

New Record of *Pseudocalliurichthys pleurostictus* (Callionymidae) from Amami O-shima, Japan

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A small dragonet species was collected from Sakinome, Amami O-shima, Kagoshima Prefecture, Japan. This species was identified as *Callionymus*

(*Calliurichthys*) *pleurostictus* Fricke, 1982. The species is recorded for the first time from Japan, and is referred to the genus *Pseudocalliurichthys*, because it has a straight and serrated preopercular spine, 8 dorsal and 7 anal rays, and no lateral line commissure on the dorsal surface of the caudal peduncle (Nakabo, 1982).

Counting and measuring methods follow Nakabo (1982), and counts and proportional measurements are shown in Table 1. Vertebrae were counted from Soft-X-ray negatives.

Table 1. Counts and proportional measurements in *Pseudocalliurichthys pleurostictus*. Data show ranges; the means and sample sizes are in parentheses.

Locality	Amami Oshima, Japan		Gulf of Thailand	
	male	female	male	female
Sex				
Number of fish	5	3	2	3
Standard length (mm)	20.5–31.8	11.1–17.1	24.2–28.5	17.6–20.3
Counts				
Dorsal fin	IV-8	IV-8	IV-8, IV-9	IV-8
Anal fin	7	7	7	7
Pectoral fin	ii–iii + 14–15 (totally 17–18)	iv + 13 (totally 16–17)	ii + 15	ii–iii + 14–16 (totally 17–18)
Pelvic fin	I, 5	I, 5	I, 5	I, 5
Caudal fin	i + 7 + ii	i + 7 + ii	i + 7 + ii	i + 7 + ii
Vertebral number (AV + CV)	7 + 14 15 (mostly 7 + 14)	7 + 14	7 + 14	7 + 14 15 (mostly 7 + 14)
In % of SL				
Body width	16.0–16.8 (16.4, 5)	18.0–19.3 (18.8, 3)	16.1–16.5 (16.3, 2)	18.7–19.2 (18.9, 3)
Body depth	11.6–13.2 (12.3, 5)	13.5–16.9 (15.2, 3)	11.2–12.4 (11.8, 2)	13.1–14.3 (13.7, 3)
Caudal peduncle depth	5.4– 6.4 (6.0, 5)	6.3– 6.6 (6.4, 3)	5.0– 5.3 (5.2, 2)	5.4– 6.8 (6.0, 3)
Predorsal length	32.5–34.6 (33.1, 5)	38.0–41.4 (39.7, 3)	31.6–33.1 (32.4, 2)	34.7–35.5 (35.1, 3)
Caudal fin length	28.3–37.6 (33.2, 5)	28.1–30.6 (29.1, 3)	30.6–33.7 (32.2, 2)	19.2–26.1 (23.1, 3)
Head length	27.0–29.3 (28.3, 5)	30.9–33.3 (31.7, 3)	26.7–31.4 (29.1, 2)	29.6–31.8 (30.6, 3)
Eye diameter	9.1– 9.8 (9.4, 5)	11.7–11.8 (11.7, 3)	9.1 (9.1, 2)	9.9–11.4 (10.7, 3)
Snout length	11.5–12.6 (12.0, 5)	10.3–12.3 (11.1, 3)	10.2–12.4 (11.3, 2)	9.9–12.5 (11.6, 3)
Upper jaw length	9.8–12.2 (11.0, 5)	10.8–11.1 (11.0, 3)	10.5–12.0 (11.3, 2)	10.3–10.8 (10.5, 3)
Interorbital width	0.5– 0.8 (0.6, 5)	0.5– 0.6 (0.5, 3)	0.3– 0.7 (0.5, 2)	0.4– 0.6 (0.5, 3)
1st dorsal spine length	45.8–79.9 (58.6, 5)	8.1– 9.0 (8.6, 3)	51.7–58.9 (55.3, 2)	9.4–12.3 (10.8, 3)
2nd dorsal spine length	9.3–13.5 (11.3, 5)	7.2– 8.2 (7.6, 3)	12.0–12.6 (12.3, 2)	9.1–10.8 (9.8, 3)
3rd dorsal spine length	6.8–12.2 (9.3, 5)	3.6– 7.0 (5.2, 3)	12.4–13.3 (12.9, 2)	6.3– 9.4 (8.2, 3)
4th dorsal spine length	4.4– 8.8 (6.9, 5)	1.8– 2.9 (2.3, 3)	8.7–10.5 (9.6, 2)	3.4– 4.9 (4.2, 3)
1st dorsal ray length	16.8–19.6 (18.4, 5)	17.1–18.4 (17.9, 3)	18.2–18.6 (18.4, 2)	18.8–19.7 (19.2, 3)
Last dorsal ray length	19.0–22.1 (23.8, 5)	8.1–14.0 (11.0, 3)	20.2–22.5 (21.4, 2)	13.6–14.3 (14.1, 3)
1st anal ray length	9.3– 9.8 (9.5, 5)	8.8– 9.4 (9.1, 3)	8.7– 9.1 (8.9, 2)	8.9– 9.4 (9.1, 3)
Last anal ray length	17.6–23.5 (20.1, 5)	10.8–15.2 (13.3, 3)	16.5–19.3 (17.9, 2)	14.2–14.3 (14.3, 3)
Pectoral fin length	22.0–24.2 (23.3, 5)	19.9–22.8 (21.1, 3)	20.7–21.4 (21.1, 2)	21.2–22.7 (22.0, 3)
Pelvic fin length	28.3–31.1 (29.6, 5)	28.1–29.7 (29.1, 3)	27.3–30.2 (28.8, 2)	23.2–28.6 (26.5, 3)
Preopercular spine length	8.2– 9.3 (8.6, 4)	8.8– 9.0 (8.9, 3)	6.7– 7.0 (6.9, 2)	7.4– 8.5 (7.9, 3)
Anal papilla length	2.5– 3.1 (2.8, 5)	0.6 (0.6, 1)	2.1– 2.9 (2.5, 2)	0.4– 0.5 (0.5, 3)

