

Trochus Trade in the Andaman Islands: How Top Shells from the Bottom of the Sea Got Fished Out

"Without understanding commerce, designing conservation measures can become difficult," writes Madhuri Ramesh. This is especially the case in the Andaman Islands, where the fate of one such species, the ornamental trochus snail, has been shaped by the commercial activities of the Japanese, the British, and later, the Indians.

By **Madhuri Ramesh** - January 26, 2021



This is the first instalment of a two-part series on trochus fishery and conservation in the Andaman and Nicobar islands. [Click here to read part two.](#)

For about **80,000 years now**, humans have made ornaments from shells. According to archaeologists, some of these ornaments were fashioned from marine snails of the dog whelk family—such as *Nassarius gibbosulus* and *N. kraussianus*—and were probably worn as pendants. Given this age-old fascination, it is not surprising that the collection and trade of marine shells is a long and tangled thread that ties together many regions in the Indian Ocean.

Moreover, tracing these historical connections has implications for how we manage contemporary island fisheries—they show us how commercial interests can connect distant places and peoples, as well as influence the survival of entire species. Therefore, without understanding commerce, designing conservation measures can become difficult.

This is especially the case in the Andaman Islands, where the fate of one such species, the ornamental trochus snail, has been shaped by the commercial activities of the Japanese, the British, and later, the Indians.

The Snail and the Shell

At first sight, trochus shells—or top shells—are often unimpressive because they are muddy brown cones, somewhat resembling one half of a broken coconut shell.

Biologically speaking, they are the conical external skeletons of sea snails belonging to the Genus *Trochus*. Some species have been reassigned to the Genus *Tectus*, and the most commonly traded species is now known as *Tectus niloticus*. However, in trade networks, people still use the old nomenclature.



Trochus shells from the Indo-Pacific. | Courtesy of H. Zell, (CC BY-SA 3.0)



A 2016 Australian stamp featuring Tectus Niloticus. | Source.

These snails are naturally widely distributed across the Indian and Pacific Oceans, ranging from Seychelles, to the Andaman and Nicobar Islands, to Fiji. Given their commercial value, they have also been introduced to many more island groups such as Guam, Hawai'i and Tahiti.

Trochus snails are generally found in intertidal zones or fairly shallow waters (of 10-20 metres depth), near coral reefs and submerged rocks, and feed on algae and small plants. When the mud and algae are removed, trochus shells are creamy white in colour with reddish-brown patches. Once this outer layer is abraded and polished, the inner mother-of-pearl layer gets exposed. This material is exceptionally iridescent, and so trochus shells are highly sought after to make buttons and jewellery in different parts of the world.

The Japanese Connection

But, what does any of this have to do with the Andaman Islands?

Two communities in the Andamans were primarily involved in harvesting and selling these shells—the first was the Karens, who migrated from Myanmar and settled in the islands in the 1920s. They are believed to have learnt of the economic value of trochus shells from craftsmen back home in Myanmar, as well as from the Japanese shell fishers who used to operate in the Andaman waters between the 1920s-30s. The second was the Bengalis, who learned shellfishing from the Karens.

Apparently, the British government, which was in power during these periods, realized the presence and value of trochus shells only in 1930 when officials captured Japanese fishing vessels close to Port Blair, within Andaman's territorial waters. As an anonymous article written in 1939 in the journal *Current Science* wryly notes, "A sudden accession of wealth is no less embarrassing to Governments [sic] than to individuals."

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Shell-Fisheries in the Andamans

IN reviewing the activities of the Zoological Survey of India during the years 1932-35, and 1935-38, we have had occasion in our editorials of December 1935 and of April 1939, to refer briefly to the part played by this Department in the scientific investigation of problems of economic importance such as, for instance, amongst others, the shell-fisheries in the Andamans. The recent publication by this Department of a *Consolidated Report on the Shell-Fisheries in the Andaman and Nicobar Islands during the years, 1930-35* enables us to assess the value of the fishery research work which the

but we are happy to note that the Director, Zoological Survey of India, has consolidated the reports of his scientific staff and published the results of six years' hard work in an intelligible form, so that they may be available to the general public interested in the scientific and economic progress of this country.

