

## CHAPTER 4

### THE PROVENANCE OF FOSSILIFEROUS CLASTS

#### 4.1 INTRODUCTION

Since the late 1800s fossiliferous clasts have been collected from the northeastern district of Victoria for which no local source has been found. From the Upper Palaeozoic conglomerates of the Wooragee Valley near Beechworth, Dunn (1871) reported amongst other lithologies, Upper Silurian sandstone clasts containing casts of shells. Howitt (1874) reported boulders containing casts of Spirifids and an Upper Silurian crinoid stem for which he postulated a local source. From the same district, Taylor, (1894) reported boulders containing casts of Orthis and Atrypa which he believed were not locally derived. Hunter (1903), collected chert clasts from the same district which contained radiolaria (identified by J.W.Gregory). Kitson (1903), whilst working at the southern end of the Ovens-King River Valley around Greta, reported blocks of Silurian sandstone containing casts of brachiopods. As well as the discovery of fossiliferous clasts other evidence was accumulating which showed the clasts were clearly part of a more widespread but poorly preserved and exposed glacial deposit ; probably Permian in age.

The only fossiliferous Silurian in the district is briefly reported by Ferguson, (1889) from an area 5 km SW of Benalla, where poorly preserved shell casts, trilobites (Encrinites) and a small solitary coral were found.

A considerable volume of material has now been collected since the first fossiliferous clasts were collected and a summary and evaluation of its significance is long overdue.

#### 4.1.1 FAUNA FROM THE PERMIAN GLACIAL CLASTS

The following lists indicate some of the most recent as well as some of the earliest identified fauna from clasts collected in the northeastern district of Victoria:

\* 1 Locality: Wilby

\* collected by: M.A.CRAIG

\* Now held at : U.N.E.

[a] Salopina n.sp.;

[b] Orthoconic cephalopod;

[c] Rhynchonellid indet.;

[d] Monongia aff.elegans Mitchell;

[e] Fenestella sp.;

[f] Leptostrophia sp.;

[g] Glossites sp.;

[h] Leptaenidae gen. indet.;

[i] ? cf Phoenicitoechia sp..

\* 2 Locality: South beyond the Owens-King River  
Valley

\* collected by: M.A.CRAIG.

\* Now held at : U.N.E.

[a] Notoconchidium thomasi Gill;

[b] Spirigerina cf supramarginalis  
(Khalfin);

[c] Tentaculites sp.;

[d] Bivalvia indet.;

[e] Leptostrophia sp.;

[f] Cladopora sp. indet.;

[g] Rhynchonellid indet.;

[h] Pleurodictyum sp.;

- [i] Atrypa sp.;
- [j] Spiriferidine n. gen.;
- [k] Orthoconic cephalopod indet.;
- [l] ? cf Phoenicitoechia sp.;
- [m] Isorthis sp. indet.;
- [n] Ancillotoechia? sp.;
- [o] n. gen. see plates 32 - 59
- [p] Crinoid ossicles and stem sections;
- [q] Howellella sp.;
- [r] Schizophoria sp. indet.;
- [s] Molongia aff. elegans  
Mitchell.

\* 3 Locality: From a slope SW of Mr. E.G.  
Smith's homestead

\* collected by: J.A.Talent, 1964 ;  
M.D.Leggo, 1963;

- [a] ?Pleurodictyum cf selcanum  
Giebel;

- [b] Isorthis sp.;
- [c] Hipparionx cf major Gill;
- [d] Notoconchidium thomasi Gill;
- [e] Stegerrhynsus? sp.;
- [f] Australocoelia leptocoelides  
sp.nov.;
- [g] Atrypa sp.;
- [h] Actinopteria sp.B;
- [i] Tentaculites sp.;
- [j] Large lamellibranchs indet.;
- [k] Trilobite scraps(?homolonitid);
- [l] Crinoid ossicles;
- [m] Auloporidae indet.;
- [n] Rhipidomellidae n. gen.?

The block containing Australocoelia leptocoeloides sp. nov. does not contain the same matrix as other fossiliferous clasts (Talent, pers.comm.).

- \* 4 Locality:"From a locality 2 miles below  
Springhust Station"

\* collected by:W Lardner

\* Now held at:The National Museum of  
Victoria

[a] Notoconchidium thomasi Gill;

[b] Stegerrhyncus sp.;

[c] Broad rhynchonellid.

\* 5 Locality:Eldorado

\* collected by:?

\* Now held at : The National Museum  
of Victoria

[a] "Trachypora" sp.;

[b] Notoconchidium thomasi Gill;

[c] Large crinoid ossicles.

\* 6 Locality: Greta

\* collected by:?

\* Now held at :?

[a] Rhipidomellid.

\* 7 Locality: Byawatha

\* collected by: R.W.Armitage,1913

\* Now held at : The National Museum  
of Victoria

[a] Notoconchidium thomasi Gill;

[b] ?Macropleura;

[c] Broad rhynchonellid;

[d] Large rhynchonellid.

\* 8 Locality:"Three miles below Eldorado at  
the junction of Eldorado Valley with the Ovens  
Valley; the drift caps the low granite spurs  
running down from the ranges and also forms  
some low undulating country."

\* GR.:?

