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A newly recorded species of dwarf gobiid genus, *Eviota* (Teleostei: Gobiidae) from northern and eastern Taiwan

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Abstract

A newly recorded species of dwarf gobiid genus, *Eviota* (Teleostei: Gobiidae) was recently collected from the coastal waters of northern and eastern Taiwan. The new record of *Eviota* species from Taiwan is identified as *Eviota perspicilla* Fujiwara, Suzuki & Motomura, 2020, which was regarded as endemic to Japan. A brief redescription and the remarks are also provided in this paper.

Key words: *Eviota*, new record, dwarf goby, Taiwan, fish taxonomy

Introduction

The gobioid fishes of the genus *Eviota* Jenkins, 1903, also known as one of the dwarfgobies, are currently represented by over 110 valid described species, most of which inhabit coral-reef habitats throughout the Indo-Pacific region (Greenfield & Winterbottom, 2016). However, the true species diversity of *Eviota* from Taiwan remains unclear and requires further detailed exploration, not only around the main island of Taiwan but also other smaller islands including the Penghu Islands, Green Island, Orchid Island, Xiaoliuqiu Island, and Dongsha Islands.

Up to 2008, seven nominal species had been documented and recorded in Taiwanese waters (Wu & Zhong, 2008). Furthermore, Greenfield and Jewett (2014) discovered a new species, which they named *Eviota aquila* and documented the type locality merely from the Formosan strait, Pingtung County, Taiwan. More recently, Shen *et al.* (2024) described a distinct new species named *Eviota rubrostriata* which belongs to the *E. zebrina* complex (defined by Tornabene *et al.* 2021) from Taiwanese waters via both molecular and morphological analysis.

The aim of this paper would be first report the newly record species of *Eviota* from Taiwanese waters. The brief redescription of the new record would be provided in this paper.

Materials and Methods

The fish specimens were collected using a hand-net while SCUBA diving in coral-reef habitats during a field survey. The morphometric measurements of these gobies generally followed Miller (1988), and the meristic accounts generally followed Chen and Shao (1996), and Chen *et al.* (1999). The definition of the head canal type generally follows the defined pattern well-documented in Lachner and Karnella (1980). The current specimens of the newly recorded species of *Eviota* are deposited in the Pisces collections of National Taiwan Ocean University, Keelung (NTOUP).

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Systematics

Eviota perspicilla Fujiwara, Suzuki & Motomura, 2020

(琉璃磯鰕虎)

(Figs. 1–2)

Eviota perspicilla Fujiwara, Suzuki & Motomura, 2020: 143. (Type locality: Kataura, Kasasa, Minami-satsuma, Kagoshima, Japan).

Material examined

NTOUP-2025-06-221, 6 specimens, 14.6–22.3 mm SL, 3rd June, 2025, Coll. I-S. Chen, Longdong Bay, 12–16 m, New Taipei City, Taiwan.

Diagnosis

The species can be well distinguished from other congeners by the following combination of features: (1) second dorsal fin I/9, anal fin I/8, pectoral fin 16–17; (2) longitudinal scale rows 23–24; (3) typical head canal pattern type II; (4) 5th pelvic fin ray present; (5) mouth large, extending beyond middle vertical of eye; and (6) specific coloration: body and head translucent and somewhat light pinkish. Caudal peduncle region with a distinct median greyish black spot. Snout and jaws reddish. Cheek, opercle scattered with large brown to grayish black marks. Post-anal region with 5 major ventral blotches and 1 small brown spot just before basal region of caudal fin. First dorsal fin translucent with 2–4 crescent pink red bands. Second dorsal fin with 3–5 longitudinal rows of pinkish red spots. Caudal fin with 7–10 vertical rows of tiny red spots.

FIGURE 1. *Eviota perspicilla*, 21.5–22.3 mm SL, male, Longdong Bay, New Taipei City, Taiwan.

FIGURE 2. *Eviota perspicilla*, 14.6–17.2 mm SL, female, Longdong Bay, New Taipei City, Taiwan.

Redescription

Body robust and rather compressed. Eye median large and snout rather short. Gill-opening restricted, extending just to anterior edge of opercle. Interorbital region very narrow. Mouth extending to middle vertical of eye. Body morphometric proportions as follows: head length 27.1–28.0%; snout to origin of first dorsal fin 38.0–41.7%; snout to origin of second dorsal fin 57.3–60.8%; snout to origin of anal fin 61.2–64.5%; body depth at anal fin origin 20.2–23.9%; caudal peduncle length 20.5–24.0%; caudal peduncle depth 13.7–16.7%, which all above in standard length. Eye diameter 26.9–34.2%; postorbital length 56.7–61.5%; snout length 18.6–23.5%; upper jaw length 42.7–46.1, which all above in head length (all four individuals seen in Table 1).

Fins.—D1 VI, D2 I/9; P 16–17 (modally 16); A I/8; V I/5. First dorsal fin rays not elongate in both sexes. Rear of second dorsal fin tip reaching vertical of caudal fin base. Fifth ray present. No frenum, no connecting membrane between 2 pelvic fins.

Scales.—LR 23–24, TR 7, PreD 0. Body with rather large ctenoid scales. Predorsal region entirely naked. Head, opercle and nape naked.

Head lateral-line system

Sensory papillae. Same to general reduced infraorbital papillae pattern in *Eviota*.

Head canals. Cephalic sensory-canal pore system pattern 2 [lacking only pore H (IT)] (anterior oculoscapular canal with pores B', single C, single D, E and F', two preopercular-canal pores, N' and O') (see Lachner and Karnella, 1980).

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TABLE 1. Morphometry of *Eviota perspicilla* from Taiwan.

Sex	Male	Male	Female	Female
Standard length (mm)	22.3	21.5	17.2	14.6
% in Standard length				
Head length	27.6	29.6	27.1	28.0
Snout to origin of first dorsal fin	38.2	40.7	41.7	38.0
Snout to origin of second dorsal fin	57.1	60.8	59.4	57.3
Snout to origin of anal fin	60.6	61.4	61.2	64.5
Body depth at anal fin origin	20.2	21.6	23.9	20.4
Caudal peduncle length	20.5	24.0	22.9	21.5
Caudal peduncle depth	13.7	16.7	15.7	16.7
% in head length				
Eye diameter	26.9	32.2	34.2	29.9
Postorbital length	59.4	59.1	61.5	56.7
Snout length	18.8	21.3	23.5	18.6
Upper jaw length	46.1	44.5	42.7	31.9

Coloration in fresh material

Body and head translucent and somewhat light pinkish.

Trunk with 6–7 inner reddish or black stripes. Caudal peduncle region with a distinct median greyish black spot. Snout and jaws reddish. Cheek, opercle scattered with large brown to grayish black marks. Post-anal region with 5 major ventral blotches and 1 small brown spot just before basal region of caudal fin. First dorsal fin translucent with 2–4 crescent pink red bands. Second dorsal fin with 2–4 longitudinal rows of pinkish red spots. Anal fin pinkish with greyish background. Pectoral fin base with two large rounded brown or grayish black marks. Caudal fins with 7–10 vertical rows of tiny red spots. Pelvic fin translucent and whitish.

Distribution

This species was previously regarded as endemic to Japan, where it was only found around the type locality from Kagoshima to Amami O-shima in Japanese waters (Fujiwara *et al.*, 2020). The current new record extends its distribution range southward to Taiwan, where it is mainly found in northern and several localities of eastern Taiwan.

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