



## *Elacatinus lobeli*, a new cleaning goby from Belize and Honduras

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### Abstract

*Elacatinus lobeli* is described as a new species of cleaning goby from coral reefs of Belize and Islas de la Bahía, Honduras. Formerly misidentified as *E. oceanops* Jordan, it differs in smaller size (largest, 31 mm SL vs. 41 mm for *E. oceanops*), 10–12 (rarely 12) branched caudal rays vs. 12–14 (rarely 12) for *E. oceanops*, a mode of 16 pectoral rays vs. 17 for *E. oceanops*, a longer pelvic disk, averaging 17.1% SL, vs. 15.6% for *E. oceanops*, and in life color: notably a bright blue line within a gray stripe on upper side of body, compared to a broad bright blue stripe on *E. oceanops*. It has been observed in cleaning symbioses with 39 species of fishes representing 19 families. Larval gnathiid isopods have been found in the gut contents.

**Key words:** Caribbean Sea, *Elacatinus*, cleaning goby, new species

### Introduction

The gobiid fish *Elacatinus oceanops* was described by Jordan (1904: 542, pl. 2, fig. 2) as a new genus and species from Dry Tortugas, Florida. The genus was noted as being allied to *Gobiosoma* Girard, but differing in the small inferior mouth and the form of the body. It was often observed at rest on living coral. Longley (1918) and Longley in Longley & Hildebrand (1941) discovered that it feeds on ectoparasites of fishes.

Böhlke & Robins (1968) reviewed the seven-spined gobiid fishes of the western Atlantic. They classified *Elacatinus* as a subgenus of *Gobiosoma*, recognizing 12 species for the western Atlantic. Recent authors, such as Sazima *et al.* (2000), Colin (2002), Guimãraes *et al.* (2004), Taylor & Hellberg (2006), and Sazima *et al.* (2008), have followed Jordan in treating *Elacatinus* as a genus.

The second author conducted his PhD research on the systematics, ecology, and distribution of these 12 species at the University of Miami, which was published as the book *Neon Gobies* (Colin, 1975). He wrote that seven of the species are associated with living corals. Six of these actively engage in removing ectoparasites from fishes; the seventh feeds on zooplankton. The remaining five species are closely associated with sponges. They take shelter in and at least one is known to reproduce within the lumen. Most sponge-dwellers are known to feed mainly on the parasitic polychaete of sponges, *Haplosyllis spongicola*.

Randall & Lobel (2009) reviewed the systematic literature on *Elacatinus* and described two new sponge-dwelling species from the Caribbean Sea, bringing the total number of western Atlantic species of the genus to 21.

Colin (1975) determined that six of the 12 species of *Elacatinus* known at that time show geographic variation in the color of the pale stripe on the body. He found a consistent difference in the live coloration of *Elacatinus oceanops* between Florida and Belize. The goby in Florida has a broad bright blue stripe on the upper side of the body between the two black stripes, whereas in Belize, the blue is reduced to a bright line in the lower part of the gray zone that separates the two black stripes. Randall (1996: 312, fig. 388) also mentioned the difference in color of the two populations.