

PEGOPHYSEMA Stewart, 1930*Loripinus (Pegophysema)* Stewart, 1930: 185

Type species *Lucina schrammi* Crosse, 1876.
Original designation.

Shell large L to 95 mm, relatively thin-shelled, subcircular, inflated, outer surface with irregular, rounded commarginal ridges. Ligament largely internal and shallowly to deeply inset. Edentulous. Anterior adductor muscle medium-long, detached from pallial line at an angle of $>30^\circ$ for about 60% of length. Pallial line entire but with secondary pallial muscle attachment sites present, extending from the pallial angle to the posterior ventral margin.

Pegophysema is distinguished from other Pegophyseminae genera, particularly *Euanodontia*, *Afrophysema* and *Cryptophysema*, by the form of the ligament, character of the pallial line, presence of secondary pallial attachment scars and the often thick periostracum. Species are also often confused with *Anodontia* (Leucosphaerinae) but despite the superficially similar shells molecular results show the taxa are not closely related.

Description of type species

***Pegophysema schrammi*.** **Shape** large, H to 93.4 mm, L to 104.0 mm, subcircular, H/L 0.90, inflated T/L 0.32. Periostracum thick, light brown, fibrous. **Colour** chalky-white. **Sculpture** of irregular, low, rounded commarginal ridges and growth increments. Anterior and posterior dorsal areas defined by weak sulci. **Lunule** narrow, lanceolate, slightly impressed, near symmetrical. Dorsal gape long, lanceolate, occupied by ligament. **Hinge plate** narrow, edentulous. **Ligament** long, robust, set into deep groove between valves with the nymph forming a prominent ridge. **Muscle scars** anterior adductor scar, long, blunt ended, detached for 60% of length and diverging from pallial line at an angle of around 30° . Posterior adductor scar broad, ovoid. Pallial line entire, with its inner edge irregular. Some secondary

pallial attachment sites extending from the junction of the pallial line and anterior adductor muscle scar to join pallial line mid-ventrally. **Inner shell surface** dull, pustulose; some large specimens have extensive inner shell thickening with radial ridges and a prominent pallial blood vessel scar. Inner surface outside pallial line glossy, with faint radial striations. **Shell margin** smooth.

Included species

Western Atlantic: *P. schrammi*. **Eastern Pacific:** *P. blanquita* (Taylor & Glover, 2005). **Indo-West Pacific:** *P. kora* (Taylor & Glover, 2005), *P. philippiana* (Reeve, 1850) (often incorrectly called *Anodontia edentula*), *P. bialata* (Pilsbry, 1895).

Pegophysema species have similar shell shapes and sculpture and most have a line of secondary pallial attachment scars. The ligament of *P. schrammi* does not extend laterally into the shell as in *P. philippiana*. Broadly similar in shape, *P. bialata*, a large species from the northern Indo-West Pacific, is only tentatively referred to this genus. It lacks the secondary pallial attachment sites, has a shorter anterior adductor muscle scar and a narrow, shallowly inset ligament.

Distribution

Western Atlantic Gulf of Mexico and Caribbean Sea, Eastern Pacific – Baja California. Indo-West Pacific – Red Sea and east Africa to Japan and New Caledonia.

Habitat

All species are deep burrowing. For example, *P. philippiana*, an economic species in the Philippines, is strongly associated with peri-mangrove habitats and has been recorded burrowing to depths of 50 cm (Leбата & Primavera, 2001 as '*Anodontia edentula*') while at Bermuda Giere (1985) records *P. schrammi* burrowing to 60–70 cm in sulphidic fine sand.