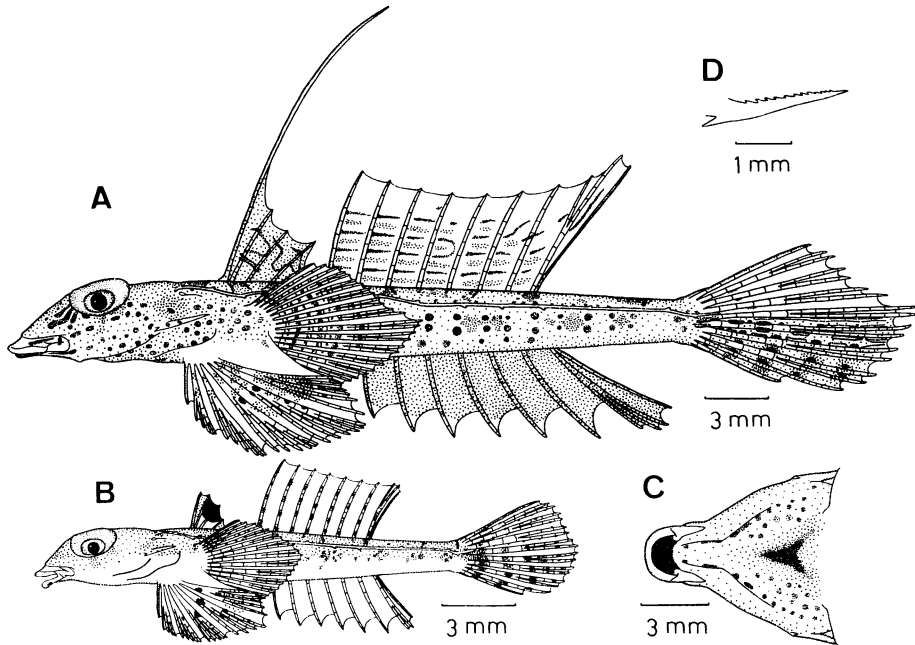


Fig. 1. *Pseudocalliurichthys pleurostictus* (Fricke) from Amami O-shima, Japan. A, lateral view of male, 31.8 mm SL, YCM-P 23644. B, lateral view of female, 17.1 mm SL, YCM-P 23531d. C, ventral view of head of male, YCM-P 23644. D, preopercular spine of YCM-P 23644.

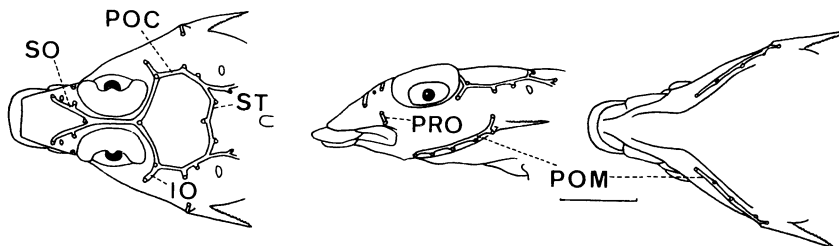


Fig. 2. Cephalic lateral line of *Pseudocalliurichthys pleurostictus*, YCM-P 23644, male, 31.8 mm SL. Left, dorsal view. Middle, lateral view. Right, ventral view. IO, infraorbital canal; POC, postocular commissure; POM, preoperculomandibular canal; PRO, preorbital canal; SO, supraorbital canal; ST, supratemporal canal. Scale indicates 3 mm.

