

CHANKS, VASES and VOLUTES

List of species

Turbinellidae Swainson, 1835

Subfamily: **Turbinellinae** Swainson, 1835 **Chanks**

1. *Turbinella pyrum* (Linnaeus, 1767)
2. *Turbinella rapa* Lamarck, 1816

Subfamily: **Vasinae** H. Adams & A. Adams, 1853 (1840) **Vases**

1. *Vasum ceramicum* (Linnaeus, 1758)
2. *Vasum turbinellus* (Linnaeus, 1758)

Volutidae Rafinesque, 1815

Voluts

Subfamily: **Amoriinae** Gray, 1857

1. *Melo melo* (Lightfoot, 1786)

Subfamily: **Volutiinae** Rafinesque, 1815

2. *Harpulina arausiaca* (Lightfoot, 1786)
3. *Harpulina laponica* (Linnaeus, 1767)
4. *Harpulina laponica loroisi* (Valenciennes, 1863)
5. *Lyria cloveriana* Weaver, 1963

Other species reported from Sri Lanka

Voluta magnifica Gebauer accepted as
Cymbiola magnifica (Gebauer, 1802)
- Kirtisinghe, 1978

Note: The genus *Cymbiola* is distributed in the Australian area. Kirtisinghe's description and the accompanying image are supportive of an identification of *Cymbiola magnifica*. There is no data regarding the provenance of the shell—and his collection cannot be traced.

TURBINELLIDAE Swainson, 1835

Chank and vase shells

The family includes a variety of usually large, elongated shells. Mostly roughly fusiform with a generally elevated spire and a siphonal canal ranging from short to very long. Whorls usually with spirals but some with axial ribs as well. The outer lip not thickened, columella with or without folds. The periostracum thick or thin, the operculum thick and horny, ovate to claw-shaped with a terminal nucleus.

Members of the family are found on soft sublittoral sandy bottoms (chanks) or on rocky and coral reefs (vase shells) in warm seas. They are carnivorous, feeding on polychaete or sipunculid worms and bivalves.

There are currently two subfamilies recognised, members of both being found in Sri Lanka:

- **TURBINELLINAE** Swainson, 1835 – chanks – species with thick, fusiform shells with an extended siphonal canal and three or four columellar folds. Indian Ocean and Caribbean regions.
- **VASINAE** H. & A. Adams, 1853 (1840) – vase shells – species with shells that are thick with conical-shaped tops and bottoms, nodulose or spiny ribs, two to four columella folds and a short siphonal canal. Tropical seas, coral reefs, deeper water.

(Poutiers, 1998; de Bruyne, 2003; MolluscaBase/WoRMS, 2019)

VOLUTIDAE Rafinesque, 1815

Volutes

Shell variable in shape, sub-cylindrical or fusiform to swollen and globose with a sunken spire. Surface of shell often smooth, glossy and brightly coloured, sometimes nodulose to spinose on shoulder, or with axial ribs or cancellate sculpture. Aperture long, with a short and wide siphonal canal anteriorly. Inner lip usually with strong, oblique folds, the weaker ones situated posteriorly. Operculum corneous, often absent.

Active animals, living on sandy or muddy bottoms, from intertidal flats to deep of the continental shelf and slope. Can crawl very quickly over the substrate or bury themselves completely, except for the tip of the long fleshy siphon. Scavengers or carnivores, feeding on a variety of invertebrates, including other molluscs. They have an extendable proboscis with which they paralyze prey with venom.

The eggs of volutes hatch usually to produce crawling juveniles, a planktonic larval stage being absent. This results in a great variety of species with restricted distribution. Some of the larger varieties—such as *Melo melo*—are edible.

Many species in a number of genera, mainly tropical, especially Australian and West Pacific, a few Antarctic.

(Poutiers, 1998 – p. 594; Eisenberg, 1989 – p. 190; de Bruyne, 2007 – p. 192)



Turbinellidae: Turbinellinae



Shellcraft with juvenile chanks.

These have been collected illegally, as chank collection is regulated, with a minimum permitted size.

Turbinellidae: Vasinae



Volutidae: Amoriinae



Volutidae: Volutiinae



Harpulina arausiaca
Actual size 75mm



Harpulina lapponica
Actual size 85mm



Harpulina lapponica
Actual size 85mm



Harpulina lapponica loroisi



Lyria cloveriana
Actual size 84.5mm



Lyria cloveriana
Actual size 84mm



Lyria cloveriana
Actual size 76mm

TURBINELLIDAE Swainson, 1835

Chank and vase shells

1. *Turbinella pyrum* (Linnaeus, 1767) Indian Chank

[*Voluta pyrum* Linnaeus, 1767; *Xancus pyrum* (Linnaeus, 1767)]
Subfamily Turbinellinae

Solid shells with inflated body whorls and spout-like siphonal protuberances that are approx. 2/3 length of apertures. Shoulder rounded with a row of low tubercles and a few rows of obsolete tubercles below. All less prominent in older shells. Three strong and one weak columellar plications: these are plate-like. Coloured milky white with a scattering of hazel spots or streaks. Spots squarish, in dense axial rows in the smallest specimen collected, sparsely distributed and irregular to absent in larger shells. Interior white; when callus present, it is suffused with peach. Periostracum brown, thick and flaky, raised into ridges over the underlying tubercles.

