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First Inventory of Sea Anemones (Cnidaria: Actiniaria) of the Mexican Caribbean

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Abstract

Ten species of sea anemones (Anthozoa: Actiniaria) are documented in the Mexican Caribbean based on observations and collections in 11 coral reef localities during 2006–2011; three of them are new records for Mexico. These species belong to families Actiniidae, Aiptasiidae, Aliciidae, Boloceroididae, Phymanthidae, and Stichodactylidae. Although these do not represent all species reported in the Mexican Caribbean, these are the most abundant and conspicuous. This work represents the first inventory of sea anemones of the Mexican Caribbean.

Key words: Anthozoa, Zoantharia, Taxonomy, Coelenterates, Coral reefs

Introduction

More than 60 species of actiniarian sea anemone have been identified from areas within the Caribbean region (Table 1). Despite this previous work, many areas remain understudied, including the Mexican Caribbean. Although sea anemones are common inhabitants of the coral reef systems in the Mexican Caribbean, they have received little attention in comparison to other anthozoans, particularly octocorals and scleractinian corals (Jordán-Dahlgren 1979, 1989, 1990, 1993, 2002). Studies of sea anemones in the Mexican Caribbean have focused mainly on toxicology (Sánchez-Rodríguez *et al.* 2006; Sánchez-Rodríguez & Cruz-Vázquez 2006; Monroy-Estrada *et al.* 2006; Morales-Landa *et al.* 2007), management programs of marine parks (INE 1998a, 1998b, 2000), and other few studies (LaJeunesse 2002; Jordán-Dahlgren 2008). Although these studies established the first records for 11 sea anemone species (Table 1), formal taxonomic identification was beyond their scope (Jordán-Dahlgren 2008).

The taxonomic knowledge of sea anemones in Mexico is limited, and currently no official records of species are listed in the National Commission for Knowledge and Use of Biodiversity inventories (CONABIO 2008). We provide taxonomic diagnoses for 10 species in the Mexican Caribbean, including images of living specimens and a discussion of external and internal features and of cnidae. Seven of these species have been previously recorded in the Mexican Caribbean: *Bunodeopsis antillensis* Duerden, 1897, *Actinostella flosculifera* (Le Sueur, 1817), *Condylactis gigantea* (Weinland, 1860), *Lebrunia danae* (Duchassaing & Michelotti, 1860), *Stichodactyla helianthus* (Ellis, 1768), *Bartholomea annulata* (Le Sueur, 1817), and *Ragactis lucida* (Duchassaing & Michelotti, 1860). Those recorded for the first time are: *Bunodosoma granuliferum* (Le Sueur, 1817), *Phymanthus crucifer* (Le Sueur, 1817), and *Aiptasia pallida* (Agassiz in Verrill, 1864). This work increases the number of sea anemone species for the Mexican Caribbean from 11 to 14, and represents the first inventory for the locality. We aim for sea anemones to be included in assessment and monitoring studies of coral reef species to clarify and remark the biological role and importance of this group in these ecosystems.