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First Record of the Gobiid Fish *Eviota fasciola* from Japan

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The gobiid fish, *Eviota fasciola*, ranges in western Oceania from the Palau to the Gilbert Islands, the Trobriand Islands, and the Great Barrier Reef (Karnella and Lachner, 1981). We collected 41 specimens of *E. fasciola* from Okinawa Island, Japan. They represent the first record of this species from Japan. This species differs from all other species of the genus *Eviota* in having an intensely pigmented spot on the pectoral base and 11–13 vertical bars on the body.

Methods for counts and description of the cephalic sensory pore and cutaneous papillae systems followed Lachner and Karnella (1978, 1980), and for measurements, Hubbs and Lagler (1958). Vertebrae were counted from X-ray photographs. Measurements were made using a binocular microscope (Nikon SMZ10) with a printer display calculator (Texas Instruments TI-5142).

Eviota fasciola Karnella et Lachner, 1981
(New Japanese name: Toranoko-isohaze)
(Figs. 1–3)

Material examined. 41 specimens, 10.0–17.6 mm in standard length, all collected from Okinawa Island: URM (Department of Marine Sciences, University of the Ryukyus)-P 2087, (1 specimen), Minatogawa, May 24, 1978; URM-P 2100, (3), same locality as URM-P 2087, May 23, 1978; URM-P 2101, (8), same locality as URM-P 2087, May 14, 1979; URM-P 2117 and 2228, (3) and (1), Komesu, Jun. 30, 1980; URM-P 2348, 2350 and 2351, (12), (1) and (1), Chibishi, May

Fig. 1. *Eviota fasciola*. Above, URM-P 2326, female, 16.0 mm SL; below, underwater photograph at Onna, Okinawa Island, 3 m depth on Sep. 22, 1985 (photo by K. Shimada).

5, 1981; URM-P 2409, (1), Oku, Jul. 17, 1981; URM-P 2417, (3), Apogama, Aug. 9, 1981; URM-P 2454, (1), same locality as URM-P 2417, Sep. 15, 1981; URM-P 2326 and 2327, (1) and (1), Onna, Sep. 22, 1985; KUFB (Laboratory of Fisheries Biology, Kyushu University) 103, (4), Cape Maeda, Aug. 21, 1983.

Description. Counts for the present specimens were compared with the original description as shown in Table 1. Measurements were done as percentage of standard length: Body depth 21.3–27.5, head length 22.6–22.8, head width 18.1–28.0, snout length 4.2–5.3, length of maxillary 8.0–13.7, eye diameter 7.1–8.5, interorbital width 1.2–

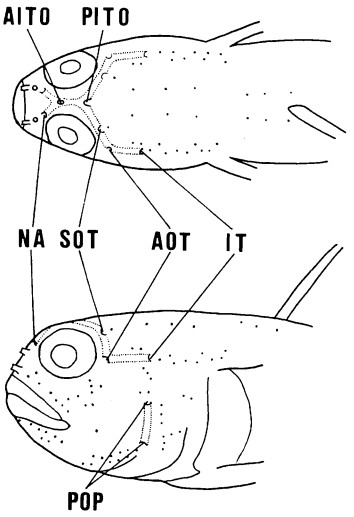

Fig. 2. Cephalic sensory pore system and cutaneous papillae system of *Eviota fasciola*, URM-P 2117-3. NA, paired nasals; AITO, anterior interorbital; PITO, posterior interorbital; SOT, paired supraotics; AOT, paired anterior otics; IT, paired intertemporals; POP, paired upper and lower preoperculars. Scale indicates 1 mm.

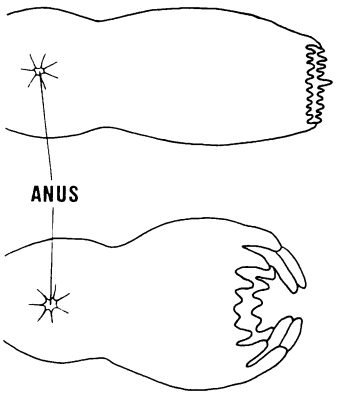

Fig. 3. Urogenital papillae of *Eviota fasciola*. Above, male, URM-P 2100-1; below, female, URM-P 2100-2. Scale indicates 0.5 mm.

Table 1. Comparison of the present specimens with the holotype and paratypes of *Eviota fasciola*. Numerals in parentheses indicate number of specimens examined.

