carnarvon Basin, W.A.; Miria Marl (GE29).

Upper Cretaceous (Maestrichtian).

GLOBOTRUNCANA (GLOBOTRUNCANA)

CONTUSA (Cushman), 1926; Edgell, 1957.

Pulvinulina arca Cushman var. *contusa* Cushman, 1926, pl. 1, p. 23.

Globotruncana (Globotruncana) contusa, Edgell, 1957, p. 111, pl. 2, figs. 10-12; pl. 3, figs. 7-9; pl. 4, figs. 1-3.

C.P.C. 1982, 1983, 1984. Hypotypes.

N. end of Giralia Range, Carnarvon Basin, W.A.; Miria Marl.

Upper Cretaceous (Maestrichtian).

GLOBOTRUNCANA (GLOBOTRUNCANA)

ELEVATA (Brotzen), 1934; Edgell, 1957.

Rotalia elevata Brotzen, 1934, p. 66, pl. 3, fig. 3.

Globotruncana (Globotruncana) elevata, Edgell, 1957, p. 112, pl. 4, figs. 4-6.

C.P.C. 1985. Hypotype.

N. end of Giralia Anticline, Carnarvon Basin, W.A.; Miria Marl (GE27).

Upper Cretaceous (Maestrichtian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
FORNICATA Plummer, 1931; Edgell, 1957.
Globotruncana fornicata Plummer, 1931, pl. 3, figs. 4-6.
Globotruncana (Globotruncana) fornicata, Edgell, 1957, p. 122, pl. 3, figs. 10-12.
 C.P.C. 1986. Hypotype.
 Giralia Range, Carnarvon Basin, W.A.; Korojon Calcarenite (GC308).
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
GLOBIGERINOIDES Brotzen, 1936; Edgell, 1957.
Globotruncana globigerinoides Brotzen, 1936, p. 177, pl. 12, figs. 3a-c; pl. 13, fig. 3.
Globotruncana (Globotruncana) globigerinoides, Edgell, 1957, p. 112, pl. 2, figs. 13-15.
 C.P.C. 1987. Hypotype.
 Brickhouse Bore, near Carnarvon, Carnarvon Basin, W.A., at 655 ft.
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
LAPPARENTI Brotzen subspec. **LAPPARENTI** Brotzen, 1936; Edgell, 1957.
Globotruncana lapparenti Brotzen, 1936, p. 175.
Globotruncana (Globotruncana) lapparenti subspec. *lapparenti*, Edgell, 1957, p. 113, pl. 1, figs. 7-9.
 C.P.C. 1988. Hypotype.
 Brickhouse Bore, Carnarvon Basin, W.A., at 995 ft.
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
 cf. **LAPPARENTI** Brotzen, 1936; Edgell, 1957.
Globotruncana (Globotruncana) cf. lapparenti, Edgell, 1957, pl. 1, figs. 4-6.
 C.P.C. 1998. Figured specimen.
 Giralia Range, Carnarvon Basin, W.A.; Korojon Calcarenite.
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
LAPPARENTI Brotzen cf. subspec. **TRICARINATA** (Quereau), 1893; Edgell, 1957.
Globotruncana (Globotruncana) lapparenti cf. subspec. *tricarinata*, Edgell, 1957, p. 113, pl. 3, figs. 1-3.
 C.P.C. 1989. Figured specimen.
 N. end of Giralia Anticline, Carnarvon Basin, W.A.; Korojon Calcarenite (GE21).
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
LUGEONI Tilev, 1951; Edgell, 1957.
Globotruncana lugeoni Tilev, 1951, p. 41, textfigs. 10a-c; 11a-d; 12a-e; 13a-d; pl. 1, figs. 5-7; pl. 2, figs. 1a-b; pl. 3, fig. 1.
Globotruncana (Globotruncana) lugeoni, Edgell, 1957, p. 113, pl. 2, figs. 7-9.
 C.P.C. 1990. Hypotype.
 Giralia Range, Carnarvon Basin, W.A.; Miria Marl (GC301).
Upper Cretaceous (Maestrichtian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
MARGINATA (Reuss), 1845; Edgell, 1957.
Rosalina marginata Reuss, 1845, p. 36, pl. 8, figs. 54, 74; pl. 13, fig. 68.
Globotruncana (Globotruncana) marginata, Edgell, 1957, p. 114, pl. 2, figs. 4-6.
 C.P.C. 1991. Hypotype.
 Giralia Range, Carnarvon Basin, W.A.; Korojon Calcarenite (GC308).
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
PARAVENTRICOSA (Hofker), 1956; Edgell, 1957.
Marginotruncana paraventricosa Hofker, 1956, p. 328, text-figs. 17, 18.
Globotruncana (Globotruncana) paraventricosa, Edgell, 1957, p. 114, pl. 1, figs. 1-3.
 C.P.C. 1992. Hypotype.
 Giralia Range, Carnarvon Basin, W.A.; Korojon Calcarenite (GE56).
Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
PLANATA Edgell, 1957.

Globotruncana (Globotruncana) planata
Edgell, 1957, p. 115, pl. 4, figs. 7-9.

C.P.C. 1993. Holotype.

C.P.C. 1944, 1995. Paratypes.

N. end of Giralia Anticline, Carnarvon Basin, W.A.; Miria Marl (GE28).

Upper Cretaceous (Campanian).

GLOBOTRUNCANA (GLOBOTRUNCANA)
SPINEA Kikoine, 1947; Edgell, 1957.

Globotruncana spinea Kikoine, 1947,
p. 21, text-figs.

Globotruncana (Globotruncana) spinea,
Edgell, 1957, p. 115, pl. 2, figs. 1-3.

C.P.C. 1966. Hypotype.

Gin Gin, Perth Basin, W.A.; Gingin Chalk.

Upper Cretaceous (Santonian).

GLOBOTRUNCANA (ROTALIPORA) cf.
TURONICA (Brotzen), 1942; Edgell, 1957.

Rotalipora turonica Brotzen, 1942, p. 32,
text-fig. 10.

Globotruncana (Rotalipora) cf. turonica,
Edgell, 1957, p. 109, pl. 1, figs. 16-18.

C.P.C. 1978. Figured specimen.

Brickhouse Bore, near Carnarvon, Carnarvon Basin, W.A., at 1,210 ft.

Upper Cretaceous (Cenomanian-Turonian).

GLOMOSPIRA ADHAERENS Parr, 1942;
Crespin, 1958.

Glomospira adhaerens Parr, 1942, p. 103,
pl. 1, fig. 2. Crespin, 1958b, p. 70,
pl. 13, figs. 6, 7.

C.P.C. 2473, 2474. Hypotypes.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

Lower Permian (Artinskian).

GLOMOSPIRELLA NYEI Crespin, 1958.

Glomospirella nyei Crespin, 1958b, p. 70,
pl. 13, figs. 1-5.

C.P.C. 2475. Holotype.

Cundlego Crossing, Minilya R., Carnarvon Basin, W.A.; Cundlego Fm.

C.P.C. 2476. Paratype.

Callytharra Springs, Carnarvon Basin; Callytharra Fm. (GW138).

C.P.C. 2477. Paratype.

Giralia No. 1 Bore, Carnarvon Basin, at 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

C.P.C. 2478. Paratype.

45 ch. on bearing 124° from Scotville end of Collinsville-Scotville railway line, Ph. Springlands, Cty Drake, Qld; "Middle Bowen".

Lower Permian (Artinskian).

GYPsINA GLOBULUS (Reuss), 1848;
Crespin, 1953.

Cerriopora globulus Reuss, 1848, p. 33,
pl. 5, fig. 7.

Gypsina globulus, Crespin, 1953b, pl. 10,
fig. 1.

C.P.C. 998. Tectotype.

3½ m. N. 35° W. from Central Hill, Cape Range, Carnarvon Basin, W.A.; Trealla Lst.

Lower Miocene (f₁-f₂ stage).

GYPsINA HOWCHINI Chapman, 1910;
Crespin, 1936, 1954.

Gypsina howchini Chapman, 1910;
p. 291, pl. 2, figs. 4a, b; pl. 3, figs. 3-5.
Crespin, 1936, pl. 1, figs. 7, 8; 1954,
p. 50, pl. 7, fig. 15.

C.P.C. 80. Hypotype.

Lake Wellington Oil Bore, ph. Glencoe, Gippsland, Vic., at 650-654 ft.

C.P.C. 81. Hypotype.*

Batesford Quarry, near Geelong, Vic.

C.P.C. 1970. Hypotype.

Amber's Bore, Netley, Adelaide Plains, S.A., at 362-400 ft.; Oaklands Lst.

Lower Miocene.

HANTKENINA (APPLINELLA) cf. DUMBLEI Weinzierl & Applin, 1929; Crespin, 1958.

Hantkenina dumblei Weinzierl & Applin, 1929, p. 402, pl. 43, figs. 5a, b.

Hantkenina (Applinella) cf. dumblei, Crespin, 1958a, p. 318, text-figs. 1-4.

C.P.C. 1525-1528. Figured specimens.

Cape Range No. 1 Bore, Carnarvon Basin, W.A., at 850-860 ft.

Middle to Upper Eocene.

HANTKENINA (APPLINELLA) cf. LONGISPINA Cushman, 1925; Crespin, 1958.

Hantkenina longispina Cushman, 1925, p. 2, pl. 2, fig. 4.

Hantkenina (Applinella) cf. longispina, Crespin, 1958a, p. 318, text-fig. 5.

C.P.C. 1529. Figured specimen.

Cape Range No. 1 Bore, Carnarvon Basin, W. A., at 850-860 ft.

Middle to Upper Eocene.

HAPLOPHRAGMOIDES CHAPMANI

Crespin, 1944; Crespin, 1953.

Haplophragmoides chapmani, 1944, p. 19, pl. 1, figs. 2a-c; 1953a, p. 29, pl. 5, fig. 3.

C.P.C. 250. Holotype.

C.P.C. 251. Paratype.

Bore No. 6763, D. L. Murray's "Goolgumble", 30 m. N.E. of Bourke, N.S.W., at 277 ft. (holotype) and 165 ft. (paratype).

Lower Cretaceous.

HAPLOPHRAGMOIDES DICKINSONI

Crespin, 1953.

Haplophragmoides dickinsoni Crespin, 1953a, p. 29, pl. 5, fig. 6.

C.P.C. 891. Holotype.

Bore at Oodnadatta, S.A., 550 m. N.N.W. of Adelaide, at 965-1,000 ft.

Lower Cretaceous.

HEMIGORDIUS HARLTONI Cushman & Waters, 1928; Crespin, 1958.

Hemigordius harltoni Cushman & Waters, 1928, p. 43, pl. 5, figs. 8, 9. Crespin, 1958b, p. 79, pl. 16, figs. 1-6; pl. 31, fig. 6.

C.P.C. 2501, 2502. Hypotypes.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 620-630 ft. (core 15); equivalent of Byro Group.

C.P.C. 2503, 2504. Hypotype and tectotype.

Water Bore, Jurgurra Ck, near BMR. No. 1 Bore, Canning Basin, W.A., at 612-613 ft.; Noonkanbah Fm.

C.P.C. 2613-2615. Hypotypes.

BMR. No. 1 Bore, Jurgurra Ck, at 494 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

HEMIGORDIUS SCHLUMBERGI (Howchin), 1895; Crespin, 1958.

Cornuspira schlumbergi Howchin, 1895, p. 195, pl. 10, figs. 1-3.

Hemigordius schlumbergi, Crespin, 1958b, p. 81, pl. 16, figs. 7-9; pl. 21, figs. 4, 5.

C.P.C. 2505, 2506, 2508. Hypotypes and tectotype.

Fossil Cliff, Irwin R., Irwin Basin, W.A.; Fossil Cliff Fm.

C.P.C. 2507. Hypotype.

Section near mouth of Salt Gully, Callytharra Springs, Carnarvon Basin, W.A.; Callytharra Fm.

C.P.C. 2889. Tectotype.

Approx. 1.6 m. S.W. of Paradise, Mt. Wynne Dome, Fitzroy Basin, W.A.; Nura Nura Member, Poole Sdst.

Lower Permian (Artinskian).

HETEROSTEGINA BORNEËNSIS Van der Vlerk, 1929; Crespin, 1938.

Heterostegina borneënsis Van der Vlerk, 1929, p. 16, pl. 16, figs. 6a-c, 25a-b.

Crespin, 1938b, p. 10, pl. 3, figs. 6-9.

C.P.C. 142-144. Tectotypes.

OKTI R., western Papua, lat. 5° 15' S., long. 141° 10' E., near suspension bridge.

Lower Miocene ("e" stage).

HETEROSTEGINA MARGARITATA

Schlumberger, 1902; Chapman, 1914.

Heterostegina margaritata Schlumberger, 1902, p. 252, pl. 7, fig. 4.

Chapman, 1914, p. 293, pl. 9, fig. 11.

C.P.C. 102. Figured section.

Bootless Inlet, Papua.

Lower Miocene.

HIPPOCREPINELLA BIAPERTA Crespin, 1958.

Hippocrepinella biaperta Crespin, 1958b, p. 37, pl. 1, figs. 1-8.

C.P.C. 2351. Holotype.

C.P.C. 2352, 2353. Paratypes.

Oonah, Tas., on main Somerset-Waratah road, 2 m. N. of Waratah; Quamby Mudstone.

Lower Permian (Artinskian).

HOFKERINA SEMIORNATA (Howchin), 1889; Crespin, 1936.

Pulvinulina semiornata Howchin, 1889, p. 14, pl. 1, figs. 12a-c.

Hofkerina semiornata, Crespin, 1936, p. 6, pl. 1, fig. 3.

C.P.C. 76. Hypotype.

No. 1 Bore, Kalimna Oil Co., Rigby Island, Gippsland Lakes, Vic. at 898 ft.

Lower Miocene.

HYPERAMMINA ACICULA (Parr) 1942; Crespin, 1945, 1958.

Hyperamminoides acicula Parr, 1942, p. 105, pl. 1, figs. 4, 5; pl. 2, fig. 4.

Crespin, 1945, p. 24, pl. 3, fig. 1.

Hyperammina acicula, Crespin, 1958b, p. 44, pl. 5, fig. 11; pl. 6, fig. 7.

C.P.C. 271. Hypotype.

"Ingelara" property, Springsure, Qld; Ingelara Fm.

C.P.C. 2380. Hypotype.

S. side of Minilya R. near Coolkilya Pool, Wandagee Stn, Carnarvon Basin, W.A.; Quinlanie Shale.

C.P.C. 2381. Hypotype.

4.8 m. S.W. of Moogooree Hstd, Williambury Stn, Carnarvon Basin; 405 ft. above base of Coyrie Fm. (G 240).

Lower Permian (Artinskian).

HYPERAMMINA CALLYTHARRAENSIS

Crespin, 1958.

Hyperammina callytharraensis Crespin, 1958b, p. 45, pl. 4, figs. 1-5.

C.P.C. 2382. Holotype.

Callytharra Springs, Carnarvon Basin, W.A.; 22-25 ft. above base of Callytharra Fm. (GW 84).

C.P.C. 2383. Paratype.

Section near Salt Gully, Callytharra Springs; Callytharra Fm. (COR115).

C.P.C. 2384. Paratype.

Wyndham Gap, Bidgemia Stn, Carnarvon Basin; near base of Callytharra Fm. (COR94).

C.P.C. 2385. Paratype.

Callytharra Springs; 180-230 ft. above base of Callytharra Fm. (GW138).

Lower Permian (Artinskian).

HYPERAMMINA COLEYI Parr, 1942; Crespin, 1958.

Hyperammina coleyi Parr, 1942, p. 104, pl. 2, fig. 3. Crespin, 1958b, p. 46, pl. 6, figs. 5, 6; pl. 7, figs. 3-5; pl. 33, figs. 1, 2.

C.P.C. 2388. Hypotype.

S. side of Minilya R., near Coolkilya Pool, Wandagee Stn., Carnarvon Basin, W.A., Quinlanie Shale.

C.P.C. 2389. Hypotype.

4.8 miles S.W. of Moogooree Hstd., Williambury Stn., Carnarvon Basin; 405 ft. above base of Coyrie Fm. (G240).

C.P.C. 2390-2391. Hypotypes.

Callytharra Springs, Carnarvon Basin; 180-230 ft. above base of Callytharra Fm. (GW138).

C.P.C. 2392. Hypotype.

5½ m. W.S.W. of Wandagee Hstd, Mandagee Stn, Carnarvon Basin; base of Quinanie Shale (MG243).

Lower Permian (Artinskian).

HYPERAMMINA ELEGANS (Cushman & Waters), 1928; Crespin, 1958.

Hyperamminella elegans Cushman & Waters, 1928, p. 36, pl. 4, figs. 3, 4.

Hyperammina elegans, Crespin, 1958b, p. 47, pl. 5, figs. 1-5.

C.P.C. 2393, 2394, 2395, 2396, 2611. Hypotypes.

4.6 m. S.W. of Moogooree Hstd, Carnarvon Basin, W.A.; 320 ft. above base of Coyrie Fm. (ML10).

Lower Permian (Artinskian).

HYPERAMMINA ELEGANTISSIMA Plummer, 1945; Crespin, 1958.

Hyperammina elegantissima Plummer, 1945, p. 222, pl. 15, figs. 17-25; Crespin, 1958b, p. 48, pl. 7, figs. 8-10.

C.P.C. 2397-2399. Hypotypes.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,220-3,240 ft. (core 67) and 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

Lower Permian (Artinskian).

HYPERAMMINA EXPANSA (Plummer) 1945; Crespin, 1958.

Hyperamminoides expansus Plummer, 1945, p. 223, pl. 16, figs. 1-6.

Hyperammina expansa Crespin, 1958b, p. 49, pl. 4, figs. 9-11.

C.P.C. 2400, 2401. Hypotypes

1½ m. E.S.E. of Cundlego Crossing, Minilya R., Carnarvon Basin, W.A.; 65 feet below top of Bulgadoo Shale (G211).

C.P.C. 2402. Hypotype.

Brutens Yard area, Fitzroy Basin, W.A.; 10 ft. below top of Noonkanbah Fm. (KNF76C).

Lower Permian (Artinskian).

HYPERAMMINA FLETCHERI Crespin, 1958.

Hyperammina fletcheri Crespin, 1958b, p. 50, pl. 6, figs. 1-4.

C.P.C. 2403. Holotype.

C.P.C. 2040-2406. Paratypes.

Road cutting 9 m. S. of Singleton on New England Highway, Hunter R. area, N.S.W.; Mulbring Subgroup, Maitland Group.

Lower Permian (Artinskian).

HYPERAMMINA FUSTA Crespin, 1958.

Hyperammina fusta, Crespin, 1958b, p. 51, pl. 4, figs. 6-8.

C.P.C. 2407. Holotype.

C.P.C. 2408, 2409. Paratypes.

4.6 m. S.W. of Moogooree Hstd, Carnarvon Basin, W.A.; 320 ft. above base of Coyrie Fm. (ML10).

Lower Permian (Artinskian).

HYPERAMMINA HADZELI Crespin, 1958.

Hyperammina hadzeli Crespin, 1958b, p. 51, pl. 5, figs. 6-10.

C.P.C. 2410. Holotype.

C.P.C. 2411-2414. Paratypes.

Callytharra Springs, Carnarvon Basin, W.A.; 180-230 ft. above base of Callytharra Fm. (GW138).

Lower Permian (Artinskian).

HYPERAMMINA HEBDENENSIS Crespin, 1958.

Hyperammina hebdensis Crespin, 1958b, p. 52, pl. 6, figs. 8-12.

C.P.C. 2415. Holotype.

Gully near Hebden, por. 148, Ph. Liddell, Hunter River area, N.S.W.; Mulbring Subgroup, Maitland Group.

C.P.C. 2418, 2603. Paratypes.

BMR. Bore, No. 2 (S), Mt. Arthur, Hunter River area, at 55-60 ft.; Maitland Group.

Lower Permian (Artinskian).

HYPERAMMINOIDES ACICULA Parr,
1942 (see **HYPERAMMINA ACICULA**
(Parr), Crespin, 1958).

HYPERAMMINOIDES sp. cf. **PROTEUS**
(Cushman & Waters), 1928, Crespin & Parr,
1941.

Hyperamminoides sp. cf. *proteus*, Crespin
and Parr, 1941, p. 301, pl. 12, figs.
4a, b; 5.

C.P.C. 147, 148. Figured specimens.

Just below Harper's Hill tuffs, W. of
Allandale Rd. turn-off from main Northern
Rd. near local rd. to "Oswald" property,
Hunter River area, N.S.W.

Permian.

HYPERAMMINITA RUDIS (Parr), 1942;
Crespin, 1948.

Hyperammina (?) *rudis* Parr, 1942,
p. 105, pl. 1, fig. 3.

Hyperamminita rudis, Crespin, 1958b,
p. 54, pl. 6, fig. 13; pl. 7, fig. 12.

C.P.C. 2419. Hypotype.

16 m. N.N.W. of Bidgemia Hstd, Bid-
gemia Stn, Carnarvon Basin, W.A.; top of
Wandagee Fm. (G321).

C.P.C. 2420. Hypotype.

Wooramel R., 2½ m. W. of junction with
Madeline Ck, Carnarvon Basin; Madeline Fm.
(WB83).

C.P.C. 2356. Hypotype.

BMR. Water Bore, Jurgurra Ck, Canning
Basin, W.A., at 30-50 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

LACAZINA WICHMANI Schlumberger,
1894; Crespin, 1938.

Lacazina wichmani Schlumberger, 1894;
p. 295, pl. 12. Crespin, 1938a, p. 6,
pl. 1, figs. 1-7.

C.P.C. 118-125. Tectotypes.

Creek near Chimbu Aerodrome, N. side
of Wahgi Valley, Central Highlands, N.G.

Eocene.

LAGENA APICULATA Reuss var.
PHIALAEFORMIS Crespin, 1953.

Lagena apiculata Reuss var. *phialaeformis*
Crespin, 1953a, p. 34, pl. 6, fig. 9.

C.P.C. 916. Holotype.

Marree Bore, S.A., 360 m. N. of Ade-
laide, at 160 ft.

Lower Cretaceous.

LAMARCKINA GLENCOENSIS Chapman
& Crespin, 1930; Crespin, 1950.

Lamarckina glencoensis Chapman &
Crespin, 1930b, p. 99, pl. 5, figs. 11, 12.
Crespin, 1950, p. 74, pl. 10, figs. 13a, b.

C.P.C. 23. Holotype.

C.P.C. 24. Paratype.

No. 3 Bore, Ph. Glencoe, Gippsland,
Vic., at 100 ft.

Lower Oligocene or Upper Eocene.

LENTICULINA AUSTRALIENSIS Crespin,
1953.

Lenticulina australiensis Crespin, 1953a,
p. 33, pl. 6, fig. 4.

C.P.C. 910. Holotype.

Marree Bore, S.A., 360 m. N. of Ade-
laide, at 190 ft.

Lower Cretaceous.

LENTICULINA GUNDERBOOKAENSIS
Crespin, 1944 = **ROBULUS GUNDER-**
BOOKAENSIS (Crespin), 1953.

Lenticulina gunderbookaensis Crespin,
1944, p. 21, pl. 1, figs. 9a, b.

Robulus gunderbookaensis, Crespin,
1953a, p. 32, pl. 6, figs. 2a, b.

C.P.C. 257. Holotype.

Bore No. 3785, W. R. Johnston,
"Calooma", 4 m. S.E. of Lila Springs, and
30 m. N.N.W. of Bourke, N.S.W., at 725 ft.

C.P.C. 908. Hypotype.

Marree Bore, S.A., 360 m. N. of Ade-
laide, at 140 ft.

Lower Cretaceous.

LENTICULINA WARREGOENSIS Crespin, 1944 = **ROBULUS WARREGOENSIS** (Crespin), 1953.

Lenticulina warregoensis Crespin, 1944, p. 21, pl. 1, figs. 8a, b.

Robulus warregoensis, Crespin, 1953a, p. 32, pl. 6, fig. 3.

C.P.C. 256. Holotype.

Bore No. 3843, A. Holmes, "Kerribee", near Ellaville, abt. 50 m. N.W. of Bourke, N.S.W., at 256 ft.

C.P.C. 909. Hypotype.

Marree Bore, S.A., 360 m. N. of Adelaide, at 120 ft.

Lower Cretaceous.

LEPIDOCYCLINA ANDREWSIANA (Jones & Chapman), 1900; Chapman, 1914.

Orbitoifes (Lepidocyclina) andrewsiana Jones & Chapman, 1900, p. 255, pl. 21, fig. 14.

Lepidocyclina andrewsiana, Chapman, 1914, p. 298, pl. 9, fig. 8.

C.P.C. 100. Tectotype.

Bootless Inlet, Papua.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA) ANGULOSA (Provale), 1909; Crespin, 1936, 1953.

Lepidocyclina tournoueri Lem. & Douv. var. *angulosa* Provale, 1909, p. 28 (90), pl. 2, figs. 13-15.

Lepidocyclina (Nephrolepidina) angulosa, Crespin, 1936, p. 7, pl. 2, fig. 13; 1953b, pl. 10, fig. 3.

C.P.C. 85. Hypotype.

No. 1 Bore; Ph. Yulecart (Hamilton Bore), Vic., at 38-43 ft.

C.P.C. 999. Tectotype.

150 feet below top of ridge, Mt. Lefroy, Cape Range, Carnarvon Basin, W.A.; Tulki Lst.

Lower Miocene (f₁-f₂ stage).

LEPIDOCYCLINA (EULEPIDINA) BADJIRRAENSIS Crespin, 1952; 1953

Lepidocyclina (Eulepidina) badjirraensis Crespin, 1952, p. 29, pl. 6, figs. 1, 2, 5; pl. 7, figs. 1, 2, 4; pl. 8, figs. 1-5; 1953b, p. 64, pl. 7, figs. 2, 3, pl. 8, fig. 4, pl. 10, fig. 3.

C.P.C. 729. Holotype (form A).

C.P.C. 730. Form B.

C.P.C. 785, 790. Tectotypes (form A).

C.P.C. 789, 791. Tectotypes (form B).

C.P.C. 989, 1000. Hypotypes.

Badjirrajirra Creek, 4 m. above mouth of E. flank of Cape Range, 11 m. N. of Learmonth, Exmouth Gulf, and 25 m. S. of Northwest Cape, Carnarvon Basin, W.A.; Mandu Lst.

Lower Miocene ("e" stage).

LEPIDOCYCLINA (TRYBLIOLEPIDINA) BATESFORDENSIS Crespin, 1943.

Lepidocyclina (Trybliolepidina) batesfordensis Crespin, 1943, p. 170, pl. 5, figs. 16-21; pl. 8, figs. 36-41; pl. 9, figs. 42-45.

C.P.C. 208. Holotype (form A).

C.P.C. 207. Paratype (form B).

C.P.C. 209. Paratype (form A).

C.P.C. 226, 227, 228. Tectotypes (form A).

C.P.C. 229, 230. Tectotypes (form B).

Upper Quarry, Australian Portland Cement Works, Batesford, near Geelong, Vic.

C.P.C. 206. Paratype (form B).

C.P.C. 210. Paratype (form A).

New Quarry, Batesford, near Geelong.

C.P.C. 225. Tectotype (form A).

C.P.C. 231, 232. Tectotypes (form B).

Old Filter Quarry, Batesford, near Geelong.

C.P.C. 211. Paratype (form A).

No. 7 Bore, Ph. Colquhoun (Lake Bunga), Gippsland, Vic., at 480 ft.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA)

BORNEËNSIS Provale, 1909, Chapman & Crespin, 1930; Crespin, 1936.

Lepidocyclina tournoueri Lem. & Douv.
var. *borneënsis* Provale, 1909, p. 74,
pl. 2, figs. 16-19

Lepidocyclina (Nephrolepidina) borneënsis, Chapman & Crespin, 1930, p. 113,
pl. 7, figs. 5, 6. Crespin, 1936, pl. 8,
pl. 2, figs. 14, 15.

C.P.C. 5. Hypotype.

C.P.C. 6. Tectotype.

No. 1 Bore, Pt. Addis, Ph. Bumberrah
(Metung), Gippsland, Vic., at 872 ft.

C.P.C. 86. Hypotype.

No. 1 Bore, Ph. Yulecart (Hamilton
Bore), Vic., at 160-161 ft.

Lower Miocene.

LEPIDOCYCLINA (TRYBLIOLEPIDINA)

GIPPSLANDICA Crespin, 1943.

Lepidocyclina (Trybliolepidina) gippslandica Crespin, 1943, p. 165, pl. 3,
figs. 1-7; pl. 6, figs. 22-28.

C.P.C. 39. Holotype (form A).

C.P.C. 212, 213, 216. Tectotypes (form
A).

No. 5 Bore, Ph. Glencoe, Gippsland,
Vic., at 70 ft.

C.P.C. 40, 93, 196. Paratypes (form
A).

C.P.C. 198. Paratype (form B).

C.P.C. 217, 218. Tectotypes (forms A
and B).

No. 15 Bore, Ph. Stradbroke, Gippsland,
at 45 ft.

C.P.C. 197. Paratype (form A).

Skinner's section, Mitchell River, Ph.
Wuk Wuk, Gippsland.

C.P.C. 199, 200. Paratypes (form B).

Brock's Quarry, Ph. Glencoe, Gippsland.

C.P.C. 214, 215, 233. Tectotypes
(form A).

No. 1 Bore, Pt. Addis, Ph. Bumberrah
(Metung), Gippsland, at 872 ft.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA)

HAMILTONENSIS Chapman and Crespin
1932 (see also *Lepidocyclina (Trybliolepidina)* Howchini).

Lepidocyclina (Nephrolepidina) hamiltonensis Chapman & Crespin, 1932b,
p. 93, pl. 12, figs. 8-10. Crespin,
1936, p. 8, pl. 2, figs. 14, 15.

C.P.C. 32. Holotype.

C.P.C. 33, 34. Tectotypes (A and B).

No. 1 Bore, Ph. Yulecart (Hamilton
Bore), western Vic., holotype at 48-53 ft.;
tectotype A at 68-80 ft.; B at 36-38 ft.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA)

HOWCHINI Chapman & Crespin, 1932 =

LEPIDOCYCLINA (TRYBLIOLEPIDINA)

HOWCHINI Crespin, 1943.

Lepidocyclina (Nephrolepidina) howchini Chapman & Crespin, 1932b,
p. 94, pl. 13, figs. 18, 19.

Lepidocyclina (Trybliolepidina) howchini
Crespin, 1943, p. 168, pl. 4, figs. 8-15;
pl. 7, figs. 30-35.

C.P.C. 42. Holotype (form A).

C.P.C. 43. Tectotype (form A).

C.P.C. 88, 94. Hypotypes (form A).

C.P.C. 222, 223, 224. Tectotypes (form
A).

C.P.C. 202. Hypotype (form B).

C.P.C. 219, 220. Tectotypes (form B).

