

A New Triglid Fish, *Pterygotrigla multipunctata*, from Japan

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Abstract A new triglid fish, *Pterygotrigla multipunctata*, is described from Tosa Bay, southern Japan. This species is easily distinguishable from the other species of *Pterygotrigla* in the combinations of having a short rostral projection slightly diverged anteriorly, cleithrum without spine, and a large black blotch on the inner surface of pectoral fin.

Pterygotrigla proposed in 1899 by E. R. Waite includes eight species, *P. polyomata* (Richardson, 1839), *P. hemisticta* (Temminck et Schlegel, 1850), *P. picta* (Günther, 1880), *P. ryukyuensis* Matsubara et Hiyama, 1932, *P. tagala* (Herre et Kauffman, 1952), *P. spinosa* Asano et Okamura, 1963, *P. guezeti* Fourmanoir et Guézé, 1963, *P. pauli* Hardy, 1982. Of them only two species were reported from Japan. *P. hemisticta* is distributed from off Tokyo Bay to the Ryukyu Islands and East China Sea, and *P. ryukyuensis* from the Ryukyu Islands alone. Two specimens, an adult female and a juvenile, were collected from Mimase Fish Market in Kochi City. They clearly differ from the other species of *Pterygotrigla*.

Measurements and counts mainly follow Hubbs and Lagler (1974) except for the following: some characters are measured from the anterior tip of upper jaw rather than the end of the rostral projection, i.e., total length, standard length, head length, snout length, etc.; body depth is measured at the origin of first dorsal fin; the body width and head width are measured at the greatest dimension of the base of the cleithrum plate and preopercular region respectively. Scales above the lateral line are counted from the origin of second dorsal fin. Number of vertebrae and median fin rays are counted from X-rays.

Pterygotrigla multipunctata sp. nov.

(Japanese name: Hime-sokohobo)

(Figs. 1, 2)

Holotype. NSMT-P (Department of Zoology, National Science Museum) 21409 (female), 151.0 mm in standard length (181.7 mm in total length), Apr. 4, 1966, Mimase, Kochi City, Tosa Bay, Japan.

Paratype. BSKU (Department of Biology, Kochi

University) 50036, 88.0 mm in standard length (109.4 mm in total length), Feb. 25, 1966, Mimase, Kochi City, Tosa Bay, Japan.

Diagnosis. Rostral projection short, slightly diverged outward; no cleithral spine; inner surface of pectoral fin blackish except for the margin and the rays, with a black blotch, as large as eye, near base of the fin.

Description. Counts and proportions of holotype and paratype are shown in Table 1. Body robust, somewhat compressed. Head large, about 2.5 times in standard length, completely covered with bony plates; many minute protuberances developed on the surface. Rostral projection short, a quarter length of eye diameter with fine serrations on the outer margin; both projections broadly separated from each other, and directed outward slightly. Snout somewhat longer than orbit diameter; the upper profile slightly concave. Nostrils two, the anterior one with a short tubular membrane, the posterior slender, situated at half way of snout. Orbit oval shaped and rather large, about 1.5 times of suborbital stay. Interorbital space concave and the width nearly equal to orbit diameter. Mouth large, maxillary extends slightly beyond a vertical line through the anterior border of orbit. Teeth on both jaws villiform, placed in a narrow band; vomerine teeth also villiform, consisting in a short and wide band; palatine toothless. Gill-rakers on first arch club-like in shape, separated from each other; pseudobranch present (Fig. 3).

