

# The Indian Sacred Chank



Central Marine Fisheries Research Institute



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**Biology, Conservation and Trade**

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## PREFACE

From the time immemorial, mankind used marine organisms not only as food sources but as medicines, souvenirs and pets. Many tropical species have also been traded for personal adornments and jewelry materials, for mythical/religious cults and for use in customary functions. Attention was traditionally focused on the capture and trade of food animals, while other forms of exploitation were comparatively minor, and the uses of non-food marine species, although wide spread, were not well evaluated and documented. Marine species are traded as curiosities, souvenirs, crafts, jewelry or as decorative, utilitarian or non-utilitarian artifacts, and even as contemplative items. Generally such curiosities and souvenirs are manufactured by utilizing the intact dead marine organisms or their parts. Worldwide, the marine curio and souvenir market comprise about 5,000 species of molluscs (bivalves and gastropods), 40 species of corals, and unknown numbers of sponges and echinoderms. Mollusc shells make up the majority of the marine curio trade items in terms of the numbers of species involved and the volume commercialized. The ornamental/curio/souvenir shell trade has intensified in recent years with the rise of internet shopping and the development of tourism has increased the market for shells. In India, approximately 500 to 600 species of molluscs are traded.

The utilization of molluscs is probably as old as mankind itself, and when humans were primarily interested in what they could directly eat or use, molluscs were important sources of food, ornaments and materials for making tools. Shells have been exploited for a wide variety of purposes and a rich amount of information could be obtained from archaeological sources that document the traditional use of gastropods. A few mollusc species are also thought to have magical, sacred or medicinal properties such as the sacred chank (*Turbinella pyrum*) that has been revered for centuries in India. The Central Marine Fisheries Research Institute has been monitoring the sacred chank resources for several years throughout the Indian coasts. A team of scientists of the CMFR Institute have maintained the live sacred chanks in captive conditions, studied their biology, breeding behavior and also reared the youngones. Sacred chanks were marked (tagged) and released in selected marine habitats such along the south east and south west coasts including in Gulf of Mannar to record their natural growth and migratory pattern. The different spheres of the sacred chanks biology, religious and ornamental values are presented in this publication.

