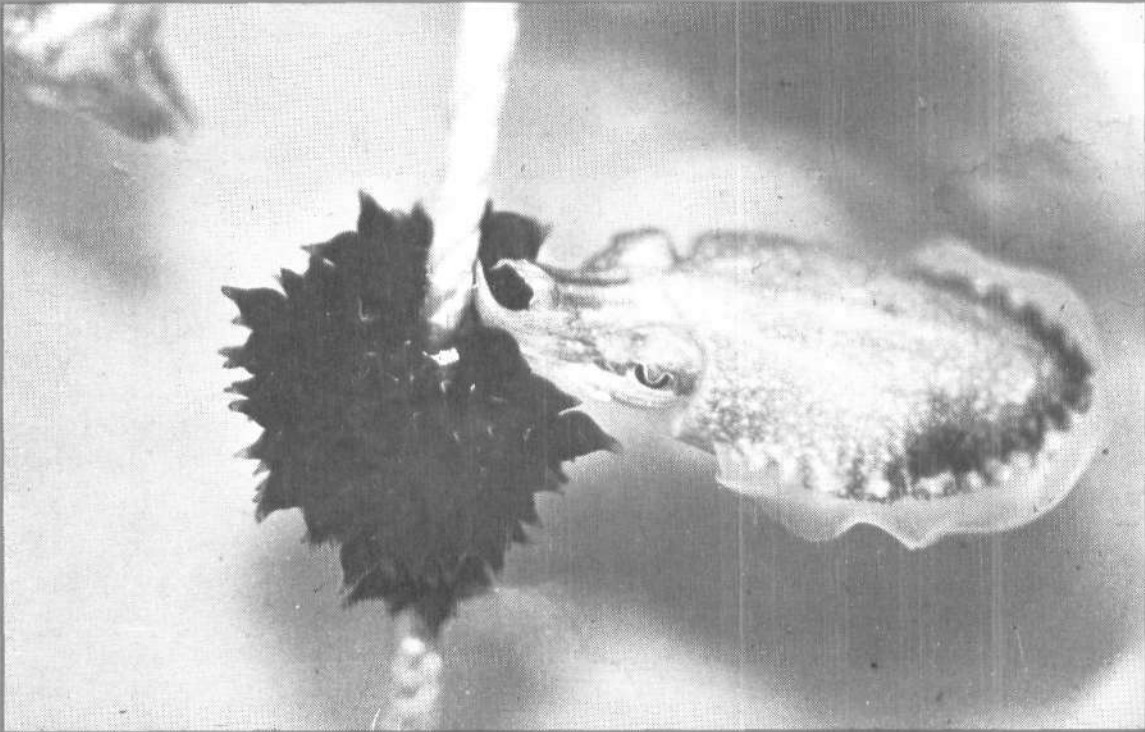




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897 Observations on spawning in captivity of the clown fish, *Amphiprion chrysogaster*

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Aquarium fish industry has become a promising enterprise in many countries. In India also, aquarium keeping has become a popular hobby. At present, the demand for freshwater aquarium fishes is fully met from the extensive breeding of fishes in captivity. For marine aquarium fishes, we fully depend on the exploitation from the wild. In the present account, spawning of the clown fish,

Amphiprion chrysogaster kept in captivity at Minicoy is reported.

On 2.9.'97, three numbers of clown fishes, *Amphiprion chrysogaster* were collected along with sea anemone belonging to the family Stoichactidae from the Minicoy lagoon and were grown in perspex tank of 50 l capacity. The fishes had a size of 68, 57 and 45 mm TL. From the next day of their captivity, the

fishes were fed with chopped fresh clam meat which they ate voraciously. The anemones were not fed separately. Instead they were fed by the fishes. The fishes used to pick the feed and release it either directly into the mouth or at the outer edge of the oral disc of the anemones. Whenever the food was given, the fishes used to eat first and after satiation, they gave the food to the anemones. But when the prey was too big to eat it was picked and directly given to the anemones. Besides clam meat, the juveniles of *Gambusia* sp. which were cultured in separate freshwater tanks were also given. About 10 to 15 numbers were given daily for 2 to 3 days in a week. Very small fishes were gulped in as such by the clown fish but bigger ones were caught and released directly into the tentacles of sea anemone.

The clown fishes grew to 85, 75 and 63 mm TL after one month. But one of the fishes (63 mm) died after some days due to asphyxiation consequent on power failure. In the next month the other two fishes grew to 90 and 85 mm respectively.

On 24.11.97 i.e. after 82 days of rearing, the first spawning occurred at 4.30 p.m. Before spawning, in the preceding 2-3 days the fishes were found to move side by side biting and nudging each other. They were also found to bite the stone frequently. The belly of the fishes were also slightly bulged.

The eggs were seen as yellow patch on the side of the stone nearer to the sea anemone. The shape of the eggs were capsule like and were approximately 2 mm long with a diameter of 1 mm and each egg got adhered to the stone through a stalk. The number of eggs could not be counted for fear of disturbance.

Immediately after spawning, the sea anemone was removed from the stone and the stone along with the eggs were shifted to another perspex tank by keeping them fully immersed in water. In the tank, mild aeration was given and the tank was fully covered with a black sheet to cut off excess light.

The colour of the eggs changed from bright yellow to dark brown and then to silvery being the colour of its large eyes. The hatching took place on the 7th day at night. Only three larvae hatched, out of which one was seen alive in the morning.

The larva had a large head and eyes, transparent body and a tail. Behind the eyes, on the ventrolateral side, there was a yolk mass yellow in colour. Pigmentation was seen on the upper side of yolk mass, on the head above eyes and on the body near the tail. But the larvae of three days old had pectoral fins also.

Immediately after spawning, the larva was seen moving very actively and were able to come up and go down in the water which had a depth of 25 cm. Due to lack of suitable live feed, an attempt was made to give the supernatant liquid after smashing the clam meat with water. But the larva survived only for three days.

The second spawning was noticed on the 12th day after the first spawning. The time of spawning was more or less same around 4 p.m. As in the previous case the eggs were transferred to another tank for hatching. Here also the hatching took place on the seventh day at night. Totally eight larvae were seen out of which only five were alive in the morning. But on the same evening, three more died. Within two days, the remaining ones also died.

Though it is said that the male will guard the eggs, in the present observation it was seen that the eggs were being eaten by the parents. Initially when the parents were seen moving around the eggs and frequently biting the egg patch, it was thought to be part of spawning activity. But on closer observation, it was noticed that they were nibbling at them. So the eggs were removed immediately. Moreover, when the hatching was fully over, the stone along with the egg cases and the non-viable eggs were put back into the parental tank. Within minutes, the entire area of egg attachment was cleaned without

even a trace. This indicates the necessity of shifting of the eggs from the parental tank.

Further spawning was not observed despite our constant watch. Moreover, after one month, one of the fishes died due to disease which appeared as decay of the edges of tail and dorsal fin.
