

Kittens' Paw shells

PLICATULIDAE

List of species

Plicatula australis Lamarck, 1819

Plicatula plicata (Linnaeus, 1767)

Other species reported from Sri Lanka

Plicatula ceylanica G.B. Sowerby II, 1873

- MolluscaBase/WoRMS

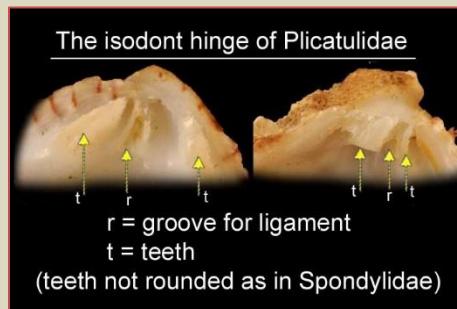
The family Plicatulidae Gray, 1854 is a family with a single genus listed in the World Register of Marine Species (WoRMS accessed 22.7.2020). There are 17 species accepted by WoRMS.

Kirtisinghe, 1978 does not report any Plicatulidae. The earliest report from Sri Lanka is in the Pearl Oyster Fishery Report by Herdman, 1906. In Volume pt. 5, Supplementary Report XXXVIII, *On the Molluscan Shells* by R. Standen and A. Leicester, page 288, *Plicatula ceylanica* is listed under Spondylidae. The name is accepted in WoRMS (See Sowerby, 1873 Monograph. The species appears to be numbered 13 in the plate instead of 14 as in the text). An inventory of molluscs from the Gulf of Mannar by Hylleberg & Kilburn, 2002, includes this species as well as *Plicatula australis* (Lamarck, 1819), reported by Satyamurti, 1956 from Krusadai Island. This species is also reported from the Andaman Islands, Lakshadweep and Tamil Nadu by Ramakrishna & Dey, 2010. *Plicatula plicata* Linnaeus, 1767 is reported from the Andamans and other parts of the Indo-Pacific by Subba Rao & Dey, 2000, Siddiqui et al, 2007 (who include Sri Lanka in the distribution) and Ramakrishna & Dey, 2010.

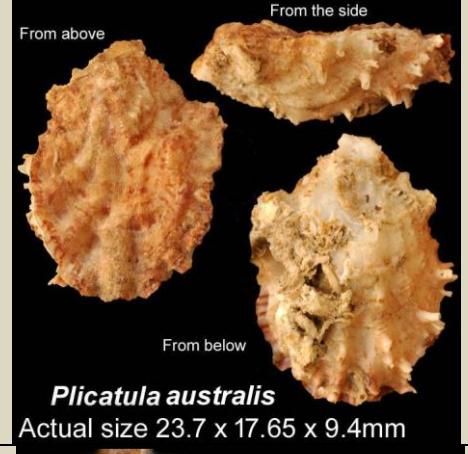
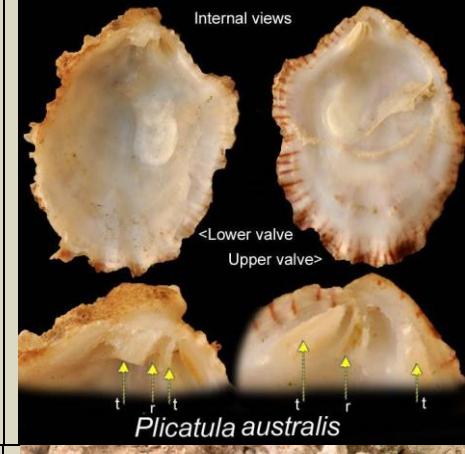
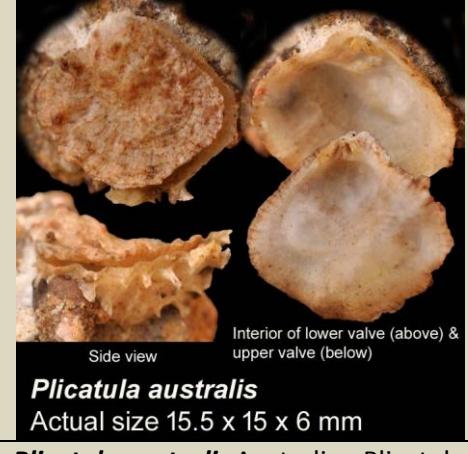
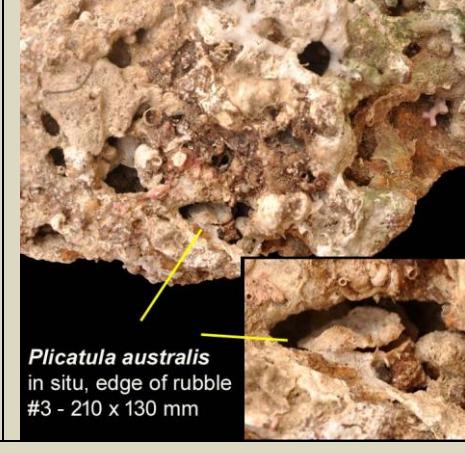
The Plicatulidae are sedentary marine clams with isodont hinges typically attached to hard substrates by the right valve. The family is monotypic with a single genus. The shells are small, with weakly convex shells which are irregularly oval or even almost triangular. (From Wikipedia, the free encyclopedia).

