

HORSE CONCHS, SPINDLES and LATIRUS SHELLS

List of species

Subfamily: Fasciolariinae

1. *Filifusus filamentosus* (Röding, 1798)
2. *Latirus gibbulus* (Gmelin, 1791)
3. *Latirus polygonus* (Gmelin, 1791)
4. *Pleuroploca clava* (Jonas, 1846)
5. *Pleuroploca trapezium* (Linnaeus, 1758)
6. *Turritarius craticulatus* (Linnaeus, 1758)
7. *Turritarius turritus* (Gmelin, 1791)

Subfamily: Fusininae

8. *Fusinus colus* (Linnaeus, 1758)
9. *Fusinus crassiplicatus* Kira, 1959
10. *Marmorofusus nicobaricus* (Röding, 1798)

Subfamily: Peristerniinae

11. *Hemipolygona amaliae* (Küster & Kobelt, 1874)

Other species reported from Sri Lanka

Latirolagena smaragdulus (Linnaeus, 1758)
Peristernia nassatula (Lamarck, 1822)
 - Kirtisinghe, 1978 (Both subfamily Peristerniinae)

FASCIOLARIIDAE J. E. Gray, 1853

Horse conchs, spindles and latirus 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.

Large members of the family are usually found on soft sublittoral bottoms of sand, mud or rubble, sometimes forming large populations. Other members, especially the smaller species, are found on shallow-water rocky bottoms. They are active predators feeding on tubeworms, vermatids, other molluscs, crabs and other sand dwelling animals.

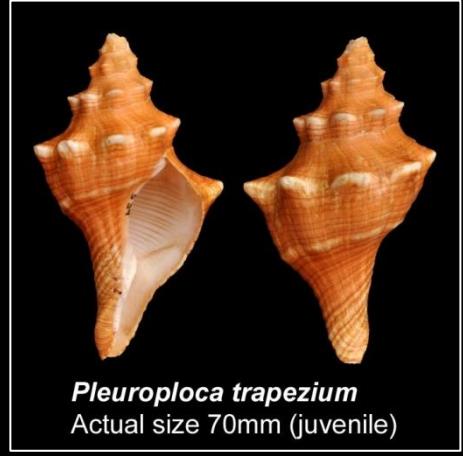
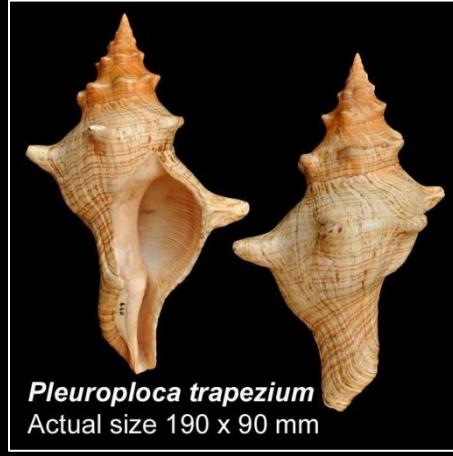
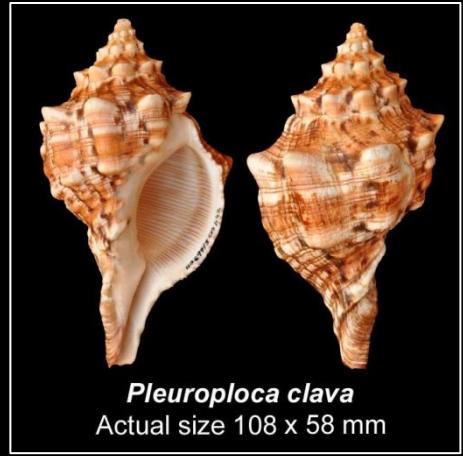
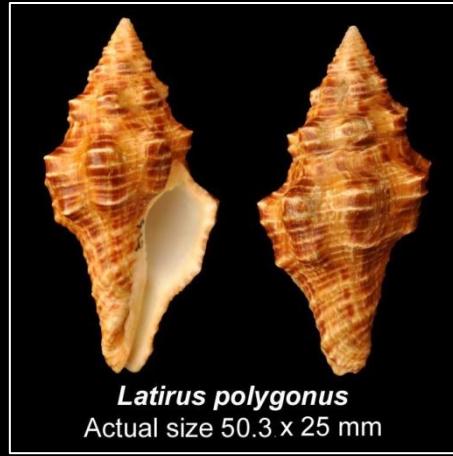
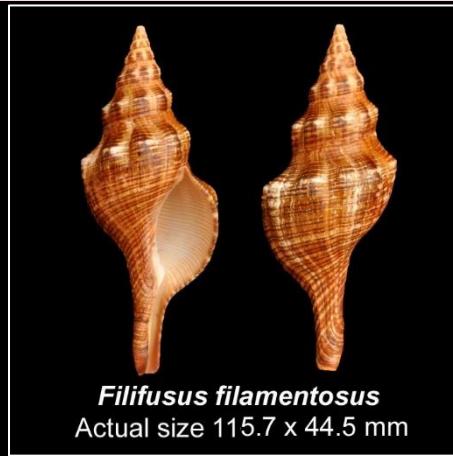
There are over 500 species in three subfamilies:

- FASCIOLARIINAE J.E. Gray, 1853 – species with a slightly curved siphonal canal and usually with columellar folds. Shallow water or on coral reefs.
- FUSININAE Wrigley, 1927 – species usually with a long, virtually straight siphonal canal and no columella folds. From shallow water to deep sea.
- PERISTERNIINAE Tryon, 1880 – species with smaller, thicker shells that are strongly ribbed or nodulose with a short siphonal canal and three oblique columella folds.
 (Fiene-Severns et al, 1998; Poutiers, 1998; de Bruyne, 2003.)

A recent phylogenetic analysis of the fasciolariids has seen the genera *Latirus* and *Turritarius* transferred from Peristerniinae to Fasciolariinae.



Fascioliidae; Fascioliinae



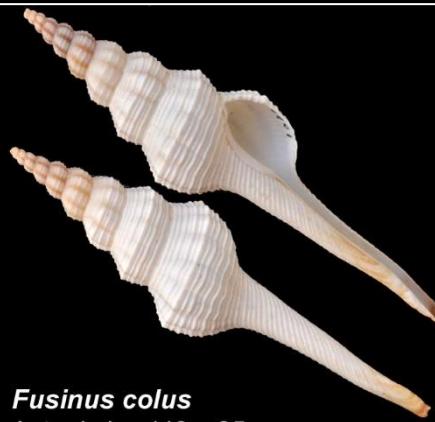


Turritarius craticulatus
Actual size 50 x 18.4 mm

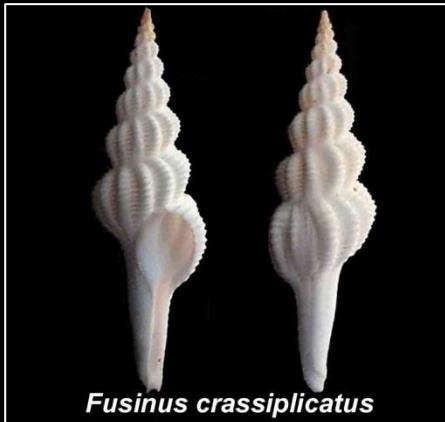


Turritarius turritus
Actual size 38 x 15 mm

Fasciolariidae; Fusininae



Fusinus colus
Actual size 140 x 35 mm



Fusinus crassiplicatus
Actual size 115mm



Marmorofusus nicobaricus
Actual size 123 x 35 mm

Fasciolariidae; Peristerniinae



Hemipolygona amaliae
Actual size 81 x 36 mm



1. *Filifusus filamentosus* (Röding, 1798)

Threaded band shell; Filamentous horse conch

[*Fusus filamentosus* Röding, 1798; *Fasciolaria ferruginea* Lamarck, 1822,
Fasciolaria filamentosa (Röding, 1798), *Fusinus filamentosus* (Röding, 1798),
Pleuroploca filamentosa (Röding, 1798)]