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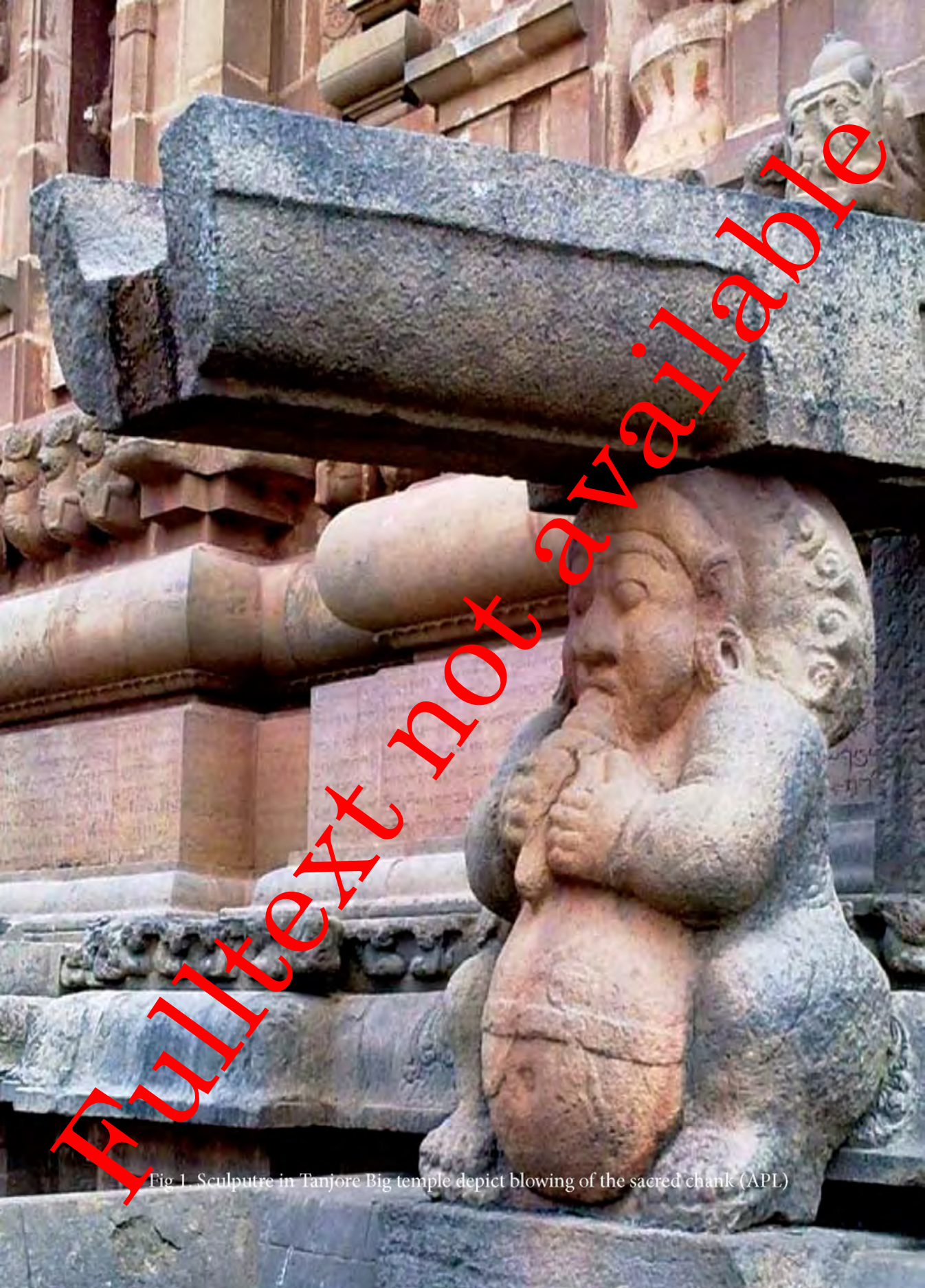


Fig 1. Sculpture in Tanjore Big temple depict blowing of the sacred chank (APL)



## Introduction

The sacred chank (*Turbinella pyrum* - Xancus) is well known as the divine conch. It is a thick-shelled Gastropod and its heavy white shell is covered by an outer coating. The name of the shell was reported to be derived from the Indian Sanskrit word 'Shankha'. The Dutch referred the shell as 'chianco' (Bouché, 2010). In its living status, the shell of the sacred chank is covered by a brown coloured soft and velvety surface skin, called periostracum, which protects the shell from several environmental factors including corrosive effects. Upon removal of the periostracum, the shell shows its characteristic milky white appearance. The overall of the shell is oblong or conical. In common, the species is right-handed or 'dextra' in its shell coiling. Rarely, a left-handed shell or 'sinistral' is recorded (one in approximately 2,00,000 shells). The sinistral shells are known as 'Dakshinavarti shankh' which command high values in terms of Hindu religious significance. The common right-handed shell is known as 'Vamavarti'. The Vamavarti is believed to represent the reversal of the laws of nature and thus linked with Siva. In the 'Varahapurana' it is mentioned that bathing with Dakshinavarti shankh frees one from all sins. 'Skandapurana' narrates that bathing with this shankh frees from sins from seven previous lives.

The sacred shell commands significant importance not only in Hinduism, but also in Buddhism. As noted from puranas, the chank is sacred emblem of the Hindu preserver God - Vishnu. The shell is mentioned as the giver of fame, longevity, prosperity, the splendor of sins and the abode of Lakshmi - the goddess of wealth and consort of Vishnu. The sacred chank is the state emblem of Kerala state and also the national emblem of the former Indian





Fig 2 A Sinistral sacred chank shell (*Turbinella pyrum*) in Sathya Bhamaji Temple, Bet, Kathiawar (Reproduced from Honell 1914) (Ref: Madras Fisheries Bulletin No. 7)



