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Ramon Ruiz-Carus

Florida Fish and Wildlife Conservation Commission

Richard E. Matheson Jr.

Florida Fish and Wildlife Conservation Commission

Frederic E. Vose

Florida Fish and Wildlife Conservation Commission

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The Threespine Bass, *Synagrops trispinosus* (Perciformes; Acropomatidae), an Addition to the Fish Fauna of the Gulf of Mexico

RAMON RUIZ-CARUS, RICHARD E. MATHESON JR., AND FREDERIC E. VOSE

We present the first documented record of *Synagrops trispinosus* in the Gulf of Mexico. This record represents a moderate extension to the known southern Caribbean distribution; it is nevertheless a new addition to the ichthyofauna of U.S. coastal waters.

During the preparation of a manuscript on the distribution of *Scombropro oculatus* (Ruiz-Carus et al., 2003), C. R. Gilbert brought to our attention three fishes in the ichthyology collection of the Field Museum of Natural History, catalog number FMNH 46438, that were collected in the Gulf of Mexico and identified as *Scombropro oculatus* (Scombroproidae). Although these specimens (Fig. 1A,C,E) are very similar in external shape to *S. oculatus* and have three anal-fin spines, our examination indicated that they actually represent the first record of *Synagrops trispinosus* Mochizuki and Sano, 1984 (Perciformes; Acropomatidae) in the Gulf of Mexico. In addition to these fish, we also located seven specimens of *S. trispinosus* from the southeastern Gulf of Mexico in the ichthyology collection of the Florida Museum of Natural History.

Synagrops trispinosus has been collected in outer continental and insular shelf waters from the Caribbean Sea to Brazil (Mochizuki and Sano, 1984; Garzón and Acero-P., 1986; Cervigón, 1993; Mejía et al., 2001; Cavalcanti and Lopes, unpubl.). This species is demersal and relatively common in depths of between 36 and 550 m off Jamaica, Puerto Rico, the Virgin Islands, Nicaragua, Colombia, Venezuela, and Surinam (Mochizuki and Sano, 1984; Garzón and Acero-P., 1986; Cervigón, 1993; Mejía et al., 2001).

We report the first records of *S. trispinosus* from the Gulf of Mexico. This range extension is based on 10 specimens. Three of these specimens (FMNH 46438) were trawled from a depth of 173 m, approximately 40 nautical miles (72 km) southeast of Cape San Blas, FL (29°10'N 85°55'W). Seven other specimens (Florida Museum of Natural History, catalog numbers UF 43133, UF 109760, UF 111439, and UF 116715) were trawled in the vicinity of Dry Tortugas in the Straits of Florida (24.2916°–24.3333° N 82.5916°–82.8916° W). These fish were taken with a 3-m otter trawl at depths of 137–365 m. The collections were made from 3 May 1998 to 11 May 2000.

Although some systematists place the genus *Synagrops* in the family Percichthyidae (e.g., Schultz, 1940; Mochizuki and Sano, 1984), we followed Johnson (1984) and Heemstra (1986) in assigning *Synagrops* to the family Acropomatidae, or oceanic basses.

MATERIALS AND METHODS

Identification was based on the original description (Mochizuki and Sano, 1984) and on the study of Cervigón (1993). Meristic and morphometric data were obtained according to standard procedures (Hubbs and Lagler, 1949). Measurements less than 5 mm were made to the nearest 0.1 mm with an ocular micrometer. Meristic counts were verified from X-radiographs (Fig. 1B,D,F).

RESULTS

Synagrops trispinosus, FMNH 46438

Diagnostic characters—Body elongate, head slender; first and second dorsal fins clearly separated (Fig. 1A,C,E). Pelvic spines with anterior edge distinctly serrated; anterior edge of second spine of first dorsal fin and anal fin smooth. Anal-fin spines three, first dorsal-fin spines eight, number of pored scales in lateral line 46–51. Posterior margin of preoperculum weakly serrated. Teeth in upper and lower jaws in a single row; canines long, sharp, well separated; upper jaw with three to four prominent fanglike teeth anterior to the vomer and without large canines on premaxillary; lower jaw with two small canines at front, followed by three to five large canines. Vomer with two canines; palatine teeth villiform.

Meristic and morphometric characters of the FMNH 46348 specimens are shown in Table 1. The size range of the *S. trispinosus* caught in the Straits of Florida (UF 43133, UF 109760, UF 111439, and UF 116715) is 65.5–107.1 mm standard length and 80.7 to 125.1 mm total length (TL). The fin-ray counts for these spec-

Fig. 1. A, C, and E: Lateral view of *Synagrops trispinosus*, FMNH 46438 specimens, 69.5, 61.2, and 47.6 mm standard length (79.3, 74.2, and 58.2 mm total length, respectively). B, D, and F: X-radiograph of *S. trispinosus*, FMNH 46438 specimens; (B) shows the remains of an unidentified fish inside the stomach.

imens are as follows: dorsal VIII-IX, 10; anal III, eight to nine; pectoral 16–17; and pelvic I, five.

