

## A new species of *Leptogorgia* (Coelenterata: Octocorallia: Gorgoniidae) from the shallow waters of the eastern Pacific

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### Abstract

*Leptogorgia cofrini*, a new species of the family Gorgoniidae from Pacific Costa Rica and Panama inhabiting shallow waters (<25 m in depth) is described and illustrated. The small size, abundant, irregular branching, and the combination of long anthocodial rods, abundant large capstans, and a low occurrence of spindles in the coenenchyme are the main distinct characteristics of the new species. Mineralization of the axial skeleton is reported.

**Key words:** Carbonate hydroxylapatite, Cnidaria, Coelenterata, octocoral, *Leptogorgia*, biodiversity, new species, coral reef, Costa Rica, Panama, eastern Pacific

### Introduction

The widespread genus *Leptogorgia* Milne Edwards & Haime, 1857, is also distributed throughout most of the eastern Pacific with about 16 nominal species (Valenciennes 1846, 1855; Duchassaing & Michelotti 1864; Verrill 1868, 1870; Hickson 1928) from shallow waters of Central America to the deeper waters (> 1900 m) of the East Pacific Rise (Bayer 2000). Six species have been reported for the shallow areas of Panama and three for Costa Rica (Verrill 1868; Hickson 1928).

Distinction among species of *Leptogorgia*, as in most gorgoniids, is based on morphological criteria, colony growth form, colour, and sclerites (Grasshoff 1992). In the chambered axial core of some gorgoniids, Bayer and Macintyre (2001) found a mineral compound, carbonate hydroxylapatite (CHAp), that is deposited as microspheres on the inner wall of the chambers and on the fine organic fibrillar meshwork filling the chambers. Some species also contain CHAp in the holdfast, filling the loculi in the layers of gorgonin. Bayer and Macintyre suggested that the skeletal mineralogy in the axes and holdfasts