Spines and grooves absent around the orbit. Nuchal spine short and sharp, the tip reaching to just below the origin of first dorsal fin. Preopercular spines sharp, two in number, the upper one larger. Opercular spines, two in number; the lower one stouter and longer, the tip extends

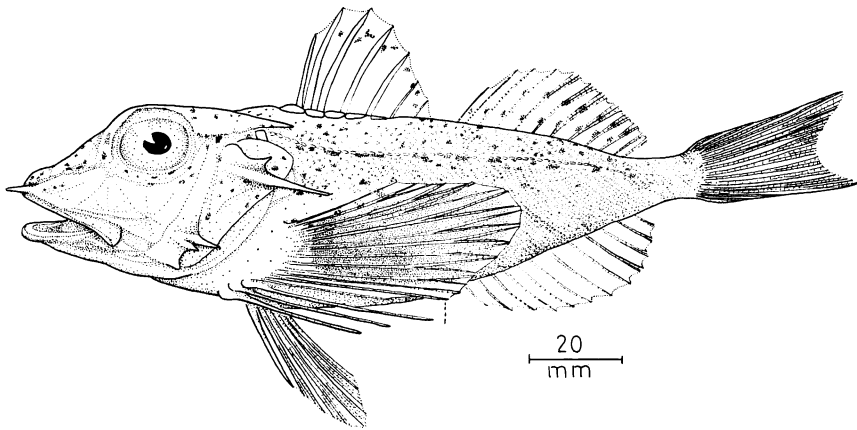


Fig. 1. Lateral aspect of *Pterygotrigla multipunctata* sp. nov., holotype 181.7 mm in total length.

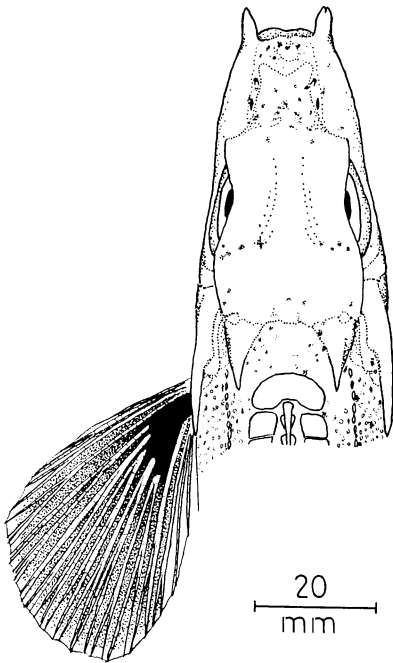


Fig. 2. Dorsal aspect of head and inner surface of pectoral fin of *Pterygotrigla multipunctata* sp. nov., holotype, 181.7 mm in total length.

to below the base of third dorsal spine. No cleithral spine; posterior part of cleithrum plate-like, embedded under the skin.

Dorsal spines sharply pointed distally, without any serration anteriorly, not reaching to the origin of second dorsal fin when depressed; first spine slightly shorter than orbit; third spine the longest, nearly equal to the half length of head. Anal fin inserted just below the origin of second

dorsal fin. Caudal fin deeply emarginated. Pectoral fin rather long, reaching to a vertical line through the base of fifth dorsal ray; the lower three rays detached completely, the uppermost one the longest, not reaching to the origin of anal fin. Pelvic fin slightly short, not extending to vent.

There are large plates (modified processes of the pterygiophores) closely associated to each other along the base of first dorsal fin; the anteriormost ones of right and left sides united, forming a plate around and before the origin of first dorsal spine; the third plate widest, and the posteriormost one smallest. No bony plates present along the base of second dorsal fin.

Scales on the body very small, cycloid and embedded under skin dorsally; nape, around the base of both dorsals, pectoral and pelvic fins, isthmus, breast and interpelvic naked. Scales on lateral line also very small and with a non-branched perforating ducts.

Color: In formalin, head brown; body, vertical and pelvic fins light brown; many small brownish blotches present on the upper half of body, on the first and second dorsal fins; those blotches arranged longitudinally in one row in first dorsal and in two rows in second dorsal; pectoral fin whitish anteriorly, blackish posteriorly, its inner surface blackish, except for the margin and the rays, and with a black blotch, as large as eye, near the base.

