

A New Percichthyid Fish *Neoscombrops atlanticus* from the Caribbean Sea

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Abstract A new percichthyid fish, *Neoscombrops atlanticus*, is described on the basis of 15 specimens from the Caribbean Sea. It is distinguished from congeners by the combination of the following characters: pored scales on lateral line 44~48 (mean 46) to hypural end; gill rakers on lower part of first arch 14~18 (mean 17); teeth on lateral side of lower jaw greatly reduced in size; some scales on body ctenoid. All specimens of the species were captured at the depths between 180 and 650 m mainly by shrimp trawls.

The percichthyid fish genus *Neoscombrops* has been represented by only three species: *N. annectens* Gilchrist, 1922 which is distributed off south-east coast of Africa, *N. analis* Katayama, 1957 from Owase, Japan, and *N. pacificus* Mochizuki, 1979 in the Pacific Ocean. A fourth species of the genus was discovered among the fish collections in U. S. National Museum of Natural History (USNM) and California Academy of Sciences (CAS). This new species is described and compared with the allied species in the present paper.

Neoscombrops atlanticus sp. nov.

(Fig. 1)

Holotype. USNM 232322, 123 mm in standard length (SL), 12°07'N, 82°44'W, Caribbean Sea, 192 m depth, shrimp trawl, Feb. 7, 1967.

Paratypes. USNM 229531, 2 specimens, 133, 134 mm SL, 12°09'N, 72°47'W, off Colombia, Caribbean Sea, 180 m depth, shrimp trawl, June 1, 1964; USNM 229532, 2 specimens, 126, 127 mm SL, 11°02'N,

75°10'W, off Colombia, Caribbean Sea, 180~198 m depths, shrimp trawl, May 23, 1964; USNM 229533, 1 specimen, 112 mm SL, 12°13'N, 72°34'W, Caribbean Sea, 180 m depth, shrimp trawl, June 1, 1964; USNM 229534, 3 specimens, 125~157 mm SL, 11°08'N, 74°23'W, off Venezuela, Caribbean Sea, 180 m depth, shrimp trawl, May 19, 1964; USNM 229535, 1 specimen, 240 mm SL, 20°42'N, 73°38'W, off Cuba, Caribbean Sea, 650 m depth, shrimp trawl, May 24, 1965; USNM 232323, 3 specimens, 119~134 mm SL, collected with the holotype; CAS 44052, 2 specimens, 172, 186 mm SL, 19°57'N, 71°05'W, off Dominica, Caribbean Sea, 270~342 m depths, trawl, Oct. 14, 1964.

Diagnosis. This species is distinguished from other members of the genus *Neoscombrops* by the combination of the following characters: pored scales on lateral line 44~48 (mean 46) to hypural end; gill rakers on lower part of first arch 14~18 (mean 17); teeth on lateral side of lower jaw greatly reduced in size; some scales on body ctenoid.

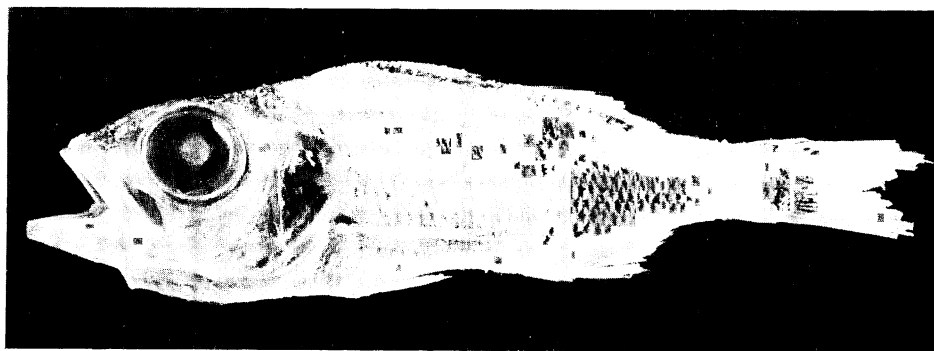


Fig. 1. Holotype of *Neoscombrops atlanticus* sp. nov., USNM 232322, 123 mm SL, captured from Caribbean Sea.

Description. Counts and proportional measurements are shown in Table 1.

The following description is based on the holotype. Characters of paratypes, when different from those of the holotype, are in parentheses.

Body elongate, compressed, and covered with large, thin and deciduous scales; remaining ones either ctenoid or cycloid (Fig. 2). Head scaly except for around nostrils and near tip of snout. Interorbital space flat. Eye large. Nostrils

just in front of eye; the anterior one with very small flap, smaller than the posterior. Mouth large. Maxillary reaching below anterior margin of pupil. Supramaxillary single. Subocular shelf present. Posterior margin of preopercle thin, smooth. Opercle with two flat, flexible spines. Pseudobranchiae well developed.

