

North Pine River Freshwater Snail

Fluvidona anodonta

Description

Defining feature: The North Pine River Freshwater Snail is a minute freshwater snail of a height of only 2mm (=lower margin of aperture {opening} to tip of spire). Belonging to the snail-family Hydrobiidae, the species has a small plate, which closes the aperture when the animal retreats into its shell.

Physical description: The tiny shell is of a light yellowish-white colour.

Habitat

The North Pine River Freshwater Snail is found in low numbers on the stream bottom in shallow water near the edge of rocky/stony small to medium-sized creeks. It was recorded in streams of excellent to good in-stream habitat structure and riparian condition. Most habitat streams were healthy (Stream Health Class [SHC] a, b, c), but also included one stream (lower Branch Creek) that was moderately disturbed (SHC d), indicating that this rare species has a certain tolerance of eutrophication (i.e. load of bio-nutrients). These findings – the only existing observations on the biology of *Fluvidona anodonta* – were obtained during Council's long-term monitoring program of freshwater streams (since 1998 ongoing).

Feeding

Limited information available.

Breeding

Limited information available.

Conservation

Status: The North Pine River Freshwater Snail is listed as vulnerable in the IUCN Red List of Threatened Species (IUCN 2010). This is a species of high biodiversity value.

Additional information

In 1982 the Australian Museum (Sydney) mounted a scientific sampling tour to southeast Queensland to re-find a rare snail (*Fluvidona anodonta*) which was described 90 years earlier (Hedley & Musson 1892) from the North Pine River. The tour yielded a single broken shell of *F. anodonta*. Since then Dr W. Ponder tried to find the minute snail at numerous locations but only saw it again when material was sent to him in 2001, collected during Council's stream health and biodiversity assessment. Therefore, we know this snail is very rare indeed. Even in the Moreton Bay Region it seems to be of very limited distribution, being recorded so far only in the Pine Rivers system. In 1996 the snail's endemism to the Moreton Bay Region was recognised in giving *F. anodonta* the common name 'North Pine River Freshwater Snail'.



Distribution

The North Pine River Freshwater Snail is known only from the Pine Rivers system, and it is likely to be endemic to the Moreton Bay Region.

So far *Fluvidona anodonta* has been recorded in five stream reaches: the headwaters and upper reaches of the North Pine River, middle Kobble Creek, upper South Pine River and Branch Creek.

Sources: Miller A.C., Ponder W.F. & Clark S.A. 1999. Freshwater snails of the genera *Fluvidona* and *Austropyrgus* (Gastropoda, Hydrobiidae) from northern New South Wales and southern Queensland, Australia. *Invertebrate Taxonomy* 13: 461-493, Nolte U. 2011. Streams of high biodiversity value in the MBR, 50 pages. Technical report to MBR Council, Hedley, C., & Musson, C. T. (1892). On a collection of land and fresh water shells from Queensland. In *Proceedings of the Linnean Society of New South Wales* (Vol. 6, pp. 551-564), International Union for Conservation of Nature (IUCN) Red List of Threatened Species (<http://www.iucnredlist.org/details/1291/0>). Photograph by Ulrike Nolte.

See <http://www.arkive.org/north-pine-river-freshwater-snail/fluvidona-anodonta/image-G140785.html>