

TR8-50-51

7. EARLY UPPER CAMBRIAN FOSSILS FROM THE COMET SLATE AT DUNDAS, TASMANIA

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SUMMARY

Collecting of fossils in the Comet Slate at a known locality on Barker Creek (Elliston, 1954) was unsuccessful. However, fossils were found in the same slate which were not previously known there. They belong to the Mindyallan Stage of the early Upper Cambrian.

OBJECTIVE

A trip was arranged with the object of collecting fossils from a known locality in the Comet Slate in Barker Creek, near Dundas. These fossils belong to the zone of *Glyptagnostus stolidotus* Opik which is the upper zone of the Mindyallan Stage (Opik, 1963). Previously, in 1951, a collection was made from this locality by J. Elliston, A. A. Opik and others. A fire at the Bureau of Mineral Resources in 1953 partially destroyed the collection. Recent work has indicated the necessity of collecting new material. To this end nine days were spent by C. G. Gatehouse (geologist) and R. V. Miniotas (assistant) in the field at Dundas. Prior to this, whilst in Hobart, information regarding the locality was obtained from Dr. A. H. Spry of the University of Tasmania and Miss E. Smith of the Department of Mines, Hobart.

LOCALITY

The location of the collection site is in Barker Creek, a tributary of the Dundas Rivulet. Barker Creek is accessible by way of a flume, which runs from the old mill-site for the Razorback Mine north towards Barker Creek. The Comet Slate outcrops in the creek about one mile from the mill.

This area comprises a geologically young topography with mountain streams. The vegetation consists of young regrowth shrubs and trees—a dense undergrowth making progress slow. The nature of the country is such that outcrops are found only in the stream-beds.

INVESTIGATIONS AND RESULTS

In the outcrop area of the Comet Slate as indicated by Elliston (1954), a detailed examination of the creek-bed was made. The Comet Slate here consists of a subgreywacke of mottled appearance but dominantly purple in colour. Boulders of purple slate were observed in the creek but none were found in situ.

The main objective, which was to re-collect the 1951 collection, was not achieved, even after three days searching. This was apparently due to the outcrop being covered by logs or rubble brought down by the creek.

During the search, however, it was discovered that the purple slate contained fossils. These were collected and packed. A. A. Opik made a preliminary examination of the material and regarded it as being of lower Mindyallan age, in Queensland terms. Fossils belonging to this zone were previously unknown in the Comet Slate.

Mindyallan age fossils were previously identified in Tasmania at Beaconsfield in 1962 by A. A. Opik from material sent to the Bureau of Mineral Resources by the Department of Mines, Hobart. (Opik, pers. comm.).

The discovery of fossils belonging to the Mindyallan Stage in Tasmania is significant, as it indicates a communication between western Queensland and Tasmania (Opik, pers. comm.) and supports the correlation with Queensland.

The Comet Slate, on this evidence, can now be said to range in age from upper Middle Cambrian into the early Upper Cambrian, that is Mindyallan.

REFERENCES

- ELLISTON, J., 1954.—The Geology of the Dundas District, Tasmania—*Pap. Roy. Soc. Tas.*, 88, 161-183.
- OPIK, A. A. 1963—Early Upper Cambrian fossils from Queensland—*Bur. Miner. Resour. Aust. Bull.* 64.