The Report is divided into three parts, the first of which deals with (1) the genesis and history of the shell-fishery in the Andaman Islands; (2) the fishing methods of the Japanese who discovered the valuable beds of Top and Turban shells (*Trochus niloticus*

Once it realized the importance of this marine resource, the colonial government hastily summoned the Zoological Survey of India (ZSI) to establish a field station in Port Blair. This new team was granted five years within which it was supposed to carry out studies to determine the abundance and distribution of these shell beds, as well as develop a management plan for their exploitation.

However, since the ZSI lacked both the infrastructure and manpower to implement this project on its own, the scientists ended up accompanying the Japanese shell fishers on their expeditions to gather field data. The Japanese worked on a cooperative basis where the master of the vessel, usually the license holder, worked with other divers whom he hired and the profits were shared in equal proportions between all of them.



A typical fishing expedition in a locally-made dunghy. | Courtesy of Manish Chandi.

From these beginnings, the ZSI voiced concerns over the unregulated nature of this fishery. In its preliminary report, the ZSI stated that “even after several months of surreptitious fishing by the Japanese, the beds were of sufficient value to need protection if the fishery was to be established on a permanent and profitable basis.” Their concern was further heightened by a sharp reduction in the abundance and collection of trochus shells in 1933–34, after which the ZSI began to actively campaign for strict fishing regulations.

Based on their studies of the breeding behaviour of trochus snails, the ZSI proposed that fishers should be allowed to collect only adult snails with shells above 9 centimetres in diameter, in order to prevent over-exploitation. Since the snails appeared to breed throughout the year in the warm waters around the Andamans, they proposed that a closed season be declared from April to September which would also coincide with the monsoons, and therefore not impose any additional burden on this industry. However, despite the concern of the ZSI, the first Andaman and Nicobar Islands Fisheries Regulations were issued only in November of 1938.

Meanwhile, many Japanese vessels, usually owned by Singapore-based fishing companies, continued to operate on the sly in these poorly monitored waters. The *Current Science* article attributes the decline of shell beds to over-exploitation by such fishers. With the Second World War looming on the horizon, the article suggests, “... the *Trochus* beds still have a chance of complete revival in the event of a European War which will give them prolonged rest.”

As the British entered World War Two in September of 1939, their interest in commercial shellfishing took a backseat. The Andaman Islands were occupied by the Japanese in 1942 and returned to British hands only in 1945.



Top: Japanese forces disembark in Andaman in March of 1942. *Courtesy of Macesito.* | Bottom: The Allied Forces land in Andaman in 1945, marking the reoccupation of the island by the British. *Courtesy of the Imperial War Museum.*

Archival records are not available for this period so it is unclear if the Japanese continued fishing for trochus during their occupation of the islands. This seems unlikely because although the Japanese were able to invade the Andamans without much opposition, the British attempted to starve the Japanese forces by attacking their supply chains by sea and air. Elderly islanders remember suffering from acute hunger and being conscripted into growing food for the Japanese troops.

Post-war Developments and the Regulation of Shell Fishing

Given the enormous disruptions caused by the Second World War and the Japanese occupation, it is not surprising to find that Indian commercial interest in trochus shells revived only in the 1950s in the Andaman Islands.

For instance, an application for a shellfishing license written in 1952, by Mr. S. K. Ghose of Andaman's Aberdeen Bazaar and addressed to the Chief Commissioner, claims "I feel worth mentioning that during a period of 9 months I have collected 42 tons of Trochus Shells. Of these, 33 Tons have already been exported and the remaining is lying in stock awaiting export. [...] I need hardly say I am the first citizen of India who has collected the highest quantity of Shells in these Islands and I hope the Administration will be pleased to help and encourage such a citizen."

