



## ***Glyptophysa* Crosse, 1872**

### **Diagnostic features**

Shell sinistral, medium-sized and globose to elongate, smooth with microscopic wrinkles, or with spiral threads or ridges and periostracal setae. Low to elongate spire. Members of the genus possess a twist or fold on the columella, a feature lacking in *Isidorella* and *Physella*. Whorls round or carinate. Copulatory organ with a flagellum, lacking an accessory bursa, penis uniramous with terminal stylet, bursa copulatrix globose; rectal ridge present; single renal ridge on roof of pulmonary cavity.

*Glyptophysa* (*Glyptophysa*) differs from the otherwise similar native genus *Isidorella* in the penial apparatus with a penial stylet and an accessory flagellum. *Isidorella* lacks a stylet and an accessory structure but the penis has two lobes.

### **Classification**

***Glyptophysa*** Crosse, 1872

Class Gastropoda

Infraclass Heterobranchia

Megaorder Hygrophila

Order Lymnaeida

Superfamily Planorboidea

Family Planorbidae

Subfamily: Miratestinae

Genus *Glyptophysa* Crosse, 1872

Type species: *Physa petiti* Crosse, 1872 (= *Glyptophysa petiti* (Crosse, 1872))

Original reference: Crosse, H. (1872). Description d'un genre nouveau et d'espèces inédites, provenant de la Nouvelle-Calédonie. *Journal de Conchyliologie* 20: 148-154.

*Type locality:* New Caledonia.

*Synonyms:* *Physastra* Tapparone-Canefri 1883; *Lenameria* Iredale, 1943; *Glyptamoda* Iredale, 1943; *Tasmadora* Iredale, 1943; *Mutalena* Iredale, 1944.

Two subgenera are recognised:

*Glyptophysa* (*Glyptophysa*) Crosse, 1872

*Glyptophysa* (*Oppletora*) Iredale, 1943

## Biology and ecology

On water weeds, wood, and similar substrates, in ponds, billabongs, swamps, and sluggish streams and rivers. Feeds on algae and detritus. Egg mass typically a bean(kidney)-shaped jelly strip containing many small eggs. Development direct.

## Distribution

Australia, New Guinea, New Caledonia, New Zealand, Moluccas, Philippines, Sumatra, islands of South Pacific east to Tahiti, and Malaysia (introduced).

## Notes

This genus is similar to the common introduced *Physa acuta* (Physidae) in that both have similar-shaped, sinistral shells. *Glyptophysa* can be distinguished by the shell not being completely smooth (as it is in *Physa*), *Glyptophysa* often having some periostracal ornament and microscopic wrinkles or spiral ridges in the case of *Glyptophysa aliciae*. *Physa* has a mottled mantle which can usually be seen through the semi-transparent shell whereas *Glyptophysa* has a uniformly dark-coloured mantle. The animal of *Physa* has digitations (finger-like processes) along the mantle edge against the columella whereas this edge is smooth in *Glyptophysa*. *Physa* lacks a false gill (pseudobranch) which is present in *Glyptophysa* and all planorbids. The animal of *Glyptophysa*, if damaged when alive, has red-coloured blood whereas *Physa* blood is clear.

The taxonomy of *Glyptophysa* is very poorly understood. A large number of species-group names are available, and it is quite possible that more species occur in Australia.

Some forms of *Glyptophysa*, particularly from Tasmania, have inflated shells with relatively low spires and superficially resemble *Isidorella*.

*Glyptophysa* appears to be disappearing from urban areas and areas heavily affected by agriculture and industry, where it is commonly replaced by the introduced *Physa*.

## Further reading

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