DISCUSSION

Although originally identified as *S. oculatus*, the FMNH specimens differ from that species but are diagnosed as *S. trispinosus* by the following characteristics: relatively longer, more slender, barbless canine teeth vs shorter, more robust, barbed canines; pelvic-fin spines with strongly serrated anterior edges vs smooth anterior edges; and preopercular posterior margin weakly serrated vs smooth (Poey, 1860; Mochizuki and Sano, 1984; Garzón and Acero-P., 1986; Cervigón, 1993; Ruiz-Carus et al., 2003).

Synagrops trispinosus is easily distinguished from congeneric species occurring in the Gulf of Mexico. The anal fin count of *S. trispinosus*

is III, eight to nine, usually III, nine, and II, seven to eight in both *S. bellus* and *S. spinosus*. From about 7.2 mm TL, the anterior edge of pelvic spines and the second spines of dorsal and anal fins are all smooth in *S. bellus* and serrated in *S. spinosus*. Pelvic spines are the only fin spines serrated in *S. trispinosus*. Scales are complete at about 20 mm TL; the number of scales on the lateral line, counted to the caudal-fin base, is 46–51 in *S. trispinosus*, 28–31 in *S. bellus*, and 29–31 in *S. spinosus* (Mochizuki and Sano, 1984; Mejía et al., 2001; Ruiz-Carus, 2003).

Garzón and Acero-P. (1986) suggested that *S. trispinosus* is a carnivore because of the structure of the mouth and teeth. We confirm that this species consumes fish. An X-radiograph (Fig. 1B) revealed the remains of an unidentified fish inside the stomach of the 79.3-mm TL specimen.

TABLE 1. Meristic and morphometric characters of *Synagrops trispinosus*, FMNH 46438. For morphometric characters other than standard length (SL) and total length (TL), entries represent the measurement in millimeters followed by the ratio of this measurement to SL or head length (HL) in percent.

Character	Specimen		
	FMNH 46438 (1)	FMNH 46438 (2)	FMNH 46438 (3)
Dorsal fin	VIII, I + 10	VIII, I + 10	VIII, I + 10
Anal fin	III, 9	III, 9	III, 9
Pectoral fin	~17	~17	~17
Pelvic fin	I,5; spine serrated	I,5; spine serrated	I,5; spine serrated
Holobranchs	4	4	4
Gill rakers: upper + lower	5 + ~15	5, rudiment + 15	5 + 15
Premaxillary canines	None	None	None
Lower jaw canines	2	2	2
Frontal canines in lower jaw followed by 9 large canines?	No, only 4	No, only 3	No, only 5
Vomerine canines	2	2	2
Canines in upper jaw	4	4	3
Scales above lateral line	Damaged	Damaged	Damaged
Vertebrae	25 = 11 + 14	25 = 11 + 14	25 = 11 + 14
SL/TL	69.5/79.3	61.2/74.2	47.6/58.2
Body depth	17.1/24.6	14.3/23.3	11.6/24.3
Head length	24.3/34.9	23.0/37.5	17.6/36.9
Eye diameter/% HL	6.9/28.3	6.2/26.9	4.9/27.8
Interorbital width/% SL	5.3/7.6	5.1/8.3	3.7/7.8
Preorbital length/% HL	5.9/24.2	5.4/23.4	4.4/22.9
Postorbital length/% HL	11.6/47.7	10.6/46.0	8.5/48.2
Upper-jaw length/% HL	10.9/44.8	9.8/42.6	7.4/42.0
Pectoral-fin length/% SL	19.7/28.3	13.3/21.7	11.7/24.6
Pelvic-fin length/% SL	11.5/16.5	7.8/12.7	7.0/14.7
Dorsal-fin base length/% SL	27.0/38.8	26.9/43.9	21.3/44.7
Anal-fin base length/% SL	13.0/18.7	11.3/18.5	9.3/19.5
Caudal-fin shape	Forked	Forked	Forked
Scales	Cycloid; entire edge	Cycloid; entire edge	Cycloid; entire edge
Mouth	Superior	Superior	Superior
Canines barbed?	No	No	No
Body color in alcohol	Straw	Straw	Straw

The meristics and morphometrics of all the specimens from the Gulf of Mexico are within those reported for Caribbean specimens (Garzón and Acero-P., 1986; Cervigón, 1993; Mejía et al., 2001).

Synagrops trispinosus does not have an English common name. We have suggested the common name threespine bass to the American Fisheries Society Fish Names Committee. This common name was accepted and it will appear in the upcoming sixth edition of Common and Scientific Names of Fishes from the United States, Canada, and Mexico (J. S. Nelson, pers. comm.). We also suggested the Spanish common name—pardete tres-espinas—but this common name will not be included because *S. trispinosus* has not been reported off Mexico.

The threespine bass caught off northwest Florida represent a moderate extension to the

known geographic distribution of the species. The new locality is approximately 895 nautical miles (1,657 km) from southwestern Jamaica (17.8833° N 77.9333° W), the closest other record. The records in the Straits of Florida are about 666 nautical miles (1,233 km) from southwestern Jamaica. The threespine bass is a new addition to the fishes known to occur in U.S. coastal waters.

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- FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, FLORIDA MARINE RESEARCH INSTITUTE, 100 EIGHTH AVENUE SE, ST. PETERSBURG, FL 33701–5020. Send reprint requests to RRC. Date accepted: October 7, 2004.