2nd International Conference of Multidisciplinary Approaches (iCMA), 2015
Faculty of Graduate Studies,
University of Sri Jayewardenepura,
Sri Lanka
ISSN: 2386 – 1509

ARTIFICIAL ASEXUAL PROPAGATION OF SEA ANEMONE (ENTACMAEA QUADRICOLOR) USING ARTIFICIAL PROPAGATION METHOD

A.H.M.S.S.K. Abeysinghe1, K.D.S.Y. Kularathne2, D.D.B. Silva2, C. Siriwardhana2 H.B.U.G.M. Wimalasiri2

1 National Zoological Gardens, Dehiwala

2 Department of Zoology, Faculty of applied science, University of Sri Jayewardenepura, Nugegoda

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 clown fish and other reef fish in reef environments. Clown fish are very important specie in aquarium trade and they need sea anemone for their survival. These host anemones represent high-value species for collectors.

This study explores asexual propagation as a method for invitroculturing of a geographically widespread and commonly traded species of host sea anemone, Entacmaea quadricolor. Experiment was conducted to establish size influenced survival after cutting into halves. Sea anemones were purchased from commercial ornamental fish trader and the experiments were carried out in the laboratory of aquarium of National Zoological Garden, Dehiwala from March 2013 to October in 2013.Ten anemones with an average diameter of 15 cm were used for the experiment. The anemones were cut in to halves using a dissecting blade and observed the growth pattern and surviva l rates. The results showed a high survival rate of 90%. The anemones took up to 40 days to form an off-centre mouth under natural sunlight and salinity of 25ppm.

This simple and cost effective method of propagation could be used to produce individuals throughout the year. This shows the potential use of this method to fulfill the high demand of sea anemone in sea water aquarium trade or to restock depleted coral habitats, thus supporting biodiversity conservation in coral reef areas.

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