No. 1 Bore, Ph. Yulecart (Hamilton
Bore), W. Vic., at 36-38 ft., 45-53 ft., 68-80
ft., 80-85 ft. (holotype), and 104-108 ft.

C.P.C. 201. Hypotype (form A).

C.P.C. 221. Tectotype (form A).

Clifton Bank, Hamilton, Ph. Yulecart.

C.P.C. 203, 204. Hypotypes (form A).

C.P.C. 205. Hypotype (form B).*

Flinders, Mornington Peninsula, Vic.

Lower Miocene.

LEPIDOCYCLINA (EULEPIDINA) INSULAE-NATALIS (Jones & Chapman), 1900; Crespin, 1938.

Orbitoides (Lepidocyclina) insulae-natalis
Jones & Chapman, 1900, p. 242, pl. 20, fig. 5.

Lepidocyclina (Eulepidina) insulae-natalis, Crespin, 1938b, p. 11, pl. 3, fig. 1.

C.P.C. 137. Tectotype.

Okti River, near Suspension Bridge, western Papua.

Lower Miocene ("e" stage).

LEPIDOCYCLINA (EULEPIDINA) MANDUENSIS Crespin, 1952; 1953.

Lepidocyclina (Eulepidina) manduensis
Crespin, 1952, p. 30, pl. 6, figs. 3, 4; pl. 7, figs. 3, 5, 6; pl. 8, figs. 6, 7; 1953b, p. 64, pl. 8, figs. 2, 3.

C.P.C. 731. Holotype (form A).

C.P.C. 732. (form B).

C.P.C. 792, 793. Tectotypes (form A).

C.P.C. 786, 787, 788. Tectotypes (form B).

C.P.C. 991. Tectotype.

Badjirrajirra Ck., 4 m. above mouth on E. flank of Cape Range, Carnarvon Basin, W.A., about 11 m. N. of Learmonth, Exmouth Gulf, and 25 m. S. of Northwest Cape; 17 ft. below top of Mandu Lst.

Lower Miocene ("e" stage).

LEPIDOCYCLINA MARGINATA (Michelotti), 1841; Crespin, 1936 (see **L. (T.) gippslandica** form B, and **L. (T.) howchini** form B).

Nummulites marginata Michelotti, 1841, p. 45, pl. 3, fig. 4.

Lepidocyclina marginata, Crespin, 1936, p. 9, pl. 2, figs. 20, 21.

C.P.C. 89. Hypotype.

No. 15 Bore, Ph. Stradbroke, Gippsland, Vic., at 45 ft.

C.P.C. 90. Hypotype.

No. 1 Bore, Ph. Yulecart (Hamilton Bore), W. Vic., at 80-85 ft.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA) MARTINI Schlumberger, 1900; Chapman & Crespin, 1932; Crespin, 1936 (see **L. (T.) gippslandica**).

Lepidocyclina martini Schlumberger, 1900, p. 131, pl. 6, figs. 5-8.

Lepidocyclina (Nephrolepidina) martini, Chapman and Crespin, 1932a, p. 95, pl. 12, figs. 11-13. Crespin, 1936, p. 9, pl. 2, figs. 27.

C.P.C. 35. Hypotype.

C.P.C. 37, 38. Tectotypes.

No. 15 Bore, Ph. Stradbroke, Gippsland, Vic., at 45 ft.

C.P.C. 36. Hypotype.

No. 5 Bore, Ph. Glencoe, Gippsland, at 80 ft.

C.P.C. 94. Hypotype.

No. 1 Bore, Ph. Yulecart (Hamilton Bore), W. Vic., at 104-108 ft.

Lower Miocene.

LEPIDOCYCLINA (EULEPIDINA) MURRAYANA (Jones & Chapman), 1900; Crespin, 1938.

Orbitoides (Lepidocyclina) murrayana, Jones & Chapman, 1900, p. 252, pl. 21, fig. 10.

Lepidocyclina (Eulepidina) murrayana, Crespin, 1938b, p. 11, pl. 3, figs. 2, 3, 4, 9.

C.P.C. 138, 140, 114. Tectotypes.

Okti River, near Suspension Bridge, western Papua.

Lower Miocene ("e" stage).

LEPIDOCYCLINA (NEPHROLEPIDINA) RADIATA (Martin), 1880; Chapman & Crespin, 1932; Crespin, 1936 (see **L. (T.) gippslandica**).

Orbitoides radiata Martin, 1888, p. 165, pl. 27, fig. 4.

Lepidocyclina (Nephrolepidina) radiata, Chapman & Crespin, 1932a, pl. 1, fig. 1; 1932b, p. 95, pl. 13, figs. 15-17. Crespin, 1936, p. 10, pl. 2, figs. 25, 26.

C.P.C. 39. Hypotype.

No. 5 Bore, Ph. Glencoe, Gippsland, Vic.,
at 70 ft.

C.P.C. 40, 93. Hypotypes.

C.P.C. 41. Tectotype.

No. 15 Bore, Ph. Stradbroke, Gippsland,
at 45 ft.

Lower Miocene.

LEPIDOCYCLINA (TRYBLIOLEPIDINA)

SONDAICA Yabe & Hanzawa, 1929;
Crespin, 1953.

Lepidocyclus (Nephrolepidina) sondaica
Yabe & Hanzawa, 1929, p. 172, pl.
20, fig. 3; pl. 21, fig. 5; pl. 26, fig. 5.

Lepidocyclus (Trybliolepidina) sondaica,
Crespin, 1953b, p. 66, pl. 8, fig. 2.

C.P.C. 990. Tectotype.

Badjirrajirra Ck., Cape Range, Carnarvon
Basin, W.A., 4 m. from mouth and 11 m.
N. of Learmonth, Exmouth Gulf; Mandu Lst.

Lower Miocene ("e" stage).

LEPIDOCYCLINA SUMATRENSIS (Brady),
1875; Chapman, 1914.

Orbitoides sumatrensis Brady, 1875;
p. 536, pl. 14, fig. 8.

Lepidocyclus sumatrensis, Chapman,
1914, p. 294, pl. 7, fig. 3.

C.P.C. 99. Tectotype.

Bootless Inlet, Papua.

Lower Miocene.

LEPIDOCYCLINA SUMATRENSIS (Brady)
forma MIRABILIS Yabe & Hanzawa, 1930;
Chapman & Crespin, 1932; Crespin, 1936.

Lepidocyclus sumatrensis (Brady) **forma**
mirabilis Yabe & Hanzawa, 1930, p. 31,
pl. 6, figs. 1-7; pl. 7, figs. 1-11.
Chapman & Crespin, 1932a, p. 96,
pl. 11, figs. 1-3. Crespin, 1936, p. 10,
pl. 2, fig. 24.

C.P.C. 25 Hypotype.

No. 1 Bore, Ph. Yulecart (Hamilton
Bore), W. Vic., at 80-85 ft.

C.P.C. 26. Tectotype.

Batesford Quarry, near Geelong, Vic.

C.P.C. 27. Tectotype.

No. 15 Bore, Ph. Stradbroke, Gippsland,
Vic., at 45 ft.

Lower Miocene.

LEPIDOCYCLINA (NEPHROLEPIDINA)

TOURNOUERI Lemoine & Douville, 1904;
Crespin, 1936.

Lepidocyclus tournoueri Lem. & Douv.
1904, p. 19, pl. 1, fig. 5; pl. 2, figs.
2-14; pl. 3, fig. 1.

Lepidocyclus (Nephrolepidina) tour-
noueri, Crespin, 1936, p. 11, pl. 2,
figs. 16, 23.

C.P.C. 87. Hypotype.

Batesford Quarry, near Geelong, Vic.

C.P.C. 92. Hypotype.

No. 15 Bore, Ph. Stradbroke, Gippsland,
Vic., at 45 ft.

Lower Miocene.

LEPIDOCYCLINA VERBEEKI Newton &
Holland var. **PAPUAENSIS** Chapman,
1914.

Lepidocyclus verbeeki N. & H. var.
papuaensis Chapman, 1914, p. 297,
pl. 8, figs. 5, 6; pl. 9, fig. 10.

C.P.C. 95. **Holotype** of var. (vertical
section).

C.P.C. 96, 101. Tectotypes.

Bootless Inlet, Papua.

Lower Miocene.

LEPIDOCYCLINA (TRYBLIOLEPIDINA)
VERRUCOSA Scheffen, 1932; Crespin,
1953.

Lepidocyclus verrucosa Scheffer, 1932,
p. 33, pl. 7, figs. 2-4.

Lepidocyclus (Trybliolepidina) verrucosa,
Crespin, 1953b, p. 65, pl. 7, fig. 1.

C.P.C. 988. Hypotype.*

3½ m. N. 88° W. of Mowboursa Well,
Yardie Creek Stn., Carnarvon Basin, W.A.;
Tulki Lst.

Lower Miocene (f₁ stage).

LINGULINA ANTIQUA Chapman &
Howchin, 1905; Crespín, 1958.

?*Pleurostomella antiqua* Chapman &
Howchin, 1905, p. 14, pl. 2, fig. 5

Lingulina antiqua, Crespín, 1958b, p. 108,
pl. 24, fig. 8.

C.P.C. 2569. Hypotype.

BMR. Bore No. 1 (S), State Forest,
Ravensworth, Hunter River area, N.S.W., at
746 ft.; Maitland Group.

Lower Permian.

LINGULINA BARTRUMI Chapman var.
METUNGENSIS Chapman & Crespín,
1930.

Lingulina bartrumi Chapman var. *metun-*
gensis Chapman & Crespín, 1930b,
p. 97, pl. 5, fig. 5.

C.P.C. 18. **Holotype.**

No. 1 Bore, Pt. Addis, Ph. Bumberrah
(Metung), Gippsland, Vic., at 1,320 ft.

Oligocene.

LINGULINA sp. Crespín, 1958.

Lingulina sp. Crespín, 1958b, p. 109,
pl. 24, fig. 9.

C.P.C. 2570. Figured specimen.

BMR. No. 1 Bore (S.C.), St. Helier's,
Hunter River area, N.S.W., at 45 ft. 6in.-
55 ft. 6in.; Maitland Group.

Lower Permian.

LUGTONIA THOMASI Crespín, 1958.

Lugtonia thomasi Crespín, 1958b, p. 65,
pl. 7, figs. 6, 7.

C.P.C. 2460. **Holotype.**

C.P.C. 2461. Paratype.

1½ m. S.W. of Nalbia Dam, Dandagee
Stn., Carnarvon Basin, W.A.; Cundlego Fm.
(CT77).

Lower Permian (Artinskian).

MARGINULINA MARREENSIS Crespín,
1953.

Marginulina marreensis Crespín, 1953a,
p. 33, pl. 6, fig. 5.

C.P.C. 911. **Holotype.**

Marree Bore, S.A., 360 m. N. of Adelaide,
at 190 ft.

Lower Cretaceous.

MARGINULINA SUBCRETACEA Crespín,
1944 = **MARGINULINOPSIS SUBCRE-**
TACEUS (Crespín), 1953.

Marginulina subcretacea Crespín, 1944,
p. 21, pl. 1, fig. 10.

Marginulinopsis subcretaceus, Crespín,
1953a, p. 37, pl. 6, figs. 10, 11.

C.P.C. 258. **Holotype.**

Bore No. 3843, A. Holmes, "Kerribee",
near Ellaville, 50 m. N.W. of Bourke, N.S.W.,
at 450 ft.

C.P.C. 914. Hypotype.

Bore No. 5594, Neargo No. 2, 45 m. S. of
Mungundi, N.S.W., at 355 ft.

Lower Cretaceous.

MARGINULINOPSIS AUSTRALIS Crespín,
1953.

Marginulinopsis australis Crespín, 1953a,
p. 33, pl. 6, figs. 6, 7.

C.P.C. 912. **Holotype.**

C.P.C. 913. Paratype.

Marree Bore, S.A., 360 m. N. of Adelaide,
at 190 ft.

Lower Cretaceous.

MARGINULINOPSIS SUBCRETACEUS
(Crespín), 1953 (see *Marginulina subcretacea*
Crespín, 1944).

MASSILINA TORQUAYENSIS (Chapman)
1921; Crespín, 1950, 1954.

Spiroloculina torquayensis Chapman,
1921, p. 321, pl. 51, figs. 1, 2.

Massilina torquayensis, Crespín, 1950,
p. 73, pl. 10, fig. 8; 1954, p. 40, pl. 7,
fig. 13.

C.P.C. 649. Hypotype.

Base of Bird Rock Cliff, Torquay, Vic.;
Jan Juc Fm.

C.P.C. 1958. Hypotype.

Bore No. 47, Glendore, Adelaide Plains,
S.A., at 174-240 ft.

Lower Oligocene or Upper Eocene.

MIOGYPSINA EXCENTRICA Tan, 1937;
Crespin, 1953.

Miogypsina excentrica Tan, 1937, p. 41,
pl. 1, fig. 12; pl. 2, figs. 1-7, 8, 9; pl. 3,
1-9. Crespin, 1953b, p. 66, pl. 9, fig. 6.

C.P.C. 997. Tectotype.

3½ m. S. 19° E. from Yardie Creek Hstd.,
Carnarvon Basin, W.A.; Tulki Lst.

Lower Miocene (f₁ stage).

MIOGYPSINA MAMILLATA Yabe &
Hanzawa, 1930; Chapman & Crespin, 1932.

Miogypsina mamillata Yabe & Hanzawa,
1930, p. 34, pl. 1, fig. 1; pl. 3, figs.
7, 8; pl. 6, fig. 13; pl. 11, figs. 7, 8;
pl. 12, fig. 1; pl. 13, fig. 8. Chapman
& Crespin, 1932b, p. 97, pl. 11, fig. 9.

C.P.C. 30. Tectotype.

No. 7 Bore, Matapu (Oil Search Ltd.),
N.G., at 1,200-1,210 ft.

Miocene ("f" stage).

MIOGYPSINA SAITOI Yabe & Hanzawa,
1930; Chapman & Crespin, 1932.

Miogypsina saitoi Yabe & Hanzawa,
p. 34, pl. 5, fig. 8; pl. 12, fig. 3;
pl. 14, fig. 7. Chapman & Crespin,
1932b, p. 98, pl. 11, fig. 7.

C.P.C. 31. Tectotype.

Mabam River, Matapau, N.G.

Miocene ("f" stage).

NEOALVEOLINA PYGMAEA (Hanzawa),
1930; Crespin, 1938.

Borelis (Fasciolites) pygmaea Hanzawa,
1930, p. 94, pl. 26 (1), figs. 14, 15.

Neoalveolina pygmaea, Crespin, 1938b,
p. 10, pl. 3, figs. 3, 5.

C.P.C. 145. Tectotype.

Okti R., western Papua, lat. 5° 15', long.
141° 10'.

Lower Miocene ("e" stage).

NODOSARIA CONICO-DENSESTRIATA

Paalzow, 1935; Crespin, 1958.

Nodosaria conico-densestriata Paalzow,
1935, p. 38, pl. 4, figs. 21-23. Crespin,
1958b, p. 100, pl. 26, figs. 5, 6.

C.P.C. 2546, 2547. Hypotypes.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 620-630 ft. (core 15); equivalent of
Byro Group.

Lower Permian (Artinskian).

NODOSARIA CRASSULA Crespin, 1958.

Nodosaria crassula Crespin, 1958b,
p. 101, pl. 26, figs. 7, 8.

C.P.C. 2548. Holotype.

C.P.C. 2549. Paratype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 620-630 ft. (core 15); equivalent of
Byro Group.

Lower Permian (Artinskian).

NODOSARIA DECORIS Crespin, 1958.

Nodosaria decoris Crespin, 1958b, p. 101,
pl. 26, figs. 9, 10.

C.P.C. 2550. Holotype.

C.P.C. 2551. Paratype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 560-570 ft. (core 14); equivalent of
Byro Group.

Lower Permian (Artinskian).

NODOSARIA FISHERI Crespin, 1958.

Nodosaria fisheri Crespin, 1958b, p. 102,
pl. 25, figs. 1-3.

C.P.C. 2552. Holotype.

C.P.C. 2553, 2554. Paratypes.

F.K.O. Bore No. 1, Nerrima, Fitzroy
Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

NODOSARIA IRWINENSIS Howchin, 1895;
Crespin, 1958.

Nodosaria irwinensis Howchin, 1895,
p. 196, pl. 10, figs. 7, 8. Crespin,
1958b, p. 103, pl. 25, figs. 4-8; pl. 31,
figs. 8-11.

C.P.C. 2555, 2556. Hypotypes.

Fossil Cliff, Irwin R., Irwin Basin, W.A.;
Fossil Cliff Fm.

C.P.C. 2557, 2558, 2559. Hypotypes.

Callytharra Springs, Carnarvon Basin,
W.A.; 22-35 ft. above base of Callytharra Fm.

Lower Permian (Artinskian).

NODOSARIA RAGGATTI Crespin, 1958.

Nodosaria raggatti Crespin, 1958b, p. 104,
pl. 27, figs. 1-5.

C.P.C. 2560. Holotype.

C.P.C. 2561. Paratype.

Minilya R., ¼ m. upstream from Wandagee Hst., Carnarvon Basin, W.A.; Bulgadoo Shale (OS 123).

C.P.C. 2562, 2563. Paratypes.

Giralia No. 1 Bore, Carnarvon Basin,
at 620-630 ft. (core 14); equivalent of Byro Group.

C.P.C. 2564. Paratype.

F.K.O. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

NODOSARIA SEROCOLDENSIS Crespin, 1945 (see *Rectoglandulina serocoldensis* p. 36).

Nodosaria serocoldensis Crespin, 1945,
p. 26, pl. 3, figs. 6, 7.

C.P.C. 276. Holotype.

C.P.C. 277. Paratype.

Cattle Ck., below waterfall, S.E. of Springsure, Qld.; Cattle Creek Fm.

Lower Permian (Artinskian).

NODOSARIA SPICULATA Crespin, 1958.

Nodosaria spiculata Crespin, 1958b,
p. 105, pl. 25, figs. 10-12.

C.P.C. 2534. Holotype.

C.P.C. 2535, 2536. Paratypes.

BMR. Bore No. 1, Jurgurra Ck., Canning Basin, W.A., at 480-500 ft. (core 12); Noonkanbah Fm.

Lower Permian (Artinskian).

NODOSARIA SPRINGSURENSIS Crespin, 1945, 1958.

Nodosaria springsurensis Crespin, 1945,
p. 26, pl. 3, fig. 5; 1958b, p. 106, pl. 26, figs. 11, 12.

C.P.C. 275. Holotype.

Cattle Ck., below waterfall, S.E. of Springsure, Qld.; Cattle Creek Fm.

C.P.C. 2567. Hypotype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 560-570 ft. (core 14); equivalent of Byro Group.

Lower Permian (Artinskian).

NODOSARIA STRIATELLA (Paalzow), 1935; Crespin, 1958.

Dentalina striatella Paalzow, 1935, p. 28,
pl. 4, fig. 25.

Nodosaria striatella, Crespin, 1958b,
p. 106, pl. 25, fig. 9.

C.P.C. 2568. Hypotype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 560-579 ft. (core 14); equivalent of Byro Group.

Lower Permian (Artinskian).

NODOSARIA TERETA Crespin, 1958.

Nodosaria tereta Crespin, 1958b, p. 99,
pl. 26, figs. 1-4.

C.P.C. 2542. Holotype.

Callytharra Springs, Carnarvon Basin, W.A.; 0-12 ft. above base of Callytharra Fm.

C.P.C. 2543. Paratype.

Fossil Cliff, Irwin R., Irwin Basin, W.A.;
Fossil Cliff Fm.

C.P.C. 2544. Paratype.

F.K.O. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A., at 129 ft.; Noonkanbah Fm.

C.P.C. 2545. Paratype.

Section near Salt Gully, Callytharra;
Callytharra Fm. (COR 115).

Lower Permian (Artinskian).

NUTTALINA CORONULA Belford, 1958
(=**NUTTALLINELLA CORONULA**
Belford, 1959).

Nuttalina coronula Belford, 1958, p. 97,
pl. 19, figs. 1-14.

C.P.C. 1530. Holotype.

C.P.C. 1531. Paratype A.

C.P.C. 1534. Paratype D.

C.P.C. 1535. Tectotype.

Pillarawa Mill, Murchison River area,
Carnarvon Basin, W.A.; about 14 ft. above
base of Toolonga Calcilutite.

C.P.C. 1532. Paratype B.

Scarp, 1 m. S. of Toolonga Point, Mur-
chison River area, Carnarvon Basin; 28 ft.
above base of Toolonga Calcilutite.

C.P.C. 1533. Paratype C.

C.P.C. 1940. Tectotype.

7 m. E.N.E. of No. 10 Bore, Cardabia,
Carnarvon Basin; 28 ft. above base of Korojon
Calcarenite.

C.P.C. 1536-1539. Tectotypes.

Meanarra Hill, Murchison River area;
Toolonga Calcilutite.

Upper Cretaceous (Holotype and Para-
types AD, Santonian; Paratypes BC,
Lower Campanian).

NUTTALLINELLA CORONULA (Belford),
1959 (see *Nuttalina coronula* Belford).

OPERCULINA BARTSCHI Cushman, 1921;
Crespin, 1936.

Operculina barstchi Cushman, 1921,
p. 376, text-fig. 13. Crespin, 1936,
p. 1, fig. 12.

C.P.C. 84. Hypotype.

Bore, Allot. 5, Ph. Berook, Mallee, Vic.,
at 160 ft.

Lower Miocene.

OPERCULINA COMPLANATA (Defrance),
1822; Chapman, 1914.

Lenticulites complanata Defrance, 1822,
p. 453.

Operculina complanata, d'Orbigny, 1826,
p. 281, pl. 14, figs. 7-10; Modèles No.
80. Chapman, 1914, p. 291, pl. 7,
fig. 2.

C.P.C. 98. Figured section.

Bootless Inlet, Papua.

Lower Miocene.

OPERCULINA VICTORIENSIS Chapman
& Parr, 1938; Crespin, 1954.

Operculina victoriensis Chapman & Parr,
1938, p. 84, pl. 16, figs. 3-8; text-fig.
2. Crespin, 1954, p. 43, pl. 7, fig. 22.

C.P.C. 1977. Hypotype.

Nathan Brewery Bore, Southwark, N.E.
corner of sect. 1, Hd. Adelaide, S.A., at 535-
555 ft.; Oaklands Lst.

Lower Miocene.

ORTHOVERTELLA PROTEA Cushman &
Waters, 1928; Crespin, 1958.

Orthovertella protea Cushman & Waters,
1928, p. 45, pl. 6, figs. 3, 4. Crespin,
1958b, p. 82, pl. 18, figs. 7-9.

C.P.C. 2509. Hypotype.

Callytharra Springs, Carnarvon Basin,
W.A.; 10 ft. above base of Callytharra Fm.

C.P.C. 2510. Hypotype.

FKO. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A., at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

PELLATISPIRA GLABRA Umbgrove, 1928;
Chapman & Crespin, 1935.

Pellatispira glabra Umbgrove, 1928, p. 64,
figs. 62-68. Chapman & Crespin,
1935, p. 58, pl. 3, fig. 4.

C.P.C. 66. Tectotype.

Bed of creek at track crossing, 9 m. from
Bullara Hstd., Carnarvon Basin, W.A.

Middle to Upper Eocene.

(This figured specimen is a section of a bryozoan,
not a foraminifer. I.C.)

PELLATISPIRA INFLATA Umbgrove, 1928;
Chapman & Crespin, 1935.

Pellatispira inflata Umbgrove, 1928, p. 63,
figs. 42-56. Chapman & Crespin,
1935, pl. 3, fig. 2.

C.P.C. 67. Tectotype.

Bed of creek at track crossing, 9 m. from
Bullara Hstd., Carnarvon Basin, W.A.

Middle to Upper Eocene.

(This figured specimen is a section of a bryozoan,
not a foraminifer. I.C.)

PELLATISPIRA ORBITOIDEA (Provale),
1908; Chapman & Crespin, 1935.

Assilina madaraszi var. *orbitoidea* Provale,
1908, p. 51, pl. 5, fig. 5.

Pellatispira orbitoidea, Chapman &
Crespin, 1935, p. 57, pl. 3, fig. 3.

C.P.C. 65. Tectotype.

Bed of creek at track crossing, 9 m. from
Bullara Hstd., Carnarvon Basin, W.A.

Middle to Upper Eocene.

(This figured specimen is a section of a bryozoan,
not a foraminifer. I.C.)

PELOSINA AMPULLA Crespin, 1958.

Pelosina ampulla Crespin, 1958b, p. 42,
pl. 2, figs. 1-3.

C.P.C. 2372. Holotype.

C.P.C. 2373, 2374. Paratypes.

Oonah, 23 m. N. of Waratah on main
Somerset-Waratah road, N.W. Tas.; Quamby
Mudstone.

Lower Permian (Artinskian).

PELOSINA HEMISPHERICA Chapman &
Howchin, 1905; Crespin, 1958.

Pelosina hemisphaerica Chapman &
Howchin, 1905, p. 6, pl. 12, figs. 2a, b.
Crespin, 1958b, p. 42, pl. 2, figs. 8-10.

C.P.C. 2369. Hypotype.

Nannigo Dam, Middalya Stn, 3 m. S.E.
of Middalya Hstd, Carnarvon Basin, W.A.;
Bulgadoo Shale (MG101).

C.P.C. 2370. Hypotype.

BMR. Bore 11 (T), Pond's Ck., Hunter
River area, N.S.W., at 26-50 ft.; Maitland
Group.

C.P.C. 2371. Hypotype.

F.K.O. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A., at 129 ft. (core); Noonkanbah
Fm.

Lower Permian (Artinskian).

PELOSINA LAGENOIDES Crespin, 1953.

Pelosina lagenoides Crespin, 1953a, p. 28,
pl. 5, fig. 1.

C.P.C. 889. Holotype.

Kopperamanna Bore, S.A., 460 m. N.E.
of Adelaide, N.E. of Lake Eyre, at 1,907 ft.

Lower Cretaceous.

PENEROPLIS PERTUSUS (Förskal), 1775;
Crespin, 1954.

Nautilus pertusus Förskal, 1775, p. 128,
no. 65.

Peneroplis pertusus, Crespin, 1954, p. 43,
pl. 6, fig. 10.

C.P.C. 1965. Hypotype.

Bore No. 37, Frogmore, Adelaide, S.A.,
at 405 ft.

Lower Pliocene.

**PLANORBULINELLA INAEQUILATER-
ALIS** (Heron-Allen & Earland) 1924;
Crespin, 1936.

Planorbulina larvata P. & J. var.
inaequilateralis Heron-Allen & Earland,
1924, p. 174, pl. 12, figs. 85-90.

Planorbulinella inaequilateralis, Crespin,
1936, pl. 1, fig. 6.

C.P.C. 79. Hypotype.

Batesford Quarry, near Geelong, Vic.

Lower Miocene.

PLANULINA CRETACEA Crespin, 1944
(see *Valvulineria infracratacea* Crespin
1953, p. 43).

Planulina cretacea Crespin, 1944, p. 221,
pl. 1, figs. 11a, b; 12a, b.

C.P.C. 259. Holotype.

C.P.C. 260. Paratype.

Bore No. 3785, W. R. Johnston,
"Calooma", 4 m. S.E. of Lila Springs, 30 m.
N.N.W. of Bourke, N.S.W., holotype at 450
ft., paratype at 400 ft.

Lower Cretaceous.

PLACOPSILINA WOORAMELENSIS

Crespin, 1958.

Placopsilina wooramelensis Crespin,
1958b, p. 94, pl. 19, figs. 4-6.

C.P.C. 2530. Holotype.

C.P.C. 2531. Paratype.

Callytharra Springs, Carnarvon Basin,
W.A.; 22-25 ft. above base of type section of
Callytharra Fm. (GW84).

Lower Permian (Artinskian).

PLUMMERINELLA KIMBERLEYENSIS

Crespin, 1958.

Plummerinella kimberleyensis Crespin,
1958b, p. 85, pl. 19, figs. 9, 10.

C.P.C. 2521. Holotype.

C.P.C. 2617. Paratype.

BMR. Bore No. 1, Jurgurra Ck, Canning
Basin, W.A., at 494 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

PROTEONINA ARENOSA Crespin, 1958.

Proteonina arenosa Crespin, 1958b, p. 38,
pl. 2, figs. 6, 7.

C.P.C. 2359. Holotype.

C.P.C. 2360. Paratype.

Wooramel R., 2½ m. W. of junction with
Madeline Ck, Carnarvon Basin, W.A.; Made-
line Fm. (WB83).

Lower Permian (Artinskian).

PSAMMOSPHERA PUSILLA Parr, 1942;
Crespin, 1958.

Psammospheera pusilla Parr, 1942, p. 106,
pl. 1, figs. 6, 7. Crespin, 1958b, p. 38,
pl. 2, figs. 4, 5.

C.P.C. 2357. Hypotype A.

S. side of Minilya R., near Coolkilya Pool,
Wandagee Stn, Carnarvon Basin, W.A.; Quin-
nanie Shale.

C.P.C. 2358. Hypotype B.

AFO. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A., at 150 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

PSEUDOGLANDULINA REGULARIS

Crespin, 1953.

Pseudoglandulina regularis Crespin, 1953a,
p. 34, pl. 6, fig. 8.

C.P.C. 915. Holotype.

Marree Bore, S.A., 360 m. N. of
Adelaide, at 100 ft.

Lower Cretaceous.

PSEUDOHYPERAMMINA RADIOSTOMA

Crespin, 1958.

Pseudohyperammina radiostoma Crespin,
1958b, p. 55, pl. 8, figs. 1-7.

C.P.C. 2421. Holotype.

C.P.C. 2424, 2425, 2426. Paratypes
C,D,E.

AFO. No. 1 Bore, Nerrima, Fitzroy
Basin, W.A. (Holotype and paratypes C,D, at
470 ft.; paratype E at 490 ft.; Noonkanbah
Fm.

C.P.C. 2422, 2423. Paratypes A and
B.

FKO. No. 1 Bore, Nerrima, Fitzroy
Basin, at 129 ft.; Noonkanbah Fm.

C.P.C. 2427. Paratype F.

1½ m. S.W. of Nalbia Dam, Wandagee
Stn, Carnarvon Basin, W.A., Bulgadoo Shale
(CT76).

Lower Permian (Artinskian).

PSEUDOPOLYMORPHINA DOANEI

(Galloway & Wissler), 1927; Crespin, 1954.

Polymorphina doanei Galloway & Wissler,
1927, p. 54, pl. 9, fig. 8.

Pseudopolymorphina doanei Crespin,
1954, p. 42, pl. 6, fig. 1.

C.P.C. 1954. Hypotype.

Bore No. 83, Twickenham-Netley,
Adelaide, S.A., at 410 ft.

Lower Pliocene.

PSEUDOPOLYMORPHINA RUTILA

(Cushman) var. **PARRI** Cushman & Ozawa,
1930; Crespin, 1954.