Premaxillary with a strong canine near symphysis, surrounded by several small teeth, and with a broad band of villiform teeth on each side. Dentary with two strong canines

Table 1. Comparison of counts and proportional measurements of *Neoscombrops atlanticus* sp. paratype material at the end of this paper; 3) from Starnes and Mochizuki (1982).

Characters	<i>N. atlanticus</i> sp. nov.			
	Holotype USNM 232322	Paratypes		
		Range	Mean	N
Standard length in mm	123	112~240	144	14
Counts				
Dorsal fin rays	IX-I, 10	IX-I, 10	IX-I, 10	14
Anal fin rays	III, 7	III, 7	III, 7	14
Pectoral fin rays	16	15~16	16	14
Pelvic fin rays	I, 5	I, 5	I, 5	14
Branched caudal fin rays	8+7	8+7	8+7	14
Lateral-line scales to hypural end	47	44~48	46	14
Transverse scales (above/below lateral line)	—	4~6/10~13	5/11	3/5
Gill rakers (upper+middle+lower)	6+1+17	4~7+1+14~18	6+1+17	14
Vertebrae	10+15	10+15	10+15	14
Predorsal bones	3	3	3	14
Branchiostegals	7	7	7	14
Teeth on lower jaw (left/right sides)	ca. 20~30	ca. 20~40	—	14
Measurements in standard length				
Head length	2.56	2.52~2.73	2.62	14
Body depth	3.24	2.98~3.37	3.16	14
Body width	7.24	5.67~7.88	6.55	14
Snout length	9.46	7.88~10.33	9.18	13
Eye diameter	7.24	6.74~7.88	7.20	14
Interorbital space	11.18	10.72~12.44	11.62	14
Upper jaw length	5.35	4.96~5.64	5.36	14
Caudal peduncle depth	9.46	7.74~10.25	9.01	14
Snout to origin of dorsal fin base	2.46	2.33~2.63	2.48	14
Snout to end of dorsal fin base	1.27	1.17~1.29	1.24	14
Snout to origin of anal fin base	1.40	1.29~1.40	1.34	9
Snout to end of anal fin base	1.22	1.16~1.21	1.19	9
Snout to pectoral insertion	2.51	2.38~2.71	2.56	6
Snout to pelvic insertion	2.20	2.18~2.45	2.34	5
Length of pectoral fin	—	3.00~3.50	3.29	12
Length of pelvic spine	—	6.29~7.75	6.95	14
Measurements in eye diameter				
3rd spine length of 1st dorsal fin	—	0.82	0.82	1
3rd spine length of anal fin	1.21	0.97~1.21	1.10	9

(sometimes one) near symphysis, single row of ca. 20~30 small teeth (ca. 20~40) on the side, and with a patch of villiform teeth on both the anterior and posterior parts. Vomer with a Λ -shaped patch of villiform teeth. Palatine with very small teeth forming a narrow band anteriorly, tapering to a single row posteriorly. Tongue smooth.

Dorsal fins two, close together. First spine of first dorsal fin very short; third and fourth longer than other dorsal spines. First dorsal

fin naked, depressible in a groove. Bases of second dorsal and anal fins covered with two or three rows of scales. First anal spine very short, third longest. Caudal fin deeply forked, with small scales near its base and with 3 (3~8) pored scales.

Color in alcohol uniformly dark purplish brown (sometimes light yellowish brown). Mouth cavity blackish, except for tongue and anterior parts of inner surface of both upper and lower jaws.

nov., *N. annectens*, and *N. pacificus*. 1) from Mochizuki (1979); 2) specimens are listed as com-