Presumably because of the size, the paratype is different from the holotype by the following characters: pectoral fin somewhat longer, reaching to a vertical through the base of the eighth

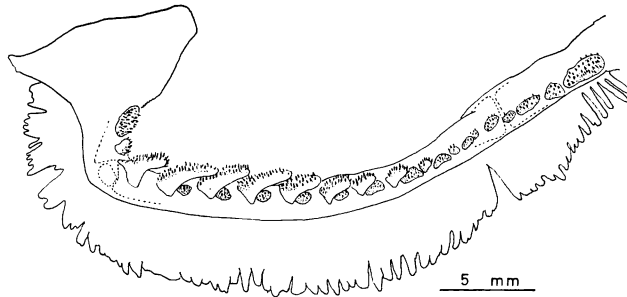


Fig. 3. Gill-rakers on the 1st arch of *Pterygotrigla multipunctata* sp. nov., holotype 181.7 mm in total length.

Table 1. Counts and proportional measurements of holotype and paratype of *Pterygotrigla multipunctata* sp. nov.

	Holotype	Paratype
Standard length (mm)	151.0	88.0
Proportional measurements in SL		
Predorsal length	2.4	2.3
Pre-second dorsal length	1.6	1.5
Preanal length	1.5	1.6
Prevent length	1.6	1.7
Body depth	3.7	3.7
Body width	5.0	5.7
Caudal peduncle length	7.3	7.5
Caudal peduncle depth	16.2	15.4
1st dorsal fin base	5.0	5.3
2nd dorsal fin base	4.2	4.1
Anal fin base	3.9	3.6
Head length	2.6	2.5
Proportional measurements in HL		
Head depth	1.6	1.6
Head width	2.1	2.2
Snout length	2.6	2.5
Upper jaw length	2.4	2.5
Orbit diameter	3.2	3.1
Interorbital width	3.3	3.7
Pectoral fin length	1.1	0.9
Uppermost detached pectoral fin ray length	1.3	1.1
Pelvic fin length	1.5	1.5
Counts		
Dorsal fin	VII-12	VIII-12
Anal fin	12	12
Pectoral fin	13+iii (detached ray)	13+iii
Pelvic fin	I, 5	I, 5
Caudal fin (branched ray)	9	9
Scales on lateral line	60	58
Scales above lateral line	11	8
Bony plates	10	10
Vertebrae (including urostyle)	10+17	10+17
Gill-rakers on 1st arch	i+1+9+iv	i+1+10+iii

dorsal ray; the longest detached pectoral ray extended opposite the base of fifth anal fin ray. Rostral projection well developed outward. Preopercular spines, three in number (two, at right side); interorbital width slightly less than orbit diameter.

Remarks. This species is similar to *Pterygotrigla hemisticta*, in general body shape. They are easily distinguished by the pectoral fin rays count, 12+iii in *P. hemisticta*, 13+iii in *P. multipunctata*, the cleithral spine which is very short and sharp in *P. hemisticta*, entirely absent in *P. multipunctata*, and coloration of the first dorsal fin: a large black blotch is present from third to sixth dorsal spines in *P. hemisticta*, lacking in *P. multipunctata*.

This species also resembles *Pterygotrigla tagala* taken from Manila Bay. The humeral spine is very short and blunt in *P. tagala*. The snout is equal to orbit diameter in *P. tagala*, while it is obviously longer than orbit diameter in *P. multipunctata*.

Further this species is distinguished from the other species in *Pterygotrigla* by lacking the cleithral spine.

Etymology. This species is named *multipunctata* in reference to its pigmentation of the body.

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日本産ホウボウ科魚類の1新種ヒメソコホウボウ

矢頭卓児・山川 武

土佐湾より得られた2個体(標準体長, 151.0 mm, 88.0 mm)をもとに新種ヒメソコホウボウ *Pterygotrigla multipunctata* sp. nov. を記載した。本種はソコホウボウ *P. hemisticta* (Temminck et Schlegel) に似るが、本種には上膊棘がないこと、胸鱗鱗条数が13+iiiであること、および第1背鱗に眼径大の1黒色斑がないことで区別される。また、本種はフィリピン産の *P. tagala* (Herre et Kauffman) とは、上膊棘がないこと、吻長が眼窩径より明らかに長いことで明瞭に区別できる。

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