

PROCEEDINGS
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A NEW CLINGFISH, *TOMICODON RHABDOTUS*
FAMILY GOBIESOCIDAE, FROM THE
LESSER ANTILLES¹

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Collections of shore fishes by Victor G. Springer, obtained under the auspices of the Breden-Archbold-Smithsonian Biological Survey of Dominica, contained several undescribed species, among which is a distinctive new *Tomicodon*. The new species brings to 11 the total known in the genus and represents a second species from the Atlantic Ocean.

The following description is based on the uniform plan and sequence previously adopted for this order of fishes (Briggs, 1955). Methods and terminology also follow those described in that work. Measurements included in the description were taken by measuring individual body parts and arithmetically dividing the results into the standard length.

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***Tomicodon rhabdotus* new species**

Fig. 1

Holotype: USNM 201804, 38.4 mm standard length (SL), collected just north of Bibay River, Bout Sable Bay, Dominica, bottom black sand and few rocks, 0-2½ ft., 13 November 1964, by V. G. Springer, R. H. Reckeweg, and P. Spangler (VGS 64-26).

¹ Contribution No. 74, Tropical Atlantic Biological Laboratory, Bureau of Commercial Fisheries, Miami, Florida 33149 and Contribution No. 971, Institute of Marine Sciences, University of Miami, Miami Florida, 33149.

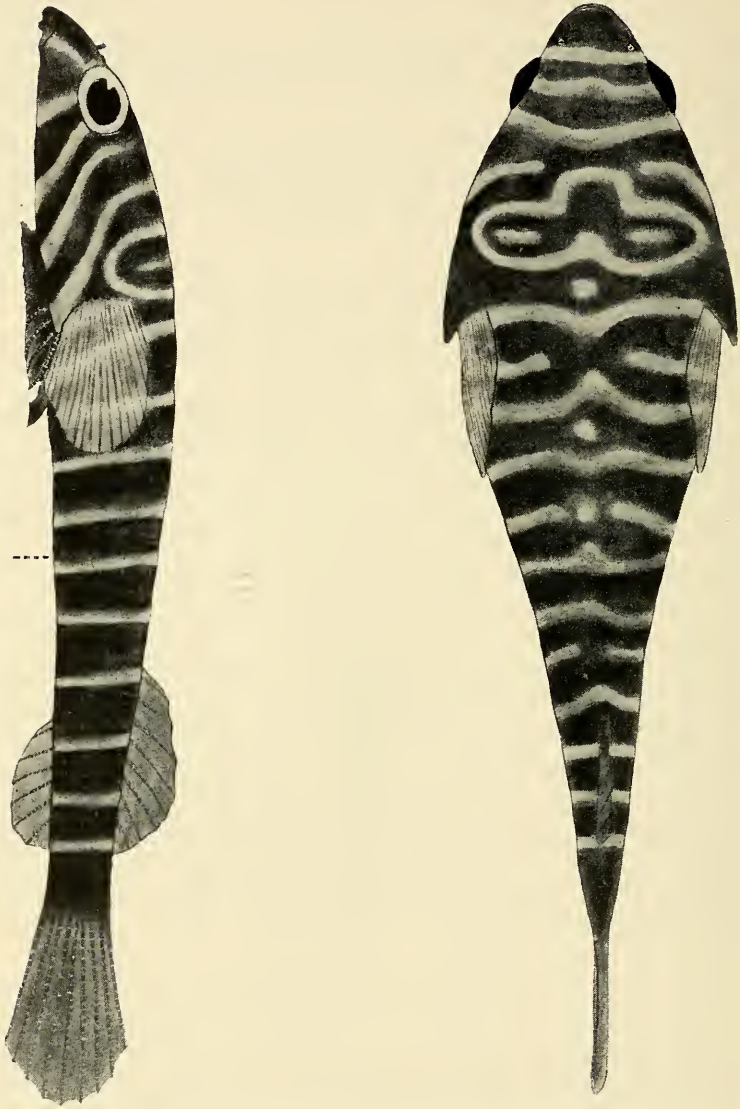


FIG. 1. *Tomicodon rhabdotus*. USNM 199561; paratype; 18.7 mm SL. (see text for data). A. Dorsal view. B. Lateral view.

TABLE 1. Comparison of three species of *Tomicodon*.

Character	<i>T. rhabdotus</i>	<i>T. humeralis</i>	<i>T. f. fasciatus</i>
Pectoral rays	18 (17 or 18)	18 (17 to 19)	21 (20 to 22)
Vertebrae	14 + 14 or 15 = 28 or 29 (usually 29)	14 or 15 (usually 15) + 14 to 17 = 29 to 32 (usually 30)	14 or 15 (usually 15) + 16 to 23 = 31 to 38 (usually 32)
Caudal rays	8	10 (9 or 10)	8
Dermal flap	large, height about 2 times diameter of anterior nostril	small, height usually less than diameter of anterior nostril	small, greatest height not exceeding diameter of anterior nostril
Position of anus	slightly closer to margin of disc than to anal fin origin	much closer to anal fin origin than to margin of disc	slightly closer to anal fin origin than to margin of disc
Pigmentation of sides	series of narrow pale vertical stripes against dark background	series of narrow pale diagonal stripes against dark background	series of heavy dark bars which extend partially to ventral surface against pale background

TABLE 2. Measurements of the holotype and two paratypes of *Tomicodon rhabdotus* (in thousandths of standard length).