***Pseudocalliurichthys pleurostictus* (Fricke)**
 (New Japanese name: Goma-itohikinumeri)
 (Figs. 1-3)

Callionymus (Calliurichthys) pleurostictus Fricke, 1982: 138-141, figs. 7-8 (type locality, Lon Ving Danlon, Bay of Nhatrang, Vietnam, 12° 12' 06'' N, 109° 17' 30'' E; SE side of Hon Mieu Island, S end of Nhatrang Bay, Vietnam; S side of Ko Platein Island and NW side of Ko Samet Island, Rayong Province, Gulf of Thailand). Fricke, 1983: 428-433, figs. 126-127 (Vietnam, Gulf of Thailand, Indonesia and Northern Australia).

Material examined. YCM-P (Yokosuka City Museum, Pisces) 23531, 3 males and 3 females, 11.1-31.1 mm in standard length, 12 Sep. 1989. YCM-P 23644, a male, 31.8 mm, 14 Sep. 1989. YCM-P 23673, a male, 31.8 mm, 14 Sep. 1989. All the specimens were collected by M. Hayashi from Sakinome, Amami O-shima, 28° 11.2' N, 129° 16' E, Kagoshima Prefecture, Japan.

Comparative material examined. NSMT-P (National Science Museum, Tokyo, Pisces) 41868, 41869, 2 males and 3 females, 17.6-28.5 mm, SW coast of Ko Samet Island, Rayong, Gulf of Thailand, 5 m depth, coll. by K. Matsuura, 1 Dec. 1986.

Diagnosis. This species clearly differs from other

species of *Pseudocalliarichthys* in the following: in male, long and filamentous first dorsal spine and many dark spots on lateral and lower sides of head and lateral side of body; in female, some irregular dark marks on lateral side of body, some dark spots on pelvic fin and a large blackish-brown mark on 1st dorsal fin.

Description (specimens from Amami O-shima). Body elongate and depressed. Head depressed. Snout somewhat long. Eye large. Interorbital space very narrow and somewhat concave. Gill-opening oval, located midway between dorsoposterior margin of eye and upper origin of pectoral fin. Preopercular spine straight and long with an antrorse process at base; innerside serrated with 3-12 very small processes (Fig. 1D). Upper jaw protractile, its posterior end almost reaching anterior margin of eye. A pair of nostrils before eyes. Teeth on jaws villiform, in broad bands. Palatine and prevomer toothless. Anal papilla conical, more elongate in male than in female.

Cephalic lateral line system developed (Fig. 2); infraorbital canal simple, reaching only postero-ventral margin of eye; postocular commissure not connected with preoperculomandibular canal. Lateral line single, running along upper side of body, curved downward at caudal peduncle and extending a little beyond caudal fin base.

First dorsal fin beginning midway between gill-opening and upper origin of pectoral fin in male and a little more posteriorly in female; 1st spine elongate and filamentous in male, but not in female. Second dorsal fin elevated posteriorly in male, becoming lower posteriorly in female; dorsal rays unbranched except for last; last ray divided at base; anterior branch of last ray divided distally. Anal rays increasing in length posteriorly and unbranched except for last; last ray divided at base; anterior branch of last ray divided distally. Pectoral fin; upper half slightly concave, lower half convex and reaching 4th dorsal ray in male; somewhat pointed and almost reaching 4th dorsal ray in female. Pelvic fin rounded, reaching 1st anal ray. Upper half of caudal fin slightly concave, lower half convex.

