Weed anemone menace in marine aquaria and its management

R. Saravanan*, I. Syed Sadiq, B. Saravanakumar and R. Jayakumar
Mandapam Regional Centre of ICAR- Central Marine Fisheries Research Institute, Mandapam Camp - 623 520, Tamil Nadu
*E-mail: stingray_mr@yahoo.com

Sea anemones are coming under the Phylum Cnidaria and Class Anthozoa. Like many Cnidarians, sea anemones contain specialized cells, known as cnidocytes or nematocytes, in their body column, oral disc, pharynx, tentacles and mesenterial filaments. Sea anemones of *Aiptasia* genus are distributed in temperate and tropical oceans attached to any hard substratum. The genus *Aiptasia* includes 13 species all equipped with 96 tentacles which are filled with nematocysts to sting their prey. The name *Aiptasia* itself means 'beautiful', however in marine aquarium keeping even if few *Aiptasia* are found in the tank it should not be taken so lightly. A hardy species it can explode in numbers within weeks. *Aiptasia* is a zooxanthellate anemone and survives well in the illuminated marine aquarium due to the photosynthetic activity of its algal symbiont. The main form of reproduction is asexual through pedal laceration, where a small piece of anemone tissue separate from the anemone and each bit of this tissue can grow into an individual anemone. These weed anemone can slowly engulf the tank species through their armoured tentacles. There are about four species of *Aiptasia* commonly encountered in the marine aquarium such as *Aiptasia pallida* (Brown Glass Anemone or Pale Anemone), *Aiptasia pulchella* (Glass anemone), *Aiptasia diaphana* (Small Rock Anemone), *Aiptasia mutabilis* (Rock Anemone or Trumpet Anemone). The fouling of *Aiptasia* anemone on the rocks and glass walls is quite common in marine aquaria, peaking in summer months (Figs. 1 & 2). If such colonization begins, it has to be controlled or eradicated through mechanical, biological or chemical methods.

Fig.1. Weed anemone *Apitasia cf. diaphana*

Fig.2. Colony of weed anemone *Apitasia cf. diaphana*

In mechanical method, the *Aiptasia* fouled rocks will be removed from the tank and disinfected. This should be done properly otherwise even remnant of a single cell will start a new colony after being replaced in the aquarium. In biological control method, certain marine invertebrates like peppermint shrimp *Lysmata* sp is used, which act as a natural bio-control agent. This method is effective in the early stages of colonization of *Aiptasia* in the aquarium. If there is a widespread growth of *Aiptasia* in tanks, it has to be dealt with chemical methods. There are various commercial brands of *Aiptasia* killers available in the aquarium industry which can be used or saturated calcium chloride solution can be injected in the body column to eradicate them, which itself is a time consuming act. Several nudibranch species especially aeolid nudibranchs are known to feed on *Aiptasia* anemone. A dorid nudibranch *Chromodoris geminus* (Fig.3), a species of sea slug dominant in the Palk Bay is being assessed if useful to control the menace of *Aiptasia* in marine aquariums.

Fig.3. Dorid nudibranch *Chromodoris geminus*