Species composition, abundance and distribution of Sea Anemone in the intertidal zones of Taklong Island and vicinity, Nueva Valencia, Guimaras

A Special Problem
Presented to
The Faculty of the
Division of Biological Sciences
University of the Philippines in the Visayas
Miagao, Iloilo

In Partial Fulfillment
Of the Requirements for the
Degree of Bachelor of Science (Biology)

Danielle Vanessa E. Arisola

April 2007

Abstract

Sea anemones are large solitary polyps that inhabit marine environments. They are the ocean dwelling members of Class Anthozoa under Phylum Cnidaria. These carnivorous animals are common along sea shores, in bays and estuaries but are never found in fresh waters. Sea anemones form a symbiotic relationship with many other marine animals which include anemonefishes and anemoneshrimps.

Due to the very little information known about sea anemones in the Philippines, this study was conducted, which specifically focuses on the species composition, abundance, and distribution of sea anemones along the intertidal zones of Taklong Island and vicinity, Nueva Valencia, Guimaras. A total census was done along the intertidal areas around Taklong Island which includes five specific areas namely, Salangan (UP channel), Likuan (area from Salangan going to Takpan-lapad), Takpan-lapad, Kalaparan, and Talisay Cove; and Piagao Cove of Tandog Island.

Five out of the 10 host species of sea anemone are found along the intertidal zones of Taklong Island and vicinity: *Entacmea quadricolor* and *Macrodactyla doreensis* which belong to the family Actiniidae; *Heteractis crispa* and *Stichodactyla gigantea* which belong to the family Stichodactylidae and *Cryptodendrum adhaesivum* which belongs to the family Thalassianthidae.

Heteractis crispa was the most dominant species, comprising 77% of the total sea anemone population, followed by *Stichodactyla gigantea* with 11%, then by *Entacmea quadricolor* and *Cryptodendrum adhaesivum* with 5%. *Macrodactyla doreensis* was the rarest species comprising only 1.3% of the total population. All 5 species of sea anemones were host anemones that harbored a variety of marine organisms namely anemoneshrimps, clownfishes (*Amphiprion clarkii, A. frenatus, A. perideraion, A. ocellaris*, and *Premnas biaculeatus*) and an anemonefish *Dascyllus trimaculatus*. Some of these anemone-fish relationships are specific, such as the relationship of *Amphiprion frenatus* to *Entacmea quadricolor*. The different species of sea anemones varied in their locations, some species are located only in sandy substrates, some only in coralline substrates and some in both. Distribution of each species along the 6 areas included in the intertidal zones of Taklong Island and vicinity also varied. Species such as *Cryptodendrum adhaesivum* and *Macrodactyla doreensis* were found only in Talisay Cove while the other species were distributed along the 6 areas. Piagao Cove contained only *Heteractis crispa* and Talisay Cove contained all 5 species.