Pseudopolymorphina rutila (Cushman)
var. *parri* Cushman & Ozawa, 1930,
p. 100. Crespin, 1954, p. 42, pl. 7,
fig. 16.

C.P.C. 1971. Hypotype.

Bore No. 36, Oaklands Railway Stn, S.W.
corner of Sect. 154, Hd. Noarlunga, Adelaide
Plains, S.A., at 270-310 ft.; Oaklands Lst.

Lower Miocene.

QUINQUELOCULINA ADELAIDENSIS

Howchin & Parr, 1938; Crespin, 1954.

Quinqueloculina adalaidensis Howchin &
Parr, 1938, p. 293, pl. 15, figs. 5, 7.
Crespin, 1954, p. 39, pl. 6, fig. 3.

C.P.C. 1958. Hypotype.

Salisbury Bore, near Adelaide, S.A., at
330 ft.

Lower Pliocene.

QUINQUELOCULINA ORNITHOPETRA

Crespin, 1950.

Quinqueloculina ornithopetra Crespin,
1950, p. 73, pl. 10, figs. 7a, b.

C.P.C. 647. Holotype.

Base of Bird Rock Cliff, Torquay, Vic.;
Jan Juc Fm.

Lower Oligocene or Upper Eocene.

QUINQUELOCULINA SINGLETONI

Crespin, 1950.

Quinqueloculina singletoni Crespin, 1950,
p. 72, pl. 10, figs. 6, 6a.

C.P.C. 648. Holotype.

Base of Bird Rock Cliff, Torquay, Vic.;
Jan Juc Fm.

Lower Oligocene or Upper Eocene.

RECTOGLANDULINA SEROCOLDENSIS

(Crespin), 1945 (see **Nodosaria Sero-**
coldensis Crespin, 1958, p. 32).

Rectoglandulina serocoldensis Crespin,
1958b, p. 107, pl. 27, figs. 6-10.

C.P.C. 2565. Hypotype.

Minilya R., ¼ m. upstream from Wan-
dagee Hstd., Carnarvon Basin, W.A.; Bulgadoo
Shale.

C.P.C. 2566, 2610. Hypotypes.

AFO. No. 1 Bore, Myroodah, Fitzroy
Basin, W.A., at 860-865 ft.; Liveringa Fm.,
Lightjack Member.

Lower Permian (Artinskian).

REOPHAX ASPER Cushman & Waters 1928;
Crespin, 1958.

Reophax asper Cushman & Waters, 1928b,
p. 37, pl. 4, fig. 7. Crespin, 1958b,
p. 59, pl. 10, figs. 1-4.

C.P.C. 2436, 2437. Hypotypes.

Victoria Pass section, Mitchell Highway,
N.S.W.; Capertee Group.

C.P.C. 2438. Hypotype.

Aldebaran Creek, 4 m. N.E. of Mt.
Catherine, 30 m. W. of Rolleston, Springsure
area, Qld.; Aldebaran Creek Group.

C.P.C. 2439. Hypotype.

Road between Maitland and Greta, W.
side of Greta, Hunter River area, N.S.W.;
Dalwood Group.

Lower Permian (Artinskian).

REOPHAX BELFORDI Crespin, 1958.

Reophax belfordi Crespin, 1958b, p. 60, pl. 10, figs. 8-11.

C.P.C. 2440. Holotype.

C.P.C. 2441, 2442, 2443. Paratypes, A, B, C.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 550-560 ft.; equivalent of Byro Group.

Lower Permian (Artinskian).

REOPHAX ELLIPSIFORMIS Crespin 1958.

Reophax ellipsiformis Crespin, 1958b, p. 61, pl. 11, figs. 1-4.

C.P.C. 2444. Holotype.

4.6 m. S.E. of Moogooree Hstd., Carnarvon Basin, W.A.; 320 feet above base of Coyrie Fm. (ML 10)

C.P.C. 2445. Paratype A.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 560-670 ft.; equivalent of Byro Group.

C.P.C. 2466. Paratype B.

Minilya R., Wandagee Stn., $\frac{1}{4}$ m. upstream from Wandagee Hstd., Carnarvon Basin; Bulgadoo Shale.

C.P.C. 2447. Paratype C.

2 $\frac{1}{4}$ m. S.E. of Donnelly's Well, Williambury Stn., Carnarvon Basin; Bulgadoo Shale (G 310).

Lower Permian (Artinskian).

REOPHAX EMACIATUS Plummer, 1945; Crespin, 1958.

*Reophax emaciatu*s Plummer, 1945, p. 227, pl. 17, figs. 18-22. Crespin, 1958b, p. 62, pl. 11, figs. 5, 6.

C.P.C. 2448. Hypotype.

Section S. of Grant Range, Fitzroy Basin, W.A.; 375 ft. below top of Noonkanbah Fm. (KNA 39A)

C.P.C. 2449. Hypotype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 560-570 ft.; equivalent of Byro Group.

REOPHAX FITTSI (Warthin), 1930; Crespin, 1958.

Nodosinella fittsi Warthin, 1930, p. 27, pl. 2, fig. 7.

Reophax fittsi, Crespin, 1958b, p. 63, pl. 11, figs. 7-9.

C.P.C. 2450, 2451. Hypotypes A, B.

Roebuck Downs No. 1 Bore, Canning Basin, W.A., at 2543-2555 ft. (core 31); ? Grant Fm.

C.P.C. 2452. Hypotype C.

4.6 m. S.W. of Moogooree Hstd., Carnarvon Basin, W.A.; 320 ft. above base of Coyrie Fm. (ML 10)

Lower Permian (Artinskian).

REOPHAX MINUTISSIMUS Plummer, 1945; Crespin, 1958.

Reophax minutissimus Plummer, 1945, p. 230, pl. 17, figs. 25-30. Crespin, 1958b, p. 63, pl. 10, figs. 5-7.

C.P.C. 2454-2455. Hypotypes A, B, C.

Aldebaran Ck., 4 m. N.E. of Mt. Catherine, 30 m. W. of Rolleston, Springsure area, Qld.; Aldebaran Creek Group.

Lower Permian (Artinskian).

REOPHAX SUBASPER Parr, 1942; Crespin, 1958.

Reophax subasper Parr, 1942, p. 109, pl. 1, fig. 12. Crespin, 1958b, p. 64, pl. 11, figs. 10, 11.

C.P.C. 2456. Hypotype A.

3.5 m. S. of Paddy's Outcamp, Middalya Stn, Carnarvon Basin, W.A.; Baker Fm. (MG179).

C.P.C. 2457. Hypotype B.

W. bank of railway cutting, W. of Minimbah, Hunter River area, N.S.W.; Mulbring Subgroup, Maitland Group.

Lower Permian (Artinskian).

REOPHAX TRICAMERATUS Parr, 1942; Crespin, 1958.

Reophax tricameratus Parr, 1942, p. 109, pl. 1, fig. 13. Crespin, 1958b, p. 65, pl. 11, figs. 12, 13.

C.P.C. 2458. Hypotype A.

4.8 m. S.W. of Moogooree Hstd, William-bury Stn, Carnarvon Basin, W.A.; 405 ft. above base of Coyrie Fm. (G240).

C.P.C. 2459. Hypotype B.

Right bank of ck. flowing into Gascoyne R., 2 m. E. of K.39 Trig., Carnarvon Basin; Wandagee Fm. (COR114).

Lower Permian (Artinskian).

ROBULUS GUNDERBOOKAENSIS (Crespin), 1944; Crespin, 1953 (see *Lenticulina gunderbookaensis* p. 25).

Lenticulina gunderbookaensis Crespin 1944, p. 21, pl. 1, figs. 9a, b.

Robulus gunderbookaensis, Crespin, 1953a, p. 32, pl. 6, figs. 2a, b.

C.P.C. 908. Hypotype.

Marree Bore, S.A., 360 m. N. of Adelaide, at 104 ft.

Lower Cretaceous.

ROBULUS WARREGOENSIS (Crespin), 1944; Crespin, 1953 (see *Lenticulina warregoensis* p. 26).

Lenticulina warregoensis Crespin, 1944, p. 21, pl. 1, figs. 8a, b.

Robulus warregoensis, Crespin, 1953a, p. 32, pl. 6, fig. 3.

C.P.C. 909. Hypotype.

Marree Bore, S.A., 360 m. N. of Adelaide, at 120 ft.

Lower Cretaceous.

ROTORBINELLA CYCLOCYPEUS (Howchin & Parr), 1938; Crespin, 1954.

Discorbis cyclocypeus Howchin & Parr, 1938, p. 302, pl. 16, fig. 11; pl. 18, figs. 5, 12; pl. 19, fig. 13.

Rotorbinella cyclocypeus, Crespin, 1954, p. 44, pl. 6, figs. 9a, b.

C.P.C. 1964. Hypotype.

Bore 31, Keele Bridge, Locksleys, near Adelaide, S.A., at 450 ft.

Lower Pliocene.

RUGOGLOBIGERINA RUGOSA (Plummer), 1927; Edgell, 1957.

Globigerina rugosa Plummer, 1927, p. 38, pl. 2, figs. 10a-d.

Rugoglobigerina rugosa, Edgell, 1957, p. 115, pl. 4, figs. 10-12.

C.P.C. 1997. Hypotype.

Giralia Range, Carnarvon Basin, W.A.; Miria Marl (GC301).

Upper Cretaceous (Maestrichtian).

SACCULINELLA AUSTRALAE Crespin, 1958.

Sacculinella australae Crespin, 1958b, p. 43, pl. 3, figs. 1-5.

C.P.C. 2375. Holotype.

Minilya R., $\frac{1}{4}$ m. upstream from Wandagee Hstd, Carnarvon Basin, W.A.; Bulgadoo Shale (OS125).

C.P.C. 2376. Paratype A.

4.6 m. S.W. of Moogooree Hstd, Carnarvon Basin; 320 ft. above base of Coyrie Fm. (ML10).

C.P.C. 2377, 2378. Paratypes B and C.

BMR. Bore No. 1, Jurgurra Ck, Canning Basin, W.A., at 30-50 ft.; Noonkanbah Fm.

C.P.C. 2379. Paratype D.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 650-660 ft.; equivalent of Byro Group.

Lower Permian (Artinskian).

SHERBORNINA ATKINSONI Chapman, 1922; Crespin, 1950, 1954.

Sherbornina atkinsoni Chapman, 1922, p. 501, pl. 32, figs. 1-5. Crespin, 1950, p. 74, pl. 10, fig. 14; 1954, p. 49, pl. 7, fig. 17.

C.P.C. 654. Hypotype.

Bell's Headland, W. of Torquay, Vic.; Jan Juc Fm.

C.P.C. 1972. Hypotype.

Aldinga section between Port Willunga
Jetty and Aldinga Ck, S.A.; Aldinga Lst.

Lower Oligocene or Upper Eocene.

SIGMOMORPHINA SUBREGULARIS

Howchin & Parr, 1938; Crespin, 1954.

Sigmomorphina subregularis Howchin &
Parr, 1938, p. 308, pl. 18, figs. 2, 11.

Crespin, 1954, p. 42, pl. 7, fig. 19.

C.P.C. 1973. Hypotype.

Nathan's Brewery Bore, Southwark, N.E.
corner of Sect. 1, Hd. Adelaide, S.A., at
509-524 ft.; Oaklands Lst.

Lower Miocene.

SPIRILLINA PAPILLO-DENTATA Crespin,
1958.

Spirillina papillo-dentata Crespin, 1958b,
p. 119, pl. 16, figs. 10, 11.

C.P.C. 2605. Holotype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 3115-3120 ft. (core 66); equivalent of
Callytharra Fm.

Lower Permian (Artinskian).

SPIROCLYPEUS MARGARITATUS

(Schlumberger), 1902; Chapman, 1914;
Chapman & Crespin, 1932.

Heterostegina margaritata Schlumberger,
1902, p. 252, pl. 8, fig. 4. Chapman,
1914, p. 293, pl. 9, fig. 11.

Spiroclypeus margaritatus, Chapman &
Crespin, 1932a, p. 92, pl. 11, figs. 4, 5.

C.P.C. 28. Tectotype.

No. 1 Bore, Ph. Yulecart (Hamilton
Bore), W. Vic., at 35-36 ft. (This specimen
considered to be a section of *Lepidocyclina*
(*Trybliolepidina*) *howchini*, see Crespin,
1943.)

C.P.C. 29. Tectotype.

Mesor Hill, Tumleo Island, Aitape area,
New Guinea.

C.P.C. 102. Tectotype.

Bootless Inlet, Papua.

Lower Miocene.

**SPIROPLECTAMMINA CARNARVONEN-
SIS** Crespin, 1958.

Spiroplectammina carnarvonensis Crespin,
1958b, p. 76, pl. 22, figs. 7-9.

C.P.C. 2490. Holotype.

C.P.C. 2491, 2492. Paratypes A and B.

Minilya R., $\frac{1}{4}$ m. upstream from Garden
Outcamp, Wandagee Hstd., Carnarvon Basin,
W.A.; Bulgadoo Shale (COR 134).

Lower Permian (Artinskian).

SPIROPLECTAMMINA CUSHMANI

Crespin, 1944, 1953.

Spiroplectammina cushmani Crespin,
1944, p. 19, pl. 1, fig. 7; 1953a, p. 30,
pl. 5, fig. 9.

C.P.C. 255. Holotype.

Bore No. 6763, D. L. Murray, "Gool-
gumble", 30 m. N.E. of Bourke, N.S.W.
(holotype at 103 ft., hypotype at 277 ft.).

Lower Cretaceous.

SPIROPLECTAMMINA EDGELLI Crespin,
1953.

Spiroplectammina edgelli Crespin, 1953a,
p. 30, pl. 5, fig. 10.

C.P.C. 897. Holotype.

Kopperamanna Bore, 430 m. N.N.E. of
Adelaide, S.A., and N.E. of Lake Eyre, at
2,100 ft.

Lower Cretaceous.

STACHEIA DICKINSI Crespin, 1958.

Stacheia dickinsi Crespin, 1958b, p. 95,
pl. 19, figs. 1-3.

C.P.C. 2531. Holotype.

Giralia No. 1 Bore, Carnarvon Basin,
W.A., at 3,115-3,120 ft. (core 66); equivalent
of Callytharra Fm.

C.P.C. 2532, 2533. Paratypes A and B.

Fossil Cliff, Irwin R., Irwin Basin, W.A.;
Fossil Cliff Fm.

Lower Permian (Artinskian).

STREBLOSPIRA AUSTRALAE Crespin & Belford, 1957.

Streblospira australae Crespin & Belford, 1957, p. 75, pl. 12, figs. 1-10. Crespin, 1958b, p. 88, pl. 2L, figs. 10-13; pl. 22, fig. 1.

C.P.C. 2268. Holotype.

C.P.C. 2269. Paratype.

C.P.C. 2270-2274. Tectotypes.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

Lower Permian (Artinskian).

STREBLOSPIRA KIMBERLEYENSIS

Crespin & Belford, 1957.

Streblospira kimberleyensis Crespin & Belford, 1957, p. 75, pl. 11, figs. 13-21. Crespin, 1958b, p. 89, pl. 20, figs. 6-9.

C.P.C. 2296. Holotype.

C.P.C. 2297. Paratype A.

C.P.C. 2299, 2300, 2301. Tectotypes.

F.K.O. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., core at 129 ft.; Noonkanbah Fm.

C.P.C. 2298. Paratype B.

A.F.O. No. 1 Bore, Nerrimah, Fitzroy Basin, at 490 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

STREBLOSPIRA MEANDRINA Crespin & Belford, 1957.

Streblospira meandrina Crespin & Belford, 1957, p. 74, figs. 1-2. Crespin, 1958b, p. 89, p. 20, figs. 1-5.

C.P.C. 2289. Holotype.

C.P.C. 2290. Paratype.

C.P.C. 2291-2295, 2302, 2303. Tectotypes.

F.K.O. No. 1 Bore, Nerrima, Fitzroy Basin, W.A., core at 129 ft.; Noonkanbah Fm.

Lower Permian (Artinskian).

TETRATAXIS CONICA Ehrenberg, 1843; Crespin, 1958.

Tetrataxis conica Ehrenberg, 1843, p. 24, pl. 37, fig. 12. Crespin, 1958b, p. 93, pl. 23, figs. 1-5; pl. 31, fig. 3.

C.P.C. 2528. Hypotype A.

C.P.C. 2895. Tectotype.

Giralia No. 1 Bore, Carnarvon Basin, W.A., at 3,115-3,120 ft. (core 66); equivalent of Callytharra Fm.

C.P.C. 2529. Hypotype B.

Wyndham Gap, Bidgemia Stn, Carnarvon Basin; Callytharra Fm.

TEXTULARIA ANACOORAENSIS Crespin, 1953.

Textularia anacooraensis Crespin, 1953, p. 31, pl. 5, fig. 15.

C.P.C. 902. Holotype.

Annacorra Bore, Southern N.T., 670 m. N.N.E. of Adelaide, at 1,110-1,123 ft.

Lower Cretaceous.

TEXTULARIA BOOKERI Crespin, 1958 (= *Textularia eximia*).

Textularia eximia Eichwald, 1860, p. 355, pl. 22, figs. 9a-d. Crespin & Parr, 1941, p. 305, pl. 13, figs. 7a-c, 8a-c.

Textularia bookeri Crespin, 1958b, p. 77, pl. 15, figs. 1-7.

C.P.C. 153. Holotype.

C.P.C. 152. Paratype D.

Large railway cutting about 4 chs. W. of Farley Stn, Hunter River area, N.S.W., Dalwood Group (Lower Marine Series).

C.P.C. 2493, 2496. Paratypes A, B, C and E.

Maitland rd, S. side of Greta, Hunter River area, Dalwood Group.

Lower Permian (Artinskian).

TEXTULARIA EXIMIA Eichwald, 1860; Crespin & Parr, 1941 (see *Textularia bookeri*).

TEXTULARIA IMPROCERA Crespin, 1958.

Textularia improcera Crespin, 1958b,
p. 78, pl. 15, figs. 8, 9.

C.P.C. 2497. Holotype.

C.P.C. 2498. Paratype.

4.8 m. S.W. of Moogooree Hstd, William-
bury Stn, Carnarvon Basin, W.A.; 405 ft.
above base of Coyrie Fm. (G240).

Lower Permian (Artinskian).

THURAMMINA PHIALAEFORMIS

Crespin, 1958.

Thuramina phialaeformis Crespin,
1958b, p. 39, pl. 3, figs. 6-8.

C.P.C. 2361. Holotype.

C.P.C. 2362. Paratype A.

Minilya R., $\frac{1}{4}$ m. upstream from Wanda-
gee Hstd, Carnarvon Basin, W.A.; Bulgadoo
Shale (OS125).

C.P.C. 2363. Paratype B.

$1\frac{1}{2}$ m. E.S.E. of Cundlego Crossing,
Minilya R., Carnarvon Basin; 65 ft. below top
of Bulgadoo Shale (G211).

Lower Permian (Artinskian).

THURAMMINOIDES SPHAEROIDALIS

Plummer, 1945; Crespin, 1958.

Thuramminoides sphaeroidalis Plummer,
1945, p. 218, pl. 15, figs. 4-10.
Crespin, 1958b, p. 40, pl. 3, figs. 9-11;
pl. 31, figs. 1, 2.

C.P.C. 2364. Hypotype A.

$2\frac{1}{4}$ m. S.E. of Donnelly's Well, William-
bury Stn, Carnarvon Basin, W.A.; Mallens
Greywacke (G308).

C.P.C. 2365. Hypotype B.

Minilya R., $3\frac{1}{2}$ m. N.W. of Wandagee
Hstd, Carnarvon Basin; Bulgadoo Shale
(M74).

C.P.C. 2366. Hypotype C.

BMR. No. 1 Bore, Jurgurra Ck, Canning
Basin, W.A., at 390-400 ft.; Noonkanbah Fm.
C.P.C. 2885, 2886. Hypotypes D and E.

Mt Sandiman Stn, 3 m. E.S.E. of Mer-
linleigh Hstd, Carnarvon Basin; Bulgadoo
Shale.

Lower Permian (Artinskian).

THURAMMINOIDES TEICHERTI (Parr),
1942; Crespin, 1958.

Crithionina teichertii Parr, 1942, p. 107,
pl. 1, figs. 9, 10.

Thuramminoides teichertii, Crespin, 1958b,
p. 41, pl. 3, figs. 12, 13.

C.P.C. 2367, 2368. Hypotypes A, B.

S. side of Minilya R., near Coolkilya
Pool, Wandagee Stn, Carnarvon Basin, W.A.;
Quinnanie Shale.

Lower Permian (Artinskian).

TOLYPAMMINA UNDULATA Parr, 1942;
Crespin, 1958.

Tolypammina undulata Parr, 1942, p. 104,
pl. 2, fig. 2. Crespin, 1958b, p. 72, pl.
19, figs. 7, 8.

C.P.C. 2479. Hypotype A.

Most north-easterly outcrop of Mantuan
Productus Bed, Reid's Dome Structure, 2.3 m.
S.S.E. of Springwood, 32 m. S.E. of Spring-
sore, Qld.

C.P.C. 2481. Hypotype B.

Gully at Hebden, Port. 148, Ph. Liddell,
Cty Durham, Hunter River area, N.S.W.; Mul-
bring Subgroup, Maitland Group.

Lower Permian (Artinskian).

TREPEILOPSIS AUSTRALIENSIS Crespin,
1958.

Trepeilopsis australiensis Crespin, 1958b,
p. 36, pl. 18, figs. 1-4; pl. 32, figs.
3, 5-8.

C.P.C. 2606. Holotype.

C.P.C. 2608. Paratype A.

C.P.C. 2892, 2893, 2894. Tectotypes.

Callytharra Springs, Carnarvon Basin,
W.A.; 22-41 ft. above base of Callytharra Fm.

C.P.C. 2608. Paratype B.

Section near Salt Gully, Callytharra
Springs; Callytharra Fm.

C.P.C. 2609. Paratype C.

Fossil Cliff, Irwin R., Irwin Basin, W.A.;
Fossil Cliff Fm.

Lower Permian (Artinskian).

TRILLINA HOWCHINI Schlumberger, 1893; Crespin, 1936, 1938 (see **Austrotrillina howchini**, p. 10).

Trillina howchini Schlumberger, 1893, p. 119, woodcut fig. 1; pl. 3, fig. 6. Crespin, 1936, p. 8, figs. 1, 2; 1938, pl. 3, fig. 3.

C.P.C. 74. Hypotype.

Bore Allot. 28, Ph. Palarang, Mallee, Vic., at 298-448 ft.

C.P.C. 75. Hypotype.

Outcrop, Skinner's section, Mitchell R., Ph. Wuk Wuk, Gippsland, Vic.

C.P.C. 139. Tectotype.

OKTI River, near Suspension Bridge, W. Papua.

Lower Miocene.

TROCHAMMINA LAEVIS Crespin, 1958.

Trochammina laevis Crespin, 1958b, p. 90, pl. 21, figs. 1-4.

C.P.C. 2522. Holotype.

C.P.C. 2523. Paratype.

Section through Mt. Hope, 24 m. S.E. of Springsure, Qld; Aldebaran Creek Group.

Lower Permian (Artinskian).

TROCHAMMINA MINUTA Crespin, 1953.

Trochammina minuta Crespin, 1953, p. 32, pl. 5, figs. 19a, b.

C.P.C. 906. Holotype.

Walumbilla Ck, Walumbilla Township, Qld, 24 m. E. of Roma.

Lower Cretaceous (Aptian).

TROCHAMMINA PARVULA Crespin, 1944 (see *Valvulineria Infracretacea*, p. 43).

Trochammina parvula Crespin, 1944, p. 20, pl. 1, figs. 6a, b.

C.P.C. 254. Holotype.

Bore No. 3785, W. R. Johnston's "Calooma", 4 m. S.E. of Lila Springs, 30 m. N.N.W. of Bourke, N.S.W., at 725 ft.

Lower Cretaceous.

TROCHAMMINA POKOLBINENSIS Crespin, 1958.

Ammodiscus planoconvexus Chapman, Howchin, & Parr, 1934, p. 186.

Trochammina pokolbinensis Crespin, 1958b, p. 91, pl. 22, figs. 5, 6.

C.P.C. 2524. Hypotype.

Pokolbin, Hunter River area, N.S.W.; Dalwood Group.

Lower Permian (Artinskian).

TROCHAMMINA PULVILLUS Crespin & Parr, 1941; Crespin, 1958.

Trochammina pulvillus Crespin & Parr, 1941, p. 308, pl. 12, figs. 6a-c. Crespin, 1958b, p. 91, pl. 22, figs. 1-4.

C.P.C. 156. Holotype.

C.P.S. 2525. Hypotype A.

Foot of Victoria Pass section, Mitchell Highway, N.S.W.; Capertee Group.

C.P.C. 2526. Hypotype B.

John Brown's Reserve section, Mulbring-Buchanan Rd, Richmond Vale, by eastern spillway, Hunter River area, N.S.W.; Mulbring Subgroup, Maitland Group.

Lower Permian.

TROCHAMMINA RAGGATTI Crespin, 1944.

Trochammina raggatti Crespin, 1944, p. 20, pl. 1, figs. 4a-c, 5; I 1953a, p. 32, pl. 6, fig. 1.

C.P.C. 252. Holotype.

C.P.C. 253. Paratype.

C.P.C. 907. Hypotype.

Bore No. 6763, D. L. Murray, "Goolgumble", at 30 m. N.E. of Bourke, N.S.W. (holotype at 372 ft., paratype at 231 ft., hypotype at 265-277 ft.).

Lower Cretaceous.

TROCHAMMINA SUBOBTUSA Parr, 1942;
Crespin, 1958.

Trochammina subobtusa Parr, 1942,
p. 109, pl. 1, figs. 14a-c. Crespin,
1958b, p. 92, pl. 21, figs. 5, 6.

C.P.C. 2527. Hypotype.

Cundlego Crossing, Minilya R., Wandagee
Stn, Carnarvon Basin, W.A.; Bulgadoo Shale.

Lower Permian (Artinskian).

VAGINULINA GIPPSLANDICA Chapman
& Crespin, 1930, 1932 (see *Vaginulinopsis*
Gippslandicus).

Vaginulina gippslandica Chapman &
Crespin, 1930b, p. 98, pl. 5, fig. 6; I
1932b, pl. 1, fig. 5.

C.P.C. 19. Holotype.

No. 3 Bore, Ph. Glencoe, Gippsland, Vic.,
at 180 ft.

Oligocene.

VAGINULINOPSIS GIPPSLANDICUS
(Chapman & Crespin), 1932; Crespin, 1950
(see *Vaginulina gippslandica*).

VALVULINA DAVIDIANA Chapman,
1900; Crespin, 1954.

Valvulina davidiana Chapman 1900, p. 9,
pl. 1, fig. 4 Crespin, 1954, p. 38, pl. 6,
fig. 5.

C.P.C. 1961. Hypotype.

Bore No. 69, Royal Park, Old Port Rd.,
Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

VALVULINA FUSCA (Williamson), 1858;
Crespin, 1954.

Rotalia fusca Williamson, 1858, p. 55,
pl. 5, figs. 114, 115.
Valvulina fusca, Crespin, 1954, p. 38,
pl. 6, fig. 6.

C.P.C. 1962. Hypotype.

Bore No. 69, Royal Park, Old Port Rd.,
Adelaide, S.A., at 352-365 ft.

Lower Pliocene.

VALVULINERIA INFRACRETACEA
Crespin, 1953 (see *Planulina Cretacea* p. 35
and *Trochammina parvula* p. 42).

Planulina cretacea Crespin, 1944, p. 22,
pl. 1, figs. 11a, b; 12a, b.

Trochammina parvula Crespin, 1944,
p. 20, pl. 1, figs. 6a, b.

Valvulineria infracretacea Crespin, 1953a,
p. 34, pl. 6, figs. 12a, b; 13a, b.

C.P.C. 259. Holotype.

C.P.C., 260. Paratype.

Bore No. 3785, W. R. Johnston,
"Calooma", 4 m., S.E. of Lila Springs and
30 m. N.N.W. of Bourke, N.S.W., Holotype
at 450 ft., paratype at 400 ft.

C.P.C. 917. Hypotype.

Bore No. 3864, P. A. McGirr, "Laura-
dale" about 12 ml. N.N.E. of Bourke, at
850 ft.

Lower Cretaceous.

VERNEUILINA HOWCHINI Crespin, 1953.

Verneuilina howchini Crespin, 1953a,
p. 31, pl. 5, fig. 16.

C.P.C. 4903. Holotype.

Anacoora Bore, southern N.T., 670 m.
N.N.W. of Adelaide, S.A., at 710-720 ft.

Lower Cretaceous.

VICTORIELLA PLECTE (Chapman), 1922;
Chapman & Crespin, 1930; Crespin, 1950.

Carpenteria proteiformis Goës, var. *pecte*
Chapman, 1922, p. 320, pl. 51, fig. 3.

Victoriella plecte, Chapman & Crespin,
1930a, p. 111, pl. 7, figs. 1-4. Crespin,
1950, p. 74, pl. 10, fig. 15.

C.P.C. 1. Hypotype A.

C.P.C. 655. Hypotype.

Basal Beds, Bird Rock Cliff, Torquay,
Vic.; Jan Juc Fm.

C.P.C. 2. Hypotype B.

C.P.C. 3, 4. Tectotypes.

No. 3 Bore, Dartmoor, western Vic., at
104' 6".

Lower Oligocene or Upper Eocene.

ANTHOZOA

ALVEOLITES CAUDATUS Hill, 1954.

Alveolites caudatus Hill, 1954, p. 32, pl. 1, figs. 10, 11.

C.P.C. 765. Holotype.

1 m. N. of traverse N. of Gneudna Well, Carnarvon Basin, W.A.; near top of Gneudna Fm.

C.P.C. 775. Tectotype (oblique section).

2936-2950 ft. in traverse S. of Gneudna Well; 1465-1470 ft. above base of Gneudna Fm.

Upper Devonian.

ALVEOLITES SUBORBICULARIS Lamarck, 1801; Hill, 1954.

Alveolites suborbicularis, Hill, 1954, p. 34, pl. 2, fig. 25.

C.P.C. 516. Tectotypes.

Menyous Gap, Pillara Range, Fitzroy Basin, W.A., 1938-2045 ft. above base of section; Pillara Lst.

Middle Devonian.

ALVEOLITES TUMIDUS (Hinde), 1890; Hill 1954.

Pachypora tumida Hinde, 1890, p. 197, pl. 8, fig. 3.

Alveolites tumidus, Hill, 1954, p. 33, pl. 2, figs. 19-24.

C.P.C. 528. Hypotype.

Long's Well, Fitzroy Basin, W.A.; between 589 and 800 ft. above base of Pillara Lst.

C.P.C. 515. Tectotype (transverse section).