Fig. 3 'Valampuri' sacred chank (*Turbinella pyrum*) in Natural History Museum, London

princely state of Travancore and kingdom of Kochi. The chank also figured on the Royal Flag of the Jaffna kingdom. It is also the election symbol of the Indian political party Biju Janatha Dal. It is considered as sacred one and one of the eight auspicious symbols ('Ashtamangala'). In Tibetan Buddhism, it is known as "doug- Dkar" (= white conch). The doung-Dkar has been used as a religious instrument throughout the history of religious music in Tibet. In the religious context, the shell is modified by removing the spire so that it can be blown as ceremonial trumpet. Apart from using as a trumpet in Hindu religion rituals, the shells were also used as war trumpet in the past. It is an emblem of power, authority and sovereignty whose blast is believed to banish evil spirits, averts natural disasters, and scare away poisonous creatures.

All the parts of the sacred chank are used for different purposes. Shell is used for ornamental and religious purposes. Flesh is edible which is rich in protein and minerals. The operculum is used for medicinal and incense stick manufacturing industries. The dried operculum costs about Rs.1500 to Rs.2000/-.

The sacred chanks are known to habituate in tropical sea-beds at depths of 15 to 18m along the South eastern coast of India, along the Indian Ocean and adjoining seas comprising of rocky banks (pars -in Tamil) interspersed with muddy sand areas and are abundantly populated with tube-dwelling worms. The chanks congregate on the muddy sand areas (pirals- inTamil) to feed on the worms. In the Western world, in the English language, this species is also known as the "divine conch".

The Chank or 'shankha' is spelt differently in different states of India, according to the language used. It is spelled Shankha in Sanskrit, Kannada and Marathi. In Gujarati, it is known as du-sukk, as sankha. In Tamil it is called as chanku; as senkham in Telugu; as sankha in Oriya and as shankho in Bengali. In English, it is usually known as a conch or conch shell, but also as a "chank" shell (Nadkarni, 1994).

A powder derived from the chank is used in the Indian Ayurvedic medicine, primarily as cure for stomach ailment and for increasing beauty and strength. Shankha is used in Ayurvedic medicinal formulation to treat many ailments. It is prepared as conch shell ash, known in Sanskrit as Shankha bhasma. Shankha bhasma is prepared by soaking the shell in lime juice and calcinating in covered crucibles for ten to twelve times and finally reducing it to powder ash. Shankha bhasma contains calcium, iron and magnesium and is considered to possess antacid and digestive properties. A compound pill called Shankavati is also prepared for use in dyspepsia. The shankha bhasma is mixed with tamarind seed ash, five salts (panchlavana), asafoetida, ammonium chloride, pepper, carui, caraway, ginger, long pepper, purified mercury and aconite in specified proportions to prepare the Shankavati. It is then made into a pill-mass in juices of lemon and prescribed for vata (wind/air) and pitta (bile) ailments as well as for beauty and strength. In Siddha medical practice, 'sankhu purpum' is prescribed to cure peptic ulcer and also for a wide variety of abdominal conditions as well as arthritis. The sankhu purpum exhibited mild inhibitory activity against *E. coli*, *Klebsiella*, *Proteus*, *Pseudomonas* and *Staphylococci* in 30 mg/10 ml, 40 mg/10ml and 50 mg/10 ml concentrations. Murugan et al (2005) reported that the 'shangu purpum' prepared from the sacred chank shells exhibited 38.3% acute anti-inflammatory effect in albino rats. The 'sanku purpum' is used for treating gastric ulcer, pain in stomach, duodenum, calcium deficiency disorders, colic, gastritis and peptic ulcer. The sanku purpum is administered at the rate of 100 to 200mg twice internally with butter or milk as per the advice of Siddha doctor.

