

The Protected Seashells of Sri Lanka - protected from what?

by

Malik Fernando
Diver, Marine Naturalist

Shells have been collected by humans for hundreds of years and used as food, ornaments and as forms of money. They have also provided humans with pearls and mother-of-pearl, the lustrous inner layers of some species of clams (shells with paired valves). More recently, they have been collected for the aquarium trade and for use in shell-craft. They are now under threat due to habitat destruction and marine pollution. In an attempt to prevent the extinction of some of the most sought-after shells, a number of the rare and most collected shells were declared as protected species under the Fauna & Flora Protection Ordinance (FFPO) Chap. 469 as amended in 1964, 1970 and 1993. The writer has no information as to the date when these were first declared protected - but the problem remains, and the list of species that may need protection has probably increased.



The Biodiversity Secretariat of the Ministry of Environment and Natural Resources recognised the need for increased awareness and action to protect all marine molluscs. A poster showing the thirteen protected species of shells (including one clam species) was produced in 2008 to enable identification of these animals and to publicise their protected status. This poster had the text in all three languages. We should ask ourselves the question as to how giving protected status - which makes it illegal to collect, possess, trade and export - such items as seashells will help to prevent their extinction.

This might sound an odd question to ask, but I raise the issue because these shells are exposed to the risk of being collected “by accident”, they form a component of the by-catch of bottom-set fishing nets. The spider conch *Lambis lambis* is caught by the hundreds, and they are mostly just thrown away. Many dead shells are washed up on beaches and collected for use in the shell ornament industry. The vast majority are not protected species. But many protected species are collected by ornamental fish collectors and those diving for chanks and sea cucumbers.



Lambis lambis in fishing trash at Mandaitivu, Jaffna. Blue swimming crab fishery.

There is a commercial export-oriented chank fishery that is regulated by licencing, with a specified minimum size permitted to be collected. The size specification is monitored at the point of export, but not

at the point of collection and as a result damaged and undersized shells reach the local ornament market.

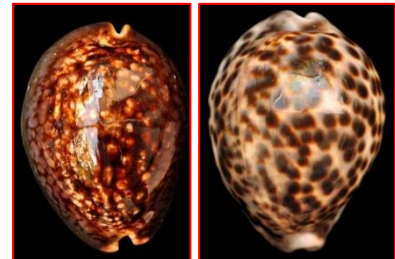


(Left) Juvenile chanks used in shell craft. (Right) Large horned helmet shells (*Cassis cornuta*) and branched murex shells (*Chicoreus ramosus*) for sale at Kirinda.

Commercial divers whose main objectives are the collection of ornamental fish, chanks or sea cucumbers are reportedly not averse to picking up a saleable shell if they come across one. Horned helmet shells are one such species and two species of cowrie (hump back cowrie and tiger cowrie)

appear to be popular, as they are frequently seen in curio and shell shops, particularly the latter that is often seen in jewellery shop windows. This is a protected species; the hump back is not. The branched murex is one of the species that come up as by-catch in bottom-set nets. They used to be trashed, but now are smashed open and the meat sold to Chinese customers.

In order to really protect our biodiversity just declaring species as protected is not enough. There has to be a proper management plan that includes creating awareness among the citizens and enforcement in a logical and responsible way. Preventing export alone is not enough if it is found that protected items are freely available on the market. Some action seems to have been taken in this regard recently as the shell markets at Kirinda and other places in the south that used to carry large inventories were found depleted of stock - "taken away by Wildlife". This is a good sign. But what about the large numbers taken as by-catch? Bottom-set nets are illegal.



Hump back cowrie (left)
Tiger cowrie (right)

List of Protected species

- 1) *Charonia tritonis*. (Triton's trumpet). Coral reefs. A predator of the coral-eating crown-of-thorns starfish. Rare.
- 2) *Tridacna maxima*. (Tridacna clam). Rock crevices in the vicinity of corals, attached firmly. The whole genus protected under FFPO; *T. maxima* appears to be the only species found in Sri Lanka. Was common.
- 3) *Tibia insulae* (*Tibia insulaechorab*) (Arabian tibia). Sandy bottoms, deep water. Listed in the FFPO as "*insulae*" but appears in the literature as "*insulaechorab*." Rare.
- 4) *Strombus listeri* (Lister's conch). Deep-water. Rare.
- 5) *Lambis lambis* (Smooth spider conch). Edges of shallow reefs amongst sand and stones, browse on algae. Very common.

6) *Lambis chiragra* (Chiragra spider conch) now named *Harpago chiragra*. Edges of shallow reefs amongst sand and stones; browse on algae. Common?



7) *Cypraea tigris* (Tiger cowrie). Shallow rocky reefs amongst corals; browse on algae. Rare, was common.

8) *Cypraea talpa* (Mole cowrie). Cylindrical in shape. Shallow water amongst corals; browse on algae. Rare.

9) *Cypraea mappa* (Map cowrie). Rocky reefs; browse on algae. Gets its name from the dark patches on top that look like continents on a map. Rare.

10) *Cypraea argus* (Eyed cowrie). Cylindrical in shape. Shallow coral reefs; browse on algae. Rare.

11) *Cypraecassis rufa* (Bull-mouth helmet). Sandy bottoms; feed on sea urchins and starfish. Rare.

12) *Cassis cornuta* (Horned helmet, *Lanka sithiyam bella* (S)). Heavy, a large flat expansion around the opening resembling the outline of Sri Lanka. Sandy bottoms; feed on sea urchins and starfish. Common.

13) *Chicoreus palmarosae* (rose branch murex). Rocky reefs. Predators of other snails and clams by drilling through the shell. Rare, was common.

Acknowledgements

Some of the text and images have been taken from the poster "The Protected Seashells of Sri Lanka" compiled by the writer that was published by the Biodiversity Secretariat of the Ministry of Environment and Renewable Resources in 2008.

Colombo
8th July, 2018