Menyous Gap, Pillara Range, Fitzroy Basin, 1124-1327 ft. above base of section; Pillara Lst.

C.P.C. 489, 504. Tectotypes.

Hull Range, 2 m. S. of Shady Creek Gap, Fitzroy Basin, 540-640 ft. and 980-1029 ft. above base of section; Pillara Lst.

C.P.C. 544. Tectotypes (transverse, tangential and vertical sections).

Minnie Pool, Fitzroy Basin, between 95-265 ft. above base of section which begins near faulted contact with Precambrian; Pillara Lst.

Middle Devonian.

ALVEOLITES sp. Hill, 1954.

Alveolites sp., Hill, 1954, p. 44, pl. 4, fig. 20.

C.P.C. 1047. Figured section.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W., (BMR Y11b).

Silurian.

AULOPORA sp. cf. **FOORDI** (Etheridge), 1904; Hill, 1954.

Aulopora sp. cf. foordi, Hill, 1954, p. 35, pl. 1, figs. 18a-c.

C.P.C. 519. Figured specimen.

Mountain Home Springs, Pillara Range, Fitzroy Basin, W.A.; 130 ft. above contact of Precambrian with Pillara Lst.

Middle Devonian (Givetian).

BARRANDEOPHYLLUM CAVUM Hill, 1954.

Barrandeophyllum cavum Hill, 1954, p. 8, pl. 3, figs. 3-9.

C.P.C. 548. Holotype and tectotype (transverse section).

C.P.C. 549, 550. Tectotypes (transverse sections).

Old Bohemia Hstd vicinity, Margaret R. area, Fitzroy Basin, W.A.; Mt Pierre Group.

C.P.C. 544, 555. Tectotypes (transverse sections).

Mt Pierre, Fitzroy Basin; Mt Pierre Group.

C.P.C. 551. Tectotype (transverse and vertical sections).

Bugle Gap, Fitzroy Basin; Pillara Lst.

Middle and Upper Devonian.

BARRANDEOPHYLLUM sp. Hill, 1954.
Barrandeophyllum sp., Hill, 1954, p. 9,
pl. 3, fig. 12.

C.P.C. 558. Transverse section.

Bugle Gap, Fitzroy Basin, W.A.; Pillara
Lst.

Middle Devonian.

BARRANDEOPHYLLUM sp. Hill, 1954.
Barrandeophyllum sp., Hill, 1954, p. 9,
pl. 3, figs. 10a, b.

C.P.C. 552. Figured sections.

Old Bohemia Hstd area, Fitzroy Basin,
W.A.; Mt Pierre Group.

Upper Devonian.

CANINIA RUDIS Hill, 1954.
Caninia rudis Hill, 1954, p. 28, pl. 3,
figs. 13a, b, 14, 15, 16a, b.

C.P.C. 562. **Holotype** (external and
transverse and vertical sections).

C.P.C. 563, 565. Tectotypes (transverse
and vertical sections).

C.P.C. 564. Hypotype.

Bugle Gap, Fitzroy Basin, W.A.; Mt.
Pierre Group.

Upper Devonian.

CANINIA RUDIS? Hill, 1954.
Caninia rudis? Hill, 1954, pl. 3, fig. 17.

C.P.C. 561. Figured specimen.

Bugle Gap, Fitzroy Basin, W.A., near
base of section.

Upper Devonian.

CATACTOTOECHUS IRREGULARIS Hill,
1954.

Catactotoechus irregularis Hill, 1954,
p. 10, pl. 3, figs. 31-36.

C.P.C. 566. Hypotype.

Oscar Mill, 1 m. S. of Oscar Hstd, Fitzroy
Basin, W.A.; Bugle Gap Lst.

Upper Devonian.

CATACTOTOECHUS sp., Hill, 1954.

Catactotrechus sp., Hill, 1954, p. 10, pl. 3,
fig. 25.

C.P.C. 56. Figured specimen.

S.E. end of Bugle Gap, Fitzroy Basin,
W.A.; Mt. Pierre Group.

Upper Devonian.

CATACTOTOECHUS sp., Hill, 1954.

Catactotoechus sp., Hill, 1954, p. 10,
pl. 3, fig. 39.

C.P.C. 568. Transverse section.

Between Horse Spring and Horse Spring
Range, Fitzroy Basin, W.A.

Upper Devonian.

COENITES cf. **SERIATOPORA** (Edwards &
Haime); Hill, 1954.

Coenites cf. *seriatopora* Hill, 1954, p. 44,
pl. 4, figs. 21a, b, c.

C.P.C. 1048. Figured specimen.

Cooimbil Hstd, Long Plains, N.S.W.
(CHLP 1b).

C.P.C. 1049. Figured specimen.

W. edge of Yarrangobilly Lst., Yarrango-
billy R., Yarrangobilly Caves, N.S.W. (BMR
Y11d).

C.P.C. 1050. Figured specimen.

Approx. 1 m. E. of Harris's Hut, Coole-
man Plains, N.S.W. (BMR HH3d).

Silurian (Wenlockian or Ludlovian).

COENITES? sp. Hill, 1954.

Coenites ? sp., Hill, 1954, p. 44, pl. 4,
fig. 22.

C.P.C. 1050. Figured section.

Approx. 1 m. E. of Harris's Hut, Coole-
man Plains, N.S.W. (BMR Silurian HH3d).

DIPLOEPORA sp. cf. **GRAYI** (Edwards &
Haime); Hill, 1954.

Diploepora sp. cf. *grayi*, Hill, 1954, p. 41,
pl. 4, fig. 12.

C.P.C. 1039. Figured specimen.

300 yds N.W. of Cooimbil Hstd, Long
Plains, N.S.W. (BMR 1b).

Silurian (Wenlockian or Ludlovian).

DISPHYLLUM DEPRESSUM (Hinde), 1890; Hill, 1954

Cyathophyllum depressum Hinde, 1890, p. 195, pl. 8, figs. 2a, b.

Disphyllum depressum, Hill, 1954, p. 21, pl. 2, fig. 9.

C.P.C. 511. Tectotype (transverse section).

Menyous Gap, Pillara Range, Fitzroy Basin, W.A., 737-1,124 ft, above base of section; Pillara Lst.

Middle Devonian.

DISPHYLLUM DEPRESSUM? Hill, 1954.

Disphyllum depressum?, Hill, 1954, p. 21, pl. 2, fig. 10.

C.P.C. 522. Figured section.

Long's Well, Emanuel Range, Fitzroy Basin, W.A., 425-589 ft. above base of section; Pillara Lst.

Middle Devonian.

DISPHYLLUM DEPRESSUM (Hinde) or **TEMNOPHYLLUM**, Hill, 1954.

Disphyllum depressum (Hinde) or *Temnophyllum*, Hill, 1954, p. 21, pl. 1, fig. 16.

C.P.C. 541. Figured specimen.

Home Range, about 0.8 m. N.W. of Mountain Home Spring, Fitzroy Basin, W.A.; from near base of Pillara Lst.

Middle Devonian.

DISPHYLLUM GOLDFUSSI (Geinitz), 1845-6; Hill, 1954.

Disphyllum goldfussi, Hill, 1954, p. 18, pl. 18, pl. 2, figs. 11, 12, 28.

C.P.C. 525, 526. Tectotypes (transverse and vertical sections).

Long's Well, Emanuel Range, Fitzroy Basin, W.A., 425-589 ft. above base of section; Pillara Lst.

Middle Devonian.

DISPHYLLUM VIRGATUM (Hinde), 1890; Hill, 1954.

Cyathophyllum virgatum Hinde, 1890, p. 194, pl., 8, figs. 1a, b.

Disphyllum virgatum, Hill, 1954, p. 19, pl. 2, figs. 3-5.

C.P.C. 532, 533. Tectotypes (transverse and vertical sections).

Guppy Hill, 7 m. S.W. of Mt. Elma, Margaret R., Fitzroy Basin, W.A., 350-360 ft. above base of section; Pillara Lst.

C.P.C. 545. Tectotypes (transverse and vertical sections).

Minnie Pool, Fitzroy Basin; 406-704 ft. above base of section of possibly faulted Pillara Lst.

Middle Devonian.

DISPHYLLUM VIRGATUM (Hinde) var. **DENSUM** Hill, 1954.

Disphyllum virgatum (Hinde) var. *densum* Hill, 1954, p. 19, pl. 2, figs. 7a, b.

C.P.C. 497. Holotype of var. (transverse and vertical sections).

Hull's Range section, S. of Shady Ck Gap, N. of Margaret R., Fitzroy Basin, W.A.; 540-640 ft. above basal contact of Pillara Lst. with Precambrian.

Middle Devonian.

DISPHYLLUM VIRGATUM (Hinde) var. **VARIABLE** Hill, 1954.

Disphyllum virgatum (Hinde) var. *variabile* Hill, 1954, p. 20, pl. 1, figs. 2-6.

C.P.C. 767. Holotype of var. (polished section).

2,936-2,950 ft. along traverse, S. of Gneudna Well, near Williambury Stn, Carnarvon Basin, W.A.; 1,465-1,470 ft. above base of Gneudna Fm.

C.P.C. 768. Figured specimen.

Traverse N. of Gneudna Well, at 1,035 ft.; about 400 feet above base of Gneudna Fm.

C.P.C. 769. Figured specimen.

Traverse S. of Gneudna Well, at 2,708-2,721 ft.; 1,335-1,345 ft. above base of Gneudna Fm.

C.P.C. 770. Figured specimen.

1 m. N. of Gneudna Well; just below top of Gneudna Fm.

C.P.C. 771. Tectotype (transverse and vertical sections).

About 1 m. N. of Gneudna Well; at top of Gneudna Fm.

Upper Devonian.

DISPHYLLUM cf. **VIRGATUM** var. **VARIABLE** Hill, 1954.

Disphyllum cf. *virgatum* var. *variabile* Hill, 1954, p. 20, pl. 2, fig. 6.

C.P.C. 540. Figured sections.

N. of Pillara Range, Fitzroy Basin, W.A.; Pillara Lst.

Middle Devonian.

DISPHYLLUM sp. Hill, 1954.

Disphyllum sp., Hill, 1954, p. 22, pl. 1, fig. 14.

C.P.C. 495. Figured sections.

Hull Range, 2 m. S. of Shady Creek Gap, N. of Margaret R., Fitzroy Basin, W.A.; 50 ft. above base of Pillara Lst.

Middle Devonian.

FAVOSITES GOTHLANDICUS GOTH-
LANDICUS Lamarck, 1816; Hill, 1954.

Favosites gothlandicus Lamarck, 1816, p. 206.

Favosites gothlandicus gothlandicus, Hill, 1954, p. 42, pl. 4, figs. 13a, b.

C.P.C. 1041. Tectotypes (transverse and vertical sections).

W. edge of Yarrangobilly Lst, Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y1).

Silurian (Wenlockian or Ludlovian).

FAVOSITES GOTHLANDICUS FORBESI

Edwards & Haime, 1851; Hill, 1954.

Favosites forbesi Edwards & Haime, 1851, p. 238.

Favosites gothlandicus forbesi Hill, 1954, p. 42, pl. 4, fig. 14.

C.P.C. 1040. Figured specimen.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y11a).

Silurian (Wenlockian or Ludlovian).

FAVOSITES sp., cf. **TRIPORA** Walkom, 1912; Hill, 1954.

Favosites sp. cf. *tripora* Hill, 1954, p. 43, pl. 4, figs. 15a, b.

C.P.C. 1042. Figured section.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y6).

Silurian (Wenlockian or Ludlovian).

FAVOSITES spp. Hill, 1954.

Favosites spp., Hill, 1954, p. 43, pl. 4 figs. 16a, b; 17.

C.P.C. 1043, 1044. Figured sections.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y4a, Y5c).

Silurian (Wenlockian or Ludlovian).

HALYSITES BREVICATENATUS Hill, 1954.

Halysites brevicatenatus Hill, 1954, p. 38, pl. 4, figs. 5a, b.

C.P.C. 1032. Holotype (transverse and vertical sections).

300 yds. N.W. of Cooinbil Hstd, Long Plain, N.S.W. (BMR 1a).

Silurian (Wenlockian or Ludlovian).

HALYSITES sp. cf. **AUSTRALIS** Etheridge; Hill, 1954.

Halysites sp. cf. *australis*, Hill, 1954, p. 39, pl. 4, figs. 8a, b.

C.P.C. 1035. Figured specimen.

Cooinbil Hstd, Long Plain, N.S.W. (BMR 2a).

Silurian (Wenlockian or Ludlovian).

HALYSITES sp. cf. **LITHOSTRO-
TIONOIDES** Etheridge; Hill, 1954.

Halysites sp. cf. *Lithostrotionoides*, Hill,
1954, pl. 38, pl. 4, fig. 6.

C.P.C. 1033. Figured specimen.

W. edge, Yarrangobilly Lst., Yarrango-
billy R., Yarrangobilly Caves, N.S.W. (BMR
Y8).

Silurian (Wenlockian or Ludlovian).

HALYSITES sp. indet., Hill, 1954.

Halysites sp. indet., Hill, 1954, p. 39,
pl. 4, fig. 9.

C.P.C. 1036. Figured specimen.

300 yds. N.W. of Cooinbil Hstd, Long
Plans, N.S.W. (BMR 2a).

Silurian (Wenlockian or Ludlovian).

HALYSITES sp. indet., Hill, 1954.

Halysites sp. indet., Hill, 1954, p. 39,
pl. 4, fig. 7.

C.P.C. 1035. Figured specimen.

W. edge of Yarrangobilly Lst., Yarran-
gobilly R., Yarrangobilly Caves, N.S.W.
(BMR Y11).

Silurian (Wenlockian or Ludlovian).

HELIOLITES DAINTREEI? Nicholson &
Etheridge, 1879; Hill, 1954.

Heliolites daintreei?, Hill, 1954, p. 40,
pl. 4, fig. 10.

C.P.C. 1037. Figured specimen.

W. edge of Yarrangobilly Lst., Yarran-
gobilly R., Yarrangobilly Caves, N.S.W.
(BMR Y5b).

Silurian (Wenlockian or Ludlovian).

HEXAGONARIA BREVILAMELLATA
(Hill), 1936; Hill, 1954.

Prismatophyllum breviamellatum Hill,
1936, p. 32, text-figs. 6-8.

Hexagonaria breviamellata, Hill, 1954,
p. 15, pl. 1, figs. 12, 13; pl. 2, fig. 1.

C.P.C. 518. Tectotypes (transverse and
vertical sections).

130 ft. above contact with Precambrian,
Mountain Home Spring, Pillara Range, Fitz-
roy Basin, W.A.; Pillara Lst.

C.P.C. 537. Tectotypes (transverse and
vertical sections).

Limestone Billy Hills, Margaret R. area,
Fitzroy Basin, from a crush breccia involving
basal Pillara Lst. and lower part of Upper
Devonian; Mt. Pierre Group.

Middle and Upper Devonian.

HEXAGONARIA BREVILAMELLATA?
Hill, 1954.

Hexagonaria breviamellata? Hill, 1954,
p. 16, pl. 2, fig. 2.

C.P.C. 534. Figured section.

3 m. S. of Spring, Fossil Downs, Mar-
garet R., Fitzroy Basin, W.A., 300-400 ft. up
in section; Pillara Lst.

Middle Devonian.

HEXAGONARIA GNEUDNENSIS Hill,
1954.

Hexagonaria gneudnensis Hill, 1954,
p. 18, pl. 1, figs. 1a, b.

C.P.C. 766. Holotype (transverse and
vertical sections).

Between 2574 and 2600 ft. on traverse S.
of Gneudna Well, Carnarvon Basin, W.A.;
1260 to 1275 ft. above base of Gneudna Fm.

Upper Devonian.

HEXAGONARIA HULLENSIS Hill, 1954.

Hexagonaria hullensis Hill, 1954, p. 16,
pl. 1, figs. 20-23.

C.P.C. 501. Holotype (transverse and
vertical sections).

C.P.C. 500. Tectotypes (transverse and
vertical sections).

Hull Range, 2 m. S. of Shady Creek Gap,
Fitzroy Basin, W.A.; Pillara Lst.

C.P.C. 535. Tectotypes (transverse and
vertical sections).

Horse Spring Range near Horse Spring, Fossil Downs Stn, Fitzroy Basin, 350-450 ft. above base of measured section; ? Pillara Lst.

C.P.C. 536. Tectotypes (transverse and vertical sections).

Hull Range, S. end, Fitzroy Basin, 280-355 ft. above base of section; Pillara Lst.

Middle Devonian.

HEXAGONARIA HULLENSIS? Hill, 1954.

Hexagonaria hullensis? Hill, 1954, pl. 1, fig. 24.

C.P.C. 499. Figured sections.

Hull Range, 2 m. S. of Shady Creek Gap, Fitzroy Basin, W.A.; 730-750 ft. above base of Pillara Lst.

Middle Devonian.

NEOMPHYMA? sp. Hill, 1954.

Neomphyma? sp., Hill, 1954, p. 37, pl. 4, figs. 2a, b.

C.P.C. 1030. Figured specimen.

Approx. 1 m. E. of Harris's Hut, Cooleman Plains, N.S.W. (BMR HH3a).

Silurian (Wenlockian or Ludlovian).

PALAEOSMILIA CONTEXTA Hill, 1954.

Palaeosmilia contexta Hill, 1954, p. 27, pl. 3, figs. 40, 41.

C.P.C. 569. Holotype (transverse and vertical sections).

C.P.C. 570. Tectotypes (transverse and vertical sections).

Button's Crossing, Ord R., Fitzroy Basin, W.A., below horizon of nautiloids of Stages III and IV.

Upper Devonian.

PHACELLOPHYLLUM sp., Hill, 1954.

Phacellophyllum sp., Hill, 1954, p. 26, pl. 3, fig. 26.

C.P.C. 567. Figured sections.

6½ m. E. of Mt Elma, W. of Horse Ck, N. of Margaret R., Fitzroy Basin, W.A.; Bugle Gap Lst.

Upper Devonian.

PHILLIPSASTRAEA DELICATULA Hill, 1936; Hill, 1954.

Phillipsastraea delicatula Hill, 1936, p. 30, text-figs. 4, 5; 1954, p. 14, pl. 1, fig. 19.

C.P.C. 539. Transverse and vertical sections.

Sparke Range, Margaret R., Fitzroy Basin, W.A.; Pillara Lst.

Middle Devonian.

PHILLIPSASTRAEA sp., Hill, 1954.

Phillipsastraea sp., Hill, 1954, p. 14, pl. 3, fig. 2.

C.P.C. 553. Transverse section.

Old Bohemia Hstd, Fitzroy Basin, W.A.; Mt Pierre Group.

Upper Devonian.

PROPORA? sp., Hill, 1954.

Propora? sp., Hill, 1954, p. 41, pl. 4, fig. 11.

C.P.C. 1038. Oblique section.

W. end of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y11c).

Silurian (Wenlockian or Ludlovian).

SPONGOPHYLLUM? sp., Hill, 1954.

Spongophyllum? sp., Hill, 1954, p. 29, pl. 1, fig. 17.

C.P.C. 542. Transverse and vertical sections.

Home Range, about 0.8 m. N.W. of Mountain Home Spring, Fitzroy Basin, W.A.; near base of Pillara Lst.

Middle Devonian.

STRIATOPORA sp., Hill, 1954.

Striatopora sp., Hill, 1954, p. 43, pl. 4, figs. 18a, b.

C.P.C. 1045. Figured sections.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y5a).

Silurian (Wenlockian or Ludlovian).

STRIATOPORA? sp., Hill, 1954.

Striatopora? sp., Hill, 1954, p. 44, pl. 4, figs. 19a, b.

C.P.C. 1046. Figured sections.

Approx. 1 m. E. of Harris's Hut, Cooleman Plains, N.S.W. (BMR HH1).

Silurian (Wenlockian or Ludlovian).

SYRINGOPORA PATULA Hinde, 1890; Hill, 1954.

Syringopora reticulata Goldfuss var. *patula* Hinde, 1890, p. 198, pl. 8, fig. 4.

Syringopora patula, Hill, 1954, p. 35, pl. 3, figs. 42, 43.

C.P.C. 571, 572. Transverse and vertical sections.

Button's Crossing, Ord R., Fitzroy Basin, W.A.; Burt Range Lst.

Upper Devonian.

TEMNOPHYLLUM TURBINATUM Hill, 1954.

Temnophyllum turbinatum Hill, 1954, p. 23, pl. 2, figs. 13, 14.

C.P.C. 523. **Holotype (transverse and vertical sections).**

C.P.C. 524. Transverse and vertical sections.

Long's Well, Fitzroy Basin, W.A.; 425-589 ft. above base of partial section of Pillara Lst.

Middle Devonian.

TEMNOPHYLLUM? FLORIFORME Hill, 1954.

Temnophyllum? floriforme Hill, 1954, p. 24, pl. 2, fig. 26.

C.P.C. 543. **Holotype (transverse and vertical sections).**

1½ m. S. of Mt Elma, N. of Margaret R., Fitzroy Basin, W.A., from outcrop projecting from J8 conglomerate; Pillara Lst.

Middle Devonian.

THAMNOPORA BOLONIENSIS (Gosselet), Hill, 1954.

Thamnopora boloniensis, Hill, 1954, p. 30, pl. 2, figs. 16-18.

C.P.C. 508. Tectotype (transverse and vertical sections).

Hull Range, 2 m. S. of Shady Creek Gap, Fitzroy Basin; between 1,020 and 1,040 ft. above base of Pillara Lst.

C.P.C. 514. Figured sections.

Menyous Gap, Fitzroy Basin; between 1,124 and 1,327 ft. above base of section of Pillara Lst.

Middle Devonian.

THAMNOPORA cf. **POLYFORATA** (Schlotheim), Hill, 1954.

Thamnopora cf. *polyforata*, Hill, 1954, p. 31, pl. 1, figs. 7-9.

C.P.C. 772, 773. Figured specimens.

Bet. 2,708-2,721 ft. in traverse S. of Gneudna Well, Carnarvon Basin, W.A.; 1,335-1,345 ft. above base of Gneudna Fm.

C.P.C. 774. Figured sections.

About 1 m. N. of Gneudna Well, Carnarvon Basin; at top of Gneudna Fm.

Upper Devonian.

TRYPLASMA DELICATULUM Etheridge, 1907; Hill, 1954.

Tryplasma delicatulum Etheridge, 1907, p. 82, pl. 22, fig. 9; pl. 23, figs. 6, 7. Hill, 1954, p. 36, pl. 4, fig. 1.

C.P.C. 1029. Hypotype.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y7).

Silurian (Wenlockian or Ludlovian).

ZAPHRENTOIDES? EXCAVATUS Hill, 1954.

Zaphrentoides? excavatus Hill, 1954, p. 12, pl. 3, figs. 18, 19.

C.P.C. 556. Holotype.

C.P.C. 557. Tectotype (transverse section).

Bugle Gap, Fitzroy Basin, W.A.; Mt Pierre Group.

Upper Devonian.

RUGOSA gen et sp. indet., Hill, 1954.

Rugosa gen et sp. indet. Hill, 1954, p. 37, pl. 4, figs. 3a, b.

C.P.C. 1031. Figured specimens.

W. edge of Yarrangobilly Lst., Yarrangobilly R., Yarrangobilly Caves, N.S.W. (BMR Y4b).

Silurian (Wenlock or Ludlovian).

SOLITARY FAVISTELLID? Hill, 1954.

Solitary favistellid? Hill, 1954, pl. 4, fig. 4.

C.P.C. 1052. Figured specimen.

Approx. 1 m. E. of Harris's Hut, Cooleman Plains, N.S.W. (BMR HH2).

Silurian (Wenlockian or Ludlovian).

HYDROZOA

PROTONOBIA WADEI Sprigg, 1949.

Coiled worm, Chapman in Wade, 1924, pl. 9.

Protonobia wadei Sprigg, 1949, p. 77, pl. 11, fig. 1; text-fig. 2.

C.P.C. 192. Holotype.

Mt. John, Osmond Range, Fitzroy Basin, W.A.

Cambrian.

CRINOIDEA

CALCEOLISPONGIA

ACUMINATA

Teichert, 1949.

Calceolispongia acuminata Teichert, 1949, p. 591, pl. 3, figs. 30-35.

C.P.C. 474, 475, 476. Hypotypes.

Near Bogadi Outcamp, Byro Stn., Wooramel R. area, Carnarvon Basin, W.A.

Lower Permian.

JIMBACRINUS BOSTOCKI Teichert, 1954.

Jimbacrinus bostocki Teichert, 1954, p. 71, pl. 13, figs. 1-7; pl. 14, figs. 1-11.

C.P.C. 326. Holotype.

C.P.C. 327, 329. Paratypes.

C.P.C. 328, 330-334. Figured specimens.

S. side of Gascoyne R., 2 m. E. of Jimba Jimba Hstd., Carnarvon Basin, W.A., 95 m. upstream from mouth of Gascoyne R. at Carnarvon.

Lower Permian (Artinskian).

OPHIUROIDEA

OPHIACANTHA (OPHIOGLYPHOIDA)

FOSTERI Chapman, 1934.

Ophiacantha (ophioglyphoida) fosteri Chapman, 1934, p. 195, pl. 7, figs. 1-4.

C.P.C. 62. Holotype.

No. 2 Bore, Gavin's Anticline, Cleeve, near Longreach, Qld, at 519 ft.

Lower Cretaceous.

ECHINOIDEA

CONOCLYPEUS WESTRALIENSIS Crespin, 1943.

Conoclypeus westraliensis Crespin, 1943, 1943, p. 75, pl. 1, figs. 1-3.

C.P.C. 184. Holotype.

C.P.C. 185. Paratype.

Gorge, E. flank of Cape Range, W. of Exmouth Gulf Outcamp, Carnarvon Basin, W.A.; Tulki Lst.

Lower Miocene.

BRYOZOA

CALLOCLADIA? RAMOSA Crockford, 1957.

Callocladia? ramosa Crockford, 1957, pl. 15, figs. 1, 2, text-fig. 9.

C.P.C. 1180. Holotype.

Keevie's Well, 8 m. N. from Mt. Anderson, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

DYBOWSKIELLA ARBORESCENS Crockford, 1957.

Dybowskiella arborescens Crockford, 1957, p. 15, pl. 2, figs. 1-4.

C.P.C. 1056. Holotype.

1½ m. S.W. from point 4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.

C.P.C. 1055. Tectotype (vertical and tangential sections).

2 m. at 120° from Tank Bore, Cherrabum Stn, Fitzroy Basin; Noonkanbah Fm.

Lower Permian (Artinskian).

DYSCRITELLA BRUTENI Crockford, 1957.

Dyscritella bruteni Crockford, 1957, p. 53, pl. 13, figs. 3, 4.

C.P.C. 1168A. Holotype (external and section).

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

DYSCRITELLA LIVERINGA Crockford, 1957.

Dyscritella liveringa Crockford, 1957, p. 54, pl. 14, fig. 1, text-figs. 7, 8.

C.P.C. 1181. Holotype.

Mt Hardman, Fitzroy Basin, W.A.; Liveringa Fm.

Lower Permian (Artinskian).

DYSCRITELLA MACROSTOMA Crockford, 1957.

Dyscritella macrostoma Crockford, 1957, p. 51, pl. 13, figs. 5-8.

C.P.C. 1116C. Holotype.

C.P.C. 1178. Tectotype (oblique section).

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).

Lower Permian (Artinskian).

DYSCRITELLA TENUIRAMA Crockford, 1957.

Dyscritella tenuirama Crockford, 1957, p. 52, pl. 13, figs. 1, 2.

C.P.C. 1161. Holotype.

Keevie's Well, 8 m. N. from Mt Anderson Hstd, Fitzroy Basin, W.A.; Noonkanbah Fm.

C.P.C. 1165A. Figured specimen.

2 m. at 226° from Bruten's Yard, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR288).

Lower Permian (Artinskian).

ERIDOPORA PERMIANA Crockford, 1957.

Eridopora permiana Crockford, 1957, p. 17, pl. 3, figs. 1-4, text-fig. 2.

C.P.C. 1065. Holotype.

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).

C.P.C. 1062. Figured specimen.

Keevie's Well, 8 m. N. from Mt Anderson Hstd, Fitzroy Basin; Noonkanbah Fm.

C.P.C. 1063A. Figured specimen.

9 m. W. of Liveringa Stn, and ¾ m. N. of Mt Anderson-Liveringa rd.; Noonkanbah Fm. (G51).

Lower Permian (Artinskian).

ETHERELLA IRREGULARIS Crockford, 1957.

Etherella irregularis Crockford, 1957, p. 34, pl. 9, figs. 1-3.

- C.P.C. 1073H. Holotype** (external and transverse section).
C.P.C. 1073G. Figured specimen.
 4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).
Lower Permian (Artinskian).
- ETHERELLA POROSA** Crockford, 1957.
Etherella porosa Crockford, 1957, p. 32, pl. 8, figs. 1-3.
C.P.C. 1102A. Holotype.
 4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).
Lower Permian (Artinskian).
- ETHERELLA POROSA** Crockford var. **MINOR** Crockford, 1957.
Etherella porosa Crockford var. minor Crockford, 1957, p. 33, pl. 8, figs. 4-6.
C.P.C. 1072D. Holotype of var.
C.P.C. 1073E. Figured specimen.
 4 m. W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.
Lower Permian (Artinskian).
- FENESTELLA HINDEI** Crockford, 1957.
Fenestella hindei Crockford, 1957, p. 58, pl. 16, fig. 1, text-fig. 10.
C.P.C. 1078E. Figured specimen.
 3 m. at 100° from Wood's Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.
Lower Permian (Artinskian).
- FENESTELLA** sp. nov., Crockford, 1957.
Fenestella sp. nov., Crockford, 1957, p. 60, text-fig. 11.
C.P.C. 1201B. Figured specimen.
 3 m. at 100° from Wood's Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.
Lower Permian (Artinskian).
- FENESTRELLINA AFFLUENZA** (Bretnall) 1926; Crockford, 1944.
Fenestella affluenza Bretnall 1926, p. 16, pl. 1, fig. 8.
Fenestrellina affluenza, Crockford, 1944, p. 148, pl. 1, fig. 10.
C.P.C. 302. Figured specimen.
 W. of Callytharra, Wooramel R., Carnarvon Basin, W.A.; Callytharra Fm.
Lower Permian (Artinskian).
- FENESTRELLINA ALIA** Crockford, 1944.
Fenestrellina alia Crockford, 1944, p. 159, pl. 4, fig. 8.
C.P.C. 301. Holotype.
 W. of Callytharra, Wooramel R., Carnarvon Basin, W.A.; Callytharra Fm.
Lower Permian (Artinskian).
- FENESTRELLINA CHAPMANI** Crockford, 1944.
Fenestrellina chapmani Crockford, 1944, p. 158, pl. 4, fig. 5.
C.P.C. 303. Holotype.
C.P.C. 304. Paratype.
 W. of Callytharra, Wooramel R., Carnarvon Basin, W.A.; Callytharra Fm.
Lower Permian (Artinskian).
- FENESTRELLINA SPARSIGEMMATA** Crockford, 1944.
Fenestrellina sparsigemmata Crockford, 1944, p. 159, pl. 4, fig. 9.
C.P.C. 300. Holotype.
 W. of Callytharra, Wooramel R., Carnarvon Basin; Callytharra Fm.
Lower Permian (Artinskian).
- FISTULAMMINA LATA** Crockford, 1957.
Fistulammina lata Crockford, 1957, p. 21, pl. 4, figs. 6, 7, text-fig. 3.
C.P.C. 1077C. Holotype.
C.P.C. 1077B. Figured specimen.
 2 m. at 120° from Tank Bore, Cherrabun Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR291).
Lower Permian (Artinskian).