<i>N. annectens</i> Gilchrist				<i>N. pacificus</i> Mochizuki			
Neotype ¹⁾	FSFL ¹⁾ , RUSI ²⁾ , USNM ²⁾ specimens			Holotype ¹⁾	Paratypes ¹⁾ , Samoan specimens ²⁾		
SAM 15749	Range	Mean	N	ZUMT 52879	Range	Mean	N
142	57~206	102	30	312	205~339	286	7
IX-I, 10	IX-I, 10	IX-I, 10	29	IX-I, 10	IX-I, 10	IX-I, 10	7
III, 7	III, 7	III, 7	30	III, 7	III, 7	III, 7	6
16	15~18	16	30	15	15	15	7
I, 5	I, 5	I, 5	30	I, 5	I, 5	I, 5	7
8+7	8+7	8+7	29	8+7	8+7	8+7	7
ca. 39	36~41	38	28	50	47~51	49	7
4 or 5/-	3~5/9~11	4/10	16/19	5/ca. 12	5/11~ca. 13	5/ca. 12	7
—	4~6+1+14~15	5+1+15	30	6+1+15	4~8+1+13~15	6+1+14	7
10+15	10+15	10+15	30	10+15	10+15	10+15	7
3	3	3	30	3	3	3	7
7	7	7	30	7	7	7	7
—	13~23/14~26	17/18	10	19/18	19~22/16~23	21/19	7
2.73	2.39~3.07	2.64	25	2.84	2.44~2.78	2.63	7
3.30	2.86~3.74	3.32	30	2.69	2.59~3.25	2.90	7
7.41	6.00~8.70	6.98	29	5.29	5.14~6.68	5.88	7
10.52	8.60~11.43	10.08	30	9.75	9.18~10.71	9.66	7
8.61	7.09~10.11	8.35	30	9.75	7.58~10.10	8.52	7
11.83	9.41~13.71	11.06	30	10.40	9.78~12.06	11.04	7
5.46	4.88~6.26	5.48	30	6.12	5.27~5.95	5.50	7
—	7.79~11.75	9.72	30	8.67	7.89~8.48	8.05	7
2.41	2.41~2.97	2.64	30	2.44	2.29~2.51	2.39	7
1.21	1.20~1.33	1.25	30	1.25	1.18~1.25	1.22	7
1.41	1.36~1.51	1.42	26	1.41	1.31~1.48	1.40	7
1.20	1.18~1.27	1.23	26	1.24	1.19~1.25	1.22	7
2.63	2.37~3.00	2.60	26	2.86	2.57~2.98	2.74	7
2.45	2.06~2.76	2.39	26	2.54	2.28~2.61	2.42	7
—	2.65~3.45	3.06	28	3.22	2.86~3.19	3.03	7
—	6.71~8.18	7.48	13	7.80	6.78~7.81	7.39	4
—	0.71~1.00	0.81	8	—	0.67~0.83	0.75	3
0.85	0.80~1.16	1.00	21	0.70	0.78~0.94	0.88	3

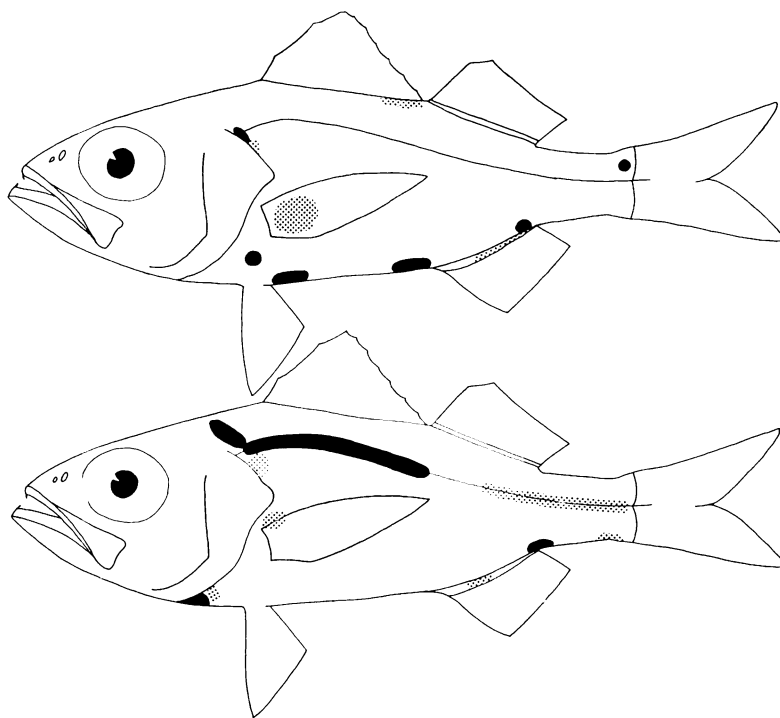


Fig. 2. Occurrence of ctenoid scales (black area) and cycloid scales (dotted area) on body in holotype (upper) and in paratypes (lower) of *Neoscombrops atlanticus*.