165 x 83 mm (ht x w)

Colombo, off Diyambingala, 13 m, on sand bottom; Wellawatte, Kinross Lagoon and Mount Lavinia, live collected on sand bottom; Kalkudah, beached, a juvenile shell, 52x 25 mm, closely spaced spots in axial rows. Protoconch 2 1/2 whorls. All by diving except beached shell.

2. *Turbinella rapa* Lamarck, 1816 Great Indian Chank

[*Turbinella pyrum* var. *acuta* Hornell, 1916; *Xancus rapa* (Lamarck, 1816)]
Subfamily Turbinellinae

This species differs from *T. pyrum* in being larger and heavier. The most obvious distinguishing character is the outer lip, which is strongly convex till very near the anterior end resulting in an extremely short siphonal protuberance. This form is also boldly marked, especially when young, with spiral rows of cinnamon-coloured squarish dots, dashes or vertical and oblique bars. They persist till later, though fainter, but are scarce in old shells. There are three strong peach coloured columella plications. The interior is white, blushed with peach around the edge of the outer lip and the parietal callus. Periostracum brown, thick and rough, with 5 raised spiral ridges, the posterior one the strongest, rather nodular, corresponding to underlying low shoulder nodules.

155 x 87; 190+ x 110; 280 x 150 mm (ht x w)

This species is found off Kirinda and Hambantota and on the distant shoals off Colombo.

Off Colombo, Pitagala shoal, 22 m, empty, and Gigiripita shoal, 23 m, empty, by diving; Kirinda, Great Basses Ridge, 20 m, sand amongst rock patches; Kirinda, purchased from shell vendor with apex trimmed for blowing; Kirinda - bottom set net spoil, the largest seen.

3. *Vasum ceramicum* (Linnaeus, 1758) Ceramic vase

[*Murex ceramicus* Linnaeus, 1758]
Subfamily Vasinae

Photograph of shell purchased in India in the Navodith Fernando Collection. 107 x 75 mm (ht x w).
Differs from *V. turbinellus* in having a high conical spire and shorter spines.

3. *Vasum turbinellus* (Linnaeus, 1758) Common Pacific Vase, Top Vase

[*Murex turbinellus* Linnaeus, 1758; *Turbinella cornigera* Lamarck, 1822,
Turbinella variolaris Lamarck, 1822]
Subfamily Vasinae

Shell thick, heavy, biconical with wide shoulder and low pointed spire. Aperture narrow. Outer lip not thickened, edentulous, inner lip adnate to the body whorl. The columella has three strong plaited and two weak ones. Sculpture is mainly spiral: a row of thick, blunt spines at the shoulder, long and re-curved forming a crown with a row of shorter spines below followed by three rows of tubercles and two rows of short tubercular spines anteriorly. The operculum is horny, claw-shaped. Entire shell spirally banded in black and white, the interior white. Usually found heavily encrusted on rocky bottoms. 90 x 73 mm (ht x w across shoulder spines).

Wellawatte, Kinross 1st reef outer face, 4-5 m, on rocks; Mount Lavinia, Bellangala, inshore, 3-4 m, amongst rocks; Maggona, Thudawa Bay SBFH, fishing trash, a juvenile shell, not encrusted, the only record of the species at that site, 37 x 35 mm (ht x w across the shoulder spines).



VOLUTIDAE Rafinesque, 1815

Volutes

1. *Harpulina arausiaca* (Lightfoot, 1786) Vexilate volute, Gold-banded volute

Subfamily Volutinae, Tribe Lyriini
[*Voluta arausiaca* Lightfoot, 1786; *Voluta vexillum* Gmelin, 1791]

Shell thick, ovate with large body whorl and low tapering, stepped, spire topped by the protoconch. Sides of whorl rounded, body whorl shouldered, tuberculated. Aperture elliptical, outer lip thick, bevelled, no teeth. Inner lip adnate to the body whorl, columella with 4 strong folds and a few weak ones posteriorly. Cream coloured, crossed by narrow, oblique spiral bands of orange. Interior cream. 75 x 40 mm (ht x w).

Shell purchased at Nilaveli from beach vendor. Minor blemishes suggestive of empty collection.