FISTULIPORA LIVERINGA Crockford, 1957.

Fistulipora liveringa Crockford, 1957, p. 14, pl. 2, figs. 5, 6.

C.P.C. 1057. Holotype.

8 m. S. from Donkey Gorge Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; base of Liveringa Fm. (PR261).

Lower Permian (Artinskian).

FISTULIPORA NURA Crockford, 1957.

Fistulipora nura Crockford, 1957, p. 12, pl. 1, figs. 1-3.

C.P.C. 1054. Holotype.

N. end of Lake Joseline, Mt Wynne area, Fitzroy Basin, W.A.; Nura Nura Member, Poole Sdst. (W42B, C).

Lower Permian (Artinskian).

FISTULIPORA STEREOS Crockford, 1957.

Fistulipora stereos Crockford, 1957, p. 13, pl. 1, figs. 4, 5.

C.P.C. 1058. Holotype.

4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).

Lower Permian (Artinskian).

HEXAGONELLA HUDLESTONI Crockford, 1957.

Hexagonella hudlestoni Crockford, 1957, p. 20, pl. 4, figs. 1-5.

C.P.C. 1074. Holotype.

C.P.C. 1075. Figured section (tangential).

4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.

C.P.C. 1071A. Figured section (tangential).

1 m. N.E. from Lake Joseline, 4 m. at 200° from Mt Wynne, Fitzroy Basin; Nura Nura Member, Poole Sdst. (W44C).

Lower Permian (Artinskian).

LEIOCLEMA GLOBOSA Crockford, 1957.

Leioclema globosa Crockford, 1957, p. 55, pl. 14, figs. 2-4.

C.P.C. 1138. Holotype (longitudinal and tangential sections).

$\frac{1}{4}$ m. N. from a point 1 m. N.E. of Lake Joseline, 4 m. at 290° from Mt Wynne, Fitzroy Basin, W.A.; Nura Nura Member, Poole Sdst.

C.P.C. 1294. Figured specimen.

9 m. E.S.E. from Cuncudgerie Hill, Canning Basin, W.A.

Lower Permian (Artinskian).

LIGULOCLEMA TYPICALIS Crockford, 1957.

Liguloclema typicalis Crockford, 1957, p. 36, pl. 9, fig. 4, text-fig. 5.

C.P.C. 1106A. Holotype.

Base of Mt Marmion, Fitzroy Basin, W.A.; top of Noonkanbah Fm.

Lower Permian (Artinskian).

LYOPORA JOSELINI Crockford, 1957.

Lyopora joselini Crockford, 1957, p. 70, pl. 19, figs. 1-3.

C.P.C. 1256A. Holotype.

C.P.C. 1256B. Figured specimen.

$\frac{1}{4}$ m. W. of a point N.E. of Lake Joseline, 4 m. at 290° from Mt Wynne, Fitzroy Basin, W.A.; Nura Nura Member, Poole Sdst. (W44C).

C.P.C. 1222. Figured specimen.

N. end of Lake Joseline, Mt Wynne area, Fitzroy Basin; Nura Nura Member, Poole Sdst. (W42B, C).

Lower Permian (Artinskian).

MEGACANTHOPORA? SCALARIFORMIS Crockford, 1957.

Megacanthopora? scalariformis Crockford, 1957, p. 48, pl. 15, figs. 3-6.

C.P.C. 1129. Holotype (external and tangential and transverse sections).

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR284).

Lower Permian (Artinskian).

MINILYA AMPLA Crockford, 1944.

Minilya ampla Crockford, 1944, p. 159,
pl. 4, fig. 7.

C.P.C. 309. Holotype.

W. of Callytharra, Wooramel R, Carnar-
von Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

PENNIRETEPORA FOSSATA Crockford,
1944.

Penniretepora fossata Crockford, 1944, p.
163, pl. 5, fig. 6.

C.P.C. 306. Holotype.

Below Callytharra, Wooramel R, Carnar-
von Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

PENNIRETEPORA GRANULATA Crock-
ford, 1944.

Penniretepora granulata Crockford, 1944,
p. 163, pl. 5, fig. 9, text-fig. 44.

C.P.C. 325. Holotype.

Below Callytharra, Wooramel R, Carnar-
von Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

PENNIRETEPORA TRIPOROSA Crockford,
1944.

Penniretepora triporosa Crockford, 1944,
p. 161, pl. 5, fig. 4, text-fig. 49.

C.P.C. 305. Holotype.

W. of Callytharra, Wooramel R, Carnar-
von Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

POLYPORA KIMBERLEYENSIS Crockford
1957.

Polypora kimberleyensis Crockford, 1957,
p. 62, pl. 17, figs. 1, 2.

C.P.C. 1173. Holotype.

Keevie's Well, 8 m. N. from Mt Anderson
Hstd, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

POLYPORA MEGASTOMA de Konnick,
1863; Crockford, 1957.

Polypora megastoma de Konnick, 1863,
p. 5, pl. 2, fig. 3. Crockford, 1957,
p. 61, pl. 16, figs. 2, 3.

C.P.C. 1207. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR284).

Lower Permian (Artinskian).

POLYPORA NATALIS Crockford, 1957.

Polypora natalis Crockford, 1957, p. 64,
pl. 18, figs. 1, 2, text-fig. 12.

C.P.C. 1289. Holotype.

2 m. at 260° from Bruten's Yard,
Cherrabun Stn, Fitzroy Basin, W.A.; Noon-
kanbah Fm. (PR302A).

Lower Permian (Artinskian).

POLYPORA OBESA Crockford, 1957.

Polypora obesa Crockford, 1957, p. 67,
pl. 19, fig. 4.

C.P.C. 1255. Holotype.

4 m. S. from Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR 284).

Lower Permian (Artinskian).

POLYPORA WADEI Crockford, 1957.

Polypora wadei Crockford, 1957, p. 65,
pl. 17, fig. 4.

C.P.C. 1080B. Holotype.

2 m. at 120° from Tank Bore, Cherrabun
Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.
(PR 291).

Lower Permian (Artinskian).

POLYPORA sp. indet. Crockford, 1957.

Polypora sp. indet. Crockford, 1957, p.
66, pl. 17, fig. 3.

C.P.C. 1250. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR 284).

Lower Permian.

PRISMOPORA? ATTENUATA Crockford, 1957.

Prismopora? attenuata Crockford, 1957, p. 26, pl. 5, figs. 6, 7.

C.P.C. 1087. Holotype.

4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin; Noonkanbah Fm. (PR 284).

Lower Permian (Artinskian).

PRISMOPORA DIGITATA Crockford, 1957.

Prismopora digitata Crockford, 1957, p. 23, pl. 5, figs. 1-4.

C.P.C. 1073B. Holotype.

C.P.C. 1073C, 1086. Figured specimens and sections.

4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR 284).

Lower Permian (Artinskian).

PRISMOPORA? TRIRADIATA Crockford, 1957.

Prismopora? triradiata Crockford, 1957, p. 24, pl. 6, figs. 1-4.

C.P.C. 1088. Holotype (sections).

2 m. at 260° from Bruten's Yard, Cherrabun Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR 302A).

C.P.C. 1089A. Figured specimen.

3 m. at 100° from Wood's Bore, Christmas Creek Stn, Fitzroy Basin; Noonkanbah Fm. (PR 256).

Lower Permian (Artinskian).

PROTORETEPORA FLEXUOSA Crockford, 1957.

Protoretepora flexuosa Crockford, 1957, p. 69, pl. 18, figs. 4, 5.

C.P.C. 1261. Holotype.

C.P.C. 1265. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (PR 284).

Lower Permian (Artinskian).

RHABDOMESON BRETNALLI Crockford, 1957.

Rhabdomeson bretnalli Crockford, 1957, p. 75, pl. 20, figs. 4-7.

C.P.C. 1189A. Holotype.

Keevie's Well, 8 m. N. of Mt Anderson, Fitzroy Basin, W.A.; Noonkanbah Fm.

C.P.C. 1187B. Figured section.

7 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin; Noonkanbah Fm. (NK 12).

Lower Permian (Artinskian).

RHABDOMESON GRANDE Bassler, 1929; Crockford, 1957.

Rhabdomeson grande Bassler, 1929, p. 69, pl. 238, figs. 9-14. Crockford, 1957, p. 75, pl. 19, fig. 5.

C.P.C. 1144B. Figured section.

3½ m. at 110° from Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (R 478).

Lower Permian (Artinskian).

RHABDOMESON MAMMILLATUM (Brettnall), 1926; Crockford, 1957.

Rhombopora mammillata Brettnall, 1926, p. 24, pl. 1, fig. 2.

Rhabdomeson mammillatum, var. nov., Crockford, 1957, p. 74, pl. 20, figs. 1-3.

C.P.C. 1176B. Figured specimen.

1½ m. S.W. from a point 4 m. due W. from Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm. (NK 15).

Lower Permian (Artinskian).

RHOMBOCLADIA MINOR Crockford, 1944.

Rhombocladia minor Crockford, 1944, p. 171, pl. 5, fig. 5; text-figs. 45, 46.

C.P.C. 307. Holotype.

Below Callytharra. Wooramel R., Carnarvon Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

RHOMBOCLADIA SPINULIFERA Crockford, 1944; Crockford, 1957.

Rhombocladia spinulifera Crockford, 1944, p. 171, text-fig. 48; 1957, p. 79, pl. 16, fig. 4.

C.P.C. 1275. Figured specimen.

Base of Mt Marmion, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

SAFFORDOTAXIS CASTANEA Crockford, 1957.

Saffordotaxis castanea Crockford, 1957, p. 78, pl. 21, figs. 5, 6; text-fig. 13.

C.P.C. 1073K Holotype.

C.P.C. 1203. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas Creek Stn; Noonkanbah Fm. (PR 284).

Lower Permian (Artinskian).

SAFFORDOTAXIS ELEGANS Crockford, 1957.

Saffordotaxis elegans Crockford, 1957, p. 77, pl. 21, figs. 1-4.

C.P.C. 185E. Holotype.

1½ m. S.W. from a point 4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin; Noonkanbah Fm. (NK 15).

C.P.C. 1195B. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin; Noonkanbah Fm. (PR 284).

C.P.C. 1094D. Figured sections.

2 m. S.S.W. from Bohemia Downs Stn, Fitzroy Basin, on a fault line; Noonkanbah Fm. (R 422).

Lower Permian (Artinskian).

STETOPORA ORNATA Crockford, 1944.

Stetopora ornata Crockford, 1944, p. 164, pl. 4, fig. 11; pl. 5, fig. 3.

C.P.C. 310. Holotype.

W. of Callytharra, Wooramel R., Carnarvon Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

STENODISCUS HARDMANI Crockford, 1957.

Stenodiscus hardmani Crockford, 1957, p. 47, pl. 12, figs. 4-6.

C.P.C. 1139A. Holotype.

C.P.C. 1139E. Figured sections.

Mt. Hardman, Fitzroy Basin, W.A.; Liveringa Fm.

Lower Permian.

STENODISCUS VARIABILIS Crockford, 1957.

Stenodiscus variabilis Crockford, 1957, p. 45, pl. 12, figs. 1-3.

C.P.C. 1145. Holotype.

Base of Mt Marmion, Fitzroy Basin, W.A.; top of Noonkanbah Fm.

C.P.C. 1141. Figured sections.

Keevie's Well, 8 m. from Mt Anderson Hstd, Fitzroy Basin, Noonkanbah Fm.

Lower Permian (Artinskian).

STENOPORA BELLA Crockford, 1957.

Stenopora bella Crockford, 1957, p. 42, pl. 11, figs. 1-5.

C.P.C. 1128A. Holotype.

C.P.C. 1128B. Figured sections.

4 m. due W. of Chestnut Bore, Christmas Creek Stn, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

STENOPORA HEMISPHAERICA Waagen Wentzel, 1886; Crockford, 1957.

Stenopora hemisphaerica Waagen Wentzel, 1886, p. 891, pl. 106, fig. 2. Crockford, 1957, p. 39, pl. 10, figs. 1, 2.

C.P.C. 1291A. Figured specimen.

4½ m. W. of Mt Wynne Trig. Pt, Fitzroy Basin, W.A.; Nura Nura Member, Poole Sdst. (K. Nura 1).

Lower Permian (Artinskian).

STENOPORA HIRSUTA Crockford, 1945.

Stenopora hirsuta Crockford, 1945, pl. 2,
fig. 6, text-figs. 11-13.

C.P.C. 321. Holotype.

C.P.C. 322-324. Figured sections.

Granton, Tasmania, opposite Bridge-
water near Hobart; Berriedale Limestone.

Lower Permian (Artinskian).

STENOPORA LINEATA Crockford, 1957.

Stenopora lineata Crockford, 1957, p. 43,
pl. 10, figs. 6-8.

C.P.C. 1127. Holotype (external and
tangential and transverse sections).

4 m. due W. of Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR 284).

Lower Permian (Artinskian).

STENOPORA PUNCTATA Crockford, 1957.

Stenopora punctata Crockford, 1957, p.
41, pl. 11, figs. 6, 7.

C.P.C. 1130. Holotype (longitudinal
and tangential sections).

3 m. at 100° from Wood's Bore, Christ-
mas Creek Stn, Fitzroy Basin, W.A.; Noon-
kanbah Fm. (PR 256).

Lower Permian (Artinskian).

STENOPORA SPICATA Bassler (1929), var.
OBTUSA Crockford, 1957.

Stenopora spicata Bassler, var. *obtusa*
Crockford, 1957, p. 40, pl. 10, figs. 3-5.

C.P.C. 1121. Holotype (external and
sections of var.).

4 m. due W. of Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR 284).

Lower Permian (Artinskian).

STREBLOCLADIA EXCAVATA Crockford,
1944.

Streblocladia excavata Crockford, 1944,
pl. 5, fig. 7, text-figs. 42-43.

C.P.C. 308. Holotype.

Below Callytharra, Wooramel R., Car-
narvon Basin, W.A.; Callytharra Fm.

Lower Permian (Artinskian).

SYNOCLADIA TEICHERTI Crockford,
1957.

Synocladia teichert Crockford, 1959, p.
72, pl. 17, fig. 5; pl. 18, fig. 3.

C.P.C. 1274. Holotype.

Base of Mt Marmion, Fitzroy Basin,
W.A.; Noonkanbah Fm.

C.P.C. 1205. Figured specimen.

4 m. due W. from Chestnut Bore, Christ-
mas Creek Stn, Fitzroy Basin, W.A.; Noon-
kanbah Fm. (PR 284).

Lower Permian (Artinskian).

TABULIPORA SCISSA Crockford, 1957.

Tabulipora scissa Crockford, 1957, p. 44,
pl. 12, fig. 7, text-fig. 6.

C.P.C. 1133. Holotype (oblique sec-
tions).

Keevie's Well, 8 m. from Mt Anderson
Hstd, Fitzroy Basin, W.A.; Noonkanbah Fm.

Lower Permian (Artinskian).

GEN. et SP. indet. Crockford, 1957.

Gen. et sp. indet., Crockford, 1957, pl. 9,
fig. 5.

C.P.C. 1102B. Figured specimen.

4 m. due W. of Chestnut Bore, Christmas
Creek Stn, Fitzroy Basin, W.A.; Noonkanbah
Fm. (PR 284).

Lower Permian (Artinskian).

BRACHIOPODA

ATHYRIS OSCARENSIS Veevers, 1959.

Athyris oscarensis Veevers, 1959, p. 140,
pl. 14, figs. 1-13; text-figs. 95-98.

C.P.C. 3015. Holotype.

C.P.C. 3014. Figured specimen.

Oscar Hill, Fitzroy Basin, W.A.; Fairfield
Beds (K 283).

C.P.C. 3009, 3013. Figured specimens.

Fossil Downs Hstd., Fitzroy Basin; Geikie
Fm. (K 285).

C.P.C. 3010, 3011, 3012. Figured
specimens.

S. of Burramundi Range, Fitzroy Basin;
Fairfield Beds (K 288, K 289).

Upper Devonian.

ATRYPA DESQUAMATA KIMBERLEY- ENSIS Coleman, 1951; Veevers, 1959.

Atrypa desquamata kimberleyensis
Coleman, 1951, p. 683, pl. 101, figs.
1-6. Veevers, 1959, p. 119, pl. 15,
fig. 13; text-fig. 73.

C.P.C. 2989. Figured specimen.

Sadler Ridge, Emanuel Range, Fitzroy
Basin, W.A.; Sadler Fm. (K 245).

Upper Devonian.

ATRYPA RETICULARIS TEICHERTI Coleman, 1951; Veevers, 1959.

Atrypa reticularis teichertii Coleman, 1951,
p. 681, pl. 100, figs. 1-10. Veevers,
p. 116, text-figs. 70-72.

C.P.C. 3030, 3031. Sections and peels.

Near Sadler Ridge, Emanuel Range,
Fitzroy Basin, W.A.; Sadler Fm. (K 225,
K 223).

Upper Devonian.

AULOSTEGES LYNDONENSIS Coleman, 1957.

Aulosteges lyndonensis Coleman, 1957, p.
46, pl. 4, figs. 1-10.

C.P.C. 1001. Holotype.

C.P.C. 1002-1007. Paratypes.

N. bank of Lyndon R., N. of Round Hill,
8½ m. E. of Mia Mia Hstd, Carnarvon Basin,
W.A.; base of Bulgadoo Shale.

C.P.C. 1956. Paratype.

2,000 ft. W. of Callytharra Springs,
Wooramel R., Carnarvon Basin; 120 ft. above
base of Callytharra Fm.

Lower Permian (Artinskian).

AULOSTEGES RECLINIS Coleman, 1957.

Aulosteges reclinis Coleman, 1957, p. 38,
pl. 1, figs. 2, 5, 7, 8-10; pl. 2, figs. 1-4.

C.P.C. 1007A (F21043). Paratype.

Near base of Mt. Hardman, Fitzroy
Basin, W.A.; Liveringa Fm., Hardman Mem-
ber.

Permian.

AUSTROSPIRIFER VARIABILIS Glenister, 1955.

Austrospirifer variabilis Glenister, 1955,
p. 58, pl. 2, figs. 1-8; pl. 3, figs. 1-8;
text-fig. 1, figs. 1-4.

C.P.C. 426. Holotype.

C.P.C. 433-436. Paratypes.

3.5 m. S. of Gneudna Well, William-
bury Stn, Carnarvon Basin, W.A.; Gneudna
Fm.

Upper Devonian.

AVONIA PROTEUS Veevers, 1959.

Avonia proteus Veevers, 1959, p. 80, pl.
8, figs. 1-15; text-figs. 44, 45.

C.P.C. 2959. Holotype.

C.P.C. 2960, 2961. Figured specimens.

Near Burramundi Range, Fitzroy Basin,
W.A.; Fairfield Beds (K 290).

C.P.C. 2962, 2963. Figured specimens.

C.P.C. 3025. Serial sections and peels
of specimen.

Oscar Hill, Fitzroy Basin; Fairfield Beds
(K 283).

Upper Devonian.

cf. **AVONIA PROTEUS** Veevers, 1959; 1959a.

cf. *Avonia proteus* Veevers, 1959a, p. 15, pl. 4, figs. 35, 36; text-fig. 5.

C.P.C. 3073. Figured specimen.

5 m. S.W. of Mt. Septimus, 50 ft. stratigraphically below contact of the Burt Range Limestone with the Enga Sandstone, Bonaparte Gulf Basin, W.A.; Burt Range Lst.

Upper Devonian.

CAMAROTOECHIA AMNICA Veevers, 1959.

Camarotoechia amnica Veevers, 1959a, p. 11, pl. 4, figs. 18, 20, 22-31.

C.P.C. 3069. Holotype.

C.P.C. 3071. Figured specimen.

N. bank of Minilya R., 5½ m. N.N.W. of Gneudna Well, Carnarvon Basin, W.A.; Moo-gooree Lst.

C.P.C. 3068, 3070. Figured specimens.

3½ m. N.W. of Gneudna Well, William-bury Stn; about 440 ft. above base of Moo-gooree Limestone near type section (TP 42).

Lower Carboniferous.

CAMAROTOECHIA EGANENSIS Veevers, 1959.

Camarotoechia eganensis Veevers, 1959a, p. 9, pl. 3, figs. 4-7; text-fig. 4.

C.P.C. 3060. Holotype.

C.P.C. 3059. Figured specimen (sections and peels).

S.E. of Oscar Range, Fitzroy Basin, W.A.; Laurel Fm. (KCH 18).

Lower Carboniferous (Tournaisian).

CAMAROTOECHIA LUCIDA Veevers, 1959.

Camarotoechia lucida Veevers, 1959, p. 88, pl. 10, figs. 1-11; text-figs. 49-54.

C.P.C. 2970. Holotype.

C.P.C. 2972. Figured specimen.

Near Burramundi Range, Fitzroy Basin, W.A.; Fairfield Beds (K 289).

C.P.C. 3027. Serial sections and peels.

Oscar Hill, Fitzroy Basin, W.A.; Fairfield Beds (K 283).

Upper Devonian.

CAMAROTOECHIA PUTEANA Veevers, 1959.

Camarotoechia puteana Veevers, 1959a, p. 26, pl. 2, figs. 13-22; pl. 3, figs. 1-3; text-figs. 9, 10.

C.P.C. 3055. Holotype.

1300-1315 ft. above base of measured section N. of Gneudna Well, William-bury Stn, Carnarvon Basin, W.A.; Gneudna Fm. (TP 22).

C.P.C. 3056, 3037. Figured specimens. Locality as above (T 8 and T 12).

C.P.C. 3058. Sections and peels of specimen.

Locality as above, 890-895 ft. above base of section.

Upper Devonian.

CAMAROTOECHIA SEPTIMA Veevers, 1959.

Camarotoechia septima Veevers, 1959a, p. 12, pl. 4, figs. 1-15, 19, 21.

C.P.C. 3063. Holotype.

C.P.C. 3061, 3062. Figured specimens.

Mt Septimus, Bonaparte Gulf Basin, W.A.; between 400 and 450 ft. above base of Septimus Lst. (F b).

Lower Carboniferous (Tournaisian).

(?) **CAMAROTOECHIA** sp. ind. II, Veevers, 1959.

?*Camarotoechia* sp. ind. II, Veevers, 1959a, p. 14, pl. 4, figs. 16, 17.

C.P.C. 3066, 3067. Figured specimens.

4 m. N.W. of Gneudna Well, William-bury Stn, Carnarvon Basin, W.A.; Yindagindy Fm. (TP 142).

Lower Carboniferous.

CHONETES INFANTILIS Öpik, 1953.

Chonetes infantilis Öpik, 1953, p. 15, pl. 3, figs. 19-22.

C.P.C. 661. Holotype.

C.P.C. 662, 663. Figured specimens.

Illæzus Band, Wapentake Beds, Heathcote, Victoria.

Lower Silurian.

cf. **CHONETIPUSTULA** sp., Veevers, 1959.
cf. *Chonetipustula* sp., Veevers, 1959, p.
84, pl. 8, figs. 22, 23.

C.P.C. 2965. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitzroy
Basin, W.A.; Sadler Fm. (K 221).

Upper Devonian.

CRURITHYRIS APENA Veevers, 1959.

Crurithyris apena Veevers, 1959, p. 133,
pl. 13, figs. 10-19; text-figs. 84-87.

C.P.C. 3003. Holotype.

C.P.C. 3004. Figured specimen.

C.P.C. 3034, 3035. Sections and peels
of specimens.

Bugle Gap, Fitzroy Basin, W.A.; Sadler
Fm. (K 150).

C.P.C. 3005, 3006. Figured specimens.

Old Bohemia area, Fitzroy Basin; Sadler
Fm. (K 103).

Upper Devonian.

CYRTOSPIRIFER AUSTRALIS Glenister,
1955.

Cyrtospirifer australis Glenister, 1955, p.
64, pl. 4, figs. 1-24; pl. 5, figs. 1-5;
text-fig. 2, figs. 1-15; 3, figs. 7-9; 4,
figs. 1-14.

C.P.C. 427. Holotype.

C.P.C. 439, 440. Paratypes.

C.P.C. 461-465. Hypotypes.

1.75 m. N. of Gneudna Well, William-
bury Stn, Carnarvon Basin, W.A.; Gneudna
Lst.

C.P.C. 441. Paratype.

3.5 m. S. of Gneudna Well; Gneudna
Fm.

Upper Devonian.

CYRTOSPIRIFER BREVICARDINUS

Glenister, 1955.

Cyrtospirifer brevicardinus Glenister,
1955, p. 67, pl. 6, figs. 21-25; text-fig.
3, fig. 6; 6, figs. 1-16.

C.P.C. 429. Holotype.

C.P.C. 478. Paratype.

Approx. 3.5 m. S. of Gneudna Well,
Williambury Stn, Carnarvon Basin, W.A.;
Gneudna Fm.

Upper Devonian.

CYRTOSPIRIFER GNEUDNAENSIS

Glenister, 1955.

Cyrtospirifer gneudnaensis Glenister,
1955, p. 66, pl. 5, figs. 6-27; pl. 6,
1-20; text-fig. 1, 5-10; 4, figs. 15-18.

C.P.C. 428. Holotype.

C.P.C. 442, 443. Paratypes.

C.P.C. 467-472. Hypotypes.

Approx. 3.5 m. S. of Gneudna Well,
Williambury Stn, Carnarvon Basin, W.A.;
Gneudna Fm.

Upper Devonian.

CYRTOSPIRIFER MINILYAENSIS

Glenister, 1955.

Cyrtospirifer minilyaensis Glenister, 1955,
p. 65, pl. 3, figs. 9-32; text-fig. 4, figs.
1-5; 5, 1-21.

C.P.C. 477. Holotype.

C.P.C. 437, 438. Paratypes.

C.P.C. 457-460. Hypotypes.

3.4 m. S. of Gneudna Well, Williambury
Stn, Carnarvon Basin, W.A.; Gneudna Fm.

Upper Devonian.

DERBYIA HARDMANI Thomas, 1958.

Derbyia hardmani Thomas, 1958, p. 78,
pl. 5, figs. 5-9; pl. 18, figs. 6; pl. 19,
fig. 2.

C.P.C. 1467. Holotype.

C.P.C. 1468, 1469, 1471. Paratypes.

C.P.C. 1470, 1537. Figured specimens.

Mt Hardman, Fitzroy Basin, W.A.; 130
ft. below top of Hardman Member, Liveringa
Fm.

C.P.C. 1472. Paratype.

Same locality as above but 190 ft. below
top of section.

Upper Permian (probably Tartarian).

DEVONOPRODUCTUS AUSTRALIS
Veevers, 1959.

Devonoproductus australis Veevers, 1959,
p. 73, pl. 8, figs. 16-21; text-figs. 4, 142.

C.P.C. 2951. Holotype.

C.P.C. 2952, 2593, 3024. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 245; specimen 3024, K 230).

Upper Devonian.

DOUVILLINA (DOUVILLINA) EXQUISITA
Veevers, 1959.

Douvillina (Douvillina) exquisita Veevers,
1959, p. 60, pl. 6, figs. 1-5; text-fig. 32.

C.P.C. 2938. Holotype.

C.P.C. 2937. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Ridge (K 244).

Upper Devonian.

EMANUELLA TORRIDA Veevers, 1959.

Emanuella torrida Veevers, 1959, p. 128,
pl. 13, figs. 1-9; text-figs. 79-83.

C.P.C. 3000. Holotype.

C.P.C. 3001, 3002. Figured specimens.

C.P.C. 3032, 3033. Serial sections and
peels of specimen.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (Holotype, K 221; Others, K 226).

Upper Devonian.

ETHERIDGINA(?) MUIRWOODAE

Prendergast, 1943; Coleman, 1957.

Etheridgina muirwoodae Prendergast,
1943, p. 54, pl. 6, figs. 14, 15.

Etheridgina(?) muirwoodae, Coleman,
1957, p. 109, pl. 17, figs. 6-11.

C.P.C. 1028. Figured specimen.

$\frac{1}{2}$ m. E. of Calvary Spring (or Calvary Gap Well), 7 m. S.E. of Mooka Stn Hstd, Wandagee area, Carnarvon Basin, W.A.; lower part of Wandagee Fm.

Lower Permian.

FITZROYELLA PRIMULA Veevers, 1959.
Fitzroyella primula Veevers, 1959, p. 106,
pl. 16, figs. 1-10; text-figs. 63-65.

C.P.C. 2979. Holotype.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 230).

C.P.C. 2980. Figured specimen.

Near Menyous Gap, Pillara Range, Fitzroy Basin; Sadler Fm. (K 276).

Upper Devonian.

GYPIDULA FRAGILIS Veevers, 1959.

Gypidula fragilis Veevers, 1959, p. 56,
pl. 4, figs. 13-19; text-fig. 28.

C.P.C. 2935. Holotype.

C.P.C. 2933, 2934. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 237, K 239).

Upper Devonian.

HYPOTHYRIDINA MARGARITA Veevers,
1959.

Hypothyridina margarita Veevers, 1959,
p. 100, pl. 10, figs. 22-35; text-figs.
61, 62.

C.P.C. 2977. Holotype.

Near Elimberrie Spring, Oscar Range, Fitzroy Basin, W.A.; Sadler Fm. (Ld 31).

C.P.C. 2978. Figured specimen.

Bugle Gap, Fitzroy Basin; Sadler Fm. (K 150).

Upper Devonian.

HYPSOMYONIA NIPHANA Veevers, 1959.

Hypsomyonia niphana Veevers, 1959, p.
35, pl. 1, figs. 12-22; text-fig. 7.

C.P.C. 2917. Holotype.

C.P.C. 2918, 2929. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 215).

C.P.C. 2920, 2921. Figured specimens.

Near Menjous Gap, Pillara Range, Fitzroy Basin; Sadler Fm. (K 273).

Upper Devonian.

ISORTHIS(?) sp. Veevers, 1959.

Isorthis(?), Veevers, 1959, pl. 2, figs. 17-21, text-figs. 17-19.

C.P.C. 2930. Figured specimen.

Sadler Ridge, Fitzroy Basin, W.A.; Sadler Fm. (K 243).

Upper Devonian.

KAYSERELLA EMANUELENSIS Veevers, 1959.

