New Record of Diplogrammus goramensis (Callionymidae) from Japan

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A West Pacific callionymid species, Diplogrammus goramensis (Bleeker) was collected from the Yaeyama Islands and Okinawa-jima, Japan. Because this species is recorded for the first time from Japan, we here describe it.

Counting and measuring methods follow Nakabo (1982). Vertebrae were counted from soft-X-ray negatives.

Diplogrammus goramensis (Bleeker)
(New Japanese name: Minami-kobunumeri)
(Fig. 1)


Diplogrammus (Diplogrammus) goramensis: Fricke, 1983: 493-504, fig. 148 (western Pacific).


Material examined. FAKU (Department of Fisheries, Faculty of Agriculture, Kyoto University) 58645, a female, 24.6 mm SL, Kabira Bay, Ishigaki-jima, Okinawa Pref., 3rd Oct., 1990. FAKU 58719, a male and a female, 24.9–31.3 mm, Yonehara, Ishigaki-jima, Okinawa Pref., 2nd Jul., 1991. URM-P (Department of Marine Sciences, University of the Ryukyus) 5194, a female, 35.6 mm, the coast between Akasaki and Minamijima, Okinawa-jima, Okinawa Pref., 13th Aug., 1982. URM-P 5198, a female, 30.9 mm, in a seagrass band, Takana, Iriomote-jima, Okinawa Pref., 26th July, 1974. URM-P 5601, 3 males and 2 females, 18.4–34.9 mm, Ishigaki-jima, Okinawa Pref., 26th July, 1980. URM-P 5602, a male and a female, 37.1–47.2 mm, Yonehara, Ishigaki-jima, Okinawa Pref., 29th July, 1980. IOP (Izu Oceanic Park) 2916, 2939, 2 females, 18.4–18.5 mm, Kabira Bay, Ishigaki-jima, Okinawa Pref., sandy bottom 10–15 m depth, coll. by H. Senou et al., 3rd Sep., 1991.

Diagnosis. This species clearly differs from other species of Diplogrammus as follows: unbranched infraorbital canal, 17–18 pectoral rays, very short upward and downward branches of lateral line; in male, cheek with 2 or 3 transverse dark bands accompanied by 2 narrower dark lines on both sides and anal fin dark with many darker spots.

Description. D IV-8 (in one specimen, V-8, probably anomaly); A 7; P, ii–iii +15–16 (totally 17–18); P I, 5; C i+7+ii; VN 7 +13.

Proportional measurements (% SL, range and mean, male and female). Body width, 16.4–18.7 (17.6); 14.9–20.1 (18.7). Body depth, 11.2–12.9 (12.2); 10.4–14.1 (12.7). Caudal peduncle depth, 5.7–6.9 (6.3); 5.2–7.0 (6.1). Predorsal length, 28.6–32.5 (29.9); 30.6–34.8 (32.0). Caudal fin length, 27.7–32.4 (30.2); 22.0–30.1 (26.0). Head length, 25.8–29.8 (27.6); 24.8–28.8 (27.2). Eye diameter, 7.0–10.9 (8.7); 8.4–10.3 (9.4). Snout length, 8.0–9.8 (9.0); 6.5–10.0 (8.2). Upper jaw length, 8.5–9.3 (8.8); 8.0–9.1 (8.4). Interorbital width, 0.2–1.5 (0.8); 0.2–2.4 (0.9). 1st dorsal spine length, 22.0–44.5 (31.1); 10.3–15.6 (12.4). 2nd dorsal spine length, 12.0–14.0 (12.8); 8.1–12.6 (10.4). 3rd dorsal spine length, 9.2–12.9 (11.2); 5.9–11.0 (8.4). 4th dorsal spine length, 4.6–8.3 (6.9); 2.7–6.5 (4.6). 1st dorsal ray length, 17.6–19.9 (18.7); 16.3–19.7 (18.1). Last dorsal ray length, 18.7–22.9 (20.3); 13.6–17.8 (15.4). 1st anal ray length, 9.7–10.9 (9.3). Last anal ray length, 14.6–19.3 (16.7); 11.4–14.9 (12.9). Pelvic fin length, 8.3–10.1 (8.8); 19.9–23.9 (22.2). Pelvic fin length, 30.5–32.5 (31.2); 27.7–33.7 (30.6). Preopercular spine length, 8.3–10.1 (8.8); 8.0–10.9 (9.3). Anal papilla length, 2.4–3.4 (2.9); 0.1–0.3 (0.2).

Body elongate and depressed. Head depressed. Snout somewhat long. Eye large. Interorbital space

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Fig. 1. *Diplogrammus goramensis* (Bleeker) from Ishigaki-jima, Japan. A and B, lateral view of head and anal fin of male, URM-P 5602 a, 47.2 mm SL. C and D, lateral view of head and anal fin of female, URM-P 5602 b.

