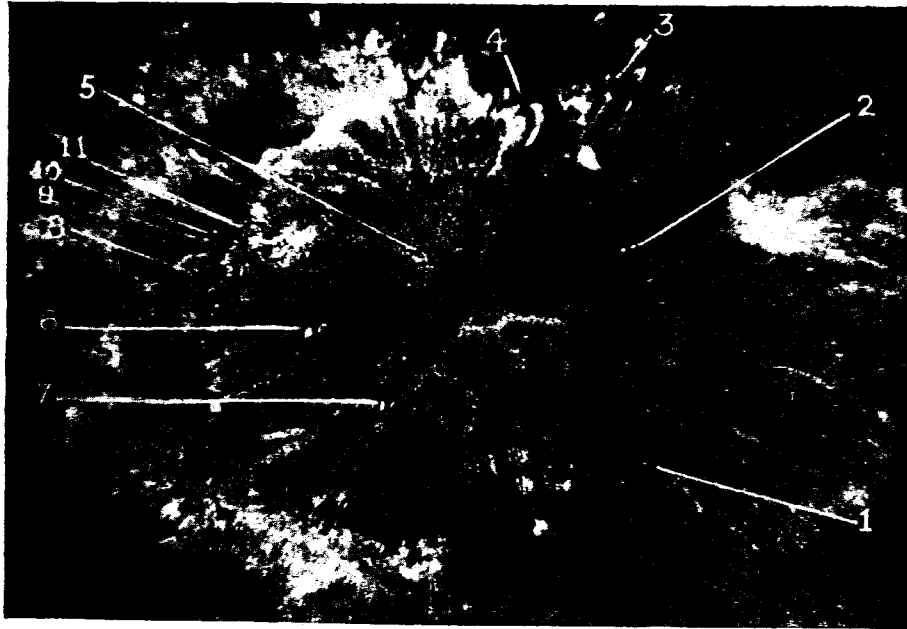


UNDERWATER ECOLOGICAL OBSERVATIONS IN THE GULF OF  
MANNAR, OFF TUTICORIN

V. ON SEA ANEMONES AND THE FISHES *Amphiprion* AND *Dascyllus* FOUND WITH THEM.

The giant sea-anemone, *Stoichactis giganteum* (Forsk.) was found to grow both on the sandy area as well as on the rocky bottom, the large-lobed disc lying flat reaching up to a maximum of 80 cm. diameter in the latter case whereas the sandy forms were smaller in size. On the rocky bed, between 14-22 metres depth, the anemone occupied shallow pits or holes into which they retracted when needed. Often, many *Amphiprion sebae* Bleeker and a few *Dascyllus trimaculatus* (Ruppell) were found swimming over the anemone at a height of nearly 30 mm. In many instances only 2 numbers of equally large *A. sebae* were seen while *Dascyllus* were not seen. In a few cases as many as seven *A. sebae* were counted in addition to four numbers of *D. trimaculatus* (Photograph). The fishes were found only over



Photograph. *Stoichactis giganteum* (Forsk.) with the anemone fishes. Nos. 1-7 are *Amphiprion sebae* and 8-11 are *Dascyllus trimaculatus*.

the anemones growing on the rocky area and not noticed with those found on the sandy ground. Several fishes like *Scolopsis vosmeri* (Bloch) *Scolopsis bimaculatus* Ruppel and *Abalistes stellaris* (Bloch) swimming close by never ventured into the domain of the anemone or the anemone fishes. Of these anemone fishes *Dascyllus* ventured a little farther from the anemone in its probing sojourns unlike *Amphiprion* which always confined itself within the radius of the anemone. The fishes did not enter into the mouth of the anemone when the anemone was forced to retract nor did they move away from their original host in quest of another in spite of the fact that the anemone was kept in retracted condition for longer time. In such times the fishes were fluttering around and were easily caught.

In addition to the fishes a pair of the shrimps, *Pereclimenes brevicarpalis* (Schenekel) of unequal size, were found moving close to the mouth of the anemone. They escaped readily into it when disturbed and emerged unharmed after the anemone expanded out. A pair of the porcellanid crab, *Petrolisthes ohshimai* (Miyake) were also seen creeping along the margin of the anemone. It was seen that all the above animals were using the anemone for shelter and protection.

Yet another species of large, proliferating, irregular shaped anemone, the identity of which it was not possible to determine, also harboured *Amphiprion sebae*. The anemone exclusive to flat rock zone held on to the substratum by means of its short, broad, violetish base and measured about 200 cm. in width possessing hundreds of long (4 cm.), pointed, closely set, brownish tentacles. The anemone was flush with the base but for the tentacles and the thin disc. Its periphery was thrown into wavy flaps, swaying in the current. The fish *A. sebae* moved in and out of the lower side of the flaps hiding inside when disturbed. It was difficult to trace the fish underneath as they entered in one place and emerged from another flap, quickly moving under the cover of the anemone. The chances of the fish to ward off danger were greater than in the case of *Stoichactis giganteum*. Hence it may be that *A. sebae* have taken to this anemone in greater numbers as evidenced by the fact that more than a pair of these fish were seen with this anemone always. *Dascyllus* sp. were not seen with this anemone.