

PERMIAN FOSSILS FROM WOOLAGA CREEK, IRWIN VALLEY, WESTERN
AUSTRALIA

by

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INTRODUCTION

The specimens examined were forwarded by Dr. B.F. Glenister of the Department of Geology, University of Western Australia. The numbers referred to are those of the Department of Geology, University of Western Australia, to whose collections the specimens belong. G.A. Thomas has provided a great deal of information on the identifications and the ranges of the brachiopods but the writer takes full responsibility for all the identifications and conclusions.

For the stratigraphy of the area reference can be made to Clarke et.al., 1951 (Irwin River area) and Condon, 1954, and Konecki et.al., ms. (Carnarvon Basin).

IDENTIFICATIONS

Holmwood Shale

Although the specimens only have the general locality Woolaga Creek, according to information supplied by B.F. Glenister, they can be distinguished by the distinct lithological character of their matrix - a hard siliceous grey limestone. None of the species present in the Holmwood Shale occurs in the rest of the collection.

"Sanguinolites" sp. (31525, 31526 and 31527)

"Dielasma" sp. ind. (31550)

Conulariid sp. ind.

Crinoid ossicles and possible brachiopod fragments (P77a)

It is not possible to draw any conclusions about the correlation of this fauna, except to say that it is distinct from the rest of the fauna in the overlying beds.

?High Cliff Sandstone

Only a few of these specimens have a restricted location other than the general location "Woolaga Creek". The specimens with a restricted location are treated separately.

(a) General Location "Woolaga Creek"

Brachiopods

Linoproductus (Cancrinella) cf. lyoni (Prendergast)
(31552, 33699, 33706 and 33765) 1942

Linoproductus (Cancrinella) sp. - finely ribbed and distinctly geniculate - may represent a new species (32755).

Linoproductus (Cancrinella) sp. ind. (31553).

Aulosteges cf. ingens Hosking 1931 (31537, 31559 and 33695).

Aulosteges sp. ind. (33744 and 33764).

Aulosteges? sp. ind. (31558).

Productid ind. (31594, 33763).

"Chonetes" sp. - a relatively large chonetid with a sulcus (P42, 31564, 31566, 31568, 32755 and 33764).

Permorthotetes sp.

"Dielasma" sp. nov. A - form with a triangular cross-section - resembles species from Coyrie Formation (P42, 31563, 31564, 31600, and 33709).

"Dielasma" sp. nov. B - form with a sulcus in the dorsal valve (33700).

"Martiniopsis" sp. A (34319).

"Martiniopsis" sp. A? (P42 and 33706)

"Phricidothyris? sp. (31554)

Cleiothyridina sp. (32755, 33707, 33764, and 33767)

Cleiothyridina sp. ind. (31563)

Spiriferidae sp. nov. - alate, ribbing simple, two ribs on fold, probably a new genus (fide G.A. Thomas), appears to be most closely related to forms from Madeline and Coyrie Formations. Form from Mingine Formation probably same genus but a different species (P42, 31579, 31595, 32755, 33688, 33759, 33760, 33761, 33762, 34282, 34285, 34285_{a-e} and 34286).

Spiriferidae sp. nov.? (31577 and 32755)

Neospirifer sp. nov. A - this form also, occurs in the Callytharra Formation (31581, 31584, 31595, 31604, 33747 and 34294).

Neospirifer sp. nov. A? - may be a variety of N. sp. nov. A or may be a different species (31587, 31588, 31591, 32755, 34295, 34296 and 34311).

Neospirifer sp. nov. B - alate form with a high fold (33690, 33691, 33753, 33754, 34308, 34309, 34309a).

Neospirifer sp. ind. (31569, 31570, 31571, 31572, 31594, 33742, 33743, 33745, 33746, 33749, 33751, 33755, 34304 and 34310).

Spiriferid ind. (33692, 33740, and 33761).

Pelecypods

Parallelodon sp. nov. - appears to be a different species to that found in the Callytharra Formation (31552).

Parallelodon sp. ind. (31542)

Astartila? sp. nov. - appears to belong to group of A? obscura Dickins, in press, from the Lyons Group, but is a different species (31533, 31539, 31540, 31594 and 31596).