Kaysarella emanuelensis Veevers, 1959, p. 41, pl. 1, figs. 23-33; text-figs. 10-12.

C.P.C. 2922. Holotype.

C.P.C. 2923. Figured specimen.

Sadler Ridge, Fitzroy Basin, W.A.; Sadler Fm. (K 222).

Upper Devonian.

KIANGSIELLA CONDONI Thomas, 1958.

Kiangsiella condoni Thomas, 1958, p. 68, pl. 9, figs. 1-7; pl. 10, figs. 1, 5, 6, 8, 9; pl. 18, fig. 1; text-figs. 12b, 13.

C.P.C. 1450. Holotype.

C.P.C. 1451-1457. Paratypes.

8½ m. bearing 82° from Mia Mia Hstd, N. bank of Lyndon R., between Bungenmurrow and Salt Pools, Carnarvon Basin, W.A.; lowest bed of Coyrie Fm. in area (ML 87, ML 89).

C.P.C. 1458. Figured specimen.

"Permian E of Talbot's Cairn", Wooramel R., Carnarvon Basin; low in Byro Group.

C.P.C. 1459. Figured specimen.

10½ m. bearing 83° from Bidgemia Hstd, Carnarvon Basin, W.A.; Coyrie Fm. (GW 95).

Lower Permian (Artinskian).

KIANGSIELLA sp. nov. A., Thomas, 1958.

Kiangsiella sp. nov. A, Thomas, p. 73, pl. 10, figs. 2a, b; 3a, b; 4.

C.P.C. 1460-1462. Figured specimens.

3½ m. bearing 65° from Coondoo Well, Arthur R. Stn, Carnarvon Basin, W.A.; Lyons Group (GW 62).

Lower Permian (Sakmarian).

KIANGSIELLA sp. nov. B. Thomas, 1958.

Kiangsiella sp. nov. B, Thomas, 1958, p. 74, pl. 10, figs. 7, 10, 11; pl. 9, fig. 8.

C.P.C. 1463, 1464. Figured specimen.

2.6 m. at 310° from Bruten's Old Yard, Cherrabun Stn, Fitzroy Basin, W.A.; 1,230 ft. above base of Noonkanbah Fm. (KNK 88).

C.P.C. 1465. Figured specimen.

About 2.2 m. at 288° from Bruten's Old Yard; 745 ft. above base of Noonkanbah Fm. (KNF 73).

C.P.C. 1466. Figured specimen.

8 m. at 188° from Gogo Hstd, Fitzroy Basin; Noonkanbah Fm. (GG 2).

Lower Permian (Artinskian).

KROTOVIA MICRACANTHA (Hosking), 1933; Coleman, 1957.

Pustula micracantha Hosking, 1933, p. 49, pl. 4, figs. 4a, b.

Krotovia micracantha Prendergast, 1943, p. 28. Coleman, 1957, p. 61, pl. 7, figs. 16-18; pl. 9, figs. 20, 21.

C.P.C. 1954. Hypotype.

2,000 ft. W. of Callytharra Springs, Wooramel R., Carnarvon Basin, W.A.; 120 ft. above base of Callytharra Fm.

Lower Permian (Artinskian).

KROTOVIA sp. indet. A, Coleman, 1957.

Krotovia sp. indet. A., Coleman, 1957, p. 67, pl. 9, figs. 22, 23.

C.P.C. 1952. Figured specimen.

Pell's Range, 14½ m. N.E. of Towrana Hstd, Carnarvon Basin, W.A.; 118 ft. above base of Callytharra Fm.

Lower Permian (Artinskian).

LADJIA SALTICA Veevers, 1959.

Ladjia saltica Veevers, 1959, p. 126, pl. 12, figs. 1-29; text-figs. 76-78.

C.P.C. 2990. Holotype.

C.P.C. 2991. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 215).

C.P.C. 2292-2299, 3042, 3043. Figured specimens.

Gap Creek Gap, Emanuel Range, Fitzroy Basin; Pillara Fm. (K 213).

Upper Devonian.

cf. **LADJIA SALTICA** Veevers, 1959, 1959a.

cf. *Ladjia saltica* Veevers, 1959a, p. 30, pl. 1, figs. 1-5; text-fig. 12.

C.P.C. 3045, 3046. Figured specimens.

Section N. of Gneudna Well, William-bury Stn, Carnarvon Basin, W.A.; 415 to 420 ft. (loc. 11) and 330 to 335 feet (loc. 159) above base of section of Gneudna Fm.

Upper Devonian (Frasnian).

LEANGELLA INO Öpik, 1953.

Leangella ino Öpik, 1953, p. 13, pl. 2, figs. 5-11; pl. 3, 12-15, text-figs. 1, 2.

C.P.C. 659. Figured specimen.

Illaeus Band, Wapentake Beds, Heathcote Victoria.

Lower Silurian.

LEPTODUS cf. **NOBILIS** (Waagen), Thomas, 1957.

Leptodus cf. *nobilis* (Waagen), Thomas, 1957, p. 177, text-fig. 2a.

C.P.C. 1525-1531. Figured specimens.

Tchindi Beach, N.T., from a bed about 3 ft. thick, 9 m. S. of W. of Port Keats Mission.

Upper Permian.

NERVOSTROPHIA BUNAPICA Veevers, 1959.

Nervostrophia bunapica Veevers, 1959, p. 65, pl. 7, figs. 1-8; text-figs. 36, 37.

C.P.C. 2943. Holotype.

C.P.C. 2944. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 245).

Upper Devonian.

NYEGE SCOPIMUS Veevers, 1959.

Nyege scopimus Veevers, 1959, p. 113, pl. 11, figs. 1-7; text-fig. 69.

C.P.C. 2987. Holotype.

Bugle Gap, Fitzroy Basin, W.A.; Mt Pierre Group (K 159).

C.P.C. 2988. Figured specimen.

Bugle Gap, Fitzroy Basin; Bugle Gap Lst. (K 168).

Upper Devonian.

PERMORTHOTETES CALLYTHARRAENSIS Thomas, 1958.

Permorthotetes callytharraensis Thomas, 1958, p. 84, pl. 4, figs. 1-8; pl. 5, figs. 1-4; pl. 6, fig. 6; pl. 18, figs. 3-5; pl. 20, figs. 1a-k, 2a-m.

C.P.C. 1473. Holotype.

C.P.C. 1474-1477, 1485. Paratypes.

C.P.C. 1484. Figured specimen.

5½ m. at 35° from Lyons R. Hstd, Carnarvon Basin, W.A.; about middle of Callytharra Fm. (G 202).

C.P.C. 1478, 1479. Figured specimens.

Near Lyons R. Hstd, Carnarvon Basin; lower part of Callytharra Fm. (G 337).

C.P.C. 1480. Figured specimen.

¾ m. W. of Callytharra Springs, Woora-mel R., Carnarvon Basin; about 13 ft. above base of Callytharra Fm. (GW 75).

C.P.C. 1481. Figured specimen.

8 m. E. of Lyons R. Hstd; middle of Callytharra Fm.

C.P.C. 1482. Figured specimen.

15 m. bearing 54° from Towrana Stn, Carnarvon Basin; 125-144 ft. above base of Callytharra Fm.

C.P.C. 1483. Figured specimen.

5¼ m. bearing 116° from Donnelly's Well, William-bury Stn, Carnarvon Basin; 310-320 ft. above base of Callytharra Fm. (ML 32).

Lower Permian (Artinskian).

PERMORTHOTETES CAMERATA Thomas, 1958.

Permorthotetes camerata Thomas, 1958, p. 102, pl. 6, figs. 1-5.

C.P.C. 1514. Holotype.

C.P.C. 1515. Paratype.

4 m. bearing 330° from Minginew Outcamp, Carnarvon Basin, W.A.; near top of Callytharra Fm. (GW 32).

C.P.C. 1516. Figured specimen.

2 m. 700 yds. bearing 170° from Mt Sandiman Hstd, Carnarvon Basin; Callytharra Fm. (G 348).

C.P.C. 1517, 1518. Figured specimen.

14 m. 1460 yds. bearing 59° from Towrana Hstd, Carnarvon Basin; middle Callytharra Fm. (GW 113A).

Lower Permian (Artinskian).

PERMORTHOTETES CRESPIINAE Thomas, 1958.

Permorthotetes crespinae Thomas, 1958, p. 89, pl. 1, figs. 5, 6; pl. 2, figs. 4-8.

C.P.C. 1487. Holotype.

C.P.C. 1488-1492. Paratypes.

About ¼ m. E. of Winderie Hstd, Carnarvon Basin; about 800 ft. below top of Lyons Group.

Lower Permian (Sakmarian).

PERMORTHOTETES GUPPYI Thomas, 1958.

Permorthotetes guppyi Thomas, 1958, p. 96, pl. 7, figs. 1-3; pl. 8, figs. 1-4; pl. 18, fig. 2; pl. 21, figs. 1a-c, 2a-g, 3a-e; pl. 22, figs. 1a-c, 2a-e, 4.

C.P.C. 1503. Holotype.

C.P.C. 1504. Paratype.

4.3 m. at 298° from Brutens Old Yard, Cherrabun Stn, Fitzroy Basin, W.A.; 1190 ft. above base of Noonkanbah Fm. (KNF 76A).

C.P.C. 1505. Figured specimen.

Mt Marmion near base on S. side, Fitzroy Basin; top of Noonkanbah Fm.

C.P.C. 1506-1510. Figured specimens.

2.6 m. bearing 70° from Shore Range Trig. Pt, Fitzroy Basin; Lightjack Member, Liveringa Fm. (KLD 64).

C.P.C. 1511-1513. Figured specimens.

About 8 m. bearing 120° from Mt Anderson Hstd, Fitzroy Basin; 905 ft. above base of Noonkanbah Fm. (KNA 28).

Permian (Artinskian and possibly early Kungurian).

PERMORTHOTETES sp. aff. **P. GUPPYI** Thomas, 1958.

Permorthotetes sp. aff. *P. guppyi* Thomas, 1958, p. 106, pl. 7, fig. 4; pl. 6, fig. 3.

C.P.C. 1519, 1520. Figured specimens.

2½ m. at 288° from Brutens Old Yard, Cherrabun Stn, Fitzroy Basin, W.A., 745 ft. above base of Noonkanbah Fm. (KNF 73).

Lower Permian (Artinskian).

PERMORTHOTETES LINDNERI Thomas, 1958.

Permorthotetes lindneri Thomas, 1958, p. 92, pl. 1, figs. 1-4; pl. 2, figs. 1-3; pl. 3, 1-6.

C.P.C. 1494a, b. Holotype.

C.P.C. 1495a, b, 1496-1499, 1502. Paratypes.

C.P.C. 1500, 1501, 1521, 1522. Figured specimen.

St Georges Range, 16 m. at 120° from Tuckfield, Fitzroy Basin, W.A.; basal Poolo Sdst. (KPA 54).

Lower Permian (Artinskian).

PLICCHONETES MACROPATUS Veevers, 1959.

Plicochonetes macropatus Veevers, 1959, p. 85, pl. 9, figs. 4-10; text-figs. 46-48.

C.P.C. 2967. Holotype.

C.P.C. 2968, 2969. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 227, holotype: K 221, figured specimens).

Upper Devonian.

PRODUCTELLA OCCIDUA Veevers, 1959.

Productella occidua Veevers, 1959a, p. 23,
pl. 1, figs. 6-13; text-figs. 7, 8.

C.P.C. 3047. Holotype.

C.P.C. 3048. Figured specimen.

1,170-1,205 ft. above base of measured
section N. of Gneudna Well, Williambury Stn,
Carnarvon Basin, W.A.; Gneudna Fm. (TP 30).

Upper Devonian (Frasnian).

cf. **PRODUCTELLA** sp., Veevers, 1959.

cf. *Productella* sp., Veevers, 1959, p. 80,
pl. 8, figs. 24, 25.

C.P.C. 2958. Figured specimen.

Sadler Ridge, Emanuel Range, Fitzroy
Basin, W.A.; Sadler Fm. (K 222).

Upper Devonian.

PRODUCTIDAE gen. et sp. ind. Veevers,
1959.

Productidae gen et sp. ind. Veevers, 1959,
p. 85, pl. 9, figs. 1-3.

C.P.C. 2966. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitz-
roy Basin, W.A.; Sadler Fm. (K 245).

Upper Devonian.

PUGNAX HULLENSIS Veevers, 1959.

Pugnax hullensis Veevers, 1959, p. 109,
pl. 11, figs. 14-19; text-figs. 66, 67.

C.P.C. 2984. Holotype.

C.P.C. 2985. Figured specimen.

Eastern Hull Range, Fitzroy Basin, W.A.;
Fossil Downs Fm. (K 356).

Upper Devonian.

PUGNAX sp. cf. **PUGNAX PUGNUS**
(Martin) 1809, Veevers, 1959.

Pugnax sp. cf. *Pugnax pugnus* (Martin),
Veevers, 1959, p. 110, pl. 11, figs. 22-
25; text-fig. 68.

C.P.C. 2986. Figured specimen.

Bugle Gap, Fitzroy Basin, W.A.; Sadler
Fm. (K 144).

C.P.C. 3039. Figured specimen.

Sadler Ridge, Emanuel Range, Fitzroy
Basin; Sadler Fm. (K 245).

Upper Devonian.

PUNCTOSPIRIFER PLICATOSULCATUS
Glenister, 1955.

Punctospirifer plicatosulcatus Glenister,
1955, p. 69, pl. 6, figs. 26-29; pl. 8,
figs. 10-12.

C.P.C. 431. Holotype.

C.P.C. 447. Paratype.

Approx. 3.5 m. N.W. of Gneudna Well,
Williambury Stn, Carnarvon Basin, W.A.;
Moogooree Lst.

Lower Carboniferous.

SCHIZOPHORIA STAINBROOKI Veevers,
1959.

Schizophoria stainbrooki Veevers, 1959,
p. 48, pl. 3, figs. 1-13; text-figs. 20-22.

C.P.C. 2901. Holotype.

C.P.C. 2902-2908. Figured specimens.

Near Sadler Ridge, Emanuel Range,
Fitzroy Basin, W.A.; Sadler Fm. Holotype
(K 216), figured specimens (K 218, K 239,
K 245, K 246).

Upper Devonian.

SCHIZOPHORIA APICULATA Veevers,
1959.

Schizophoria apiculata Veevers, 1959, p.
52, pl. 4, figs. 1-14; text-fig. 26.

C.P.C. 2909. Holotype.

C.P.C. 2910, 2911. Figured specimens.

Near Hull Range, Fitzroy Basin, W.A.;
Fairfield Beds (K 322).

Upper Devonian.

SCHIZOPHORIA sp. Veevers, 1959.

Schizophoria sp. Veevers, 1959, p. 54, pl.
2, figs. 30-38, text-fig. 27.

C.P.C. 2931, 2932. Figured specimens.

Sadler Ridge, Emanuel Range, Fitzroy
Basin, W.A.; Sadler Fm. (K 230).

Upper Devonian.

SCHUCHERTELLA DROMEDA Veevers, 1959.

Schuchertella dromeda Veevers, 1959, p. 69, pl. 5, figs. 11-21, text-figs. 38, 39.

C.P.C. 2945. Holotype.

C.P.C. 2946, 2947, 3038, 3023. Figured specimens.

Oscar Hill, Fitzroy Basin, W.A.; Fairfield Beds (K 283).

Upper Devonian.

SCHUCHERTELLA GRATILICA Veevers, 1959.

Schuchertella gratilica Veevers, 1959, p. 72, pl. 5, figs. 1-10; text-fig. 40.

C.P.C. 2948. Holotype.

C.P.C. 2949, 2950. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 246, holotype, K 243, K 245).

Upper Devonian.

SKENIDIUM ASELLATUM Veevers, 1959.

Skenidium asellatum Veevers, 1959, p. 33, pl. 1, figs. 1-11; text-figs. 5, 6.

C.P.C. 2912. Holotype.

C.P.C. 2913, 2914, 2916, 3020. Figured specimens.

Near Menyous Gap, Pillara Range, Fitzroy Basin, W.A.; Sadler Fm. (K 276).

C.P.C. 2915. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, Sadler Fm. (K 245).

Upper Devonian.

SOWERBYELLA AUSTRUM Öpik, 1953.

Sowerbyella austrum Öpik, 1953, p. 14, pl. 3, figs. 17, 18.

C.P.C. 660. Holotype.

Iliaenus Band, Wapentake Beds, Heathcote, Victoria.

Lower Silurian.

SPINATRYPA ASPERA PRIDERI (Coleman), 1951; Veevers, 1959, 1959a.

Atrypa aspera prideri Coleman, p. 684, pl. 102, figs. 1-17.

Spinatrypa aspera prideri, Veevers, 1959, p. 121, text-figs. 74, 75; 1959a, p. 30, pl. 2, figs. 1-10; text-fig. 11.

C.P.C. 3029. Sections and peels.

Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 230).

Upper Devonian.

C.P.C. 3053. Serial sections and peels of specimen.

Gneudna Well, Carnarvon Basin, W.A.; 1,080-1,115 ft. above base of type section of Gneudna Fm. (TP 192).

Upper Devonian.

SPIRIFER FLUCTUOSUS Glenister, 1955.

Spirifer fluctuosus Glenister, 1955, p. 68, pl. 7, figs. 1-14; pl. 8, figs. 1-8.

C.P.C. 430. Holotype.

C.P.C. 444-446, 479. Paratypes.

3.5 m. N.W. of Gneudna Well, William-bury Stn, Carnarvon Basin, W.A.; Moogooree Lst.

Lower Carboniferous.

STEINHAGELLA NUMIDA Veevers, 1959.

Steinhagella numida Veevers, 1959, p. 77, pl. 9, figs. 11-20; text-fig. 43.

C.P.C. 2954. Holotype.

C.P.C. 2955, 2956, 2957. Figured specimens.

Near Sadler Ridge, Emanuel Range, Fitzroy Basin, W.A.; Sadler Fm. (K 245).

Upper Devonian.

STREPTORHYNCHUS COSTATUS Thomas, 1958.

Streptorhynchus costatus Thomas, 1958, p. 49, pl. 15, figs. 1-7; pl. 19, fig. 5; pl. 22, fig. 5; text-figs. 12c, d.

C.P.C. 1419. Holotype.

C.P.C. 1420-1422. Paratypes.

8 m. S.W. of Mt. Anderson Hstd, Fitzroy Basin, W.A.; 905 ft. above base of Noonkanbah Fm. (KNA 28).

C.P.C. 1423, 1523, 1524. Figured specimens.

Same locality as holotype, but 690 ft. above base of Noonkanbah Fm. (KNA 23).

C.P.C. 1424. Figured specimen.

Same locality as above but 760 ft. above base of Noonkanbah Fm. (KBA 24).

Lower Permian (Artinskian).

STREPTORHYNCHUS CRASSIMURUS

Thomas, 1958.

Streptorhynchus crassimurus Thomas, 1958, p. 44, pl. 12, figs. 1-5, 10; pl. 19, fig. 4; text-fig. 11.

C.P.C. 1407. Holotype.

C.P.C. 1408-1412. Paratypes.

2½ m. bearing 288° from Brutens Old Yard, Cherrabun Stn, Fitzroy Basin, W.A.; 745 ft. above base of Noonkanbah Fm. (KNF 73).

Lower Permian (Artinskian).

STREPTORHYNCHUS HOSKINGAE

Thomas, 1958.

Streptorhynchus hoskingae Thomas, 1958, p. 52, pl. 12, figs. 6, 7, 9; pl. 13, figs. 1-6; text-figs. 11a, b.

C.P.C. 1425. Holotype.

C.P.C. 1426. Paratype.

W. limit of Minilya syncline, N. of Minilya R., 1½ m. S.W. of Coolkilya Pool, Carnarvon Basin, W.A.; lower part of Wandagee Fm.

C.P.C. 1427, 1428. Figured specimens.

9¾ m. bearing 220° from Moogooree Hstd, or 2¼ m. bearing 142° from Kimbers Well, Williambury Stn, Carnarvon Basin; lower part of Wandagee Fm. (MG 207A).

C.P.C. 1429. Figured specimen.

2¼ m. bearing 280° from Barrabiddy Dam, Wandagee Stn, Carnarvon Basin; base of Cundlego Fm. (MG 170).

Lower Permian (Artinskian).

STREPTORHYNCHUS JOHNSTONEI

Thomas, 1958.

Streptorhynchus johnstonei Thomas, 1958, p. 55, pl. 14, figs. 1-6; text-fig. 12a.

C.P.C. 1439. Holotype.

C.P.C. 1431, 1432. Paratypes.

Kennedy Range, ¾ m. S. of Southern Cross Bore, Middalya Stn, Carnarvon Basin, W.A.; 549 ft. above base of Coolkilya Fm. (TJ 198).

Middle Permian (Kungurian).

STREPTORHYNCHUS LULUIGUI Hosking, 1932; Thomas, 1958.

Streptorhynchus luluigui Hosking, 1932, p. 45, pls. 4, 5. Thomas, 1958, p. 62, pl. 8, figs. 9, 10; pl. 17, figs. 1-5; pl. 19, figs. 3, 6; text-fig. 11c.

C.P.C. 1444-1446. Figured specimens.

Near Tulu Bore, Merrima Stn, Fitzroy Basin, W.A.; high in Lightjack Member, Liveringa Fm. (KLC 42).

C.P.C. 1447, 1448. Figured specimens.

¼ m. at 120° from Mt Cedric, Fitzroy Basin, W.A.; Hardman Member, Liveringa Fm.

Upper Permian.

STREPTORHYNCHUS PLICATILIS

Hosking, 1932; Thomas, 1958.

Streptorhynchus plicatilis Hosking, 1932, p. 48, pl. 5. Thomas, 1958, p. 41, pl. 11, figs. 1-6; pl. 18, fig. 7; text-fig. 11f.

C.P.C. 1400, 1401. Figured specimens.

Section 600 yds. W. of Callytharra Springs, Wooramel R., Carnarvon Basin, W.A.; 73-90 ft. above base of Callytharra Fm. (GW 90).

C.P.C. 1402. Figured specimen.

Section as above but 22-35 ft. above base of Callytharra Fm. (GW 84).

C.P.C. 1403-1405. Figured specimens.
Section as above but 10-22 ft. above base
of Callytharra Fm. (GW 82).

C.P.C. 1406. Figured specimen.
P 6 (WAPET loc.) Wooramel R. area,
Carnarvon Basin; Callytharra Fm.

Lower Permian (earliest Artinskian).

STREPTORHYNCHUS VARIABILIS

Thomas, 1958.

Streptorhynchus variabilis Thomas, 1958,
p. 47, pl. 10, figs. 12, 13; pl. 11, figs.
7-10; pl. 19, fig. 1; text-figs. 11d, e.

C.P.C. 1413. Holotype.

C.P.C. 1414, 1415, 1418. Paratypes.
2 m. at 255° from Brutens Old Yard,
Cherrabun Stn, Fitzroy Basin, W.A.; 650 ft.
above base of Noonkanbah Fm. (KNF 84).

C.P.C. 1416, 1417. Figured specimens.
About 2 m. S. of E. of Brutens Old Yard;
Noonkanbah Fm. (PR 288).

Lower Permian (Artinskian).

STREPTORHYNCHUS sp. nov. A. Thomas,
1958.

Streptorhynchus sp. nov. A., Thomas,
1958, p. 66, pl. 12, fig. 8.

C.P.C. 1449. Figured specimen.

1½ m. W. of Cooracoothara Well, Wil-
liambury Stn, Carnarvon Basin, W.A.; Lyons
Group, about 300 ft. from top (TP 79).

Lower Permian (Sakmarian).

STREPTORHYNCHUS sp. aff. **S. PER-**
FIDIABADENSIS (Eth. fil.), Thomas, 1958.

Streptorhynchus sp. aff. *S. perfidiabadensis*
(Eth. fil.) Thomas, 1958, p. 58, pl. 15,
figs. 8a, 9a, b, 10a, b; text-fig. 11g.

C.P.C. 1433-1435. Figured specimens.

2.6 m. at 70° from Shore Range Trig. Pt,
Fitzroy Basin, W.A.; Lightjack Member,
Liveringa Fm. (KLD 64).

Middle Permian (Kungurian).

STREPTORHYNCHUS sp. cf. **S. PELAR-**
GONATUS (Schlotheim); Thomas, 1958.

Streptorhynchus sp. cf. *S. pelargonatus*,
Thomas, 1958, p. 60, pl. 16, figs. 1-9;
text-fig. 11h.

C.P.C. 1436-1443. Figured specimens.

Mt Hardman, beds about 4 ft. thick at
about 130 ft. below top of hill, Fitzroy Basin,
W.A.; Hardman Member, Liveringa Fm.
(KLB 11).

Upper Permian (probably Tartarian).

STRINGOCEPHALUS FONTANUS Veevers,
1959.

Stringocephalus fontanus Veevers, 1959,
p. 148, pl. 17, figs. 1-3, 4a, 4-6; pl. 18,
figs. 1a-d, 2-4; text-figs. 101, 102.

C.P.C. 3017, 3018, 3019. Figured speci-
mens.

1 m. S.E. of Mountain Home Spring
where a north-running fence crosses Home
Range, Fitzroy Basin, W.A.; base of Pillara
Fm. (K 438).

Middle Devonian.

STROPHALOSIA PRIDERI Coleman, 1957.

Strophalosia prideri Coleman, 1957, p.
116, pl. 18, figs. 15, 16; pl. 19, figs.
1-19.

C.P.C. 1018. Holotype.

C.P.C. 1019-1027. Paratypes.

Right bank Lyndon R., 9 m. E. of Mia
Mia Hstd, Carnarvon Basin, W.A.; near
bottom of Bulgadoo Shale.

Lower Permian.

SYRINGITHYRIS SPISSUS Glenister, 1955.

Syringothyris spissus Glenister, 1955, p.
70, pl. 7, fig. 15; pl. 8, fig. 9; text-fig.
7-1-13.

C.P.C. 432. Holotype.

C.P.C. 448, 480. Paratypes.

2.5 m. N.W. of Gneudna Well, William-
bury Stn, Carnarvon Basin, W.A.; Moogooree
Lst.

Lower Carboniferous.

TAENIOTHAERUS (?) FLETCHERI
Coleman, 1957.

Taeniothaerus(?) fletcheri Coleman, 1957,
p. 91, pl. 9, figs. 15-19; pl. 10, figs.
1-7.

C.P.C. 1950. Holotype.

C.P.C. 1951, 1955. Paratypes.

S. side of Mt Hardman, Fitzroy Basin,
W.A.; 120 ft. stratigraphically below top of
Hardman Member, Liveringa Fm.

Permian.

TAENIOTHAERUS IRWINENSIS Coleman,
1957.

Taeniothaerus irwinensis Coleman, 1957,
p. 93, pl. 21, fig. 7.

C.P.C. 1953. Figured specimen.

2000 ft. W. of Callytharra Springs,
Wooramel R., Carnarvon Basin, W.A.; Cally-
tharra Fm.

Lower Permian (Artinskian).

TAENIOTHAERUS TEICHERTI Coleman,
1957.

Taeniothaerus teichertii Coleman, 1957, p.
104, pl. 16, figs. 1-8; pl. 17, figs. 1-5.

C.P.C. 1098. Holotype.

C.P.C. 1009-1017. Paratypes.

$\frac{1}{2}$ m. E. of Calvary Springs (or Calvary
Gap Well), 7 m. S.E. of Mooka Stn Hstd,
Carnarvon Basin, W.A.; lower part of Wan-
dagee Fm.

Lower Permian.

TEICHERTINA FITZROYENSIS Veevers,
1959.

Teichertina fitzroyensis Veevers, 1959, p.
37, pl. 2, figs. 1-16; text-figs. 8, 9a, b.

C.P.C. 2929. Holotype.

C.P.C. 2926, 2927, 2928. Figured
specimens.

Near Sadler Ridge, Fitzroy Basin, W.A.;
Sadler Fm. (K 215).

C.P.C. 2925, 2925. Figured specimens.

Near Menyous Gap, Pillara Range; Sadler
Fm. (K 276).

Upper Devonian.

TINGELLA SUCHANA Veevers, 1959.

Tingella suchana Veevers, 1959, p. 136,
pl. 15, figs. 1-9; text-figs. 88-94.

C.P.C. 3007. Holotype.

C.P.C. 3008. Figured specimen.

C.P.C. 3036, 3037. Serial sections of
specimens.

Gap Creek Gap, Oscar Range, Fitzroy
Basin, W.A.; Pillara Fm. (K 209).

C.P.C. 3044. Figured specimen.

Menyous Gap, Pillara Range, Fitzroy
Basin; Pillara Fm. (K 463).

Middle Devonian.

UNCINULUS AREFACTUS Veevers, 1959

Uncinulus arefactus Veevers, 1959, p.
99, pl. 11, figs. 8-13; text-figs. 59, 60.

C.P.C. 2975. Holotype.

C.P.C. 2976. Figured specimen.

Sadler Ridge, Emanuel Range, Fitzroy Basin,
W.A.; Sadler Fm. (K 231).

Upper Devonian.

UNCINULUS WOLMERICUS Veevers, 1959

Uncinulus wolmericus Veevers, 1959, p.
96, pl. 10, figs. 36-50; pl. 15, figs. 14-17,
text-figs. 56-58.

C.P.C. 2973. Holotype.

C.P.C. 2974. Figured specimen.

Near Sadler Ridge, Emanuel Range, Fitz-
roy Basin, W.A.; Sadler Fm. (K 221).

C.P.C. 3040. Figured specimen.

Near Menyous Gap, Pillara Range, Fitz-
roy Basin; Sadler Fm. (K 270).

Upper Devonian.

ZOPHOSTROPHIA UNGAMICA Veevers,
1959.

Zophostrophia ungamica Veevers, 1959,
p. 63, pl. 6, figs. 6-12, text figs. 33-35,

C.P.C. 2942. Holotype.

C.P.C. 2939, 2940, 2941. Figured
specimens.

Sadler Ridge, Emanuel Range, Fitzroy
Basin, W.A.; Sadler Fm. (K 245).

Upper Devonian.

GEN ET SP. IND. Veevers, 1959.

Gen. et sp. ind. Veevers, 1959a, p. 16, pl. 4, figs. 32-34.

C.P.C. 3072. Figured specimen.

5 m. S.W. of Mt Septimus, 500 ft. stratigraphically below contact of the Burt Range Limestone with the Enga Sandstone, Bonaparte Gulf Basin, W.A.; Burt Range Lst.

Upper Devonian.

GEN ET SP. IND. Veevers, 1959.

Gen et sp. ind. Veevers, 1959a, p. 31, pl. 2, figs. 11a, b, 12a, b.

C.P.C. 3054. Figured specimen.

370-380 ft. above base of s type section, Gneudna Fm., Williambury Stn, Carnarvon Basin, W.A. (TP 161).

Upper Devonian.

PELECYPODA

ALLORISMA? sp. nov. Dickins, 1956.