Color in 70% ethyl alcohol. Body marbled light brown dorsally, with 3 series of small dark spots on side below lateral line, somewhat light brown ventrally in male; marbled light brown dorsally, with 5 patches of dark marks on side below lateral line and white ventrally in female. Head below eye and ventral surface with many small dark spots in male only. Ventral surface of lower jaw black in male,

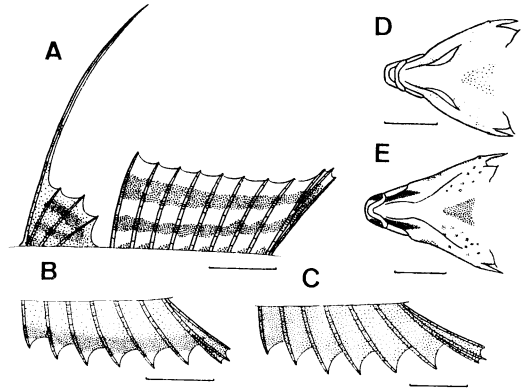


Fig. 3. *Pseudocalliarichthys pleurostictus* from the Gulf of Thailand. A, first and second dorsal fins of male, 24.2 mm SL, YCM-P 41868a. B, anal fin of male, YCM-P 41868a. C, anal fin of male, 28.5 mm SL, YCM-P 41869. D, ventral view of head of male, YCM-P 41868a. E, ventral view of head of male, YCM-P 41869. Scales indicate 3 mm.

white in female. Throat with an inverse V-shaped darker mark in male only. First dorsal fin dark with some vermicular dark lines in male, and with a large black mark on upper half of 2nd and 3rd membrane in female. Second dorsal fin with about 4 series of short longitudinal dark lines and faint dark lines between them in male; transparent and some dark spots on each ray in female. Anal fin dark in male, transparent in female. Pectoral fin with many dark spots in male, with some dark spots on upper half in female. Pelvic fin with some dark spots. Caudal fin, in male upper half almost transparent, middle part with some oblong marks margined with dark brown and lower half dark with about 4 transverse series of darker marks; in female almost transparent with some dark spots on each ray on lower half.

Remarks. The male specimens from Amami O-shima agree well with the holotype described by Fricke (1982), but differ from it in the coloration of the 1st dorsal fin (light with irregular darker marks in the latter), 2nd dorsal fin (almost transparent), anal fin (almost transparent), ventral surface of the lower jaw (white) and throat (without dark mark). The female specimens from Amami O-shima agree well with the paratype (female) of Fricke (1982), but differ from it in having no dark mark on the throat (dark brown spot on the throat in the latter).

We examined 5 specimens of this species (NSMT-P) from the Gulf of Thailand. The male

specimens from the Gulf of Thailand agree with those from Amami O-shima in the coloration of the body and throat, but differ from the latter in the coloration of the 1st dorsal fin (dark with a few darker bands in the former, Fig. 3A), 2nd dorsal fin (transparent with 2 or 3 longitudinal broad dark bands, Fig. 3A), anal fin (dark with darker distal margin in one specimen, Fig. 3B; uniformly dark in other specimen, Fig. 3C), and ventral surface of lower jaw (almost white, Fig. 3D or small dark marks, Fig. 3E). The female specimens from the Gulf of Thailand agree well with those from Amami O-shima.

The male and female specimens from the Gulf of Thailand generally agree well with those of Fricke (1982), but differ in the coloration of the 2nd dorsal and anal fins in the males, and the throats in the both sexes.

The specimens figured by Fricke (1982) were collected from Vietnam, and he also examined 2 male paratypes from the Gulf of Thailand. However, he did not note variation in the species. Although Fricke (1983) redescribed this species on the basis of specimens from Vietnam, the Gulf of Thailand, Indonesia and northern Australia, and noted some color variations, it is not clear if such variations are related to geographic separations or to individuality. More specimens are needed to clarify the situation.

Based upon the aforementioned sexual dimorphic characters, *P. pleurostictus* seems to mature at a standard length of about 30 mm.

Acknowledgments

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奄美大島から採集された日本初記録のネズッポ科ゴマイトヒキヌメリ (新称)

中坊徹次・林 公義

鹿児島県奄美大島の崎の目海岸において、ネズッポ科イトヒキヌメリ属の *Pseudocallionymus pleurostictus* (Fricke) (ゴマイトヒキヌメリ: 新称) の雄5個体、雌3個体を採集した。本種は日本初記録であり、またベトナム産の完・副模式標本と若干の相違もみられるので記載した。

本種は体長約 30 mm 程度で成熟する矮小種であると思われる。雄は背鰭第1棘が著しく長く糸状に伸び、頭部側面、頭部腹面、体側面に多くの褐色の小円斑がある。また、雄の下顎腹面は黒く、喉部に逆V字状の暗色斑があり、これらは完模式標本である雄にはない形質である。雌の第1背鰭第2・3膜の上半分に1黒斑があり、下顎腹面、喉部ともに無斑紋である。副模式標本である雌には喉部に1黒斑があり、奄美大島産のものと異っている。しかし、全体としてみれば、これらの相違は種レベルのものとは考えられず、奄美大島産の標本を *P. pleurostictus* と同定した。

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