Subfamily *Fasciolariinae*

Shell large (reported up to 150 mm), slender, spindle-shaped with tall pointed spire and moderately long siphonal canal that is about as long as the aperture, shoulder with low tubercles. Suture constricted, subsutural portion concave. Whorls tapered down below the shoulder. Aperture oval, with a shallow posterior canal and a moderately long curved, open anterior siphonal canal. Outer lip thin, crenulate, lirae within; columella curved with three anterior folds; the inner lip callus. Sculpture of thick and thin spirals with threads in between encircle the entire shell with a row of axial tubercles at the shoulder. The tubercles triangular or low and rounded; many specimens with abraded shoulder tubercles. The axial ribs on which they are placed fade away at about the middle of the whorl. Operculum claw-shaped, thick and horny. Creamy-white or tan, the spiral grooves cinnamon, covered by an adherent shiny brown periostracum. Interior cream or white, the apertural lirae cinnamon.

135 x 55 mm (ht x w)

Mount Lavinia, no find data; Mount Lavinia, Bellangala, inshore, 6 m, on rock, by diving.

Genus *Latirus* Montfort, 1810 comprises shells that are medium to large in size (5 to 11.3 cm), fusiform, basally constricted; whorls shouldered, two spiral rows of tubercles on the body whorls, the pairs of tubercles connected by rounded axial ribs; the outer lip straight in the centre with concave sections to either side, the inner side usually with beaded lirae, columella with three or four folds. (Vermeij and Snyder, 2006).

2. *Latirus gibbulus* (Gmelin, 1791)

Knobbed latirus

[*Murex gibbulus* Gmelin, 1791; *Fusus gibbulus* (Gmelin, 1791), *Latirus aurantiacus* Montfort, 1810]
Subfamily *Fasciolariinae*

Shell moderately large, thick and heavy, fusiform, angulated shoulder, the spire moderately tall and pointed. The suture impressed, hardly constricted, subsutural region concave. Aperture narrowly elongate-quadrata, posterior canal shallow, the anterior siphonal canal short, straight, open. Outer lip is characteristically straight in the mid-portion, concave above and below, as in other *Latirus*; thin, crenulate with short paired teeth on the inner side bordered by a smooth interval and beaded lirae in the interior; columella curved, thickly callus (obscuring any columellar folds that might have been present in the three adult shells in the collection), the inner lip callus, adherent to the body whorl. The body whorl with two rows of rounded spirally arranged tubercles, the highest at the shoulder, joined by slightly concave axial ribs making the whorl flat-sided above, tapering below, and the junction concave. Spiral sculpture restricted to low cords over the subsutural region to the shoulder and the anterior end. Operculum claw-shaped, thick and horny. Tan, encircled by thick, paired cinnamon-coloured spiral lines, the apices of the shoulder tubercles blushed with cinnamon. The colour and pattern largely hidden under a thick, glossy, chocolate brown to reddish-brown periostracum. Aperture pink, blushed with orange on the columella.

81 x 40 mm (ht x w)

Mount Lavinia, Bastian Appuge gala, 10 m, rocky bottom; Colombo, Palagala (reef), 11 m, in crevices of sandstone reef. All by diving.

Note: This species differs from *L. polygonus* (see below) and *H. amaliae* (see below) in that its axial ridges are concave and the tubercles smoothly rounded; *polygonus* has straight ridges and *amaliae* has arched (convex) ridges, in both crossed by spiral threads or cords that form tubercles where they intersect making the ridges angular.

3. *Latirus polygonus* (Gmelin, 1791)

Polygonal latirus

[*Murex polygonus* Gmelin, 1791]
Subfamily *Fasciolariinae*

Shell small, fusiform, angulated shoulder, the spire moderately tall and pointed. The suture impressed, hardly constricted, subsutural portion concave. Aperture narrowly elongate-quadrata, posterior canal shallow, the anterior siphonal canal short, straight, open. Outer lip is characteristically straight in the mid-portion, thin, crenulate, the inner margin smooth, the interior lirae; columella curved, a low nodule posteriorly bordering the posterior canal, three to four folds anteriorly; the inner lip callus, adherent to the body whorl. The body whorl with two rows of spirally arranged tubercles, the highest at the shoulder, joined by straight axial ribs making the whorl flat-sided above, tapering below, the junction concave. Spaced spiral threads encircle the exterior. Honey coloured, axial ribs cinnamon, grooves between them paler, spiral threads yellowish-white. Interior white.

