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Two new dwarfgobies of the genus *Eviota* from the Ryukyu Islands, Japan (Teleostei: Gobiidae)

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Abstract

Two species of dwarfgoby are described from the Ryukyu Islands, Japan. *Eviota flebilis* **n. sp.** belongs to cephalic sensory-pore system pattern 2 (lacking only IT pore), has a dorsal/anal fin-ray formula of 8/7, unbranched pectoral-fin rays, the 5th pelvic-fin ray 12.9% of the 4th, a distinctive narrow, red-orange line under the eye, and a dark vertical line at the caudal-fin base. *Eviota specca* **n. sp.** has a cephalic sensory-pore system pattern 1 (complete), has a dorsal/anal-fin formula of 8/8, the body heavily sprinkled with chromatophores, and a single dark spot on the upper pectoral-fin base.

Key words: Ichthyology, systematics, dwarfgoby, Gobiidae, *Eviota*, new species, Japan

Introduction

In their book on the gobioid fishes of Japan, Suzuki et al. (2004) illustrated 19 undescribed species in the genus *Eviota*, identifying them by numbers or letters. Previously we have described four of these (Greenfield & Suzuki 2010, 2011, 2013). In this paper we describe one more of these species (*Eviota* sp. 3) from the Ryukyu Islands, Japan collected by the second and author. The second species was recently collected from Iriomote-jima Island, the Ryukyu Islands, Japan. Often undescribed species of *Eviota* are taken using chemicals such as rotenone and series of specimens are obtained; however, in this case the specimens were recognized underwater and individually collected. Both of these species are rarely seen. The new species fit the description typical of all species of *Eviota*: the pelvic fins are separate and lack a frenum and the 5th pelvic-fin ray, if present, is unbranched; the membrane joining the 5th pelvic-fin rays is rudimentary or absent; there are ctenoid scales on the body but no scales on the head, nape or pectoral-fin base; the breast either lacks scales or may have a few embedded cycloid scales; the teeth in the upper jaw are in two or more rows and there are 1–3 enlarged curved canine-like teeth in the innermost row of the lower jaw just behind the jaw symphysis.

Material and methods

Counts and measurements, descriptions of fin morphology and the cephalic sensory-canal pore patterns follow Lachner & Karnella (1980), Jewett & Lachner (1983), and Akihito *et al*. (1993), and refer to pore patterns not their Groups. Postanal midline spots, along the posteroventral midline of the body, begin at the anal-fin origin and extend to a vertical drawn 2 to 3 scale rows anterior to the ends of the hypurals where they articulate with the caudal-fin ray bases, the additional smaller spot posterior to this is not counted. “The membranes joining the first four [pelvic] fin rays are considered to be well developed when the membranes extend beyond the bases of the first branches; they are considered to be reduced when they are slightly developed, not extending to the bases of the first

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Comparisons. *Eviota specca* is a member of the cephalic sensory-pore pattern 1 (complete) with 32 described species (Greenfield & Jewett, 2014 - Table 1). Only eight of the species in pattern 1 share the dorsal/anal-fin formula of 8/8 with *E. specca*: *E. distigma* Jordan & Seale, *E. herrei* Jordan & Seale, *E. monostigma* Fourmanoir, *E. nebulosa* Smith, *E. nigramembrana* Greenfield & Suzuki, *E. nigripinna* Lachner & Karnella, *E. randalli* Greenfield, and *E. winterbottomi* Greenfield & Randall. The complete pectoral-fin base is dark in *E. monostigma* (upper half in *E. specca*); three subcutaneous body bars between anal-fin origin and caudal-fin base in *E. randalli* (four in *E. specca*); opercular membrane dark in *E. nigramembrana* (clear in *E. specca*); *E. distigma* with two dark spots on pectoral-fin base in males and with an obvious dark spot on the caudal peduncle over the posteriormost subcutaneous bar (both absent in *E. specca*); body deep in *E. herrei*, 24.8–28.5% SL (more slender in *E. specca*, 21.4%) and 5th pelvic-fin ray 20% of 4th (3.5% in *E. specca*); *E. nigripinna* with an obvious dark spot on the caudal peduncle, the dorsal fin solid black, and the nape crossed by four orange bars (all absent in *E. specca*); *E. nebulosa* has a caudal spot located above the midline on the posteriormost subcutaneous bar, no dark pigment on pectoral-fin base, and dorsal fin with broad dark and light bars (*E. specca* lacks a caudal spot above the midline, has pigment on the upper pectoral-fin base, and the dorsal fin is not crossed by dark and light bars); *E. winterbottomi* has a complete dark bar over the posteriormost subcutaneous bar, whereas it is not obvious in *E. specca* and *E. winterbottomi* has round red spots on the cheek in life (*E. specca* lacks them).

Remarks. One other species of *Eviota* also has a heavy speckling of chromatophores on the body like *E. specca*, *E. piperata*; however, it lacks the IT pore, has small chromatophores covering the head as well as the body, the entire pectoral-fin base is covered with pigment, and has larger chromatophores on the dorsal fins (Greenfield & Winterbottom, 2014).

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