



A literature review of the sponge-dwelling gobiid fishes of the genus *Elacatinus* from the western Atlantic, with description of two new Caribbean species

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Abstract

Nineteen species of the neotropical gobiid genus *Elacatinus* are currently known from the western Atlantic, six of which are closely associated with sponges. *Elacatinus colini* is described as a new species of sponge-dwelling goby from Belize and Islas de la Bahía, Honduras. Formerly regarded as a color variant of *E. xanthiprora* (Böhlke & Robins) from Florida, it is differentiated principally by having a white instead of bright yellow stripe on the body, and 17 or 18 vs. 19 or 20 pectoral-fin rays. A second new species, *E. serranilla*, also formerly identified as a color form of *E. xanthiprora*, is described from three specimens from the Serranilla Bank in the Caribbean Sea (15°50'N, 79°50'W) and one from Jamaica (formerly a paratype of *E. xanthiprora*). It is distinct in having 10 dorsal soft rays (vs. 11 or 12 for *E. xanthiprora*), a bluish white dorsolateral stripe and median rostral band, longer dorsal-fin spines, and longer dorsal and anal soft rays. *Elacatinus xanthiprora* is presently known from Dry Tortugas (type locality) north to Miami in the Atlantic, and north to 28°41'N, 83°45'W on the Gulf coast of Florida, where the largest specimen (ANSP 148926, 43.1 mm SL) was collected at a depth of 26 m. Specimens off the east coast of Nicaragua in 27 m, and from nearby Isla de Providencia in 3–13 m, also previously identified as *E. xanthiprora*, probably represent two different undescribed species. Additional collection of specimens from the latter two localities is recommended for details of life color and DNA analysis.

Key words: Caribbean Sea, gobiid fish, *Elacatinus*, sponge-dwelling, 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 five specimens collected by the surgeon Joseph C. Thompson stationed at the U.S. Naval Station on Garden Key, Dry Tortugas, Florida. Thompson described its habits as: “clinging to coral heads; endeavors to shelter in grooves.” Jordan wrote, “This species is the type of a distinct genus, *Elacatinus*, allied to *Gobiosoma*, but differing in the small, inferior, minnow-like mouth and in the form of body.” Longley (1918) and Longley in Longley & Hildebrand (1941: 226) was the first to report that *E. oceanops* removes ectoparasitic crustaceans from a variety of reef fishes.

Böhlke & Robins (1968) reviewed the seven-spined gobiid fishes of the western Atlantic. They divided the genus *Gobiosoma* Girard into five subgenera: *Gobiosoma*, *Austrogobius* de Buen, *Tigrigobius* Fowler, *Garmannia* Jordan and Evermann, and *Elacatinus* Jordan. They recognized 12 species in the subgenus *Elacatinus* for the western Atlantic, which they divided into two groups. The *horsti* group comprised *Gobiosoma horsi* Metzelaar, *G. chancei* Beebe and Hollister, and six new species, *G. atronasum*, *G. louisae*, *G. prochilos*, *G. randalli*, *G. tenox*, and *G. xanthiprora*. The first two species and the last were known to be closely associated with sponges, and *G. tenox* was regarded as a probable sponge inhabitant. The *oceanops* group consisted of *G. oceanops* (Jordan), and three new species, *G. evelynae*, *G. genie*, and *G. illecebrosus*.