

The Eastern Seaboard Species of *Jardinella* (Mollusca, Gastropoda, Hydrobiidae), Queensland Rainforest-inhabiting Freshwater Snails Derived from the West

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ABSTRACT. Three species of the hydrobiid genus *Jardinella*, two of them new, are described from streams and rivers in north-east Queensland. Although associated with rainforests, these species appear to be derived from a western Queensland radiation of the genus.

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Hydrobiid snails are well represented in south-eastern Australia but only one species, *Jardinella thaanumi* (Pilsbry), has been described from north-east Queensland. This species, the type of the genus *Jardinella* Iredale & Whitley, 1938, is found in streams and rivers on the eastern slopes of the Great Dividing Range. This paper provides information on the anatomy and distribution of *J. thaanumi* (Pilsbry) and two new species. Twelve additional species of *Jardinella* live in springs on the western side of the Great Dividing Range (Ponder & Clark, 1990).

Materials and Methods

Most of the material on which this paper is based was collected in 1980 on a survey of the streams and

rivers of the section of north-east Queensland between Townsville and the Daintree River.

Shells were measured by viewing the shells through a drawing apparatus located above a digitising-pad linked to a microcomputer. Selected parameters were digitised and the input converted to millimeters. The parameters measured were maximum shell length; maximum shell width, length of body whorl, length and width of aperture, diameter of umbilical chink, and diameter of protoconch. The convexity ratio (see Ponder *et al.*, 1989, for details), spire angle and the angle of the outer lip of the aperture were calculated by the computer from a series of points input via the digitising pad. The number of protoconch and teleoconch whorls were counted. All shell measurements were either at right angles or parallel to the longitudinal shell axis. Each measured individual was sexed.

The operculum was removed and the following