Notes: Occurrence given by Eisenberg, 1989 as "N. Sri Lanka" and in Abbott & Zim, 1967 as "Ceylon". Abbott & Dance, 1982 says Ceylon and S. India.

First description of 1786 with incorrect location. Type location designated by Reeve (1849) to Ceylon: "Here restricted to waters in Nilaveli, Trincomalee, northeast Ceylon". Circa 12 fathoms on sandy substrate. Rather rare. Adults 75 - 105 mm. - Weaver & du Pont, 1970.

Internet images available through Google (2019, July) are of shells from Tamil Nadu. See references in India Biodiversity Portal.

2. *Harpulina lapponica* (Linnaeus, 1767) Brown-lined volute

Subfamily Volutinae, Tribe Lyriini
[*Voluta lapponica* Linnaeus, 1767; *Harpulina japonica* Shikama & Horikoshi, 1963,
Voluta indica Sowerby I, 1845]

Shell thick, ovate, similar to the previous species but with rounded shoulder devoid of tubercles. Tall protoconch present. Lip bevelled, no teeth, 6-8 columellar plaits, the strongest anterior. Pale buff ground colour, rows of spiral cinnamon dashes, some coalescing to form axial bars. Interior flesh coloured. 85 x 44.1; 85 x 41.34; 67.34 x 34.68mm (ht x w)

Purchased from beach vendor at Mount Lavinia.

Occurrence: South India and Sri Lanka.

3. *Harpulina lapponica loroisii* (Valenciennes, 1863) Lorois's volute

Subfamily Volutinae, Tribe Lyriini
[*Voluta lorois* Valenciennes, 1863]

Shell similar in shape to the previous species. Light buff coloured, overlaid with chocolate-coloured axial zigzag lines. Image of a shell in the Navodith Fernando collection is available. No find data but provenance Sri Lanka.

Occurrence: South India and Sri Lanka.

4. *Lyria cloveriana* Weaver, 1963 Clover's Lyria

Subfamily Volutinae, Tribe Lyriini
[*Lyria (Indolyria) cloveriana* Weaver, 1963, *Lyria (Indolyria) cloveriana cloveriana* Weaver, 1963,
Lyria cloveriana cloveriana Weaver, 1963, all accepted, alternate representation, MolluscaBase (2019).]

Shell ovate with high spire and protoconch. Sides of whorls rounded. Low shoulder, rounded, set off by low ridges that become obsolete at length, also visible on the spire whorls. Aperture elliptical, outer lip thick, bevelled, not toothed. Inner lip adnate to the body whorl, columella with plications throughout most of its length increasing in size anteriorly. Light fawn with reddish spaced, spiral lines throughout. Variable deep pink-red blotches on the dorsum of the body whorl and elsewhere, including on the spire whorls. Interior white. 84.5 x 30; 84 x 33 mm; 84 x 34; 75 x 33, 76 x 28.5 mm (ht x w).

Maggona, Thudawa Bay SBFH, fishing trash, slender, highly coloured; Kirinda, bottom-set fish net collection by Dr. Ananda Perera, 2 shells, one inflated, the other slender. Kirinda, purchased from shell vendor, slender.

Note: There are five shells in the collection—four from Kirinda and one from Maggona. Four are slender, one is inflated with a shorter spire, collected from the same source as one of the slender form (ex Ananda Perera). Poppe, 1992 has described a sub-species "Lyria cloveriana gabryae" with a type locality of Nilaveli. No description has been seen, the image showing an inflated shell with a spire shorter than in the slender forms. The type locality of the species is Tangalle, named from 4 dead shells collected from the same locality. (Clover was a shell dealer who was supplied by Callistus de Almeida from Sri Lanka.) (Weaver & du Pont, 1970)

Occurrence: Sri Lanka. South India?

5. *Melo melo* (Lightfoot, 1786)

Baler shell

Subfamily Amoriinae, Tribe Melonini

[*Voluta melo* Lightfoot, 1786; *Cymbium indicum* (Gmelin, 1791), *Cymbium maculatum* Röding, 1798,
Voluta anguria Lightfoot, 1786, *Voluta indica* Gmelin, 1791.

Shell large, globular-ovate, thin-shelled. Rounded apex of spire immersed in the adult. Aperture very large, outer lip thin, edentulous, with a large U-shaped notch for the siphon. Inner lip indistinguishable, columella with four plaits. Exterior smooth and glossy under a thin, brown periostracum. Shell pink-orange in colour with variable brown macules arranged in two spiral rows on the body. Juvenile shell (60 mm) pear-shaped with a low, domed spire, and with three spiral rows of squarish brown macules. 180 x 125 mm (ht x w)

Jaffna, Mandaitivu, fishing trash, many shells including a juvenile 60 x 36 mm; Kalpitiya, Puttalam lagoon.

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1.8.2019