The archives also contain complaints about Chinese fishermen from Penang being granted licenses to collect trochus shells, an application from a British subject residing in Singapore, and a stern letter to a Mr Tan Suan Seng that he will be allowed to engage in shellfishing only if he has an Indian crew, the vessel is registered in India, and the catch sold through Indian markets.

Subject :- Exports of Pearl Shell to the United States of America - Possibility of.

SIR,

Please refer to your letter No.F.12-38/50-EP dated the 6th November, 1950 on the subject noted above. There is no information regarding pearl shells in the waters around these islands as fishing of shells has not been undertaken since the reoccupation of these islands until very recently, when some Chinese fishermen from Penang were granted licences. They have collected only Trocus and top shells, which according to them are found in shallow water - 6 to 10 fathoms deep, while pearl shells are to

Source: State Archives of the Andaman and Nicobar Islands.

MEMORANDUM.

With reference to his two applications dated the 13th June, 1952 regarding licence for shell fishing in the Andaman and Nicobar waters Mr. Tan Suan Seng is informed that his applications can only be considered if:

- (1) he produces a boat registered in India;
- (2) all the crews engaged are of Indian Nationality; and
- (3) he agrees to dispose of the fish and shells through Indian Markets only.

By order,

Sd/- K.C. Banerjee,
Secretary to the Chief Commissioner.

A stern warning is issued to Mr. Tan Suan Seng. Source: State Archives of the Andaman and Nicobar Islands.

Clearly, there was a resurgent interest in the shellfisheries of the Andamans. In addition, the government also intended to bring in fisherfolk from the mainland to work the under-exploited waters of these islands. This made it imperative for the government to strengthen its regulatory framework with respect to marine fishing. An initial attempt to do so had been made in 1938 under the British, at the behest of the ZSI.

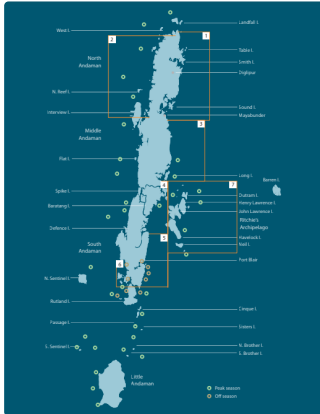
Then in 1955, a more focussed effort was made by adding Section 12 to the "Andaman and Nicobar Islands Fisheries Regulation," in the form of the "Andaman and Nicobar Islands Shell-fishing Rules."

According to these rules, the Andaman Islands would be divided into seven shell fishing zones (with the Nicobar Islands comprising the eighth and ninth) and the collection rights would be auctioned based on tenders. Other provisions included the collection of licencing fees from both divers and contractors, a cap on the maximum number of divers per contractor (15), and the collection of registration fees for both motorboats (20 HP engines) and dingies.

As Dr. Bhatia, the Deputy Fisheries Development Adviser to the Government of India, commented in his tour notes in 1955, one of the main reasons for this renewed governmental interest was that the

royalty collected on the export of trochus shells remained at the amount set in the 1920s, that is, ₹60 per ton (at 10% of the then market rate). On the other hand, their market value had risen to about ₹6,000 per ton in the 1950s. The new rules addressed this shortcoming by increasing the royalty on export to ₹100–200 per ton and introducing additional charges in the form of licenses, auctions, and so on.

However, Dr. Bhatia was rather dissatisfied by the new rules because he noted that the allocation of divers to a particular contractor and zone made them vulnerable to exploitation. Moreover, the licensing was controlled by the Revenue Department and the monitoring and inspection by the Harbour Master—neither of whom were experts in fisheries management.



The business community too requested some revisions when a draft of the new rules was circulated for comments. For instance, a Mr. Venkat Giri of Port Blair wrote to the Chief Commissioner pointing out that “The zones are not equitably divided. The deposit of shells in the proposed zones are quite uneven [...] In the zonal system it will also be next to impossible to restrict the lessees from encroaching one another’s zone all the more so because a particular lessee’s zone will have very little yield and he possess [sic] a motor boat of very good speed. (..)Therefore it would be proper and just that licenses are issued to collect in Andaman Waters as before to all licensees but the quantity of export of each license may be restricted.”