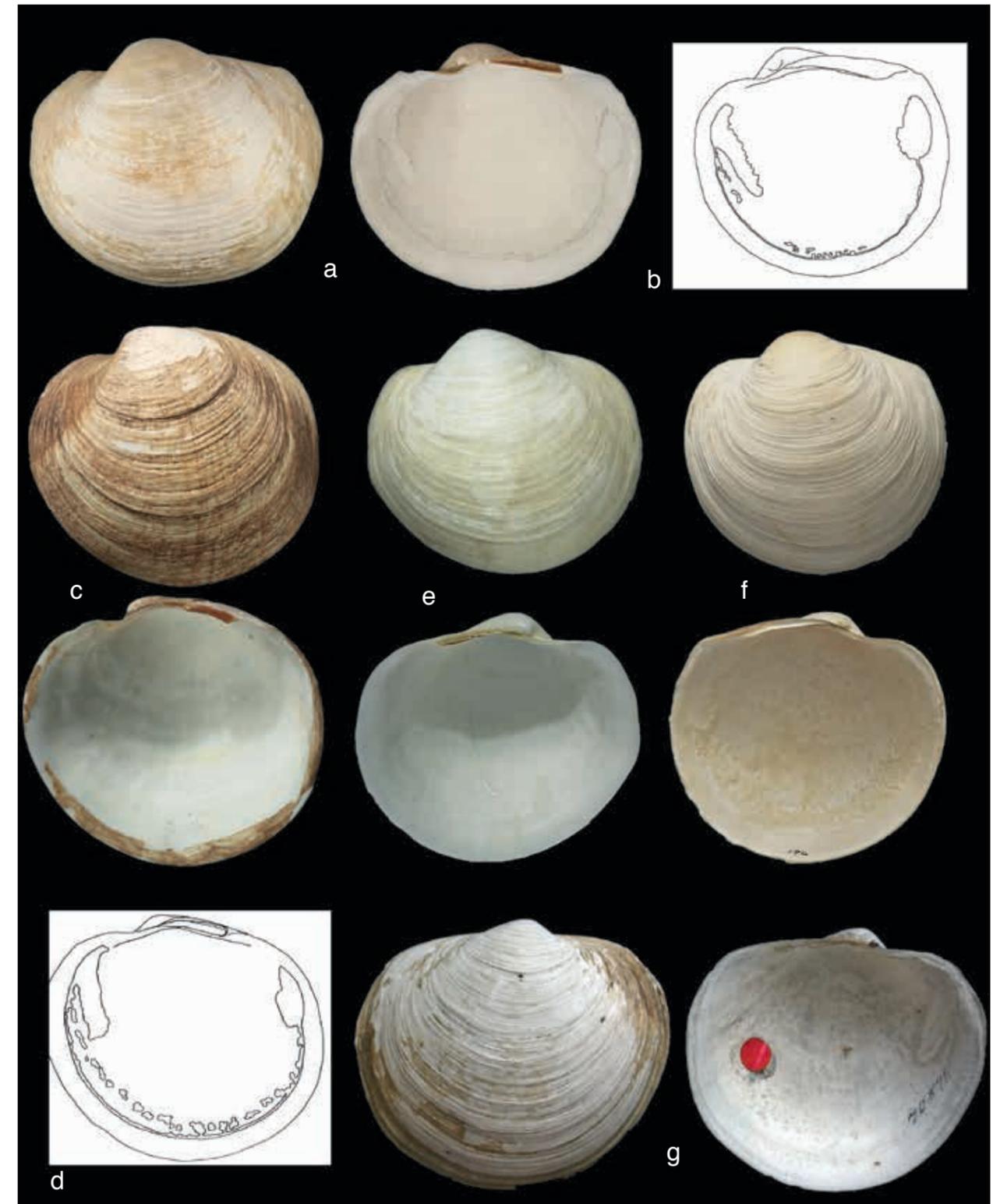


Figure 31. *Pegophysema* species

a. *Pegophysema schrammi* (Crosse, 1876). Syntype of *Lucina schrammi* (MNHN-IM-2000-30088), Guadeloupe. L 78.5 mm. **b.** *P. schrammi* internal drawing of syntype. **c.** *Pegophysema philippiana* (Reeve, 1850). Woody Island, Gove Peninsula, Northern Territory, Australia (NHMUK 20040241). L 65 mm. **d.** *P. philippiana* internal drawing. **e.** *Pegophysema kora* (Taylor & Glover, 2005). Holotype (NMW 1993.061.01413a), Bahrain L 54.3 mm. **f.** *Pegophysema blanquita* (Taylor & Glover, 2005). Holotype (SBMNH 351452), Sonora, Gulf of California, L. 90.2 mm. **g.** *Pegophysema bialata* (Pilsbry, 1895). Holotype (ANSP 70.876), Inland Sea, Japan. L 56.8 mm.