

Early Ordovician Conodonts from Far Western New South Wales, Australia

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ABSTRACT. Thirty species (representing 19 genera) of Early Ordovician conodonts are described and illustrated from Mount Arrowsmith and Koonenberry Gap in the northwestern part of New South Wales. One new genus, *Cooperignathus*, and the new species *Oepikodus pincallyensis*, are established. *Acodus* sp. cf. *emanuelensis* predominates in 35 samples from the Tabita Formation and upper beds of the underlying Yandaminta Quartzite at Mount Arrowsmith, associated with ramiform and pectiniform taxa including species of *Cooperignathus*, *Prioniodus*, *Oepikodus*, *Erraticodon*, and *Baltoniodus*. The Koonenberry Gap fauna is dominated by coniform species, particularly *Protopanderodus nogamii*, *P. gradatus*, and *Scolopodus multicostatus*. Both faunas span an age range from latest Bendigonian to Chewtonian (*evae* Zone); their compositional differences are probably related to slight variations in water depths and depositional environments. Species endemic to the shallow water Australian cratonic region, represented by *Bergstroemognathus kirki*, *Triangulodus larapintinensis*, *Acodus* sp. cf. *emanuelensis* and *Prioniodus* sp. cf. *amadeus*, support a correlation with Early Ordovician faunas of central and western Australia, particularly those from the lower Horn Valley Siltstone of the Amadeus Basin. Biogeographically significant species in the western New South Wales faunas include *Cooperignathus nyinti*, *C. aranda* and *Scolopodus multicostatus*, which provide linkages with counterparts in North America and South China. Cosmopolitan elements in the documented collections are represented by *Cornuodus longibasis*, *Drepanoistodus basiovalis*, and *Scolopodus quadratus*. Only one species, *Scalpellodus latus*, from Mount Arrowsmith appears to be otherwise confined to Baltoscandia (northern Europe).

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