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FRESHWATER MUSSELS IN THE TRIASSIC OF THE SPRINGFIELD BASIN.

by

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ABSTRACT:

Buff-pink argillites at the top of the Triassic succession in the Springfield Basin contain numerous impressions of freshwater mussels in association with Thinnfeldia feistmanteli.

Two species belonging to the family Mutelidae are present:

Prohyria sp. and Protovirgus sp.

Neither species appears to have been described.

1. INTRODUCTION:

At the top of the Triassic succession in the Springfield Basin 70 to 90 feet of buff-pink siliceous argillites (Johnson and Bucknell 1959, p.247) carry moulds and casts of mollusca and impressions of the fern Thinnfeldia feistmanteli. Material (F 80/58) collected by W. Johnson and C. von der Borch was submitted for identification on 10.4.58.

2. LOCATION AND PRESERVATION:

All specimens were collected 8½ miles east of Gordon, on Section 48, Hundred of Cudla Mudla on the mesa described by Johnson and Bucknell (p.248). They consist mainly of external moulds and some internal casts, on the weathered surfaces of loose fragments and blocks of argillite. No original shell material was collected.

3. IDENTIFICATION:

Two species of fluviatile freshwater mussels are present. In the past the name Unio has been used for fossil freshwater mussels in South Australia.

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|---------------|-------------------------------------|
| Phylum | <u>Mollusca</u> |
| Class | <u>Pelecypoda</u> |
| Family | <u>Mutelidae</u> Gray, 1847 |
| (1) Subfamily | <u>Velesunioninae</u> Iredale, 1934 |
| Genus | <u>Prohyria</u> McMichael, 1957 |

The Springfield Basin specimens are transversely elongate and posteriorly acuminate. Unless they are juveniles they are distinct from Prohyria eyrensis (Etheridge) which occurs abundantly in the Leigh Creek Basin.

- (2) Genus Protovirgus McMichael, 1957.

McMichael established the genus for very elongate shells of uncertain affinity with maximum height less than 48 per cent of the total length and beaks situated at the anterior one-fifth or one sixth. The Springfield Basin species is distinct from either of the two known representatives of the genus - Protovirgus dunstani (Etheridge) from transition beds between the Hawkesbury Sandstone and the Wianamatta Group of Upper Triassic age, and Protovirgus flemingi McMichael from the Upper Cretaceous of New Zealand.

Impressions of Thinnfeldia feistmanteli Johnston are also present.

Systematic descriptions of the molluscs will be published elsewhere.

4. REFERENCES

Johnson, W. and Bucknell M.J. 1959. Pseudoigneous rocks in the Triassic succession of the Springfield Basin, Gordon-Gradock district. Trans. Roy. Soc. S. Aust. 82, pp. 245 - 257, one text fig. pls. 1 - 3.

McMichael, D.F. 1957. A review of the fossil freshwater mussels (Mollusca, Pelecypoda) of Australasia. Proc. Linn. Soc. N.S.W. 81, (3), pp. 222 - 244, pls. 13 - 14, one text fig.

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