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# LOWER ORDOVICIAN GRAPTOLITES IN NEW SOUTH WALES.

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(Figure 1.)

THE graptolites from Narrandera, New South Wales, in the collection of the Australian Museum, are particularly important as they represent the first undoubted evidence of Lower Ordovician rocks in New South Wales. The late W. S. Dun's statement (1930, p. 76) on examining them that "most of the Palaeozoics between Narrandera and Albury were Ordovician" becomes, therefore, a shrewd generalization.<sup>1</sup> The bed in which they occur is a highly cleaved, blue, andalusite slate, its alteration suggesting the close proximity of an intrusive igneous mass that may limit the

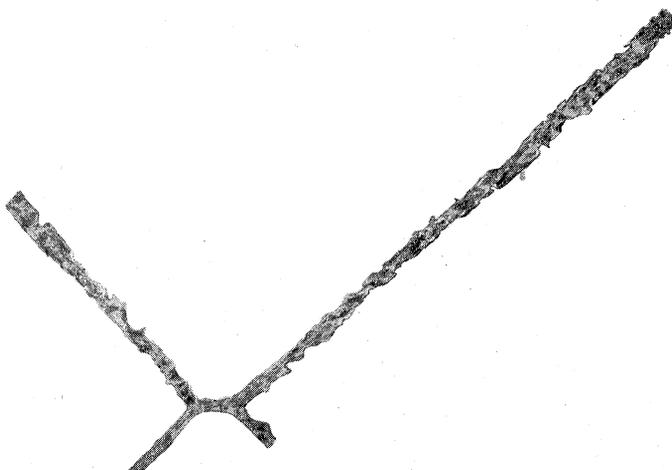


Figure 1.—*Tetragraptus quadribrachiatum* J. Hall. Approximately  $\times 3$ .  
Del. J.H.M.

possibility of finding other beds in the area. They are high in the Lower Ordovician, and, if part of a normal succession, are many thousands of feet above the older members of the Lower Ordovician on which the Victorian goldfields of Bendigo, Castlemaine and Daylesford are located.

Most of the Victorian goldfields occur along known tectonic lines. The Narrandera slates appear to be on the north-western extension of such a line passing through the Victorian goldfields of Harrietteville, Bright and Chiltern. The reefs there are in unfossiliferous slates thought to be of Ordovician age. For that reason, it is desirable

<sup>1</sup> In an unpublished report on "Lower Ordovician Fossils near Narrandera, N.S.W.," dated 25th June, 1930, the late W. S. Dun referred to graptolite-bearing beds in Portions 56 and 57, Parish Corobimella, N.S.W., from which were obtained *Tetragraptus* and *Phyllograptus*, and also fragments of a crustacean, probably *Ceratiocaris*, and of an ophiuroid. He stated: "There appears to be little doubt that this series is an extension of the Victorian Lower Ordovician Belt and that it will be necessary to alter our Geological Map considerably."—EDITOR.

to ascertain the position of the Narrandera graptolite bed in regard to this tectonic line as it may lead to the discovery of payable reefs or leads.

The following forms are found at Narrandera:

*Tetragraptus quadribrachiatum* J. Hall (F.39697, Figure 1) (F.39696).

*Glossograptus hincksii* (Hopk.) (F.39697).

*Glossograptus* sp. (F.39694).

*Climacograptus* cf. *antiquus* Lapw. (F.39695).

*Climacograptus* sp. (F.39696) (F.39699).

They appear as a white film on the bedding-plane and are poorly preserved.

*Tetragraptus quadribrachiatum* (F.39696-7) agrees with Elles and Wood's description (1901-1918, pp. 57-8) except that the number of thecae to a given length is slightly less (7 in 10 mm.). It is the stout Lower Ordovician form and in nowise depauperated. The form identified as *Climacograptus* cf. *antiquus* Lapw. agrees fairly well with Elles and Wood's description of that form (1901-1918, pp. 199-200). The number of thecae to a given length is slightly less and the average width slightly greater. On the other hand, the thecae have that slight introversion of their apertural margins and the conspicuous elliptical excavations of *C. antiquus*. *Glossograptus hincksii* (Hopk.) (F.39697) agrees with Hopkinson's description of that form except that its width is, on the whole, greater. The polyparies are, however, not well preserved and the andalusite markings somewhat obscure the spines.

*Climacograptus* (F.39696, F.39699) is specifically unidentifiable. Beyond the fact that it reaches a maximum width of 2.3 mm., other characters are obscure.

Under Harris and Keble's subdivision (Harris and Keble, 1932) they would be placed in the Darriwil Series of the uppermost beds of the Lower Ordovician. Under the suggested subdivision of Harris and Thomas (Harris and Thomas, 1938) they would be regarded as Middle Ordovician.

#### References.

- Dun, W. S., 1930.—New South Wales Department of Mines Annual Report.
- Elles, G. L., and E. M. R. Wood, 1901-1918.—A Monograph of British Graptolites. *Palaeontographical Society, London*.
- Harris, W. J., and R. A. Keble, 1932. Victorian Graptolite Zones, with Correlations and Descriptions of Species. *Proceedings of the Royal Society of Victoria*, Vol. xlv, pp. 25-48, pls. iii-vi.
- Harris, W. J., and D. E. Thomas, 1938.—A Revised Classification of the Ordovician Graptolite Beds of Victoria. *Victoria. Department of Mines. Mining and Geological Journal*, Vol. i, No. 3, July, pp. 62-72, pls. i-iii.