Ailochroia crassa, one of the sponge species recorded for the coral reef in Cahuita, Caribbean Costa Rica, (Photo: Jorge Cortés).
Abstract  A total of 127 species of sponges distributed in two classes, 14 orders, 42 families, and 72 genera are reported for Costa Rica in this part. Sixty-five species from the Caribbean coast are included here, belonging to 1 class, 10 orders, 29 families, and 45 genera; and 62 species in 2 classes, 13 orders, 31 families, and 44 genera from the Pacific. There are no species in common between both sides of Costa Rica. Twenty-nine species are new records for the Caribbean and 53 species for the Pacific of Costa Rica. Four species, *Stelleta pudica*, *Amorphinopsis atlantica*, *Axinyssa lithophaga*, and *Hymeniacidon caerulea*, may be new records for the Caribbean Sea. There are probably many more species, since only a few sites have been studied, and several habitats have not been sampled in the Caribbean or Pacific of Costa Rica, for example, caves, mangroves, or deep waters. There are few studies from other Central American countries, with the exception of Belize and Panama.

Introduction

Sponges (Phylum Porifera) represent an important group of aquatic organisms, found all the way from freshwater to the deep oceanic environments and from the tropics to the poles. There are more than 7,000 valid species of sponges in the world (Hooper & Van Soest 2002, 9,000 species in Bergquist 2001). And in the Caribbean, there are probably more than 325 species reported by Hartman (1977) (see van Soest 1994, 640 species), which included only species from areas shallower than 120 m. Sponges are among the most diverse and abundant components of the fauna on tropical benthic ecosystems, such as coral reefs and mangroves (Rützler et al. 2000; Díaz & Rützler 2001). There are only four papers and one thesis (Loaiza 1989) on marine sponges of Costa Rica. The first and only paper with Pacific species includes the species collected around Isla del Coco during the cruise of the Albatross in 1891 (Wilson 1904). The second paper contains a list and description of coral boring sponges from the Caribbean coast of Costa Rica (Risk et al. 1980), the third paper is the publication of the thesis by Betty Loaiza Coronado (Loaiza 1991), in which she described the sponges from two sites on the Caribbean coast, Isla Uvita and Puerto Vargas. The last paper is a compendium of all that could be found in the literature and in the collection of the Museo de Zoología, Universidad de Costa Rica on sponges from Costa Rica (Cortés 1996).

A total of 127 species of sponges from Costa Rica are reported in this part. They comprise 2 classes, 14 orders, 42 families, and 72 genera. Sixty-five species from the Caribbean coast (Species List 6.1 is included on the CD-Rom) are presented here, comprising 1 class, 2 subclasses, 10 orders, 29 families, and 45 genera; and 62 species from the Pacific (Species List 6.2 is included on the CD-Rom) in 2 classes, 13 orders, 31 families, and 44 genera. There are no species in common between both sides. Four species, *Stelleta pudica*, *Amorphinopsis atlantica*, *Axinyssa lithophaga*, and *Hymeniacidon caerulea*, may be new records for the Caribbean Sea. There are probably more species in Costa Rica than the 127 species reported here, since only a few sites have been studied, and several habitats have