Shells small, thick, irregularly triangular or fan-like. Prominent broad, coarse radial ribs or folds. Inequivalve, right (lower) valve usually more convex; shell inequilateral, the ears small or lacking. Crenulate margin. Internal ligament and two prominent cardinal teeth in both valves, a long narrow chondrophore in the middle. A single muscle scar towards the posterior. Cemented by either valve, usually the right, to hard substrates. Attached near the umbo in shallow waters. (Eisenberg, 1989).

Occurs in the Caribbean and Indo-Pacific regions. (de Bruyne, 2003).



28. Family: PLICATULIDAE – kitten's paw shells

 <p><i>Plicatula australis</i> Actual size 23.7 x 17.65 x 9.4mm</p>	 <p><i>Plicatula australis</i> Actual size 15.5 x 15 x 6 mm</p>	<p>MF750: Maggona, Thudawa Bay, fishing trash.</p> <p>Was loosely attached to the underside of a piece of dead coral. Main attachment umbonal, some substrate fragments remain attached along one side (at left). Upper valve coated with bryozoans that were left in place to avoid damaging the shell. Interior views show the single rounded muscle scar and the two pairs of teeth (t) with a central resilifer pit (r).</p>
 <p><i>Plicatula australis</i> Actual size 15.5 x 15 x 6 mm</p>	 <p><i>Plicatula australis</i> in situ, edge of rubble #3 - 210 x 130 mm</p>	<p>MF799: Maggona, Thudawa Bay, fishing trash.</p> <p>Shell attached by lower valve within a deep crevice in encrusted coarse sandstone rubble. Preserved with attachment. The overhanging parts of the stone removed. Lower valve photographed attached to substrate. Side view shows flat upper valve and concave lower valve with open spines used for attaching.</p>

Plicatula australis Australian Plicatula

Sowerby, in the *Conchologia Iconica*, 1874 describes this shell as follows: "Shell roundish, depressed, rather thin, black spotted; plaits small, numerous, obtuse, divergent, branched, imbricated, aculeated near the margin." The term 'aculeated' means spiny and no doubt refers to the spines used for attachment seen in the images.

A number of images are available through the Internet.



Left - MF770: Trincomalee, Yard Cove, exposed at low tide. Faded and weathered, single valve.

Right - MF771: Paiyagala, beached. Faded, weathered, single valve. Collected by Ayesha Hettiarachchi & Eshan Fernando.

Plicatula plicata Folded Plicatula (Branched Plicatula of Sowerby)

[*Spondylus plicatus* Linnaeus, 1767 - original name; *Plicatula philippinarum* G. B. Sowerby II, 1847;
Plicatula ramosa Lamarck, 1819 *sensu* G. B. Sowerby II, 1847 (misapplication)]

Sowerby's description (under the name *P. ramosa*) is as follows: "Shell ponderous, generally gibbous, whitish; plaits marked by a purple or cinnamon or chestnut lines and spots; plaits few in the middle of the shell, divided into one or two branches towards the margin, muscular impression rounded, elevated; cardinal teeth brown; inner margin marked with brown lines." The term 'generally gibbous', meaning 'bulging', refers to the shape, as seen in the Conchologia illustrations. The description of *P. philippinarum*, now synonymised with *P. plicata*, refer to shells with plaits occasionally divided, very rarely imbricated. *Plicatula essingtonensis* G. B. Sowerby II, 1873 is another Sowerby species now synonymised with divergent, rarely divided ribs.

The faded and weathered shells in the collection do not show the branching described by Sowerby. There are a number of Internet images that show similarly shaped shells with the marginal scallops. They match the images in the Bangladesh publication of Siddiqui et al.

- Siddiqui et al, 2007 p.272

Plicatula ceylanica The Ceylon Plicatula

Type locality Sri Lanka Exclusive Economic Zone

There are no specimens in the collection and no images available through the Internet.

Sowerby describes this species as follows: "Shell solid, subtrigonal, pale cinnamon, produced posteriorly, acuminated, marked on the ribs with short divergent cinnamon lines." He further adds that the ribs are sharply angular, branched and imbricated. The term 'acuminated' means 'tapered to a point', referring to the shape of the shell. The image in the Conchologia on Plate IV is numbered 13, instead of 14 as it should have been.

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