	Holotype USNM 201804	Paratype USNM 199561	Paratype USNM 199560
Standard length (mm.)	38.4	18.7	15.9
Greatest body depth	126	126	107
Caudal peduncle depth	073	072	072
Caudal peduncle length	095	091	084
Head length	355	396	404
Head width	302	333	333
Snout length	094	086	075
Eye diameter	057	083	087
Bony interorbital	079	076	073
Dorsal-caudal length	284	259	248
Pectoral fin length	133	144	155
Postdorsal-caudal length	090	083	082
Disc length	293	297	309

Paratypes: USNM 199560, one specimen 15.9 mm SL, just north of Rav Anse Cola River and a little south of Colihaut, Dominica, bottom algal-covered rocks and barren boulders, 0–20 ft., 31 October 1964, V. G. Springer and R. H. Reckeweg (VGS 64–14). USNM 199561, one specimen 18.7 mm SL, Grand Bay, just south of Stowe, Dominica, bottom rocks and boulders, 0–15 ft., 2 November 1964, V. G. Springer and R. H. Reckeweg (VGS 64–16).

Diagnosis: A medium-sized *Tomicodon* with 5 pairs of trifid incisors in upper jaw and 4 pairs in lower jaw. Anus slightly closer to posterior margin of disc than to anal fin origin. Dermal flap extending from margin of anterior nostril comparatively large, simple, and broad at distal end; its height equal to or greater than distance between anterior and posterior nostrils. Distinctive pattern of narrow, pale, vertical stripes on posterior half of sides of body. Dorsal rays 9, anal rays 6, pectoral rays 18 (17 or 18), and caudal rays 8. Vertebrae 14 + 14 or 15 = 28 or 29, including hypural.

Description: Body moderately compressed, depth 7.9–9.3 in SL. Caudal peduncle short, least depth 1.2–1.5 in length. Head depressed, length 2.5–2.8 and width 3.0–3.3 in SL. Snout moderately shallow with a rounded outline, 3.8–5.4 in head length. Teeth in front of upper jaw consist of 5 pairs of trifid incisors in all specimens, followed on each side by 2 (1 or 2) well-developed canines. Lower jaw with 4 pairs of trifid incisors in all specimens, followed on each side by 3 (2 or 3) well-developed canines.

Greatest diameter of eye 0.8–1.4 in bony interorbital width and 4.7–6.2 in head. Subopercular spine moderately developed, but hidden by

TABLE 3. Frequency distribution of vertebrae in three species of *Tomicodon*.

Species	28	29	30	31	32	33	34	35	36	37	38	No.	mean
<i>T. rhabdotus</i>	1	2										3	28.66
<i>T. humeralis</i>		11	54	12	1							78	30.08
<i>T. f. fasciatus</i> ¹				3	31	9			2	2	1	48	32.62

¹ Although several specimens of *T. fasciatus* exhibited unusually high vertebral counts, they appeared to be otherwise typical.

heavy skin of opercle region. Upper attachment of gill membrane opposite 5th (5-6) pectoral ray.

Dorsal-caudal distance may extend forward as far as the posterior margin of pectoral fin. Postdorsal-caudal distance 1.8-2.0 in dorsal length. Disc length 3.2-3.4 in SL. Disc region A with 6-7 rows of flattened papillae across its width; 9-10 rows across width of disc region B.

Coloration: No color observations were made at the time of collection. Specimens examined shortly after being placed in isopropanol, exhibited a rich olive-green ground color. The light diagnostic markings (fig. 1) were pale yellow, perhaps as a result of fading. After several months in alcohol, the ground color faded to brown. Configuration of the pale body markings is nearly identical in all specimens; the markings were more conspicuous, however, in the two small paratypes which were noticeably darker than the holotype.

Etymology: From the Greek, *rhabdotus*, meaning striped.

Discussion: As indicated in Table 1, the new species is not closely related to *T. fasciatus* (Peters), the only species of the genus known previously from the Atlantic Ocean. Of the Eastern Pacific species of *Tomicodon*, *rhabdotus* is probably most closely related to *T. humeralis* (Gilbert), endemic to the Gulf of California. Although the two species are easily differentiated, they have in common low vertebral and pectoral-ray counts, and a high dorsal-ray count. Configuration of lateral markings is similar in the two species. The major difference is that in *rhabdotus* the lateral stripes are nearly vertical, whereas in *humeralis* they are diagonal.

The apparent restricted distribution of *Tomicodon rhabdotus* and the similarities it shares with *T. humeralis* suggest that it has only recently invaded the Atlantic Ocean. In contrast, the wide distribution and the occurrence of two forms, subspecifically distinct, indicate that *T. fasciatus* has long been established in the Atlantic.

LITERATURE CITED

- BRIGGS, JOHN C. 1955. A monograph of the clingfishes (order Xenopterygii). Stanford Ichthy. Bull. 6: 1-224, 114 figs., 15 maps.