

Devonian Syringostromatid Stromatoporoids from the Broken River Region, North Queensland

BARRY D. WEBBY*¹ AND YONG YI ZHEN²

¹Centre for Ecostratigraphy & Palaeobiology,
Department of Earth & Planetary Sciences, Macquarie University, NSW 2109, Australia
bwebby@laurel.ocs.mq.edu.au

² Australian Museum, 6 College Street, Sydney NSW 2010, Australia
yongyi.zhen@austmus.gov.au

ABSTRACT. Six species of syringostromatid stromatoporoids are described from the biostratigraphically well-constrained carbonate successions of the Broken River region, North Queensland; the various occurrences range from earliest Devonian (early Lochkovian) to Mid-Devonian (late Eifelian). Included are three new Lochkovian species, *Atopostroma stearni* from the uppermost part of the Jack Formation and the Martins Well Limestone Member of the succeeding Shield Creek Formation, *A. protentum* and *Habrostroma alternum* also from the Martins Well Limestone Member. Transitional forms between the species of *Atopostroma* and *Habrostroma* are recorded from the Martins Well fauna. In addition *Atopostroma distans* (Ripper, 1937) is found in the Lomandra Limestone (late Emsian), and is present in reworked pebbles of the Dip Creek and the Chinaman Creek limestones of possible late Emsian-Eifelian. Sparse records of *Columnostroma* sp. in the Mid-Devonian (late Eifelian) Dosey Limestone, and reworked clasts of *Parallelopora* sp. in the Chinaman Creek Limestone, also occur. Characteristic structural elements of syringostromatid fauna are described including pachyστεles, pachystromes and microlaminae, and microreticulate (acosmoreticular and clinoreticular) microstructures in the best preserved specimens. Also aspects of the evolutionary development of the fauna and the nature of the preservation of certain structural elements are discussed.

WEBBY, BARRY D., & YONG YI ZHEN, 2008. Devonian syringostromatid stromatoporoids from the Broken River region, North Queensland. *Records of the Australian Museum* 60(3): 215–236.

This contribution is the second documenting the morphological features of the Devonian stromatoporoids of the Broken River region, North Queensland (Fig. 1), this time focusing almost entirely on descriptions of the syringostromatid fauna. The earlier work of Webby & Zhen (1997) was devoted to describing 31 species, representing more than half the orders of the class Stromatoporoidea from the region, namely the labechiids, actinostromatids, clathrodictyids and stromatoporellids. One of these described stromatoporellids was a dendroid species, *Stachyodes costulata* Lecompte, 1952, from the late Givetian or Frasnian

Stanley Limestone Member of the Mytton Formation of the SD192S section of the Broken River region, now also assigned to the syringostromatids.

The only other significant contribution on Devonian stromatoporoids of North Queensland since our earlier (1997) publication is that of Cook (1999) describing 35 stromatoporoid taxa from the Middle Devonian Fanning River Group of the Burdekin Basin, from an area about 180 km to the east (Fig. 1). Included are descriptions of a number of Middle Devonian (Givetian) syringostromatids—two species of *Coenostroma*, *C. burdekinense* Cook, 1999, and

* author for correspondence