



Sipunculans and Echiurans of Isla del Coco (Cocos Island), Costa Rica

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Abstract

The sipunculan fauna of Isla del Coco was found to be quite diverse with eleven species reported. Several of the sipunculan species, as well as the echiuran *Thalassema steinbecki*, have been encountered previously from Pacific Costa Rica. More surprising is the occurrence of several species of sipunculans not previously known from the eastern Pacific region such as *Siphonosoma cumanense*, *Phascolosoma scolops*, *Aspidosiphon gosnoldi*, *A. misakiensis*, and *A. (Paraspidosiphon) laevis*. Possible larval sources for those species previously unknown from this region are discussed. The identity of specimens previously identified as *Phascolosoma perlucens* from Pacific Costa Rica are in question and are referred to as *P. sp.* The presence of anastomosing longitudinal muscle bands as being characteristic of the genus *Siphonosoma* is discussed.

Key words: Sipuncula, Echiura, *Siphonosoma*, *Antillesoma*, *Phascolosoma*, *Aspidosiphon*, *Thalassema*, Costa Rica, Eastern Pacific

Introduction

Isla del Coco is a small island situated in the eastern Pacific Ocean approximately 55 km from the southern coast of Costa Rica (Cortés 2008). Its next nearest neighbor is Isla Malpelo (Colombia) approximately 630 km away. Given its relative isolation from continental and other influences Isla del Coco is often considered a natural laboratory for studies of biogeography and evolution. With this in mind the government of Costa Rica established this island as a National Park and designated it and its surrounding waters as an area of Marine Conservation and allows only limited access to the area (Cajiao 2008).

The flora and fauna of Isla del Coco have been studied by many researchers with the first major studies conducted by Alexander Agassiz in 1888. Cortés (2008) has reviewed all the known marine scientific expeditions to the island and found that over 1,100 species of marine species have been reported from the surrounding waters. The major groups that have been studied include the mollusks (especially gastropods), crustaceans and fish. While Isla del Coco is thought to be a center of marine diversity in the eastern Pacific many taxonomic groups have been poorly sampled or ignored entirely.

Since 2007 scientists from the Universidad de Costa Rica's Centro de Investigación en Ciencias del Mar y Limnología (CIMAR) have been visiting the island with one of their objectives being the collection of marine organisms. As part of these studies Fernández (2008) was the first to inventory the marine algae of the island and recognized 29 species. Breedy and Cortés (2008) found 12 species of octocorals with eight of these being new records. Vargas-Castillo and Wehrtmann (2008) have found 12 new records of species of Stomatopods and Decapod Crustaceans bringing the total number of known species in those groups to 135. Alvarado and