50.3 x 25 mm (ht x w)

Mount Lavinia, Bellangala Channel, 7 m, under rock; Mount Lavinia reef, no find data; Colombo, no find data; Unawatuna, 5 m; Kirinda, purchased. Mostly live collected by diving.

4. *Pleuroploca clava* (Jonas, 1846)

Persian Horse Conch

Fasciolariinae
[*Fasciolaria clava* Jonas, 1846; *Fasciolaria persica* Reeve, 1847, *Pleuroploca persica* (Reeve, 1847)]

Shell broadly fusiform, spire stepped, low, the shouldered body whorl inflated tapering down to a siphonal canal that is shorter than the length of the aperture. Suture constricted, the subsutural area concave. The aperture oval, a shallow posterior canal, anterior siphonal canal wide, open, slightly curved. The outer lip thin, crenulate, lirae within, the columella curved with three folds anteriorly, the strongest bordering the root of the anterior canal; inner lip thickly callus, adhering to the body whorl. Sculpture of broad, low axial ribs raised into strong, wide, blunt shoulder tubercles with a second row about the middle of the body whorl. Rounded spirals of varying width encircle the

body, being wide over the mid-body and narrow below, bordered by dark incised lines. Growth lines passing over all make the surface rough. The ground colour creamy-white, blushed with pink-orange, the tubercles cream, axial streaks and blotches of chocolate brown between the axial ridges and shoulder tubercles and the spiral lines also brown. Interior of outer lip white, columella and inner lip cream, interior of aperture white, the lirae cinnamon. Periostracum brown, adherent.

108 x 58 mm (ht x w).

Nilaveli, purchased from beach vendor. Appears to be rare as very few seen being offered for sale.

Note: Internet search (24.8.2019) shows very few offered for sale – from Sri Lanka, “Northern area”; off Colombo, diver collected, 10 m depth; Laccadive Islands, diver collected; trawled off South India. Specimens in Amsterdam zoological Museum collected in the early nineteen-nineties appear to be from the Indonesia region (labels indistinct). Prices quoted range from 70 USD (101 mm shell) to 278 USD (137 mm shell). Shells described as rare or very rare.

5. *Pleuroploca trapezium* (Linnaeus, 1758) Trapezium horse conch

[*Murex trapezium* Linnaeus, 1758; *Fasciolaria trapezium* (Linnaeus, 1758)]

Subfamily *Fasciolariinae*

Shells large and heavy, broadly fusiform with strong blunt spinous tubercles on the shoulders; the spire moderately tall, stepped and pointed, suture impressed, constricted. The aperture broadly elliptical, posterior canal shallow, the open anterior siphonal canal slightly curved. The outer lip thin, crenulate, lirae within, the columella with three anterior folds, the lowest bordering the root of the siphonal canal, the inner lip thickly callus, adherent to the body whorl. Sculpture in the adult consisting of a row of strong nodular spines at the angulated shoulder, best developed on the last two whorls. In the early whorls—and in the juvenile—they are flattened axially and triangular, in later whorls becoming cylindrical with blunt apices, often worn or eroded. The exterior smooth, marked by growth lines, these being particularly crowded and grooved over the narrowed lower body whorl and siphonal canal. The body whorl is creamy-white, the upper whorls—and juveniles—orange-tan, the tubercles tipped with white, encircled by paired cinnamon coloured spiral lines. Interior cream, the lirae cinnamon. Periostracum thin, shiny reddish-brown.

190 x 90 cm (h x w)

Chilaw, Udappuwa, beached, a 70 mm juvenile; Kirinda, Amaduwa beach, fishing trash; Kalkudah, beach, fishing trash.

