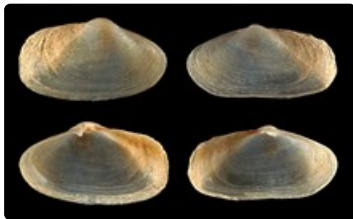




Lentidium dalyfluvialis Hallan & Willan, 2010



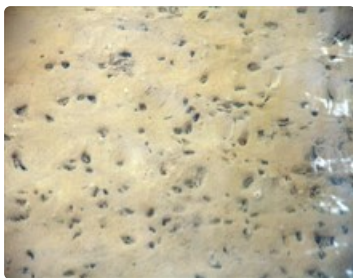
Lentidium dalyfluvialis (adult size 8-13 mm)



Distribution of *Lentidium dalyfluvialis*.



Daly River, NT. Photo A. Hallan.



Lentidium burrows, Daly River. Photo A. Hallan.

Diagnostic features

This species is easily recognised based on its brittle, very thinly valved (almost transparent) orange shell of up to 13 mm in length.

Classification

Lentidium dalyfluvialis Hallan & Willan, 2010

Class Bivalvia

Infraclass Heteroconchia

Cohort Heterodonta

Megaorder Neoheterodontei

Order Myida

Superfamily Myoidea

Family Corbulidae

Subfamily: Lentidiinae

Genus *Lentidium* Cristofori & Jan, 1832 (Type species *Lentidium maculatum* Cristofori & Jan, 1832, = *Lentidium mediterraneum* Costa, 1830) (Synonyms *Corbulomya* Nyst, 1845; *Dentina* Megerle von Mühlfeld, 1841).

Original name: *Lentidium dalyfluvialis* Hallan & Willan, 2010. In Hallan, A. & Willan, R. C. (2010). Two new species of *Lentidium* (Myida: Corbulidae) from tropical northern Australia: remarkable fresh/fluvial to brackish-water bivalves. *Molluscan Research* 30(3): 143-153.

Type locality: Browns Creek, Daly River, Northern Territory.

State of taxonomy

We follow the taxonomy of Hallan and Willan (2010). However, this species probably belongs to a new genus as it is quite distinct from any other corbulid.

Biology and ecology

This species is a shallow burrower in sandy sediments overlain with a thin layer of mud, where it commonly lies at an angle with its siphons exposed in the water column. For the family, *L. dalyfluvialis* is rather active and can readily reposition itself in the sediment when disturbed.

Commonly found in high densities of up to 1000 individuals/m², in a narrow section of the upper estuarine, freshwater to slightly brackish parts of the Daly River, Northern Territory.

Distribution

Endemic to the Daly River, Northern Territory.

Notes

Lentidium dalyfluvialis is the only species of this genus present in freshwater environments in Australia (and possibly world-wide). As far as is known, it is endemic to the Daly River, Northern Territory, where it occurs with other molluscs presumably endemic to that river, such as *Colenuda kessneri* and *Coleglabra nordaustralis* (both Clenchiellidae).

The congener *Lentidium origolacus* Hallan & Willan, 2010 was abundant in the lacustrine phases of the Gulf of Carpentaria during the Last Interglacial Period, primarily associated with low-salinity environmental conditions (see Chivas *et al.*, 2001; Hallan and Willan, 2010; Hallan *et al.*, 2012). Its extant population is known only from the Gilbert River (also in the Gulf), albeit the vast majority of this material was collected in the euryhaline lower reaches of the estuary (Hallan and Willan, 2010). The species has never been observed live, and it is unknown if it ventures into freshwater in the modern environment. While *L. origolacus* could have occurred in salinities approaching freshwater in the palaeo-lake, it is possible these occurrences consisted of short, intense and

opportunistic blooms enabled by the opening of a niche habitat more so than favourable environmental conditions. As such, these Quaternary records cannot readily be used as proxies for present-day conditions in which the species may occur (Hallan, pers. obs.).

Further reading

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Hallan, A. & Willan, R. C. (2010). Two new species of *Lentidium* (Myida: Corbulidae) from tropical northern Australia: remarkable fresh/fluviatile to brackish-water bivalves. *Molluscan Research* 30: 143.

Hallan, A., Colgan, D. J., Anderson, L. C., García, A. & Chivas, A. R. (2013). A single origin for the limnetic-euryhaline taxa in the Corbulidae (Bivalvia). *Zoologica Scripta* 42: 278-287.

Hallan, A., García, A., Chivas, A. R., & Devriendt, L. 2012. Molluscs from the Gulf of Carpentaria, Australia, throughout the Last Interglacial period (past ~130 ka). *Quaternary International* 279-280: 186.

Willan, E. C. & Kessner, V. (2021). A conspectus of the freshwater molluscs of the Daly River catchment, Northern Territory. *Northern Territory Naturalist* 30: 108-137.

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https://keys.lucidcentral.org/keys/v3/freshwater_molluscs/

To contact the authors for comment or suggestions, please email: fwmollusc@gmail.com

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