Artificial asexual propagation of Sea anemone (*Entacmaea quadricolor*) using artificial propagation method

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Abstract

Sea anemones (Phylum Cnidaria; Class Anthozoa, Order Actiniaria) exhibit a diversity of developmental patterns that include cloning by fission. The genetic diversity is different form asexually breed anemone to sexually breed anemone. Sea anemone exhibits iconic symbiotic association with anemone fish and other reef fish in reef environments. Anemone fish are very important specie in aquarium trade and they need anemone for their survival. These host anemones represent high-value species for collectors. This study examines asexual propagation as a method for culturing a geographically widespread and commonly traded species of host sea anemone, *Entacmaea quadricolor*. Experiment was done to establish size influenced survival after cutting into halves. The anemones were cut in to half and observe the growth pattern and survival rates. Survival rates were high in experiment. The anemones took up to 40 days to form an off-centre mouth. This low technology method of propagation could be used to produce individuals throughout the year and the anemones could then be used to supply the aquarium trade or restock depleted habitats, thus supporting biodiversity conservation in coral reef areas.

Key words: Sea anemones, anemone fish, *Entacmaea quadricolor*, propagation, asexual reproduction.