Allorisma? sp. nov. Dickins, 1956, p. 21, pl. 2, figs. 1, 2.

C.P.C. 754. Figured specimen.

2 m. S.S.E. of Donnelly's Well, Williambury Stn, Carnarvon Basin, W.A.; top of Mallens Greywacke or base of Bulgadoo Shale.

Lower Permian (Artinskian).

ANTIGONA (PROXICHIONE) COGNATA

(Pritchard), 1903; Crespin, 1950.

Chione cognata Pritchard, 1903, p. 101, pl. 12, fig. 5.

Antigona (Proxichione) cognata, Singleton, 1943, p. 254. Crespin, 1950, p. 154, pl. 14, fig. 5.

C.P.C. 639. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 50-100 ft.; Kalimnan Stage.

Lower Pliocene.

ASTARTILA CONDONI Dickins, 1957.

Astartila condoni Dickins, 1957, p. 23, pl. 3, figs. 7-11.

C.P.C. 2212. Holotype.

1 m. W. of Callytharra Springs, Byro Stn, Carnarvon Basin, W.A.; top 15 ft. of Lyons Group (WB 2).

C.P.C. 2213, 2214. Paratypes A, B.

3 m. W. of Moogooree Hstd, Carnarvon Basin; 250 ft. below top of Lyons Group.

Lower Permian (Sakmarian).

ASTARTILA FLETCHERI Dickins, 1956.

Astartila fletcheri Dickins, 1956, pl. 17, pl. 2, figs. 3-9; text-fig. 1.

C.P.C. 750. Holotype.

C.P.C. 751-753. Paratypes.

$\frac{3}{4}$ m. S.E. of Southern Cross Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

Permian (Kungurian).

ASTARTILA? OBSCURA Dickins, 1957.

Astartila? obscura Dickins, 1957, p. 25, pl. 3, figs. 1-6.

C.P.C. 2215. Holotype.

C.P.C. 2216, 2217. Paratypes.

1 m. W. of Callytharra Springs, Byro Stn, Carnarvon Basin, W.A.; top 15 ft. of Lyons Groups (WB 2).

Lower Permian (Sakmarian).

ATOMODESMA EXARATA Beyrich 1864; Dickins, 1956.

Atomodesma exarata Beyrich, 1864, p. 71, pl. 3, figs. 4a-b. Dickins, 1956, p. 23, pl. 4, figs. 2-5.

C.P.C. 755. Hypotype A.

$\frac{3}{4}$ m. S.E. of Southern Cross Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

C.P.C. 1310. Hypotype B*.

$\frac{5}{8}$ m. N.W. of Muderong Bore, Middalya Stn.; Coolkilya Greywacke.

Permian (Kungurian).

ATRINA JANJUKIENSIS Crespin, 1950.

Atrina janjukiensis Crespin, 1950, p. 150,
pl. 17, figs. 18-20.

C.P.C. 630. Holotype.

C.P.C. 631. Paratype.

Lakes Entrance Oil Shaft, Ph. Colquhoun,
Gippsland, Vic., at 1048 ft.; Janjukian Stage.

Lower Oligocene or Upper Eocene.

AVICULOPECTEN TENUICOLLIS (Dana),
1847; Dickins, 1957.

Pecten tenuicollis Dana, 1847, p. 160;
1849, p. 705, pl. 9, figs. 7, 7a.

Aviculopecten tenuicollis, Dickins, 1957,
p. 45, pl. 6, figs. 7-9.

C.P.C. 2253. Hypotype A.

3 m. W. of Moogooree Hstd, Carnarvon
Basin, W.A.; 1250 ft. below top of Lyons
Group.

C.P.C. 2254. Hypotype B.

1 m. W. of Callytharra Springs, Byro
Stn., Carnarvon Basin; top 15 ft. of Lyons
Group (WB 2).

Lower Permian (Sakmarian).

CUNA PARTICULA Hedley, 1902; Chapman
& Crespin, 1933.

Cuna particula Hedley, 1902, p. 316, fig.
56. Chapman & Crespin, 1933, p. 66,
pl. 5, figs. 1, 2.

C.P.C. 50. Hypotype.

No. 1 Bore, Pt. Addis, Ph. Bumberrah
(Metung), Gippsland, V., at 180-200 ft.;
Kalimnan Stage.

Lower Pliocene.

DELTOPECTEN LYONENSIS Dickins, 1957.

Deltopecten lyonensis Dickins, 1957, p.
41, pl. 7, figs. 1-5, 9; pl. 8, figs. 11-13;
pl. 9, fig. 12, pl. 10, figs. 3, 4; text-fig. 9.

C.P.C. 2244. Holotype.

C.P.C. 2245-2251. Paratypes A-G.

About 3 m. N.E. of Round Hill, 1 m. W.
of Kialawibri Creek road crossing, Winning
Stn, Carnarvon Basin, W.A.; upper part of
Lyons Group (ML 108).

C.P.C. 2252. Paratype H.

4½ m. S.E. of E. of Baracooda Pool,
Arthur R., Bidgemia Stn, Carnarvon Basin;
upper part of Lyons Group (GW 34).

Lower Permian (Sakmarian).

EUCRASSATELLA KINGICULOIDES

(Pritchard), 1903; Crespin, 1950.

Crassatella kingiculoides Pritchard, 1903,
p. 94, pl. 13, figs. 1-3. Crespin, 1950.

C.P.C. 637. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun,
Gippsland, Vic., at 100 ft.; Kalimnan Stage.

Lower Pliocene.

EURYDESMA PLAYFORDI Dickins, 1957.

Eurydesma playfordi Dickins, 1957, p. 33,
pl. 5, figs. 1-11; pl. 10, figs. 1, 2, 5;
text-figs. 5, 6.

C.P.C. 2228. Holotype.

C.P.C. 2229-2236. Paratypes A-H.

1 m. W. of Callytharra Springs, Carnar-
von Basin, W.A.; top 15 ft. of Lyons Group
(GW 81).

C.P.C. 2237. Paratype I.

About 10½ m. W. of Jimba Jimba Hstd,
Carnarvon Basin; top of upper part of Lyons
Group (GW 105).

Lower Permian (Sakmarian).

CHAENOMYA sp. nov., Dickins, 1957.

Chaenomya sp. nov., Dickins, 1957, p. 29,
pl. 4, figs. 10-12.

C.P.C. 2223. Figured specimen.

1 m. W. of Callytharra Springs, Carnar-
von Basin, W.A.; top 15 ft. of Lyons Group
(WB 2).

Lower Permian (Sakmarian).

CHLAMYS ANTIAUSTRALIS (Tate), 1885;

Chapman & Crespin, 1932.

Pecten antiaustralis Tate, 1885, p. 160, pl.
9, figs. 7a-c.

Chlamys antiaustralis, Chapman &
Crespin, 1932, pl. 1, fig. 8.

C.P.C. 47. Figured specimen.

No. 1 Bore, Kalimna Oil Co., Rigby Island, Gippsland Lakes, Vic., at 30 ft.; Kalimnan Stage.

Lower Pliocene.

CLAUSINELLA SUBROBORATA (Tate), 1886; Chapman & Crespin, 1932.

Chione subroborata Tate, 1886, p. 156, pl. 14, fig. 17.

Clausinella subroborata, Chapman & Crespin, 1932, pl. 1, fig. 7.

C.P.C. 46. Figured specimen.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Vic., at 60-70 ft.; Kalimnan Stage.

Lower Pliocene.

CTENODONTA CHAPMANI Öpik, 1953.

Ctenodonta chapmani, Öpik, 1953, p. 17, pl. 6, fig. 37.

C.P.C. 664. Holotype.

Illaenus Band, Wapentake Beds, Heathcote, V.

Lower Silurian.

CUCULLAEA PRAELONGA Singleton, 1932; Crespin, 1950.

Cucullaea corioensis McCoy, *praelonga* Singleton, 1932, p. 303, pl. 24, fig. 20.

Cucullaea praelonga Singleton, 1945, p. 257. Crespin, 1950, p. 150, pl. 15, fig. 12.

C.P.C. 629. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 100 ft.; Kalimnan Stage.

Lower Pliocene.

GLYPTOLEDA sp., Dickins, 1956.

Glyptoleda sp., Dickins, 1956, p. 11, pl. 1, figs. 3, 4.

C.P.C. 740, 741. Figured specimens.

1½ m. S. of Merlinleigh Hstd, Carnarvon Basin, W.A.; Wandagee Fm.

Lower Permian (Artinskian).

HINNITES CORIOENSIS McCoy, 1876; Crespin, 1950.

Hinnites corioensis McCoy, 1879, p. 31, pl. 58, figs. 1-5. Crespin, 1950, p. 152, pl. 15, fig. 13.

C.P.C. 635. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 281 ft.; Bairnsdale Substage.

Middle Miocene.

LEIOPTERIA? CARRANDIBBIENSIS

Dickins, 1957.

Leiopteria? carrandibbiensis Dickins, 1957, p. 30, pl. 4, figs. 13-17; text-fig. 4.

C.P.C. 2224. Holotype.

C.P.C. 2225-2227. Paratypes A-C.

1 m. W. of Callytharra Springs, Byro Stn, Carnarvon Basin, W.A.; top 15 ft. of Lyons Group (WB 82).

Lower Permian (Sakmarian).

LENTIPECTEN VICTORIENSIS Crespin, 1950.

Lentipecten victoriensis Crespin, 1950, p. 151, pl. 15, figs. 8-11.

C.P.C. 632. Holotype.

C.P.C. 633. Paratype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 1,020-1,060 ft.; Janjukian Stage.

Lower Oligocene or Upper Eocene.

MIDDALYA JOHNSTONEI Dickins, 1956.

Middalya johnstonei Dickins, 1956, p. 36, pl. 6, figs. 1-7, text-fig. 3.

C.P.C. 1301. Holotype.

C.P.C. 1302, 1303. Paratypes A-B.

2½ m. W.N.W. of Bakers Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

C.P.C. 1304. Paratype C.

About 3½ m. slightly N. of E. of Southern Cross Bore, Middalya Stn, Carnarvon Basin; Coolkilya Greywacke.

C.P.C. 1305. Paratype D.

Immed. S. of Bakers Bore, Middalya Stn; Coolkilya Greywacke.

Permian (Kungurian).

NUCULANA DARWINI (de Koninck), 1877.
Tellonomya darwini de Koninck, 1877,
p. 147, pl. 16, fig. 9.

Nuculana darwini, Dickinson, 1957, p. 18,
pl. 2, figs. 1-6.

C.P.C. 2201-2204. Hypotypes A-D.

1 m. W. of Callytharra Springs, Byro Stn,
Carnarvon Basin, W.A.; top 15 ft. of Lyons
Group.

Lower Permian (Artinskian).

NUCULANA LYONENSIS Dickinson, 1956.
Nuculana lyonensis Dickinson, 1956, p. 8,
pl. 1, figs. 7-9.

C.P.C. 734. **Holotype.**

C.P.C. 735, 736. Paratypes.

3 m. W. of Moogooree Hstd; 1250 ft.
below top of Lyons Group.

Lower Permian (Sakmarian).

NUCULANA THOMASI Dickinson, 1956.
Nuculana thomasi Dickinson, 1956, p. 10,
pl. 1, figs. 1, 2, 10.

C.P.C. 737. **Holotype.**

1½ m. S.E. of Muderong Bore, Middalya
Stn, Carnarvon Basin, W.A.; Coolkilya Grey-
wacke.

C.P.C. 738. Paratype.

Just S. of Bakers Bore, Middalya Stn;
Coolkilya Greywacke.

Permian (Kungurian).

C.P.C. 739. Paratype.

¼ m. N. of Paddys Outcamp, Middalya
Stn; Norton Greywacke.

Lower Permian (Artinskian).

ORIOCRASSATELLA STOKESI Etheridge
Jnr. 1907; Dickinson, 1956.

Oriocrassatella stokesi Etheridge jnr.,
1907, p. 9, pl. 6, figs. 2-5. Dickinson,
1956, p. 33, pl. 6, figs. 8-14.

C.P.C. 781. Hypotype E.

1½ m. E. of Middle Well, Middalya Stn,
Carnarvon Basin, W.A.; Norton Greywacke.

Lower Permian (Artinskian).

PACHYDOMUS? sp. Dickinson, 1957.

Pachydomus? sp. Dickinson, 1957, p. 26,
pl. 4, figs. 1-4; text-fig. 3.

C.P.C. 2218. Figured specimen.

3 m. W. of Moogooree Hstd, Carnarvon
Basin, W.A.; 1,250 ft. below top of Lyons
Group.

C.P.C. 2219, 2220. Figured specimens.

3½ m. N.E. of Round Hill Well, 700 ft.
W. of Kialawibri Ck. road crossing, Winning
Stn, Carnarvon Basin; top part of Lyons
Group.

Lower Permian (Sakmarian).

PACHYMYONIA OCCIDENTALIS Dickinson
1957.

Pachymyonia occidentalis Dickinson, 1957,
p. 28, pl. 4, figs. 5-9.

C.P.C. 2221. **Holotype.**

C.P.C. 2222. Paratype.

1 m. W. of Callytharra Springs, Byro
Stn, Carnarvon Basin, W.A.; top 15 ft. of
Lyons Group (WB 2).

Lower Permian (Sakmarian).

PANOPE KALIMNENSIS Crespin, 1950.

Panope kalimnensis Crespin, 1950, p. 155,
pl. 17, figs. 19, 20.

C.P.C. 642. **Holotype.**

Lakes Entrance Oil Shaft, Ph. Colquhoun,
Gippsland, Vic., at 50 ft.; Kalimnan Stage.

Lower Pliocene.

PARALLELODON SUBTILISTRIATUS
Wanner, 1922; Dickinson, 1956.

Parallelodon subtilistriatus Wanner, 1922,
p. 72, pl. 4, fig. 4. Dickinson, 1956,
p. 12, pl. 1, figs. 5, 6, 11.

C.P.C. 742, 743. Hypotypes A, B.

$\frac{1}{2}$ m. N.W. of Muderong Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

Permian (Kungurian).

PRAEUNDULOMYA CONCENTRICA

Dickins, 1957.

Praeundulomya concentrica Dickins, 1957, p. 10, pl. 1, figs. 1-11; text-fig. 2.

C.P.C. 2193. Holotype.

C.P.C. 2194, 2199, 2200. Paratype A. F and G.

5 m. S.W. of Moogooree Hstd, $5\frac{1}{2}$ m. S.E. by E. of Donnelly's Well; 355 ft. above base of Coyrie Fm.

C.P.C. 2195, 2196. Paratypes B, C.

Same locality as holotype but 402-455 ft. above base of Coyrie Fm.

C.P.C. 2197, 2198. Paratypes D, E.

Same locality and formation as holotype, but 20 ft. higher in section.

Lower Permian (Artinskian).

PRAEUNDULOMYA ELONGATA Dickins, 1957.

Praeundulomya elongata Dickins, 1957, p. 36, pl. 6, figs. 10-14; text-fig. 7.

C.P.C. 2238. Holotype.

C.P.C. 2239, 2240. Paratypes A, B.

1 m. W. of Callytharra Springs, Byro Stn, Carnarvon Basin, W.A.; top 15 ft. of Lyons Group (WB 4, WB 2).

Lower Permian (Sakmarian).

PSEUDOMYALINA OBLIQUA Dickins, 1956.

Pseudomyalina obliqua Dickins, 1956, p. 26, pl. 3, figs. 1-7; text-fig. 2.

C.P.C. 756. Holotype.

C.P.C. 757. Paratype A.

$\frac{5}{8}$ m. E. of S. of Muderong Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

C.P.C. 758, 760-762. Paratypes B, D, E, F.

$\frac{3}{4}$ m. S. of Southern Cross Bore, Middalya Stn; Coolkilya Greywacke.

C.P.C. 759. Paratype C.

$\frac{3}{4}$ m. S.E. of Muderong Bore, Middalya Stn; Coolkilya Greywacke.

Permian (Kungurian).

SCHIZODUS CRESPINAE Dickins, 1957.

Schizodus crespinae Dickins, 1957, p. 38, pl. 6, figs. 1-6.

C.P.C. 2241. Holotype.

C.P.C. 2242, 2243. Paratypes A, B.

About 3 m. N.E. of Round Hill Well, 1 m. W. of Kialawibri Ck road crossing, Winning Stn, Carnarvon Basin, W.A.; upper part of Lyons Group (ML 109).

Lower Permian (Sakmarian).

SCHIZODUS KENNEDYENSIS Dickins, 1956.

Schizodus kennedyensis Dickins, 1956, p. 30, pl. 5, figs. 1-10.

C.P.C. 764. Holotype.

C.P.C. 777-780. Paratypes A, C-E.

$\frac{3}{4}$ m. S. of Southern Cross Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

Permian (Kungurian).

SERRIPECTEN YAHLIENSIS (T. Woods), 1865; Crespin, 1950.

Pecten yahliensis Tenison Woods, 1865, pl. 1, figs. 4a, b.

Serriptecten yahliensis, Crespin, 1950, p. 152, pl. 16, figs. 14, 15.

C.P.C. 634. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 325 ft.; Bairnsdale Sub-stage.

Middle Miocene.

SPONDYLUS PSEUDORADULUS McCoy, 1876; Crespin, 1950.

Spondylus pseudoradula McCoy, 1876, p. 17, pl. 45, figs. 2, 2a-c.

Spondylus pseudoradulus, Crespin, 1950, p. 152, pl. 14, figs. 1, 2.

C.P.C. 636. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 50-100 ft.; Kalimnan Stage.

Lower Pliocene.

STUCHBURIA MUDERONGENSIS Dickins, 1956.

Stuchburia muderongensis Dickins, 1956, p. 14, pl. 1, figs. 12-17.

C.P.C. 747. Holotype.

C.P.C. 748, 749, 1308, 1309. Paratypes A, B, C.*D.*

1½ m. S.E. of Muderong Bore, Middalya Stn, Carnarvon Basin, W.A.; Coolkilya Greywacke.

Permian (Kungurian).

STUCHBURIA VARIABILIS Dickins, 1957.

Stuchburia variabilis, Dickins, 1957, p. 21, pl. 2, figs. 7-9, 14.

C.P.C. 2205. Holotype.

C.P.C. 2206. Paratype A.

1½ m. slightly S. of W. of Callytharra Springs, Byro Stn, Carnarvon Basin, W.A.; top bed of Lyons Group (WB 6).

C.P.C. 2207-2211. Paratypes B-F.

1 m. W. of Callytharra Springs; top 15 ft. of Lyons Group.

Lower Permian (Sakmarian).

TRACHYCARDIUM (OVICARDIUM) GIPPSLANDICUM Crespin, 1950.

Trachycardium (Ovicardium) gippslandicum Crespin, 1950, p. 154, pl. 14, figs. 3, 4.

C.P.C. 640. Holotype.

C.P.C. 641. Paratype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 50-100 ft.; Kalimnan Stage.

Lower Pliocene.

UNDULOMYA PLEIOPLEURA Fletcher, 1946; Dickins, 1956.

Undulomya pleiopleura Fletcher, 1946, p. 398, pl. 34, figs. 1-5. Dickins, 1956, p. 29, pl. 4, figs. 6-8.

C.P.C. 763. Hypotype.

2 m. N. of Muderong Bore, Middalya Stn, Carnarvon Basin, W.A.; top of Norton Greywacke or Baker Fm.

Permian.

VENERICARDIA DEPRESSULUM Chapman & Crespin, 1933.

Venericardia depressulum Chapman & Crespin, 1933, p. 67, pl. 5, fig. 3.

C.P.C. 51. Holotype.

Steam Drill, Ph. Coongulmerang, Gippsland, Vic., at 300-334 ft.; Kalimnan Stage.

Lower Pliocene.

VENERICARDIA GIPPSLANDICA Chapman & Crespin, 1933.

Venericardia gippslandica Chapman & Crespin, 1933, p. 67, pl. 5, fig. 4.

C.P.C. 52. Holotype.

Princes Highway, E. of Bunga, Lakes Entrance, Ph. Colquhoun, Gippsland, Vic., Kalimnan Stage.

Lower Pliocene.

VENERICARDIA JANJUKIENSIS Chapman & Singleton, 1927; Crespin, 1950.

Venericardia janjukiensis Chapman & Singleton, 1927, p. 120, pl. 2, figs. 3Ca, b, 31. Crespin, 1950, p. 153, pl. 14, fig. 7.

C.P.C. 638. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 1,060 ft.; Janjukian Stage.

Lower Oligocene to Upper Eocene.

VENERICARDIA SPINULOSA (Tate) var. **DENNANTI** Chapman & Crespin, 1933.

Venericardia spinulosa (Tate) var. *dennanti* Chapman & Crespin, 1933, p. 68, pl. 5, figs. 5, 6.

C.P.C. 53. Holotype.

Old Bunga road, E. of No. 1 Bore, Lakes Entrance (Lake Bunga), Gippsland, Vic., Kalimnan Stage.

Lower Pliocene.

GASTROPODA

BELLEROPHON sp. c. Öpik, 1953.

Bellerophon sp. c., Öpik, 1953, p. 19,
pl. 6, figs. 47-49.

C.P.C. 671. Figured specimen.

Iliaenus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

CERITHIOPSIS WOOLNOUGHII Chapman & Crespin, 1933.

Cerithiopsis woolnoughi Chapman & Crespin, 1933, p. 69, pl. 5, figs. 7, 8.

C.P.C. 54. Holotype.

C.P.C. 55. Paratype.

Fernbank Water Bore, East Gippsland, Vic., at 270 ft.; Kalimnan Stage.

Lower Pliocene.

DAPHNELLA GRANULOSA Chapman & Crespin, 1933.

Daphnella granulosa Chapman & Crespin, 1933, p. 3, pl. 5, fig. 13.

C.P.C. 60. Paratype.

Kalimna Oil Co. No. 1 Bore, Rigby Island, Gippsland Lakes, Vic., at 50 ft.; Kalimnan Stage.

Lower Pliocene.

ETREMA ALLITERATA (Hedley) 1915; Chapman & Crespin, 1933.

Glyphostoma alliteratum Hedley, 1915, p. 728, pl. 82, figs. 56, 57.

Etrema alliterata, Chapman & Crespin, 1933, p. 74, pl. 5, fig. 14.

C.P.C. 61. Hypotype.

No. 16 Bore, Ph. Stradbroke, Gippsland, Vic., at 200 ft.; Kalimnan Stage.

Lower Pliocene.

HOLOPEA LATENS Öpik, 1953.

Holopea latens Öpik, 1953, p. 20, pl. 7, figs. 55, 56; text-fig. 7.

C.P.C. 676. Holotype.

Illaneus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

KEENIA CARNARVONENSIS Dickins, 1957.

Keenia carnarvonensis Dickins, 1957, p. 50, pl. 9, figs. 9-11.

C.P.C. 2264. Holotype.

About 3 m. N.E. of Round Hill Well, 1 m. W. of Kialawibri Ck. road crossing, Winning Stn, Carnarvon Basin, W.A.; upper part of Lyons Group (ML 109).

C.P.C. 2265. Paratype.

At rabbit-proof fence, 3.4 m. S. of Coyango Well, Williambury Stn, Carnarvon Basin; 800 ft. stratigraphically below top of Lyons Group.

Lower Permian (Sakmarian).

KOKENOSPIRA (TRITONOPHON) TRIMETRA Öpik, 1953.

Kokenospira trimetra Öpik, 1953, p. 20, pl. 7, figs. 52-54.

C.P.C. 674. Holotype.

C.P.C. 675. Figured specimen.*

Iliaenus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

KOKENOSPIRA TRISINUATA Öpik, 1953.

Kokenospira trisinuata Öpik, 1953, p. 19, pl. 7, figs. 50, 51; text-fig. 6.

C.P.C. 672. Holotype.

Iliaenus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

LOXONEMA SUBANGULATUM Öpik, 1953.

Loxonema subangulatum Öpik, 1953, p. 21, pl. 7, figs. 57, 58.

C.P.C. 684. Holotype.

Iliaenus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

MARGINELLA KALIMNAE Chapman & Crespin, 1933.

Marginella kalimnae Chapman & Crespin, 1953, p. 73, pl. 5, fig. 12.

C.P.C. 59. Holotype.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 80-90 ft.; Kalimnan Stage.

Lower Pliocene.

MOURLONIA? LYNDONENSIS Dickins, 1957.

Mourlonia? lyndonensis Dickins, 1957, p. 46, pl. 8, figs. 1-5.

C.P.C. 2255. Holotype.

C.P.C. 2256-2257. Paratypes A-C.

About 3 m. N.E. of Round Hill Well, 1 m. W. of Kialawibri Ck. road crossing, Winning Stn, Carnarvon Basin, W.A.; upper part of Lyons Group.

Lower Permian (Sakmarian).

PERSONELLA CLARKEI Chapman & Crespin, 1933.

Personella clarkei Chapman & Crespin, 1933, p. 70, pl. 5, fig. 11.

C.P.C. 56. Paratype.

Kalimna Oil Co. No. 1 Bore, Rigby Island, Gippsland Lakes, Vic., at 30-50 ft.; Kalimnan Stage.

Lower Pliocene.

PHRAGMOLITES PHAEACUS Öpik, 1953.

Phragmolites phaeus Öpik, 1953, p. 18, pl. 6, figs. 40-43.

C.P.C. 667. Holotype.*

C.P.C. 667, 669. Paratypes.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

PLANORBIS HARDMANI (McCoy MS.) Wade, 1924; Chapman, 1938.

Planorbis hardmani (McCoy MS.), Wade, 1924, pl. 1, figs. 2-4. Chapman, 1938, p. 61, pl. 6, figs. 1, 2.

C.P.C. 105. Lectotype.

C.P.C. 106, 190. Paralectotypes.

Hill J.40, Mt Elder, Kimberley Division, W.A.

Tertiary.

PLATYSCHISMA? sp. nov. Dickins, 1957.

Platyschisma? sp. nov. Dickins, 1957, p. 51, pl. 8, fig. 8.

C.P.C. 2266, 2267. Figured specimens.

At rabbit-proof fence, 3.4 m. S. of Coyango Well, Williambury Stn, Carnarvon Basin, W.A.; 800 ft. stratigraphically below top of Lyons Group.

Lower Permian (Sakmarian).

PTYCHOMPHALINA UMARIENSIS (Reed), 1928; Dickins, 1957.

Pleurotomaria umariensis Reed, 1928, p. 389, pl. 34, fig. 12; pl. 35, figs. 11-13.

Ptychomphalina umariensis Dickins, 1957, p. 47, pl. 9, figs. 1-5.

C.P.C. 2259-2261. Hypotypes A-C.

About 3 m. N.E. of Round Hill Well, 1 m. W. of Kialawibri Ck road crossing, Winning Stn, Carnarvon Basin, W.A.; upper part of Lyons Group (ML 109).

Lower Permian (Sakmarian).

TROPHON (ENATIMENE) METUNGENSIS Chapman & Crespin, 1933.

Trophon (Enatimene) metungensis Chapman & Crespin, 1933, p. 71, pl. 5, fig. 9.

C.P.C. 57. Holotype.

No. 1 Bore Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 90-100 ft.; Kalimnan Stage.

Lower Pliocene.

TROPIDODISCUS sp. b. Öpik, 1953.

Tropidodiscus sp. b. Öpik, 1953, pl. 6, figs. 44-46.

C.P.C. 670. Figured specimen.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

TURRITELLA CONSPICABILIS Tate, 1893; Chapman & Crespin, 1932.

Turritella conspicabilis Tate, 1893, p. 339, pl. 8, fig. 1. Chapman & Crespin, 1932, pl. 1, fig. 9.

C.P.C. 48. Figured specimen.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 90-100 ft.; Kalimnan Stage.

Lower Pliocene.

TYLOSPIRA CORONATA (Tate), 1889; Chapman & Crespin, 1932.

Pellicaria coronata Tate, 1889, p. 171, pl. 10, figs. 6, 13.

Tylospira coronata, Chapman & Crespin, 1932, pl. 1, fig. 10.

C.P.C. 49. Figured specimen.

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 80-90 ft.; Kalimnan Stage.

Lower Pliocene.

TYPHIS (CYPHONOCHELUS) RUGICOSTATUS Chapman & Crespin, 1933.

Typhis (Cyphonochelus) rugicostatus Chapman & Crespin, 1933, p. 72, pl. 5, fig. 10.

C.P.C. 58. **Holotype.**

No. 1 Bore, Pt. Addis, Ph. Bumberrah (Metung), Gippsland, Vic., at 90-100 ft.; Kalimnan Stage.

Lower Pliocene.

CEPHALOPODA

ACONECERAS AUSTRONISOIDES Brunn-schweiler, 1959.

Aconeceras austronisoides Brunn-schweiler, 1959, p. 11, pl. 1, figs. 1a, b.

C.P.C. 2626. **Holotype.**

W. slope of Windalia Hill on Lyndon R., Carnarvon Basin, W.A.; about 20 ft. above base of Windalia Radiolarite at type locality.

Lower Cretaceous (Aptian).

ACONECERAS WHITEHOUSEI Brunn-schweiler, 1959.

Aconeceras whitehousei Brunn-schweiler, 1959, p. 12, pl. 1, figs. 2a, b.

C.P.C. 2627a. **Holotype.**

E. slope of Windalia Hill on Lyndon R., Carnarvon Basin, W.A.; 80 ft. above base of Windalia Radiolarite.

Lower Cretaceous (Aptian).

AETHOCERAS CAURUS Teichert & Glenister, 1954.

Aethoceras caurus Teichert & Glenister, 1954, p. 82 (228), pl. 9 (22), figs. 8-10; text-fig. 15.

C.P.C. 364. **Holotype.**

Emanuel Creek, Fitzroy Basin, W.A.; 1,065-1,170 ft. above base of section, Emanuel Fm. (NL 20E).

Early Ordovician (Upper Canadian).

?AGANIDES Chapman in Wade, 1924.

?*Aganides* Chapman in Wade, 1924, pls. 3, 4 (part) = *Sporodoceras contiguum* (Munster) in Delepine, 1935, p. 209, pl. 12, figs. 1-3; pl. 12, figs. 13 a.b.

C.P.C. 317. Figured specimen.

Mt Pierre, W. Kimberleys, W.A.

Devonian.

ALLOPILOCERAS CALAMUS Teichert & Glenister, 1954.

Allopiloceras calanus Teichert & Glenister, 1954, p. 64 (216), pl. 7 (20), figs. 8, 9.

C.P.C. 355. Holotype.

Emanuel Creek, Fitzroy Basin, W.A.; 1,065-1,170 ft. above base of section, Emanuel Fm. (NL 20E).

Early Ordovician (Upper Canadian).

APHETOCERAS DELECTANS Teichert & Glenister, 1954.

Aphetoceras delectans Teichert & Glenister, 1954, p. 77 (223), pl. 10 (23), figs. 1-7; text-fig. 13.

C.P.C. 359. Holotype.

C.P.C. 361, 362. Paratypes.

