

First Record of the Scorpaenid Fish *Brachypterois serrulatus* from Japan, with a Key to Japanese Genera of the Pteroinae

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Brachypterois serrulatus (Richardson), belonging to the subfamily Pteroinae, is known from the Indian Ocean, Philippine Sea, and China Sea (Kotthaus, 1979). Recently, we examined four specimens of *B. serrulatus* from off Kochi Prefecture. They were characterized by having a serrated and scaled mandible, no cirri or flap on the free lachrymal margin, finely serrated ridges on the head, and a short spinous dorsal fin. There has been no record of this species from Japanese waters, and the present specimens represent the first record of this genus and species from Japan.

The specimens examined are deposited in the Department of Biology, Faculty of Science, Kochi University (BSKU), and the Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University (HUMZ).

Brachypterois serrulatus (Richardson)

(New Japanese name: Nokogiri-kasago)

(Figs. 1, 2)

Sebastes serrulatus Richardson, 1846: 215 (China Sea); Günther, 1860: 106.

Brachypterois serrulifer Fowler, 1938: 79~81, fig. 35 (1 specimen, 16°30'36"N, 120°11'6"E,

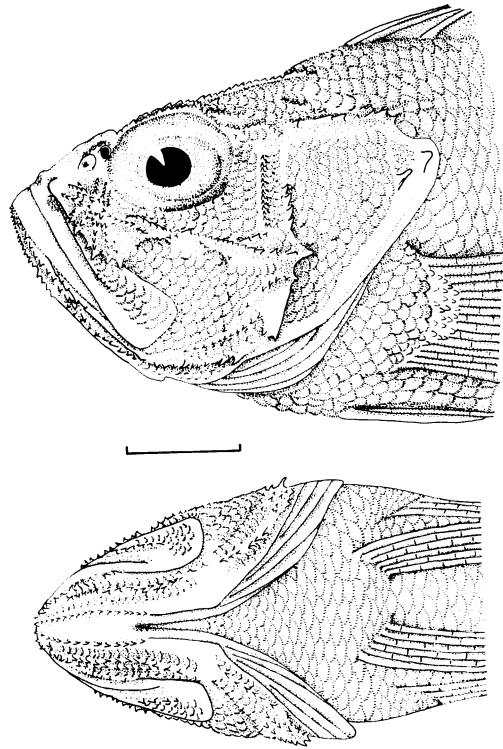


Fig. 2. Lateral and ventral aspects of *Brachypterois serrulatus*, HUMZ 36733, 81.5 mm SL, off Kochi Prefecture, southern Japan. Scale bar indicates 10 mm.

off San Fernando Point Light, 45 fms (82 m), west coast of Luzon); Herre, 1951: 432~433 (33, Gulf of Lingayen, Manila Bay and Ragay Gulf of Luzon; mouth of Hugli river and northern part of Bay of Bengal in India).



Fig. 1. *Brachypterois serrulatus*, HUMZ 36733, 81.5 mm SL, off Kochi Prefecture, southern Japan.

Ranipterois serrulifer: Whitley, 1950: 407 (as type of new genus).

Brachypterois serrulatus: Anonymous, 1962: 861, fig. 692 (10, South China Sea from Zhelang (22°40'N, 115°34'E) to Xincun, Hainan I.); Chu and Jin, 1963: 462, fig. 348 (4, off Zhou-shan I. and Mayi I. of Zhejiang Province, and Dong'ao of Fujian Province, East China Sea); Kotthaus, 1979: 25, fig. 476 (3, off western India, northwest of Bombay).

Material. All from off Kochi Pref., southern Japan. BSKU 2270 (1, 69.7 mm SL), Urado fish market, 8 January 1953; BSKU 7262 (1, 77.0), Mimase fish market, 28 April 1957; HUMZ 35083 (1, 80.4) and 36733 (1, 81.5), Mimase fish market, 1956.

Counts. Dorsal XIII, 10~11; anal III, 5~6; pectoral 15~16 (branched rays 6~8); pelvic I,5; principal caudal fin rays 6+6; lateral line scales 24~25; gill rakers 4~6+1+10~11; vertebrae 10+14.