Zone No.	Area	Authorised Port	Authorised Officer
1	Cape Price to Mayabunder	Mayabunder	Tehsildar, Mayabunder
2	Cape Price to Austen Strait	Mayabunder	Tehsildar, Mayabunder
3	Mayabunder to Long Island	Long Island	DFO, Middle Andaman
4	Long Island to Shoal Bay	Long Island	DFO, Middle Andaman
5	Shoal Bay to Chidiyatapu	Port Blair	Harbour master
6	Chidiyatapu to Port Mouat	Port Mouat	Tehsildar, Wimberleygunj
7	Ritchie’s archipelago	Port Blair	FDO, Port Blair

Source: Advani, S., A. Sridhar, N. Namboothri, M. Chandi and M.A. Oommen. 2013. *Emergence and transformation of marine fisheries in the Andaman Islands*. Dakshin Foundation and ANET.

Similarly, Roy & Company submit a thorough analysis of the ramifications of the proposed new rules. “In general, the demarcation of boundary [sic] has proved to be a source of litigation, trouble and conflict in all walks of life – domestic, national or international. [...],” they write. “The following reasons are set forth against the demarcation of zone as proposed:

1. All zones are not uniform in resources. Some are rich while some are barren.
2. Some zones are far away and some are near.
3. Though some zones may be rich, it is difficult to carry out operation [sic] either due to strong current or due to the waters being infested with sharks or due to inclement weather.
4. The two varieties of shell i.e. Turbo and Trochus cannot evenly be had from all the zones. One or the other zone is rich in either variety. But the difference of price between the two varieties is very great. (At present the difference is more than ₹1000/- per ton).”

Roy & Company further add that “[...] the zonal system will act as a detriment to the conservation rather than as an incentive because, in the case of a poor zone, the licensee will strain all his resources to fulfil his limit without caring to see the proper growth of shell-beds.” Finally, the letter also suggests extending the license period from 1 to 5 years to provide more security to the bidder and encourage the development of allied industries such as button manufacturing.

A few months later, in September of 1955, the newly formed Shell Fishing Committee met for the first time to weigh the objections raised and finalize the new rules. In a revealing instance of settler appropriation of aboriginal territory, it noted that one of the trochus-rich areas had been omitted from the regulations because it was used by the Onges—an aboriginal tribe of the Andamans—but that this was an unnecessary precaution. “It was felt that the movement of Onges [sic] was restricted to a period from September to November and any licensee could work up in the area for the remaining five months without disturbing the Onges in any way. The committee felt that Rutland, Cinque, brother and sister islands [sic] should be leased out from 1st of December to 30th April, as it

might not disturb the movement of Ongees in any way.” The only restriction it advocated was that the contractor should neither employ the Onges in shellfishing nor interact with them in any way.

In December that year, a business group (M/s Akoojee Jadwet & Co.) stepped forward to train the Nicobaris in shellfishing if they were granted permission to work in that zone. And so, it appears that the Nicobar Islands joined the trochus trade network many decades after the Andamans.

The After - Effects of Trochus Fishing

In the meanwhile, the archives indicate that one unintended outcome of the revised rules of 1955 was that they hindered the conduct of fisheries studies. In light of this, in 1956 the Fisheries Development Officer appealed to higher officials to make the following amendments: that the Fisheries Department be exempt from the closed season, and that in general, it should be permitted to collect trochus shells or snails from any zone or landing centre and measure them in order to understand population trends.