The sacred chank shells fished from the chank habitats are piled and transferred to storage sheds ('chank godowns') until the end of the fishing season. The godowns are situated almost near the shore of the prominent chank fishing sites. A safe distance from the dwelling places is essential as the rotting down of the remains of the chanks left in the upper part of the shell produces a distinctive aroma. The shells are effectively cleaned out by armies of fly maggots before being packed into sacks and sold. When the shells reach Kolkata (West Bengal), they are sorted again into several trade varieties according to their size and quality, which largely depends on the locality where they were caught. These are then auctioned to middle-men who supply the chank workers with the type of material they require.

The non-religious use of chank shell seems to be largely confined to Tamil Nadu, Bengal and some of the North-Eastern States. In Tamil Nadu, bullocks with a small chank or a few chanks are worn around their necks as a protective amulet against the evil-eye. A similar 'cow's necklace' (garur mala) made from the apex of a larger shell could be noted in places such as Berhampur. Children are often protected in the same manner by the wearing of small plain chank bracelets or even a single bead worn around the waist. In Tamil Nadu, as per the traditions, it is customary to bury a chank beneath the first stone of a new house





Fig. 3. Photographs from Tanjore temple depicting the sinistral form of Turbinella (Dr.APL)

or, in some places and to leave part of the shell exposed inside the doorway, showing as a white patch on the floor. According to belief this exposed part of shell will bring good luck and keep out evil spirits. All entering or leaving must pass over it and thereby avoid misfortunes.

The wearing of chank bangles (*ankha balara*) by married Hindu women is customary to Bengal (West Bengal and Bangladesh) and Bengali women living in the adjacent states like Bihar, Orissa and Assam. Archaeological evidence indicated that such bangles were worn and bangle-making workshops were established in Southern and Central India, the Kathiawar area of Gujarat, and Sri Lanka as long as 2000 years ago, and apparently were cut in the same way as being practiced presently. It was also noted from the historical evidence and as suggested by Hornell (1917) that this formerly widespread custom and trade was to some extent suppressed after the migration of Muslims to south India during the fourteenth century, and subsequently the craft was transferred to Bengal region. Before 1947, there had been a small scale chank cutting business in Chittagong, employing the local workers. Only large shells were used for producing the massive broad bangles or armlets – which were favoured by the tribal people living in adjoining hill.

In West Bengal, the chank shops sell, in addition to bangles, an assortment of other chank shell products: finger and toe rings, ear-rings, necklaces of plain chank beads (cut from the columella, 4-5 from each shell), medallions of various designs ranging from God to national and international leaders and as very small containers for stocking the shindur. In West Bengal such bangle industries exist in places such as Kolkata, Jitpore of Murshidabad, Bishnupur, Bankura, Beldange (Nadia District) and Habra. Among these, Kolkata is considered as the main centre for the bangle industries (Ashim Kumar Nath et al., 2012).

The medallions are either worn around the neck or fastened around the upper right arm by a cord as an amulet (tabiz); herbal ointments were also placed in the concave back of the medallion in contact with the skin, on the advice of an astrologer, as a cure for various ailments. In Nagaland, longitudinal slices of chank shells are used as hair ornaments by the men, and long cylindrical beads made from the columella are worn on necklaces. Chanks were also used as currency until the mid-nineteenth century, especially for trading cattle and slaves. Hornell (1918) indicated the exchange rate as 1 male slave = 1 cow + 3 chanks; the more valuable female slave = 3 cows + 4 to 5 chanks; 1 cow = 10 chanks; and 1 chank was equivalent to one rupee. The orthodox Hindu States of Travancore and Cochin used the symbol of the reversed chank, sacred to Vishnu, in the design of their coins and stamps.

The life stages and growth of sacred chank in its natural habitat remained a puzzle for several years for biologists. Considering this scientific efforts were put forward by the Central Marine Fisheries Research Institute to study important aspects about breeding, hatchery development, baby chank rearing and growth estimation using 'tagging and recapture' studies. Some of the important results hitherto unknown to literature and published information are described in this book. This book also describes in detail about the aspects of biology, taxonomic characteristics, distribution pattern, fishing practices, trade, Government legislations, medicinal attributes, ornamental, religious, mythological significances and conservation aspects.

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