

Revision of Two Prioniodontid Species (Conodonta) from the Early Ordovician Honghuayuan Formation of Guizhou, South China

YONG YI ZHEN^{1*}, JIANBO LIU², AND IAN G. PERCIVAL³

¹ Australian Museum, 6 College Street, Sydney NSW 2010, Australia
yongyi@austmus.gov.au

² Department of Geology,
Peking University, Beijing 100871, P.R. China
jbliu@pku.edu.cn

³ Geological Survey of New South Wales, Department of Primary Industries,
State Geoscience Centre, 947–953 Londonderry Road, Londonderry NSW 2753, Australia
ian.percival@minerals.nsw.gov.au

ABSTRACT. The septimembrate conodonts *Acodus triangularis* (Ding in Wang, 1993) and *Prioniodus honghuayuanensis* n.sp., are described and illustrated from Guizhou, South China where both species are widely distributed in Lower Ordovician strata. The adenticulate *A. triangularis*, which ranges through the middle and upper parts of the Honghuayuan Formation, is morphologically more primitive than the denticulate *P. honghuayuanensis*, which is present from the uppermost Honghuayuan Formation into the lower part of the succeeding Dawan Formation. *Prioniodus honghuayuanensis*, elements of which were previously ascribed to *Oepikodus communis* (Ethington & Clark, 1964), appears to be closely related to a species of *Prioniodus* from the basal Whiterockian of Utah, North America.

ZHEN, YONG YI, JIANBO LIU & IAN G. PERCIVAL, 2005. Revision of two prioniodontid species (Conodonta) from the Early Ordovician Honghuayuan Formation of Guizhou, South China. *Records of the Australian Museum* 57(2): 303–320.

Conodonts from the Honghuayuan Formation of Guizhou Province, South China were first studied by An (1987) in the Honghuayuan and Ganxi sections (Fig. 1). In the Honghuayuan section, An (1987) recognized three conodont assemblages with the lowermost consisting only of coniform species. The middle assemblage is characterized by the occurrence of *Serratognathus diversus* An, 1981. The upper assemblage is much higher in diversity, with the appearance of a number of pectiniform species of *Prioniodus*, *Bergstroemognathus* and *Rhipidognathus*. Similar faunas were also recorded from the Honghuayuan Formation of

Yanhe, northern Guizhou (An, 1987; X.Y. Chen *et al.*, 1995), and are widely distributed in the Honghuayuan Formation and age equivalent units in South China (An *et al.*, 1985; An, 1987; Wang, 1993).

More recently, conodont samples were collected from Lower Ordovician sections in Guizhou and other parts of South China with the aim of revising the faunas to provide support for a more precise biostratigraphic correlation and age alignment, both regionally and internationally. This revision will assist our understanding of the origin, radiation and phylogeny of the prioniodontid and related clades