Emanuel Ck, Fitzroy Basin, W.A.; lower part of Emanuel Lst., 460-1,065 ft. above base of section (NL 20D).

C.P.C. 360. Paratype.

Same locality as above but 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Upper Canadian).

APHETOCERAS DESERTORUM Teichert & Glenister, 1954.

Aphetoceras desertorum Teichert & Glenister, 1954, p. 80 (226), pl. 10 (23), fig. 8; text-fig. 1.

C.P.C. 363. Holotype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Upper Canadian).

APOCRINOCERAS TALBOTI Teichert & Glenister, 1954.

Apocrinoceras talboti Teichert & Glenister, 1954, p. 76 (222), pl. 1 (14), figs. 7-9.

C.P.C. 354. Holotype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Upper Canadian).

ARKOCERAS sp., Teichert & Glenister, 1954.

Arkoceras sp., Teichert & Glenister, 1954, p. 86 (232), pl. 10 (23), figs. 10, 11; text-fig. 18.

C.P.C. 357. Figured specimen.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. (NL 17).

Early Ordovician (Mid. Canadian).

ATURIA cf. **ATURIA CLARKEI** Teichert, 1944; Glenister, Miller, & Furnish, 1956.

Aturia cf. *A. clarkei*, Glenister, Miller, & Furnish, 1956, p. 502, pl. 55, figs. 3, 4.

C.P.C. 1713. Figured specimen.

Immed. S. of Giralia-Bullara road, 2 m. E. of Bullara Stn boundary, Carnarvon Basin, W.A.; Giralia Calcarenite.

Middle Eocene.

ATURIA cf. **ATURIA ZIGZAC** (Sowerby), Miller & Crespin, 1936.

Aturia cf. *A. zigzac*, Miller & Crespin, 1936, p. 79, pl. 13, figs. 1, 2; text-fig. 1.

C.P.C. 188. Figured specimen.

2 m. N.E. of Merlinleigh Woolshed, Carnarvon Basin, W.A.

Tertiary.

ATUROIDEA BRUNNSCHWEILERI

Glenister, Miller, & Furnish, 1956, p. 500, pl. 55, figs. 1, 2, 5, 6; pl. 56, figs. 1, 2; text-fig. 7.

C.P.C. 1707. Holotype.

12 m. E.N.E. of Bullara Hstd, 1½ m. S.S.E. of Jubilee Bore, Giralia, Carnarvon Basin, W.A.; Giralia Calcarenite (GIR 1).

C.P.C. 1706. Paratype.

6½ m. S. of Jubilee Bore (GIR 3).

C.P.C. 1705, 1709. Paratype.

Near top of One Tree Hill, Giralia, Caradabia Range, Carnarvon Basin.

ATUROIDEA sp. Glenister, Miller, & Furnish, 1956.

Aturoidea sp., Glenister, Miller, & Furnish, 1956, p. 501, pl. 56, figs. 3, 4.

C.P.C. 1711. Figured specimen.

Scrubby Range, a hill 19½ m. E.S.E. of Maud Landing, and 33½ m. W.S.W. of Winning Pool, Carnarvon Basin, W.A.; Boongerooda Greensand.

Paleocene.

BASSLROCERAS ANNULATUM Teichert & Glenister, 1954.

Bassleroceras annulatum Teichert & Glenister, 1954, p. 74 (220); pl. 1 (14), figs. 17, 18.

C.P.C. 353. **Holotype.**

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1065-1170 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

BELOCERAS SAGITTARIUM (G. & F. Sandberger), 1851; Glenister, 1958.

Goniatites sagittarius (pars) G. & F. Sandberger, 1851, p. 77, pl. 4, figs. 3, 3q-c, 31.

Beloceras saggittarium, Glenister, 1958, p. 85, pl. 5, fig. 12; pl. 10, fig. 7; pl. 13, figs. 1-3; pl. 14, figs. 1-8; text-figs. 13A, 14, 15A-D.

C.P.C. 1746-1751. **Hypotypes.**

S.E. end, Bugle Gap, 3¼ m. at 61° from Pinnacle Springs, 126° 05' E., 18° 44½' S., Fitzroy Basin, W.A.; Virgin Hills Fm.

Upper Devonian.

CAMPENDOCERAS GRACILE Teichert & Glenister, 1954.

Campendoceras gracile Teichert & Glenister, 1954, p. 71 (217); pl. 1 (14), figs. 10, 11.

C.P.C. 371. **Holotype.**

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

CIMOMIA TENUICOSTA Glenister, Miller, & Furnish, 1956.

Cimomia tenuicosta Glenister, Miller, & Furnish, 1956, p. 495, pl. 53, figs. 1-9.

C.P.C. 1714. **Holotype.**

C.P.C. 1715, 1716. **Paratypes.**

Gully between One Tree Hill and White Hill, Giralia-Cardabia Range, Carnarvon Basin, W.A.; Miria Marl.

C.P.C. 1717. **Paratype.**

Remarkable Hill, Giralia-Cardabia Range; Miria Marl.

Upper Cretaceous (Campanian-Maestrichtian).

CYRTENDOCERAS CARNEGIEI Teichert & Glenister, 1954.

Cyrtendoceras carnegiei Teichert & Glenister, 1954, p. 67 (213), pl. 8 (21), figs. 7-9; text-fig. 12.

C.P.C. 351. **Holotype.**

C.P.C. 352. **Paratype.**

Emanuel Ck, Fitzroy Basin, W.A., Emanuel Fm. (NH 145).

Early Ordovician (Up. Canadian).

DIASTOLOCERAS PERPLEXA Teichert & Glenister, 1954.

Diastoloceras perplexa Teichert & Glenister, 1954, p. 45 (191), pl. 1 (14), figs. 12-16; text-fig. 7.

C.P.C. 345. **Holotype.**

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

EOFALCIFERELLA CONDONI Brunnschweiler, 1959.

Eofalciferella condoni Brunnschweiler, 1959, p. 13, pl. 1, figs. 3, 4.

C.P.C. 2627b. **Holotype.**

E. slope of Windalia Hill, Lyndon R., Carnarvon Basin, W.A.; 80 ft. above base of Windalia Radiolarite at type locality.

Lower Cretaceous (Aptian).

ECTOCYCLOCERAS INFLATUM Teichert & Glenister, 1954.

Ectocycloceras inflatum Teichert & Glenister, 1954, p. 41 (187), pl. 1 (14), figs. 5, 6.

C.P.C. 370. Holotype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1,065-1,170 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

ENDOCERATIDAE gen et sp. indet. Teichert & Glenister, 1954.

Endoceratidae gen. et sp. indet. Teichert & Glenister, 1954, p. 71 (217), pl. 8 (21), figs. 2-5.

C.P.C. 342, 343. Figured specimens.

Emanuel Ck, Fitzroy Basin, W.A.; Gap Creek Dolomite (NH 142, NH 141).

Early Ordovician.

EOTHINOCERAS MAITLANDI Teichert & Glenister, 1954.

Eothinoceras maitlandi Teichert & Glenister, 1954, p. 49 (195), pl. 3 (16), fig. 13.

C.P.C. 335, 336. Paratypes.

C.P.C. 337, 338A. Hypotypes.

Emanuel Ck, Fitzroy Basin, W.A. (NL 17).

Early Ordovician.

GALTOCERAS KIMBERLEYENSE Teichert, 1939.

Galtoceras kimberleyense Teichert, 1939, p. 110, pl. 1, figs. 4, 5.

C.P.C. 116. Holotype.

Mt Pierre, W. Kimberley area, W.A.

Devonian.

?GONIOCLYMENIA Chapman in Wade, 1924.

?Gonioclymenia Chapman in Wade, 1924, p. 44, pl. 3 (pars).

C.P.C. 313-316. Figured specimens.

Mt Pierre, W. Kimberley area, W.A.

Devonian.

HARDMANOCERAS LOBATUM Teichert & Glenister, 1952.

Hardmanoceras lobatum Teichert & Glenister, 1952, p. 748, pl. 107, figs. 6-10.

C.P.C. 482. Holotype.

C.P.C. 483. Paratype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1065-1170 ft. above base of section (NL 20E, NL 20F).

Early Ordovician (Up. Canadian).

HEMICHIOANELLA CANNINGI Teichert & Glenister, 1954.

Hemichioanella canningi Teichert & Glenister, 1954, p. 47 (193), pl. 2 (15), fig. 5; pl. 3 (16), figs. 1-4; text-fig. 8.

C.P.C. 344. Holotype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. (NH 145).

Early Ordovician (Up. Canadian).

LEBETOCERAS OEPIKI Teichert & Glenister, 1954.

Lebetoceras oepiki Teichert & Glenister, p. 54 (200), pl. 5 (18), figs. 1-5, text-fig. 9.

C.P.C. 340. Holotype.

C.P.C. 341. Paratype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. (NL 20F, NL 17).

Early Ordovician (Up. Canadian).

LOBENDOCERAS EMANUELENSE Teichert & Glenister, 1954.

Lobendoceras emanuelense Teichert & Glenister, 1954, p. 69 (215), pl. 9 (22), figs. 1-7.

C.P.C. 346. Holotype.

C.P.C. 347. Paratype.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. 1065-1175 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

LOXOCHOANELLA WARBURTONI

Teichert & Glenister, 1954.

Loxochoanella warburtoni Teichert & Glenister, 1954, p. 37 (183), pl. 2 (15), figs. 2, 4.

C.P.C. 338, 339. Paratypes.

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm., 1065-1175 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

MANTIOCERAS CINCTUM Glenister, 1958.

Manticoceras cinctum, 1958, p. 76, pl. 10, figs. 1-3; text-figs. 7a, b.

C.P.C. 1736. **Holotype.**

S.E. end of Bugle Gap, 3½ m. at 61° from Pinnacle Spring, 126° 05' E., 18° 44½' S., Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 190).

Upper Devonian.

MANTIOCERAS GUPPYI Glenister, 1958.

Manticoceras guppyi Glenister, 1958, p. 74, pl. 7, fig. 1, pl. 8, figs. 3, 4; pl. 10, figs. 4, 5; text-figs. 5A, 6A-D.

C.P.C. 1729. **Holotype.**

C.P.C. 1730, 1732-1735. Paratypes.

S.E. end of Bugle Gap, 3½ m. at 61° from Pinnacle Spring, Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 178).

C.P.C. 1731. Paratype.

Approx. 4 m. S.W. of Old Bohemia Hstd, 126° 06' E., 18° 42' S., Fitzroy Basin, W.A.; 187-213 ft. above base of Gogo Fm. (K.Dup.126).

Upper Devonian.

MANTIOCERAS LINDNERI Glenister, 1958.

Manticoceras lindneri Glenister, 1958, p. 72, pl. 7, fig. 2; pl. 6, figs. 1, 2.

C.P.C. 1728. Paratype.

S.E. end of Bugle Gap, 3½ m. at 61° from Pinnacle Spring, Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 190).

Upper Devonian.

MESOBELOCERAS THOMASI Glenister, 1958.

Mesobeloceras thomasi Glenister, 1958, p. 83, pl. 8, fig. 2; pl. 10, fig. 6; text-figs. 12A, B, 13B.

C.P.C. 1742. **Holotype.**

C.P.C. 1743-1745. Paratypes.

Horse Spring Range, in the vicinity of Horse Spring, 126° 02' E., 18° 12' S., Fitzroy Basin, W.A.; Fossil Downs Fm., base 4-6 ft. above base (F.Du 479).

Upper Devonian.

NEOMANTIOCERAS ERRATICUM Glenister, 1958.

Neomanticoceras erraticum Glenister, 1958, p. 81, pl. 11, figs. 6-9; text-figs. 10, A11.

C.P.C. 1741. **Holotype.**

S.E. end of Bugle Gap, 3½ m. at 61° from Pinnacle Spring, Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 178).

NOTOCYCLOCERAS YURABIENSE

Teichert & Glenister, 1954.

Notocycloceras yurabiense Teichert & Glenister, 1954, p. 56 (202), pl. 5 (18), figs. 6, 7; pl. 6 (19), fig. 1.

C.P.C. 350. **Holotype.**

Emanuel Ck, Fitzroy Basin, W.A.; Emanuel Fm. 1065-1175 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

OPHIIOCERAS GIBLINI Chapman, 1934.

Ophioceras giblini Chapman, 1934, p. 192, pl. 10, fig. 2.

C.P.C. 63. **Holotype.**

Hattons Corner, Yass, N.S.W.

Silurian.

?ORTHOCERAS sp. Chapman in Wade, 1924.

?*Orthoceras* sp., Chapman in Wade, 1924, pl. 2.

C.P.C. 191. Figured specimen.

Mt Pierre, Kimberley area, W.A.

Devonian.

PONTICERAS DISCOIDALE Glenister, 1958.

Ponticeras discoidale Glenister, 1958, p. 65, pl. 5, figs. 7-9; pl. 12, figs. 10, 11; text-figs. 1C, 2A.

C.P.C. 1720. Holotype.

$\frac{1}{2}$ m. N. of Main Scarp of Pillara Range, 1 m. E. of N. entrance to Menyous Gap, 125° 51½' E., 18° 24¼' S., Fitzroy Basin, W.A.; Sadler Fm. (NH 9B).

C.P.C. 1721. Paratype.

Approx. 4 m. S.W. of Old Bohemia Hstd, Fitzroy Basin; 127-213 ft. above base of Gogo Fm.

Upper Devonian.

PONTICERAS RETORQUATUM Glenister, 1958.

Ponticeras retorquatum Glenister, 1958, p. 66, pl. 5, figs. 2, 3; text-figs. 1A, 2B.

C.P.C. 1722. Holotype.

C.P.C. 1723-1725. Paratypes.

S.E. end of Bugle Gap, 3¼ m. at 61° from Pinnacle Spring, Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 190).

Upper Devonian.

PONTICERAS sp. Glenister, 1958.

Ponticeras sp., Glenister, 1958, p. 67, pl. 5, fig. 1; text-figs. 2C, D.

C.P.C. 1726. Figured specimen.

Approx. 4 m. S.W. of Old Bohemia Hstd, Fitzroy Basin, W.A.; about 187-213 ft. above base of Gogo Fm. (K. Dup. 126).

PROBELOCERAS ALVEOLATUM Glenister, 1958.

Probeloceras alveolatum Glenister, 1958, p. 69, pl. 15, figs. 2, 3; text-figs. 3A, B.

C.P.C. 1727. Holotype.

Approx. 4 m. S.W. of Old Bohemia Hstd, Fitzroy Basin, W.A.; about 187-213 ft. above base of Gogo Fm. (K. Dup. 126).

Upper Devonian.

PROTEROCAMEROCERAS CONTRARIUM Teichert & Glenister, 1954.

Proterocameras contrarium Teichert & Glenister, 1954, p. 59 (205), pl. 4 (17), figs. 1-4.

C.P.C. 366. Holotype.

C.P.C. 367. Paratypes.

Emanuel Ck., Fitzroy Basin, W.A.; Emanuel Fm. (NL 20E).

Early Ordovician (Up. Canadian).

PYRENOCERAS LIRATUM Teichert & Glenister, 1954.

Pyrenoceras liratum Teichert & Glenister, 1954, p. 84 (230), pl. 10 (23), figs. 12-15; text-fig. 17.

C.P.C. 358. Holotype.

Emanuel Ck., Fitzroy Basin, W.A.; Emanuel Fm., 1065-1175 ft. above base of section (NL 20E).

Early Ordovician (Up. Canadian).

TEICHERTIA PRORA Glenister, Miller, & Furnish, 1956.

Teichertia prora Glenister, Miller, & Furnish, 1956, p. 497, pl. 54, figs. 1-8; text-fig. 3B.

C.P.C. 1700. Holotype.

C.P.C. 1701-1703. Paratypes.

Immed. S. of Giralia-Bullara rd., 2 m. E. of Bullara Stn boundary, Carnarvon Basin, W.A.; Giralia Calcarenite (GIR 2).

Upper Eocene.

TIMANITES ANGUSTUS Glenister, 1958.

Timanites angustus Glenister, 1958, p. 79, pl. 11, figs. 1-5; pl. 12, fig. 9; text-fig. 9.

C.P.C. 1737. Holotype.

C.P.C. 1738-1740. Paratypes.

Central Bugle Gap, 3¼ m. at 143° from Paddys Spring, 126° 02¼' E., 18° 41' S., Fitzroy Basin, W.A.; Gogo Fm. (K. Dup. A95).

Upper Devonian.

THYLACOCERAS KIMBERLEYENSE

Teichert & Glenister, 1952.

Thylacoceras kimberlense Teichert & Glenister, 1952, p. 738, pl. 104, figs. 1, 2.

C.P.C. 481. Holotype.

C.P.C. 348, 349. Figured specimens.

Emanuel Ck., Fitzroy Basin, W.A.; Emanuel Fm. (NL 20D, NL 20E, holotype).

Early Ordovician (Up. Canadian).

TORNOCERAS (POLONOCERAS) sp.
Glenister, 1958.

Tornoceras (Polonoceras) sp., Glenister, 1958, p. 15, fig. 1, text-figs. 17A, B.

C.P.C. 1758. Figured specimen.

Geikie Range, 3 m. N. of Fossil Downs Hstd, 125° 47' E., 18° 06' S., Fitzroy Basin, W.A.; Fossil Downs Fm. (K. Dul. 478).

Upper Devonian.

TORNOCERAS (TORNOCERAS)

CLAUSUM Glenister, 1958.

Tornoceras (Tornoceras) clausum Glenister, 1958, p. 92, pl. 15, figs. 7-9; text-figs. 16A-C.

C.P.C. 1756. Holotype.

C.P.C. 1757. Paratype.

S.E. end of Bugle Gap, 3½ m. at 61° from Pinnacle Spring, Fitzroy Basin, W.A.; Virgin Hills Fm. (RS 190).

Upper Devonian.

TORNOCERAS (TORNOCERAS) CONTRACTICUM Glenister, 1958.

Tornoceras (Tornoceras) contracticum Glenister, 1958, p. 90, pl. 15, figs. 4-6; text-figs. 16A, B.

C.P.C. 1753. Holotype.

C.P.C. 1754, 1755. Paratypes.

Central Bugle Gap, 3½ m. at 143° from Paddys Spring, 126° 02½' E., 18° 41' S., Fitzroy Basin, W.A.; Gogo Fm. (K. Dup. A95).

Upper Devonian.

VENTROLOBOCERAS FURCILLATUM

Teichert & Glenister, 1954.

Ventroloboceras furcillatum Teichert & Glenister, 1954, p. 58 (204), pl. 7 (20), figs. 1-4.

C.P.C. 356. Holotype.

Emanuel Ck., Fitzroy Basin, W.A.; Emanuel Fm. (NL 20D).

Early Ordovician (Up. Canadian).

WADEROCERAS AUSTRALE Teichert, 1939.

Waderoceras australe Teichert, 1939, p. 111, pl. 1, figs. 2, 3.

C.P.C. 117. Holotype.

Mt Pierre, W. Kimberleys, W.A.

Devonian.

TRILOBITA**BATHYURISCUS SAINT-SMITHI** Chapman, 1929.

Bathyriscus saint-smithi Chapman, 1929, p. 207, pl. 21, fig. 7.

C.P.C. 73. Holotype.

12 m. W. of Mt Isa, at head of Templeton R., Qld.

Cambrian.

?OLENELLUS Chapman in Wade, 1924.

?Olenellus Chapman in Wade, 1924, p. 24, pl. 6.

C.P.C. 312. Figured specimen.

Linacre R., Ord River area, W.A.

Cambrian.

REDLICHIA FORRESTI (Eth. fil.), 1890; Öpik, 1958.

Olenellus? forresti Etheridge Jnr. (in Foord), 1890, p.

Redlichia forresti, Öpik, 1958, p. 27, pl. 1, figs. 1, 2; pl. 2, figs. 1-4; pl. 3, figs. 1-4; text-figs. 1-3, 7, 8.

C.P.C. 922-924, 928, 2327. Figured specimens.

Junction of Linacre Ck and Brook Ck, Ord R. area, W.A.; Negri Fm.

Middle Cambrian.

REDLICHIA IDONEA Whitehouse, 1939;
Öpik, 1958.

Redlichia idonea Whitehouse, 1939, p.
Öpik, 1958, pl. 4, figs. 1, 2; pl. 5, figs.
1, 2; pl. 6, 4, 5.

C.P.C. 2329, 2330, 2332. Figured speci-
mens.

Halls Memorial, Barkly Highway, Qld;
Yelvertoft Beds.

Middle Cambrian.

REDLICHIA cf. **IDONEA** Whitehouse, 1939;
Öpik, 1958.

Redlichia cf. *idonea*, Öpik, 1958, pl. 6,
fig. 6.

C.P.C. 2333. Figured specimen.

Halls Memorial, Barkly Highway, Qld;
Yelvertoft Beds.

Middle Cambrian.

REDLICHIA VENULOSA (Whitehouse),
1939; Öpik, 1958.

Mesodema venulosa Whitehouse, 1939, p.
190, pl. 19, fig. 1.

Redlichia venulosa, Öpik, 1958, p. 12,
&c., pl. 6, figs. 1-3.

C.P.C. 2331. Figured specimen.

Halls Memorial, Barkly Highway, Qld;
Yelvertoft Beds.

Middle Cambrian.

REDLICHIA sp. Chapman in Wade, 1924.

Redlichia sp., Chapman in Wade, 1924,
pl. 5.

C.P.C. 193. Figured specimen.

Kellys Ck, ¼ m. S.E. of Oaks Durack
Bore, Kimberley area, W.A.

Cambrian.

REDLICHIA sp. a. Öpik, 1958.

Redlichia sp. a., Öpik, 1958, pl. 1, figs.
4, 5; text-figs. 5, 9.

C.P.C. 925, 926, 930. Figured speci-
mens.

Gum Ridge, E. of Tennant Creek, N.T.;
Gum Ridge Fm.

Middle Cambrian.

REDLICHIA sp. b. Öpik, 1958.

Redlichia sp. b., Öpik, 1958, pl. 1, fig. 6;
text-fig. 4.

C.P.C. 927. Figured specimen.

Gum Ridge, E. of Tennant Creek, N.T.;
lower part of Gum Ridge Fm.

Middle Cambrian.

REDLICHIA sp. c. Öpik, 1958.

Redlichia sp. c., Öpik, 1958, pl. 3, figs.
5-7.

C.P.C. 2328. Figured specimen.

Gum Ridge, E. of Tennant Creek, N.T.;
lower part of Gum Ridge Fm.

Middle Cambrian.

REDLICHIA sp. d. Öpik, 1958.

Redlichia sp. d., Öpik, 1958, p. 35, pl. 6,
figs. 7, 8.

C.P.C. 2334, 2335. Figured specimens.

Halls Memorial, Barkly Highway, Qld;
Yelvertoft Beds.

Middle Cambrian.

THOMASTUS VICARIUS Öpik, 1953.

Thomastus vicarius Öpik, 1953, p. 24, pl.
9, figs. 75-79.

C.P.C. 691. **Holotype.**

Iliaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

OSTRACODA

AECHMINA AECHNESSA Öpik, 1953.

Aechmina aechnessa Öpik, 1953, p. 29, pl. 11, figs. 93, 94.

C.P.C. 692. Holotype.

C.P.C. 693. Figured specimen.

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

BAIRDIA GRAYI Crespin, 1945.

Bairdia grayi Crespin, 1945, p. 32, pl. 4, figs. 1a, b.

C.P.C. 261. Holotype.

N. bank Cattlè Ck, 14 m. S.E. of Springsure, Qld; Cattle Creek Fm.

Lower Permian.

BAIRDIA NYEI Crespin, 1945.

Bairdia nyei Crespin, 1945, p. 32, pl. 4, figs. 2a, b.

C.P.C. 262. Holotype.

Cranky Corner, Hunter River area, N.S.W.; Dalwood Group (= Lower Marine Series).

Lower Permian.

BASSLERELLA AUSTRALAE Crespin, 1945.

Basslerella australae Crespin, 1945, p. 34, pl. 4, figs. 9a, b, 10.

C.P.C. 269. Holotype.

C.P.C. 270. Paratype.

Cattle Ck, 14 m. S.E. of Springsure, Qld, below waterfall; Cattle Creek Fm.

Lower Permian.

BEYRICHTIA EPONA Öpik, 1953.

Beyrichia epona Öpik, 1953, p. 33, pl. 11, figs. 111-115; pl. 12, figs. 116-119.

C.P.C. 709. Holotype.

C.P.C. 710-712. Figured specimens.

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

CAVELLINA AEQUIVALVIS Crespin, 1945.

Cavellina aequivallis Crespin, 1945, p. 33, pl. 4, figs. 7a, b.

C.P.C. 267. Holotype.

Kulnura Bore, Ph. Kooree, Cty Northumberland, N.S.W., at 3,894 ft.

Permian.

CAVELLINA KULNURAENSIS Crespin, 1945.

Cavellina kulnuraensis Crespin, 1945, p. 34, pl. 4, fig. 8.

C.P.C. 268. Holotype.

Kulnura Bore, Ph. Kooree, Cty Northumberland, N.S.W., at 2,865 ft.

Permian.

CAVELLINA SPRINGSURENSIS Crespin, 1945.

Cavellina springsurensis Crespin, 1945, p. 33, pl. 4, figs. 6a, b.

C.P.C. 266. Holotype.

Cattle Ck, 14 m. S.E. of Springsure, Qld, below waterfall; Cattle Ck Fm.

Lower Permian.

CTENETOMA? DUBITABILIS Öpik, 1953.

Ctenetoma? dubitabilis Öpik, 1953, p. 34, pl. 12, figs. 120-123.

C.P.C. 716. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

CTENETOMA? UNGUICULATA Öpik, 1953.

Ctenetoma? unguiculata Öpik, 1953, p. 34, pl. 12, fig. 124; text-fig. 13.

C.P.C. 718. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

CTENOBOLBINA PROXIMA Öpik, 1953.
Ctenobolbina proxima Öpik, 1953, p. 32,
pl. 11, fig. 102; text-fig. 11c.

C.P.C. 701. Holotype.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

DILOBELLA? CHAPMANI Öpik, 1953.
Dilobella? chapmani Öpik, 1953, p. 32,
pl. 11, fig. 103; text-fig. 11d.

C.P.C. 702. Holotype.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

DREPANELLINA VICTORIANA Öpik,
1953.

Drepanellina victoriana, Öpik, 1953, p.
35, pl. 12, figs. 128, 129.

C.P.C. 722. Holotype.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

GILLATIA? MITIS Öpik, 1953.
Gillatia? mitis Öpik, 1953, p. 35, pl. 12,
fig. 127.

C.P.C. 721. Holotype.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

GILLATIA TRINACRIA Öpik, 1953.
Gillatia trinacria Öpik, 1953, p. 34,
pl. 12, fig. 125.

C.P.C. 720. Holotype.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

HAPLOPRIMITIA sp. e, Öpik, 1953.
Haploprimitia sp. e, Öpik, 1953, p. 30,
pl. 11, fig. 96.

C.P.C. 696. Figured specimen.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

HAPLOPRIMITIA sp. f, Öpik, 1953.
Haploprimitia sp. f, Öpik, 1953, p. 30,
pl. 11, fig. 97.

C.P.C. 697. Figured specimen.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

HEALDIA CHAPMANI Cressin, 1945.
Healdia chapmani Cressin, 1945, p. 32,
pl. 4, figs. 3a, b; 4, 5.

C.P.C. 263. Holotype.

C.P.C. 264, 265. Paratypes.

Cattle Ck, 14 m. S.E. of Springsure, Qld,
below waterfall; Cattle Creek Fm.

Lower Permian.

KAYATIA MULTICARINATA Öpik, 1953.
Kayatia multicarinata Öpik, 1953, p. 33,
pl. 11, fig. 110; text-figs. 12 C, D.

C.P.C. 707. Holotype.*

C.P.C. 708. Figured specimen.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

KAYATIA PRIMA Öpik, 1953.
Kayatia prima Öpik, 1953, p. 32, pl. 11,
figs. 104-109; text-figs. 12 A, B.

C.P.C. 703. Holotype.*

C.P.C. 704-706. Figured specimens.*

Illaenus Band, Wapentake Beds, Heath-
cote, Vic.

Lower Silurian.

KIESOWIA PEREGRINA Öpik, 1953.

Kiesowia peregrina Öpik, 1953, p. 31, pl. 11, figs. 100, 101; text-fig. 11B.

C.P.C. 700. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

PUNCTOPRIMITIA NATALIS Öpik, 1953.

Punctoprimitia natalis Öpik, 1953, p. 29, pl. 11, fig. 95; text-fig. 10.

C.P.C. 695. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

QUADRICOLLINA INITIALIS Öpik, 1953.

Quadricollina initialis Öpik, 1953, p. 30, pl. 11, figs. 98, 99.

C.P.C. 699. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

ULRICHIA ALATA Öpik, 1953.

Ulrichia alata Öpik, 1953, p. 30, text-fig. 11A.

C.P.C. 698. Holotype.*

Illaeus Band, Wapentake Beds, Heathcote, Vic.

Lower Silurian.

DECAPODA

HARPACTOCARCINUS VICTORIENSIS

Crespin, 1947.

Harpactocarcinus victoriensis Crespin, 1947, p. 20, pl. 14, figs. 1-7.

C.P.C. 318. Holotype.

C.P.C. 319, 320. Paratype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 1,000 ft.; Janjukian Stage.

Lower Oligocene or Upper Eocene.

THALASSINA ANOMALA Herbst.; Chapman in Wade, 1924.

Thalassina anomala, Chapman in Wade, 1924, p. 43, pl. 1 (pars).

C.P.C. 311. Figured specimen.

Anson Bay, Northern Territory.

Upper Tertiary.

CETACEA

MESOPLODON LONGIROSTRIS (Cuvier), 1823; Glaessner, 1947.

Ziphius longirostris Cuvier, 1823, p. 356, pl. 27, figs. 9, 10.

Mesoplodon longirostris Glaessner, 1947, p. 26, pl. 1, text-fig. 1.

C.P.C. 473. Hypotype.

Lakes Entrance Oil Shaft, Ph. Colquhoun, Gippsland, Vic., at 6-7 ft. below surface; Kalimnan Stage.

Lower Pliocene.

CONODONTS

OISTODUS LARAPINTINENSIS Crespin, 1943.

Oistodus larapintinensis Crespin, 1943, p. 231, pl. 31, figs. 1-13.

C.P.C. 234. Holotype.

C.P.C. 235-246. Paratypes.

South gorge, Waterhouse Range, Central Australia, 40 m. S.W. of Alice Springs; Larapintine Series.

Ordovician.

PALTODUS MADIGANI Crespin, 1943.

Paltodus madigani Crespin, 1943, p. 232, pl. 31, figs. 14-16.

C.P.C. 247. Holotype.*

C.P.C. 248. Paratype.*

South gorge, Waterhouse Range, Central Australia, 40 m. S.W. of Alice Springs; Larapintine Series.

Ordovician.

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