

A NEW SPECIES OF THE BRACHIOPOD *NOTANOPLIA* (*NOTANOPLIIDAE*) FROM THE EARLY DEVONIAN OF NEW SOUTH WALES

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SUMMARY

Notanoplia mitchelli sp. nov., a new notanopliid brachiopod, is described from Bowning, N.S.W., probably from the Lochkovian (Early Devonian) Elmside Formation. The distinctive genus is known only from Early and Middle Devonian rocks, and is known from Australia and Western Europe, and possibly from China.

INTRODUCTION

Among collections purchased in 1930 by the Australian Museum are a number of brachiopods mostly labelled simply "Bowning". This material was collected by John Mitchell in the Yass, N.S.W., area in the years between 1883 and his death in 1928 (Brown, 1941). A few specimens belong to *Notanoplia* and constitute the basis of this paper; they appear to have previously received no more than passing attention. Nevertheless, in (presumably) Mitchell's handwriting, a label on the rock bearing one specimen (AMF 28650) bears the word "new". Another rock (bearing AMF 28873) bears the caption "*Stropheodonta*", reflecting Mitchell's broad concept of that genus (e.g. Mitchell, 1923). Other brachiopods curated with the above specimens — and possibly from the same formation — include mainly *Plectodonta bipartita* Chapman (= *P. davidi* Brown, 1949; see Savage, 1974, p.27), but inarticulate and orthocean brachiopods also occur.

The lithology, which is fine brown to grey mudstone, suggests that this material was from one of Mitchell's Upper Trilobite Bed localities. The problem of relating specimens to Mitchell's individual localities at Bowning has been discussed elsewhere (Sherwin, 1972), and appears to be insurmountable. Nevertheless, the label "Bowning" on specimens, the lithology and general fauna all point to the "Upper Trilobite Bed". Now assigned to the Elmside Formation (Link, 1970), the Upper Trilobite Bed (Mitchell, 1886) is placed at the same stratigraphic level as the algal limestones which yielded an *Icriodus woschmidti* conodont fauna (Link, 1970; Link and Druce, 1972); Klapper (1977, p.40) has suggested that the Yass *I. woschmidti* is more correctly *I. woschmidti hesperius*. The thickness of the Formation (Link, 1970, Fig. 1) appears to be about 20 m and the algal lenses occur towards the top of the unit (Link and Druce, 1972, Fig. 2). As the *I. woschmidti hesperius* occurrence is of earliest Devonian age (Klapper, 1977) this appears to be the most accurate age that can presently be inferred for the *Notanoplia* occurrence at Bowning. Mitchell (1923, p.470) and Gill (1953) had noted earlier the possibility of a Devonian age for the Upper Trilobite Bed. Lower parts of the Formation may be Pridolian (latest Silurian). The present occurrence supports the hypothesis that all *Notanoplia* are post-Silurian.

Collection of further material is considered unlikely, as fossiliferous outcrops of this "Bed" are sparse. However, I have seen no notanopliid from the lower horizons in the Yass Basin, and have been informed by the late Ida Browne and by K. S. W. Campbell and D. Strusz (pers. comm.) that they have seen no other *Notanoplia* from this area.