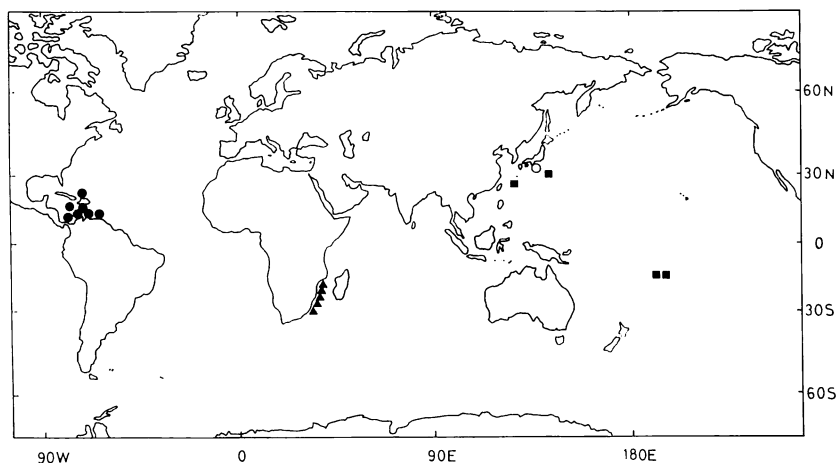


Fig. 3. Distributions of all species of the genus *Neoscombrops*. ●, *N. atlanticus* sp. nov.; ▲, *N. annectens*, from Mochizuki (1979) and the present study; ■, *N. pacificus*, from Mochizuki (1979) and Starnes and Mochizuki (1982); ○, *N. analis*, from Katayama (1957).

Etymology. This species is named *atlanticus* in reference to its distribution in the Caribbean Sea.

Remarks. The present new species belongs to the genus *Neoscombrops* by the following

characters: three anal spines; a row of small teeth, ca. 20~40 in number, on the lateral side of lower jaw; first and second dorsal fins close together; fin spines without serration; 44~48 scales on lateral line.

Only three species have been known in the genus *Neoscombrops*; *N. annectens* from south-east coast of Africa (Gilchrist, 1922; Barnard, 1927; Smith, 1953; Far Seas Fisheries Research Laboratory, 1976; Mochizuki, 1979), *N. analis* from Owase, Japan (Katayama, 1957), and *N. pacificus* from the Pacific Ocean (Mochizuki, 1973, 1979; Masuda et al., 1975; Starnes and Mochizuki, 1982) (Fig. 3). Therefore, the present new species is the fourth in the genus and is the first record of the genus from the Atlantic Ocean.

The new species closely resembles *N. annectens* in many morphological characters (Table 1) and both were collected from continental slopes (Fig. 3). However, it is distinguished from *N. annectens* in having the following characters: 44~48 pored scales on lateral line (36~41 in the latter); some scales on body ctenoid (all scales cycloid in the latter); teeth reduced in size on lateral side of lower jaw (not reduced in the latter); 14~18 (mean 17) gill rakers on lower part of first arch (14~15 (mean 15) in the latter).

The new species is also different from *N. pacificus* by the presence of ctenoid scales on the body (all scales cycloid in the latter), teeth reduced in size on lateral side of lower jaw (not reduced in the latter), shorter third anal spine (0.97~1.21 (mean 1.10) in eye diameter in the former instead of 0.70~0.94 (mean 0.84) in the latter), and 14~18 (mean 17) gill rakers on lower part of first arch (13~15 (mean 14) in the latter) (Table 1). This new species was captured from continental slopes by shrimp trawls, whereas *N. pacificus* was caught from rocky areas around small islands far from the great continents in the Pacific Ocean by hand lines (Starnes and Mochizuki, 1982).

This new species is distinguished from *N. analis* in having the pelvic spine with a smooth anterior edge (with distinct serration in the latter), a row of small teeth on lateral side of lower jaw (about five large canine-like teeth in the latter), and 44~48 scales on lateral line (28 in the latter). As noted by Mochizuki (1979), however, the affiliation of *N. analis* in the genus *Neoscombrops* is questionable.

Comparative material. *N. annectens*: USNM 229530, 1 specimen, 126 mm SL, 25°29'S, 33°35'E, off Mozambique, Indian Ocean, 450 m depth,

shrimp trawl, Sept. 28, 1964; USNM 218919, 11 specimens, 76~101 mm SL, 25°12'S, 34°04'E, off Mozambique, 230~295 m depths, shrimp trawl, Sept. 29, 1964; RUSI 7893 (Rhodes University, JLB Smith Institute of Ichthyology), 1 specimen, 200 mm SL, off Durban, South Africa; RUSI 10965, 2 specimens, 103, 116 mm SL, Delagoa Bay, South Africa; RUSI 10936, 5 specimens, 86~180 mm SL, off Natal (?), South Africa.

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カリブ海から得られたスズキ科の1新種 *Neoscombrops atlanticus*

望月賢二・佐野光彦

カリブ海から得られた標本に基づき, 新種 *Neoscom-*

brops atlanticus を記載した. 本種は有孔側線鱗数が 44~48 (平均 46) であること, 第一鰓弓の下枝鰓耙数が 14~18 (17) であること, 下顎側部の歯が小さいこと, 体部の鱗に櫛鱗が混じることにより同属の他種と明瞭に区別された. 本種は大陸棚斜面の水深 180~650 m より shrimp trawl で採集された.

(望月: 113 東京都文京区本郷 7-3-1 東京大学総合研究資料館水産動物部門; 佐野: 113 東京都文京区弥生 1-1-1 東京大学農学部水産学科水産資源学教室)