Note: 1. These shells are very common in certain areas and are collected as by-catch on bottom-set fishing nets. They are used decoratively around houses and gardens (Kandakuliya, Kalpitiya peninsular.)

2. They can be used as trumpets with the apex of the shell sawn off and are sold for this purpose.

Genus *Turritarius*, proposed by Vermeij and Snyder (2006), comprises of small shells (1.8 to 7.4 cm), high-spired, fusiform, basally constricted, with short anterior siphonal canal; spire usually longer than aperture plus canal; spire flat-sided with appressed sutures; body whorl evenly rounded without shoulder angulation; axial sculpture consisting of six to ten low, broad, rounded ribs; spiral sculpture consisting of cords, often with threads between adjacent cords, the intersections of cords and ribs without tubercles; aperture small, outer lip convex with paired crenations, inside with smooth lirae; columella with four folds.

Turritarius is an Indo-West Pacific genus. The shells differ from *Latirus* and *Hemipolygona* in that they are small, with whorls that are not shouldered, with tall spires that are not turreted (stepped), without nodules or tubercles where axial and spiral sculpture intersect, with small apertures and proportionately very short anterior siphonal canals (much shorter than the length of the aperture). (Vermeij and Snyder, 2006).

6. *Turritarius craticulatus* (Linnaeus, 1758) Craticulate Latirus

[*Murex craticulatus* Linnaeus, 1758; *Latirus craticulatus* (Linnaeus, 1758)]

Subfamily *Fasciolariinae*

Shells small, fusiform; tall pointed spire with flat sides, basally constricted, short siphonal canal. Sutures appressed, the whorls gently rounded, no shoulder angulation. Aperture elongate oval, posterior canal shallow, anterior siphonal canal short, straight, open. Outer lip thin, crenulate, smooth lirae in interior; columella concave, two to three folds anteriorly, a rounded nodule bordering the anal canal; inner lip adherent to the body whorl posteriorly, free anteriorly. Sculpture of eight to nine oblique, low, rounded, axial ribs crossed by thin, low, rounded spiral cords with occasional threads in between. Base colour whitish to tan, axial ribs orange to russet, a single indistinct white spiral band on body whorl. Interior white.

50 x 18.4 mm (ht x w); 54+ x 23mm (ht x w apex damaged)

Wellawatte, Kinross first reef, 7 m, under loose coral, crab occupied; Mount Lavinia reef, 5 m, crab occupied. Both by diving.

7. *Turritarius turritus* (Gmelin, 1791) Tower Latirus

[*Voluta turrita* Gmelin, 1791; *Latirus turritus* (Gmelin, 1791)]

Subfamily *Fasciolariinae*

Shells small, fusiform; tall pointed spire with flat sides, basally constricted, short siphonal canal. Suture incised, constricted, the whorls gently rounded, no shoulder angulation. Aperture small, oval, posterior canal shallow, anterior siphonal canal short, straight, open. Outer lip thin, crenulate, smooth lirae in interior; columella concave, four folds anteriorly, a rounded nodule posteriorly bordering the

anal canal, inner lip adherent to the body whorl posteriorly, free and erect anteriorly. Eight low, rounded, axial ribs crossed by thick, low, rounded spiral cords with threads in between (seen clearly in upper spire whorls). Operculum thick, horny, claw-shaped. Tan, with chocolate brown spiral cords. Interior white.

44 x 15.5mm (ht x w apex eroded)

Mount Lavinia, Bellangala south reef, 7 m, crab occupied; Off Colombo, Degal Meda (reef), 17 m, rocky bottom; Maggona, Thudawa Bay, SBFH, fishing trash, entrapped within sedimentary rock.