	Holotype and paratypes (Karnella and Lachner, 1981)	Present specimens
Number of specimens	345	41
Standard length (mm)	7.8–19.1	10.0–17.6
Dorsal fin	VI-I, 8 (3), VI-I, 9 (15)	VI-I, 8 (2), VI-I, 9 (36), VI-I, 10 (1)
Anal fin	I, 8 (17), I, 9 (1)	I, 7 (1), I, 8 (37), I, 9 (1)
Pectoral fin	16 (7), 17 (11)	16 (7), 17 (32)
Pelvic fin	I, 4 (19)	I, 4 (39)
Fourth ray of pelvic fin		
Number of branches	6–12 average 9.1	6–12 average 9.5
Number of segments between consecutive branches	0–2 average 1.1	0–4 average 1.2
Branched caudal fin rays	11 (3), 12 (6), 13 (3)	11 (4), 12 (10), 13 (10), 14 (5)
Segmented caudal fin rays	17 (17)	16 (4), 17 (35)
Lateral scale rows	23 (1), 24 (5), 25 (1)	23 (1), 24 (10), 25 (13), 26 (3)
Transverse scale rows	6 (3)	6 (29), 7 (6)
Vertebrae	10 (9)+16 (8), 17 (1)	10 (39)+15 (1), 16 (37), 17 (1)

2.9, pectoral fin length 25.9–34.0, caudal fin length 24.4–32.9, caudal peduncle length 16.1–26.8, caudal peduncle depth 13.1–16.8, pre-first dorsal length 33.9–40.5, pre-second dorsal length 58.6–66.7, pre-pelvic length 23.8–31.4, pre-anal length 62.0–71.9.

Body short, moderately stocky, compressed; caudal peduncle deep, very compressed; head round and large, less compressed than body. Steep profile from interorbital region to the tip of the snout; dorsal profile straight from nape to caudal peduncle. Eye oval, large, slightly prominent, situated high and anteriorly; its diameter about 1.5 times in snout length. Mouth oblique, relatively small; posterior edge of the maxillary extending below the middle of the eye.

No spinous elongation of dorsal fin in both sexes. Pelvic fin not extending to origin of anal fin.

Cephalic sensory pore system pattern 1; cutaneous papillae system pattern A (Fig. 2). Genital papilla cylindrical and not fimbriate in male, bulbous in female (Fig. 3).

Color in fresh and living specimens (Fig. 1): The following description is based on a color print of URM-P 2326 and underwater slides at Okinawa Island. Ground color of head and body pale blue-greenish. Vertical bars and spots on head and body brown, each with dark chromatophores except those of the snout. Iris reddish-brown. Pale-blue lines between vertical bars prominent in living fish (Fig. 1 below).

Color in preserved specimens: Ground color of head and body pale. Brown bars and spots disappeared; dark chromatophores remained, forming dark bars and spots, most prominent at pectoral base. Iris dark. Five subcutaneous bars from origin of anal fin to end of caudal peduncle and a spot of the same kind on caudal peduncle remained.

Habitat. This species is found at reef edges and its vicinity where waves are rather strong.

Remarks. Our specimens agree well with the original description. The pectoral spot of specimens from Australia is kidney-shaped (Karnella and Lachner, 1981), while that of our specimens, as well as those from Trobriand Islands (Karnella and Lachner, 1981), is semicircular (Fig. 1 above). We regard this difference as intraspecific variation.

Karnella and Lachner (1981) reported four species of the *Eviota epiphanes* group (*E. epiphanes*, *E. fasciola*, *E. disrupta* and *E. irrasa*) sharing a number of meristic and morphological characters. They pointed out that these species do not show sympatric distribution. *Eviota fasciola* is common at Okinawa Island. *Eviota epiphanes* occurs in southern Japan (Yoshino and Shimada, 1984), but has not been collected from Okinawa Island. *Eviota fasciola* is easily distinguished from *E. epiphanes* by the following characters: well developed dark mark on pectoral base (weak in the latter); vertical trunk bars extending to lower body (reduced to saddles). Further investigations on the distribution of both species in Japan is required.

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日本初記録のイソハゼ属トラノコイソハゼ（新称）

須之部友基・島田和彦

沖縄本島でイソハゼ属の一種トラノコイソハゼ(新称) *Eviota fasciola* を 41 個体採集した．本種は西部太平洋に広く分布しており，本報告が日本初記録である．本種は，胸鰭基部に 1 個の明瞭な黒色斑をもつこと，及び体側に 11-13 本の暗色横帯があることで，イソハゼ属の他種とは容易に区別される．

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