

A report on rare occurrence of a mushroom coral, *Cycloseris cyclolites* (Lamarck, 1801) in Gulf of Mannar, India

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The frequent heavy-scale climatic oscillations and the recent local disturbances on the reefs worldwide were a menace for biodiversity sustenance. The major concern is that many species of Scleractinian corals could have been lost while being unaware of their existence. The recent survey yielded *Cycloseris cyclolites* after 29 years in the reef areas of the Gulf of Mannar Marine National Park.

[**Keywords:** Hard corals, Mushroom corals, Fungiidae, Scleractinian, Gulf of Mannar]

Introduction

Fungiidae commonly called as mushroom corals. The family, consists of 13 genera of which 10 genera are free living, such as *Cycloseris*, *Diaseris*, *Heliopungia*, *Fungia*, *Ctenactis*, *Herpolitha*, *Polyphyllia*, *sandalolitha*, *Halomitra*, and *Zoopilus*. These genera were mostly reported from reef flats and shallow reef slopes of fringing reefs^{1, 2}. Totally, 58 species were reported under 13 genera, among them 12 species belonged to the genus of *Cycloseris* from Indo-Pacific region³. Gulf of Mannar (GoM), Andaman and Nicobar islands, Lakshadweep group of Islands and Gulf of Kachchh are the major coral reef ecosystems in India. The family Fungiidae has 48 species, among which 10 species coming under the genera, *Cycloseris* were recorded from three major reefs in India, except the Gulf of Kachchh. In the Gulf of Mannar, only one species was noted under this genus⁴, and there was no live report of this genus till date in the Gulf of Mannar.

Material and methods

A rapid survey was carried out under the project, “Ophisthobranchs of Gulf of Mannar Biosphere Reserve” in Gulf of Mannar Marine Biosphere Reserve, south-east coast of India, during 2017-2018. During the study period, a live animal of mushroom coral with extended polyp was observed at a depth of

12 m in the off Kurusadi Island, Mandapam group of Islands (Lat. 09°10'39.8 N; Long. 79°12'55.9 E) and 9 m depth in Off Vembar coast (Latitude 09°02'16.1 N; Longitude 78°22'45.4 E), Thoothukudi.

Results

An extensive survey to explore the status of Ophisthobranchs diversity and distribution on reef environment along the Gulf of Mannar coast yielded *Cycloseris cyclolites* (Lamarck, 1801) from Kurusadi Island, Mandapam group and off Vembar coast, Thoothukudi in Gulf of Mannar Marine National Park. A detailed description of this species is followed:

Phylum: Cnidaria

Class: Anthozoa

Order: Scleractinia

Family: Fungiidae

Genus: *Cycloseris*

Name: *Cycloseris cyclolites* (Lamarck, 1801)

1880 *Diaseris mortoni* Tenison-Woods

1815 *Fungia* (*Cycloseris*) *cyclolites* Lamarck

1815 *Fungia cyclolites* Lamarck

1846 *Fungia glans* Dana, 1846

1906 *Fungia japonica* Vaughan

1921 *Fungia adrianae* Van Der Horst

1925 *Fungia borneensis* Gerth

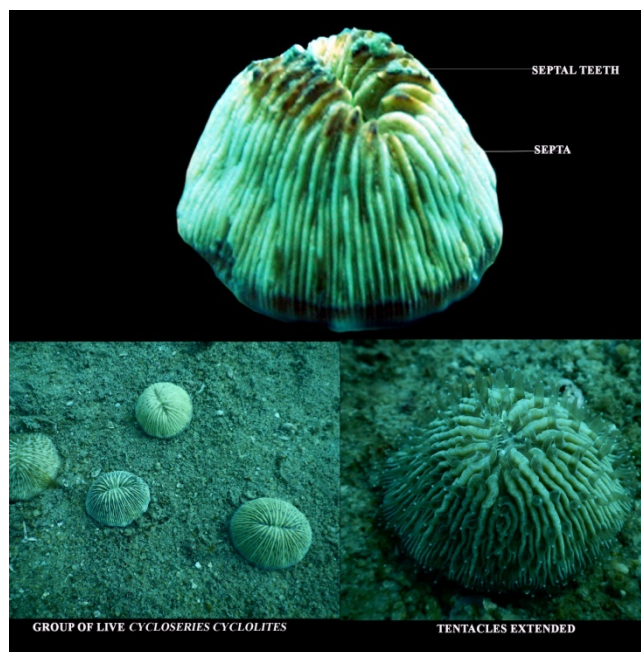


Fig. 1 — A Septa and Septal teeth arrangement, B&C, Live animal *Cycloseris cyclolites* with extended tentacles from Off Kurusadi Island and Off Vembar coast from Gulf of Mannar.

IUCN Red List Category & Criteria: Least concern

Key Character: A tiny monostomatous corallum, brownish in colour, was observed. The polyp (40 mm wide) was slightly oval, dome shaped with a concave under the surface. The septa observed was in symmetry and was thick and exerts around the mouth (Veron, 2002).

Distribution: Indonesia, Hokkaido, Aldabra, Chagos, Reunion, Madagascar, Mozambique, Red Sea, Mauritius, Rodriguez, South Africa.

India: Gulf of Mannar, Lakshadweep, Andaman and Nicobar.

Taxonomic Reference: Veron⁴.

Discussion

The species, *C. cyclolites* belonging to the family Fungiidae, was reported (Figure 1) in liveable condition after 29 years. In India, about 634 species of Scleractinian corals are reported from the major reef region. Out of these, about 424 species belonging to 86 genera and 19 families were reported from Andaman and Nicobar islands, 104 species belonging to 37 genera and 13 families from Lakshadweep

islands, 56 species under 27 genera and 10 families from the Gulf of Kachchh Marine National Park, and 117 species belonging 40 genera and 14 families were reported from the Gulf of Mannar, Marine National Park⁵.

The present work revealed the species *C. cyclolites* from Gulf of Mannar after Pillai report. This species is diversified in Lakshadweep and Andaman and Nicobar Islands, but is the least in the Gulf of Mannar. More extensive surveys are required increasing the number of species and population, abundance, threats and resilience studies, important for conserving coral biodiversity along the Gulf of Mannar coast.

Conclusion

The Gulf of Mannar islands are split up into four groups: Mandapam, Keelakarai, Vembar, Thoothukudi Islands. Most of the research is going on around the islands; however the research on sub-tidal is very scanty. The present study reported the species *C. cyclolites* from 12 m depth in sub-tidal region off Kurusadi Island. Many more new records use reported emerge if a detailed investigation of the sub-tidal regions is encouraged.

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