# UNDERWATER ECOLOGICAL OBSERVATIONS IN THE GULF OF MANNAR, OFF TUTICORIN

## II. THE OCCURRENCE OF THE SYNAPTID *CHONDROCLOEA* ALONG WITH THE MASSIVE SPONGE, *PETROSIA*

In this paper an interesting instance of association between a sponge and a synaptid, which was observed during the course of our underwater dives with SCUBA is recorded. The rocky patches of the sea bottom off Tuticorin exhibited certain characteristic fauna depending on the depth and locality. For instance, the shoreward rocky floor in the 10-13 metre range was characterized by, amongst other things, the small and medium sized sponges firmly attached to the substratum and was conspicuous by the absence of the massive sponge of the genus *Petrosia*. The offshore rocky area between 10 and 22 metres showed, in addition to other sponges, the prolific growth of *Petrosia* spp., especially in between Lat. 8°43′ N-8°50′N and

Long. 78°18'E.-78°23'E. *Petrosia testudinaria* (Lamarck) was the more common sponge although *Petrosia similis* Ridley and Dendy was also recognised. The *Petrosia* spp. ranged in size from 15×30 cm. up to 90×90 cm. In areas where small as well as large sized *Petrosia* spp. occurred in abundance the entire locality presented an animated appearance with fishes like *Zanclus cornutus* (Linnaeus), *Heniochus acuminatus* (Linnaeus), *Abalistes stellaris* (Bloch), *Odonus niger*, (Ruppell), *Gaterin schotaf* (Forskål), *Pomacanthodes annularis* (Bloch), *Pterois russelli* Bennet, *Lutjanus sebae* (Cuvier), *Chaetodon ocellatus* (Cuvier), *Enneacentrus miniatus* (Forskål) etc. hovering over or moving in between the columns of the sponges. Living in the vicinity also were varied fauna and luxuriant flora. But the most striking and characteristic of the animals noticed along with *Petrosia testudinaria* (Lamarck) was the synaptid, whitish in colour markedly visible even

*Chondrocloea striata* on *Petrosia testudinaria*

from a considerable distance. The synaptid was found occupying the meandering grooves on the irregular surface of the sponge (Photograph). In undisturbed condition many specimens of this synaptid measured from 50 to 60 cm. in length. The specimens were extricated from the sponge with difficulty owing to the extremely adhering nature of the body of the synaptid possessing spicules of 'anchor and anchor plate' pattern. It was possible to collect many specimens like this and they were identified as *Chondrocloea striata* Sluiter.

Pearson (1903) reported *Chondrocloea striata* from Ceylon but did not specify the sponge on which the specimens were found. Bell (1887) and Koehler & Vaney (1908) have collected the specimens from Andamans from sponges. From the present account it is of interest to note that the specimens were found only

on *Petrosia testudinaria* and not on any other sessile animals or sponges along the bottom to a stretch of nearly 600 sq. km. up to a depth of 23 metres. The incidence of occurrence of this synaptid was noticed greatest in the area at depths 17-22 m. and has not been noticed on *Petrosia* occurring in less deep waters. More than one synaptid of the said species was often found over the same sponge. There were many *Petrosia* in the area which did not have this synaptid also.

It is difficult to think of any other reason as to why *Petrosia* should be preferred as a host except that the hard sponge body may serve as a firm attachment for the synaptid.

Thanks are due to Dr. F. B. Salvadori for the photograph of the synaptid on sponge. To Mr. D. B. James, Research Scholar, we are grateful for the identification of the synaptid.

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