The government also issued a clarification that would ensure that it received the royalty that was due to it: “The scheme of shell-fishing rules is that after the licensee has fished shells within his zone, he should forthwith take them to the authorised port specified in schedule I for the purpose of measurement and assessment of royalty. As soon as this has been done, the only thing left for him is to export (or otherwise dispose of) the royalty-paid shells. For this purpose, he can bring his shells to Port Blair etc whether by land or by sea. In the case of sea transport, the only means is the Government crafts. A licensee cannot, for obvious reasons, be permitted to cross over the zone of another licensee with shells in his boats.”

Despite this intensive oversight, the government records continued to report a decline in trochus populations. For instance, an internal memo dated May 1959 admits, “Though an industry of immense promise, the history of its growth, development and present position do not present a picture of perfection. In the earlier days it has been the victim of wanton destruction by the Japanese poachers. At present the entire responsibility of exploitation and export of these shells are in the hands of a few contractors who are interested in picking up as many shells as possible within the short period of their license.” In fact, in July 1960, the Deputy Commissioner forwarded to the Chief Commissioner, a suggestion from the Fisheries Development Officer that trochus collection licenses be withheld for five years, to give the shell beds time to recover.



Curios made from trochus shells, Andaman Islands.

Although this did not come to pass, the state of the shell beds can be gauged from the fact that in 1960–61 there were bidders for only three of the nine zones. Moreover, a Cottage Industries Officer had been appointed to promote the manufacture of shell handicrafts in the Andamans. This official was so short of raw material that he requested the Chief Commissioner to instruct the Fisheries Department to hand over all the trochus shells they had collected for study once they had recorded the data they needed. The latter meanwhile, did not have sufficient funds to engage divers to collect shells and responded with a plea for the same. “Whenever there is any exhibition we are asked to take part,” writes the Fisheries Department, “and without some beautiful corals and shells in stock it is difficult to take part in them and put up a reasonable show.[...] Recently Fisheries Museum has opened and we do not have good varieties of shells and corals for display.”

In 1962, the government also opened the bid for shellfishing to mainlanders, by advertising in newspapers such as *The Statesman* and *The Hindu*, but it did not elicit sufficient interest and this was discontinued. A circular from the Deputy Commissioner dated October 1965 indicates that the decline in (legal) shell fishing continued and mentions that the government had attempted to form “a cooperative society of poachers” but this too failed. In 1967, the Deputy Commissioner reported the formation of a cabal, “The parties who participated in the said auction formed a ring with the object of distributing zones among themselves by tendering low bids.” The Deputy Commissioner found that the highest bids offered for the seven zones being low were found unacceptable” and ordered a fresh auction with licenses for a two-year term.

The shellfishing rules were revised several times in subsequent years until trochus and turbo collection was altogether banned in 2001 when they were listed under Schedule IV of the Indian Wildlife Protection Act. An assessment conducted by the ZSI in 2010 found that the shell beds had not fully recovered and hence the National Board for Wildlife recommended that the ban remain in place, despite petitions from the fishers and shell-craft industry.

How Top Shells from the Bottom of the Sea Got Fished Out

Overall, what this foray into the archives indicates is that the thread of commerce, in the form of trade in trochus shells, tied Japanese, British and Indian actors to the Andaman Islands. And so, it would seem that international trends and connections have influenced the development of fisheries in these islands for almost a century now, and not just in the recent past. This is in contrast to popular understanding which tends to depict these islands as pristine, remote areas that have somehow been untouched by historical events. Further, it emphasizes the fact that in islands, social well-being is closely linked to the state of environmental resources and therefore, it is short-sighted to promote commerce without conservation.

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For more on coastal India’s past, present, and future, curated by The Bastion and Dakshin Foundation under “The Shore Scene”, [click here](#).

Featured image: Trochus shells from the Indo-Pacific. Courtesy of H. Zell, (CC BY-SA 3.0).

References:

Advani, S., A. Sridhar, N. Namboothri, M. Chandi and M.A. Oommen. 2013. Emergence and transformation of marine fisheries in the Andaman Islands. Dakshin Foundation and ANET.

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Files from the State Archives of the Andaman and Nicobar Islands.

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