Proportional measurements. Head length in SL 2.6~2.8; body depth 2.5~2.9; predorsal length 3.0~3.4; tip of snout to anus 1.4~1.6; pectoral fin ray length 2.0~2.1; pelvic fin ray length 3.3~3.8; caudal fin ray length 3.0~3.4. Snout length in head length 4.5~4.8; orbit diameter 2.7~3.5; interorbital width 6.2~7.6; upper jaw length 1.9~2.0; longest dorsal spine 2.4~2.8. Pelvic origin to anus in pelvic origin to anal origin 1.1~1.2.

Remarks. The brief original description of *Brachypterois serrulatus* was made by Richardson (1846) as *Sebastes serrulatus*. Richardson's types are apparently lost. They were dried specimens found in insect boxes received from China, and Dr. Eschmeyer (personal communication) was unable to locate them in the British Museum. After this, Fowler (1938) described one specimen of *B. serrulatus* under the name of *Brachypterois serrulifer*. He wrongly gave the pectoral rays as 14; their number is really 16 in the type, USNM 98886 (Eschmeyer, personal communication). The present specimens from Japanese waters well agree with their descriptions.

Since the species of the genus *Brachypterois* is added to Japanese fish fauna for the first time, we hereby give a key to genera of the Pteroinae in Japan as follows.

Key to genera of the subfamily Pteroinae in Japan

- 1a. All pectoral fin rays simple.....*Pterois*
- 1b. Some of the upper pectoral fin rays divided.
.....2.
- 2a. Mandible with serrated ridges and scales.
..... *Brachypterois*
- 2b. Mandible smooth and naked.....3.
- 3a. Free lachrymal margin without flap or cirri.
Infraorbital ridge finely serrated. In male,
a thin parietal crest well developed. .*Ebosia*
- 3b. Free lachrymal margin with a well-developed
flap or barbel. Infraorbital ridge with fine
serration or spines. No thin parietal crest.
.....4.
- 4a. Two anal spines. Caudal fin truncate.
..... *Parapterois*
- 4b. Three anal spines. Caudal fin round.....
..... *Dendrochirus*

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Literature cited

- Anonymous. 1962. Cottoidei. In A synopsis of fishes of South China Sea. Sci. Press, Beijing (Peking), (xxxvii+1128 pp., 860 figs.) pp. 833~937, figs. 677~733. (In Chinese).
- Chu, Y. T. and X. B. Jin. 1963. Cottoidei. In A synopsis of fishes of East China Sea. Sci. Press, Beijing, (xxviii+ 610 pp., 442 figs.) pp. 451~504, figs. 339~375. (In Chinese).
- Fowler, H. W. 1938. Description of new fishes obtained by the United States Bureau of Fisheries Steamer "Albatross," chiefly in Philippine seas and adjacent waters. Proc. U. S. Nat. Mus., 85 (3032): 31~135, figs. 6~61.
- Günther, A. 1860. Catalogue of the fishes in the British Museum. II. T ayl er and Francis, London, xxi+548 pp.
- Herre, A. W. 1951. A review of the scorpaenoid

- fishes of the Philippines and adjacent seas. Philipp. J. Sci., 80 (4): 381~482.
- Kotthaus, A. 1979. Fishes of the Indian Ocean. Results of the ichthyological investigations during the Indian Ocean Expedition of the Research Vessel "Meteor," October, 1964, to May, 1965. A. Systematical section, XXI, Diverse orders. "Meteor" Forsch.-Ergebnisse, Reihe D, (28): 6~54, figs. 453~514. (In German).
- Richardson, J. 1846. Report on the ichthyology of the seas of China and Japan. Rept. Brit. Assoc. Adv. Sci., 15: 187~320.
- Whitley, G. P. 1950. Studies in ichthyology. No. 15. Rec. Austr. Mus. Sydney, 22 (3): 389~408, figs. 1~14.
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日本で得られたフサカサゴ科の1種ノコギリカサゴ
(新称)

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ミノカサゴ亜科に属する4個体のノコギリカサゴ *Brachypterois serrulatus* が本邦の高知県沖合で初めて得られた。本種はこれまでシナ海からインド洋にかけて広く分布することが知られていた。本種は下顎に鋸歯状の隆起と鱗を持つこと、涙骨下縁に皮弁を欠くこと、頭部に鋸歯状の隆起を持つこと、および短い背鰭条を持つことにより他のミノカサゴ亜科魚類から明瞭に区別される。本属は日本初記録であるので本邦産ミノカサゴ亜科5属の検索表を提示した。

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