Astartila? sp. ind. (31538, 31544 and 31563)
Stutchburia cf. variabilis Dickins, in press
(33711, 33768).
Stutchburia? sp. ind. (31534)
Atomodesma cf. mytiloides Beyrich 1865 (33768)
Schizodus sp. (31546).
Oriocrassatella cf. stokesi Etheridge Jnr. 1907(32755)
Streblochondria? sp. (31556)
Aviculopecten cf. tenuicollis (Dana) 1847 (P42 and 31547)
Pectinid ind. (32755, 33710 and 33768A)

Gastropods

Bellerophon sp. (31534 and 31535)
Bellerophonitid ind. (33688)
Pleurotomariid ind. (31549)

Other Fossils

Fenestrate bryozoan (33712)

(b) Red Ferruginous Sandstone from 25 yards west of Glendevon Homestead in north-south band right up to Woolaga Creek, 330 yards north-north-west of Homestead.

Brachiopods

Linoproductus (Cancrinella) sp. (33697)
Aulosteges cf. ingens. Hosking 1931 (33696)
"Dielasma" sp. nov. A (33701, 33770)

Pelecypods

Streblochondria sp. ind. (33702)

Gastropods

Baylea? sp. (33708)
Indet. gastropods (33769)

Other Fossils

Corals (33770)

(c) Basal 20 ft. of High Cliff Sandstone, 100 yards south of the old Glendevon Homestead (one number - 38552).

Brachiopods

"Chonetes" sp.
Cleiothyridina sp.
Spiriferidae sp. nov.?
Neospirifer sp. nov. A?

Gastropods

Bellerophon sp. ind.

CONCLUSIONS

The only conclusion that can be based on the study of the fauna from the Holmwood Shale is that it is distinct from the rest of the fauna considered in this report.

With respect to the rest of the fauna it is unfortunate that the exact localities of most of the specimens have not been recorded so that it is not possible to be certain whether one or more than one horizon is represented in the collections.

Three species (Linoproductus (Cancrinella) cf. lyoni, Neospirifer sp. nov. A and Stutchburia cf. variabilis) have not elsewhere been recorded from above the Fossil Cliff Formation or its palaeontological and stratigraphical equivalent, the Callytharra Formation. On the other hand three species (Aulosteges cf. ingens, "Dielasma" sp. nov. A. and Spiriferidae sp. nov.) are conspecific or closely related to forms which have not been recorded from below the Byro Group and its equivalents. Two species or varieties (Neospirifer sp. nov. A? and Neospirifer sp. nov. B) appear to be intermediate in type between those found in the Fossil Cliff and Callytharra Formations and those found in Madeline and Coyrie Formations (bottom part of the Byro Group). Two of the new species (Parallelodon sp. nov. and Astartila? sp. nov.) are not known from elsewhere.

Taken as a whole this fauna is quite distinct from both the fauna of the Minginev Formation with which it may have one species in common ("Dielasma" sp. nov. B) and the fauna from Carynginia Gully which has been assigned to the Fossil Cliff Formation by Dickins and Thomas (1957). The Woolaga Creek fauna lacks Linoproductus cora var. foordi, Composita sp. nov. and another new species of Parallelodon as well as other species which are present at Carynginia Gully, and in the Fossil Cliff and Callytharra Formations.

On the basis of this evidence a conclusion seems to be justified that amongst the collections from Woolaga Creek are fossils which are younger than those from the Fossil Cliff Formation and it is likely these represent a marine horizon intermediate between the Fossil Cliff and Callytharra Formations and the Madeline Formation, a marine horizon from which either no fossils or very poor fossils have been collected from elsewhere in the Perth and Carnarvon Basins.

REFERENCES

- CLARKE, E. de C., PRENDERGAST, R.L., TEICHERT, C. AND FAIRBRIDGE, R.W., 1951 - Permian Succession in the Northern Part of the Irwin Basin, Western Australia. J.Roy.Soc.W.Aust., 25, 31-84.
- CONDON, M.A., 1954 - Progress Report on the Stratigraphy and structure of the Carnarvon Basin, Western Australia. Bur.Min.Resour.Aust.Rep. 15.
- DICKINS, J.M., and THOMAS, G.A., 1957 - Permian Fossils from Carynginia Gully, Irwin River Area, Western Australia. Bur.Min.Resour.Aust.Rec. 1957/69 (unpublished).
- KONECKI, M.C., CONDON, M.A., DICKINS, J.M., and QUINLAN, T., ms.- The Geology of Murchison and Wooramel Rivers Areas, Western Australia. Bur.Min.Resour.Aust. Rep.