Narrow and concave. Gill-opening a little behind midway between dorsoposterior edge of eye and upper origin of pectoral fin, opercular flap below it. Longitudinal dermal fold on lower part of lateral side of body. Preopercular spine long with an antroorse process at base; innerside with 3–7 upward processes; posterior tip upcurved. Upper jaw protractile, its posterior end almost reaching anterior margin of eye. Teeth on jaws villiform in broad bands. Palatine and prevomer toothless. Anal papilla conical, more elongate in male than in female.

Cephalic lateral line developed (Nakabo, 1982, fig. 24E); infraorbital canal simple, reaching only posteroinferior margin of eye; postocular commissure not connected with preoperculomandibular canal. Lateral line single, running along upper side of body, strongly curved below 1st dorsal fin and anterior half of 2nd dorsal fin, and with no transverse lateral line commissure on dorsal surface of caudal peduncle.

First dorsal fin beginning a little behind midway between gill-opening and upper origin of pectoral fin; 1st spine elongate and filamentous in males, but not in females. Second dorsal fin emarginated; elevated posteriorly in males, not elevated posteriorly in females; dorsal rays unbranched except for last; last ray divided at base; both branches of last ray divided distally. Anal rays increasing in length posteriorly and unbranched except for last; last ray divided at base; both branches of last ray divided distally. Pectoral fin with upper half slightly concave, lower half slightly convex, reaching 3rd or 4th dorsal ray. Pelvic fin rounded, reaching 2nd anal ray. Caudal fin round.

Color in 70% ethyl alcohol. Body marbled light brown with 5 darker bands dorsally; lateral side and ventral surface with many dark spots in males, white in females. Longitudinal dermal fold with many small dark spots in male, with 7 or 8 dark spots in female. Cheek with 2 or 3 transverse dark bands accompanied by 2 narrower dark lines on both sides in males, with some irregular marks in females. First dorsal fin faint dark with irregular white marks in males, dark with some white circles in females. Second dorsal fin with 3 or 4 dark marks on each membrane, 2 dark brown lines along distal margin in males; transparent and with 3 or 4 dark spots on each ray in females. Anal fin dark with many darker circles, distal margin darker in males; transparent with a longitudinal dark line near distal margin in adult females, without a dark line in young females. Pectoral fin with some dark spots in male, almost transparent in female. Pelvic fin faint dark with some darker spots in male, transparent with some dark spots in female. Caudal fin with dark marks, and with 2 dark brown lines along distal margin of upper half, lower margin dark brown in males; with some dark marks on middle part, a longitudinal dark line near lower margin in females.

**Distribution** (Fig. 2). In Japanese waters, *D. goramensis* is distributed mainly in the Yaeyama Islands, and is very rare in Okinawa-jima. Up to now, *D. goramensis* has not been found from Amami Islands northward. On the other hand, the closely related species *Diplogrammus xenicus* (Jordan et
Thompson, 1914) is distributed in Okinawa-jima northward to the Izu Peninsula and Miyake-jima, and off the middle part of Honshu. It is very rare in Yaeyama Islands.

Remarks. *D. goramensis* is closely related to *D. xenicus* in having short upward and downward branches of the lateral line, similar coloration of the second dorsal and caudal fins in males, and similar coloration of the first and second dorsal and anal fins in females. *D. goramensis* differs from *D. xenicus* in having an unbranched tip of the infraorbital canal (tip branched in the latter) and in the coloration of the anal fin in adult males.

*Callionymus cookii* Günther is a junior synonym of *D. goramensis* as stated by Fricke (1983). In addition to the characters examined by Fricke (1983), We examined the infraorbital canal of the holotype of *C. cookii* (BM (NH) 1871.9.13.230), and We found the same pattern as in *D. goramensis*.

Ochiai’s (1963) specimens of *D. goramensis* from the Amami Islands have already been identified as *D. xenicus* by Nakabo (1983).

*Dermosteira drotheae* Schultz (1943) is apparently *D. goramensis* according to the characters shown by him.


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日本初記録のネズッボ科ミナミコブヌメリ（新称）

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沖縄県西表島、石垣島、沖縄本島から、ネズッボ科コブヌメリ属の Diplogrammus goramensis (Bleeker) (ミナミコブヌメリ: 新称) を得た。本種は日本初記録なので記載した。

本種はコブヌメリ D. xenicus に極めてよく似ているが、頭部側線系の眼下管の先端が分枝していないことで区別される。その他、コブヌメリとは、成熟した雌の腹部と臀鰭の斑紋が異なってい る。本種は西部太平洋の島々にごく普通にみられる。

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