\* collected by: E.J.Dunn,1869

\* Now held at : The National Museum  
of Victoria

- [a] Schizophoria sp.;
- [b] Isorthis (?Reeftonia) cf.alpha  
Gill;
- [c] Schuchertella sp.;
- [d] "Hipparionyx" sp.;
- [e] "Chonetes" sp.;
- [f] Notoconchidium thomasi Gill;
- [g] Eatonia? sp.;
- [h] Atrypa cf.reticularis Linne;
- [i] Howellella sp.;
- [j] Delthyris sp.;
- [k] Nucleospira sp.;
- [l] Auloporidae indet.;
- [m] Crinoid ossicles;
- [n] Orthotetidse indet.;
- [o] Stropheodontid indet.;
- [p] Rhynchonellid indet.;
- [q] Gasteropod indet.



\* 9 Locality:Chiltern

\* GR.:?

\* collected by:?, determined by F.  
McCoy.1877

\* Now held at: ?

[a] Hipparionyx sp.;

[b] Notoconchidium thomasi Gill;

[c] Howellella sp.;

[d] Auloproidae indet.;

[e] Rhipidomellid indet.;

[f] Orthotetid indet.;

[g] Cuboidal rhynchonellid indet.;

[h] Gasteropod indet. .

Preliminary identifications made by me using data from Talent (1965) have been confirmed by Dr. J.A.Talent. Other material collected by me was identified with considerable assistance from Dr. Talent. Faunal identifications for localities 3 to 9 are from Talent (unpubl MS.). Plates 32 to 59 show a selection of fauna from the region.

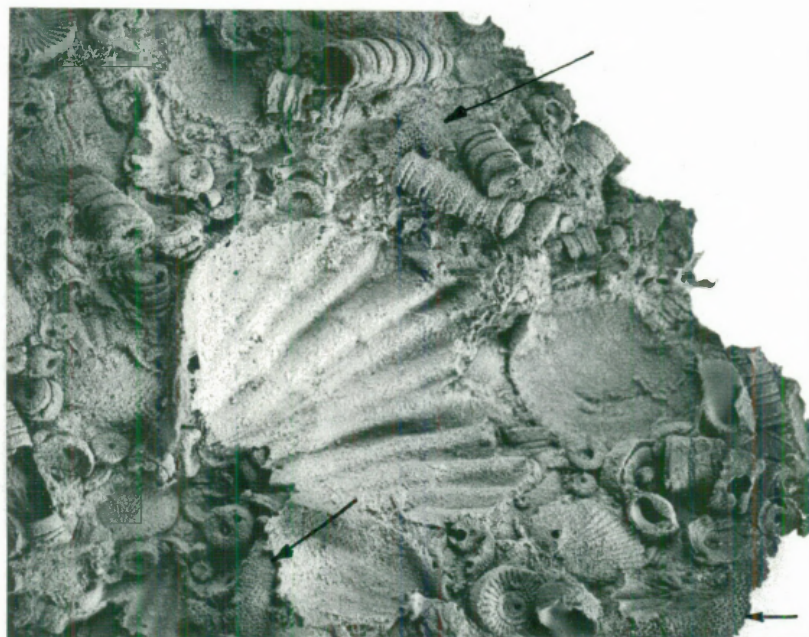


Plate 32 Cladopora sp. indet (sample 77/29a) x3



Plate 33 Orthoconic Cephalopod (sample 77/40b) x2



Plate 34 Ancillotoechia ? sp. (1)  
Orthoconic Cephalopod (sample 79/24 x2.5 (2))





Plate 35 Tentaculites (sample 77/17g) x5



Plate 36 Notoconchidium thomasi Gill  
Pedicle valve (sample 77/17c2) x2.5



Plate 37 Molongia aff. elegans  
(laterally squashed - sample 77/40avii  
x4



Plate 38 Notoconchidium thomasi Gill  
(sample 77/17f) x3.5



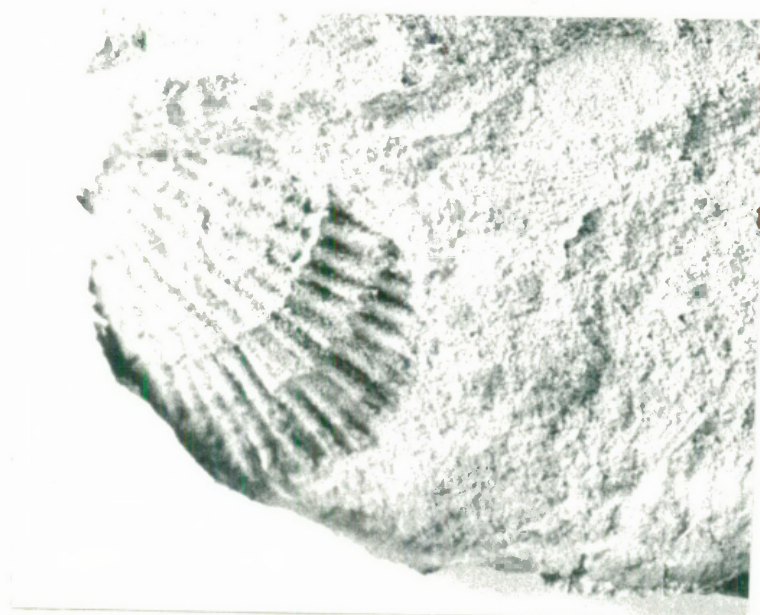


Plate 39 Atrypa (sample 79/C2) x5



Plate 40 Leptostrophia sp.  
brachial valve (sample 79/C1) x5



Plate 41 Leptaenidae gen. indet.  
(sample 81/27) x5