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**Octocorals from Costa Rica: The genus *Pacifigorgia*  
(Coelenterata: Octocorallia: Gorgoniidae)**

ODALISCA BREEDY & HECTOR M. GUZMAN



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## Octocorals from Costa Rica: The genus *Pacifigorgia* (Coelenterata: Octocorallia: Gorgoniidae)

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## Abstract

Species of the genus *Pacifigorgia* are surveyed for the first time in the shallow Pacific seas off Costa Rica. They are identified and described with detailed illustrations. The main collection belongs to the Zoology Museum, University of Costa Rica. Most of this material has been collected by means of SCUBA. This regional account of *Pacifigorgia* includes four species that were previously described: *P. adamsii*, *P. eximia*, *P. irene* and *P. stenobrochis*, and another nine that are new species.

**Key words:** Cnidaria, Coelenterata, Costa Rica, eastern Pacific, gorgonian, new species, octocoral, *Pacifigorgia*, sea fans, soft corals, taxonomy

## Introduction

Octocorallia is a group of marine organisms with a wide geographical range and a broad environmental tolerance; they are found from the Arctic to the Antarctic Oceans and occur in different population densities from shallow waters to deep abysses (Bayer 1981). Many areas, such as the eastern Pacific, have not been extensively surveyed (Bayer 1981; Williams & Lindo 1997) and therefore, no comprehensive taxonomic accounts have been made.

Gorgonian octocorals (order Alcyonacea) are the most abundant components of the shallow eastern Pacific waters (Hickson 1928; Prahel et al. 1986; Breedy & Guzman 2002).

The lack of extensive surveys along the eastern Pacific and ambiguous descriptions of this fauna have led to taxonomic confusion and apathy in the study of these organisms. The most important general contributions on gorgonians of the eastern Pacific are Valenciennes (1846, 1855), Verrill (1868a–c, 1869a–b, 1870), Hickson (1928), Bielschowsky (1918, 1929), Kükenthal (1924), and Stiasny (1941, 1943). However, these authors failed to provide detailed illustrations and in most cases holotypes were not designated (Prahel et al. 1986; Breedy & Guzman 2002).

Eleven genera in four families have been previously reported for the eastern Pacific: Gorgoniidae (*Eugorgia*, *Leptogorgia*, *Pacifigorgia*, *Phycogorgia*); Paramuriceidae (*Heterogorgia*); Plexauridae (*Muricea*, *Psammogorgia*, *Thesea*, *Echinogorgia*, *Adelogorgia*); and Ellisellidae (*Ellisella*), (Bayer 1958; Bayer & Deichmann 1960). With the exception of the genus *Pacifigorgia*, which was recently revised (Breedy & Guzman 2002) the rest remain to be studied in detail.

Octocorals are common along the coasts of Costa Rica, ranging widely in distribution and depth. Very little taxonomic research has been carried out on this group: Guzman and Cortés (1985) described 23 species from the Caribbean, later, Guzman and Jiménez (1989) added one more to the list. Verrill (1868c) reported five species for the Pacific coast, and Breedy (2001) described one more.