8. *Fusinus colus* (Linnaeus, 1758)

Long-tailed Spindle

Fusininae

[*Murex colus* Linnaeus, 1758; *Colus longicauda* (Lamarck, 1801), *Fusinus longicauda* (Lamarck, 1801)]

Shell tall, spindle-shaped, with very long siphonal canal longer than the spire, straight, wavy at end. Suture incised, constricted, subsutural portion sloping to angled shoulder. Spire tall, regularly tapering, whorls rounded. Aperture elliptical, the siphonal canal open. Outer lip crenulate, lirate within, columella smooth, the inner lip thin and callus. Sculpture of low axial ribs that fade in later whorls, being present only below the shoulder crossed by strong, close-set spiral cords, generally thick and thin alternating, those on the siphonal prolongation markedly oblique. Milky white with extremities blushed with brown, the grooves between axial ribs darker.

140 x 35 mm (ht x w)

Gandara, Naotunna South shell shop, purchased by Rashminda Kurukulasuriya; a damaged shell collected from a pile of sand at a building site in Colombo.

9. *Fusinus crassiplicatus* Kira, 1959

Ribbed spindle

Fusininae

Shell fusiform with tall stepped spire, the anterior siphonal canal shorter than the spire. Suture constricted; sides of whorls convex. Aperture oval, anterior canal straight, open. Sculpture of strong arched axial ribs crossed by spiral cords. Milky white.

115 mm high

Kalpitiya, beached, collected by A. C. M. Niyas with no detailed location data.

10. *Marmorofusus nicobaricus* (Röding, 1798)

Nicobar spindle

[*Syrinx nicobarica* Röding, 1798; *Fusinus nicobaricus* (Röding, 1798), *Fusus nicobaricus* (Röding, 1798)]

Fusininae

Shell fusiform with tall stepped spire and a long siphonal canal as long as the spire. Suture incised, constricted, whorls shouldered. Aperture narrow, elongated, outer lip thin, crenulate, lirate within. Inner lip adherent to body whorl. Columella smooth, no folds. Sculpture of axial ribs forming shoulder nodules, obsolete below, crossed by rounded, granular spirals. Cream coloured with variable chocolate-brown axial lines, sometimes branching, oblique, fusing with adjacent lines. Periostracum thin, dusky, translucent.

141 x 44mm (ht x w)

Kalpitiya, Battalangunduwa Island, fishing trash, with intact periostracum; Kirinda, purchased from shell shops.

Genus *Hemipolygona* Rovereto, 1899 comprises strongly sculptured species that are medium to large (3.0 to 10.9 cm maximum adult shell length), fusiform, with a pronounced shoulder angulation and strongly constricted base. The siphonal canal is relatively long and the interior has beaded lirae. *Hemipolygona* differs from *Latirus* in the shape of the outer lip: rounded as against angulated with straight central sector and convex sectors to either side. The rounded lip shape is a result of the axial ribs being arched; in *Latirus* they are straight between the upper and lower rows of nodules.

11. *Hemipolygona amaliae* (Küster & Kobelt, 1874)

[*Turbinella amaliae* Küster & Kobelt, 1874; *Plicatella amaliae* (Küster & Kobelt, 1874)]

Peristerniinae

Shell strong, fusiform, shoulder angulated and with tall, stepped, pointed spire, the base constricted. Suture impressed. Aperture oval, a shallow posterior canal, the anterior siphonal canal wide and open, as long as the aperture, straight, curved at the end. Outer lip thin, crenulate, a narrow smooth margin inside with a small nodule at the entrance to the siphonal canal, beyond which irregularly beaded lirae extend into the interior; columella curved, a nodule bordering the posterior canal, three to four folds anteriorly; the inner lip thickly callus, adherent to the body whorl. Exterior with strong arched axial ribs, more pronounced below the shoulder and fading away over the constricted base, crossed by strong, rounded spiral cords forming tubercles where they cross the axial ribs, the highest at the shoulder. Exterior brown, axial ridges and narrowed base cinnamon, the grooves between the ridges paler, spiral cords golden, the aperture and interior peach. [Based on Vermeij & Snyder, 2006]

81 x 36 mm (ht x w), apex eroded

Mount Lavinia, Bellangala rocky islet, 5 m, rocky bottom, live collected; Rocky bottom seaward of Bellangala, 10 m, crab occupied. Both by diving.

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