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Thysanichthys evides, a Senior Synonym of *Sebastella littoralis*, and a Valid Species of *Scorpaenodes* (Actinopterygii: Scorpaenidae)

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The nominal species, *Thysanichthys evides* Jordan and Thompson, 1914 (Scorpaenidae), originally described from Misaki, Japan, has not been reported since its original description. Examination of the type specimens of *T. evides* showed them to be identical with the holotype and non-type specimens of a species previously widely-regarded as *Scorpaenodes littoralis* (Tanaka, 1917), originally described as *Sebastella littoralis,* also from Misaki. *Thysanichthys evides* is herein regarded as a senior synonym of *Sebastella littoralis*, and is a valid species of *Scorpaenodes*.
Key Words: Teleostei, Scorpaenidae, *Scorpaenodes*, synonymy, *Thysanichthys evides*, *Sebastella littoralis*.

Introduction

The scorpionfish *Scorpaenodes littoralis* (Tanaka, 1917) (*q.v.*), originally described as a new genus and species *Sebastella littoralis* on the basis of a single specimen from Misaki, Kanagawa Prefecture, Japan, is characterized by having coronal and interorbital spines, and a dark blotch on the subopercle (Poss 1999; Nakabo 2002). This species is widely distributed in the Indo-Pacific, including East Asia (Ishida 1997; Randall *et al*. 1997; Xinbo 2006), Hawaii (Mundy 2005), French Polynesia (Randall 2005), Australasia (Hutchins 2001; Paulin *et al*. 2001), the Arabian Sea (Manilo and Bogorodsky 2003), and South Africa (Eschmeyer 1986). However, it has never been recorded from equatorial regions, and thus has an antitropical distribution (Poss 1999; this study). It is common on shallow rocky reefs in temperate and subtropical regions, especially along the Pacific coast of southern Japan (Motomura and Iwatsuki 1997; Shinohara *et al*. 2000; Senou *et al*. 2002, 2006). A detailed study on its biology was published by Yoneda *et al*. (2000).

Scorpaenodes littoralis has been widely recognized as a valid species (e.g., Poss 1999; Greenfield and Matsuura 2002); however, our examination of the holotypes of *Thysanichthys evides* Jordan and Thompson, 1914 (*q.v.*) and *Sebastella littoralis* (both from Misaki, Japan) revealed that they represent the same species. Thus, *T. evides* is a senior synonym of *Scorpaenodes littoralis*, and is regarded here as a

valid species of *Scorpaenodes*. In this paper we document this synonymy through a morphological comparison of non-type material of *S. littoralis* with the type specimens of *T. evides*.

Material and Methods

Measurements follow Motomura (2004a, b), with head width following Motomura *et al.* (2005b, 2006a) and maxillary depth following Motomura *et al.* (2006b). Counts follow Motomura *et al.* (2005a–c) and Motomura and Johnson (2006). The last two soft rays of the dorsal and anal fins are counted as single rays, each pair being associated with a single pterygiophore. Standard length is expressed as SL. Terminology of head spines follows Randall and Eschmeyer (2002, fig. 1) and Motomura (2004b, fig. 1) with the following additions: the spine at the base of the uppermost preopercular spine is referred to as the supplemental preopercular spine (Eschmeyer 1965); the spine on the lateral surface of the lacrimal bone is referred to as the lateral lacrimal spine (Motomura and Senou 2008, fig. 2); and the coronal and pretympanic (as an extra spine) spines are those figured by Chen (1981, fig. 1) and Motomura *et al.* (2004, fig. 14b) respectively. Institutional codes are as follows: Biodiversity Research Center, Academia Sinica, Taipei (ASIZP); Laboratory of Marine Biology, Faculty of Science, Kochi University, Kochi (BSKU); California Academy of Sciences, San Francisco [CAS (SU)]; Carnegie Museum of Natural History, Pittsburgh (CM); Field Museum of Natural History, Chicago (FMNH); Kagoshima University Museum, Kagoshima (KAUM); Museum of Comparative Zoology, Harvard University, Cambridge (MCZ); Museum of New Zealand Te Papa Tongarewa (NMNZ); National Museum of Nature and Science, Tokyo (NSMT); Museum Support Center of the Smithsonian Institution National Museum of Natural History, Suitland (USNM); Western Australian Museum of Natural Science, Welshpool (WAM); and University Museum, University of Tokyo, Tokyo (ZUMT).

Type specimens examined in this study — *Thysanichthys evides*: FMNH 57082 (formerly CM 6019a), holotype, 73.8 mm SL, Misaki, Kanagawa Prefecture, Pacific coast of central Japan (Fig. 1A); SU 22611, 5 paratypes, 39.7–68.4 mm SL, Misaki. *Sebastella littoralis*: ZUMT 7439, holotype, 75.5 mm SL, Misaki (Fig. 1B).

Non-type specimens previously identified as *Scorpaenodes littoralis* examined in this study (51 specimens, 27.9–82.7 mm SL) — **JAPAN:** BSKU 13974, 80.0 mm SL, 13976, 73.6 mm SL, 13977, 67.8 mm SL, Usa, Tosa, Kochi, Sep. 1968; BSKU 39342, 68.6 mm SL, Inojiri, Usa, Tosa, Kochi, 11 Jun. 1983; BSKU 40079, 66.5 mm SL, 40080, 65.3 mm SL, 40081, 53.7 mm SL, Uchinoura Bay, Susaki, Kochi, 16 May, 1984; BSKU 45650, 58.7 mm SL, Kashiwa-jima Island, Kochi, 10 m, 23 Apr. 1989; BSKU 53919, 71.4 mm SL, Irino Fishing Port, Kuroshio, Kochi, 12 Apr. 2002; BSKU 60855, 81.8 mm SL, off Susaki, Kochi, 8 Nov. 2002; BSKU 65503, 78.3 mm SL, 70331, 56.9 mm SL, 70332, 49.4 mm SL, 70333, 55.5 mm SL, 70334, 62.5 mm SL, 70335, 71.5 mm SL, west side of Futanarabi-jima, off Okino-shima Island, Sukumo, Kochi, 22 Jul. 2003; BSKU 67339, 77.3 mm SL, Ashizuri Port, Tosashimizu, Kochi, 6 Aug. 1998; BSKU 87688, 69.2 mm SL, Iburi, Tosashimizu, Kochi, 13 Jun. 2000; BSKU 91538, 67.2 mm SL, Saga Fishing Port, Kuroshio, Kochi, 17 Jun. 2007; KAUM-I. 1510, 56.4 mm SL, Tagami, Kumano, Nishinoomote, Tanega-shima Island, Kagoshima, 30°38′47″N, 131°02′34″E, M. Takayama, 4 Jan. 2007; KAUM-I. 3209, 40.2 mm SL, east of Sakinoyama, Kataura,

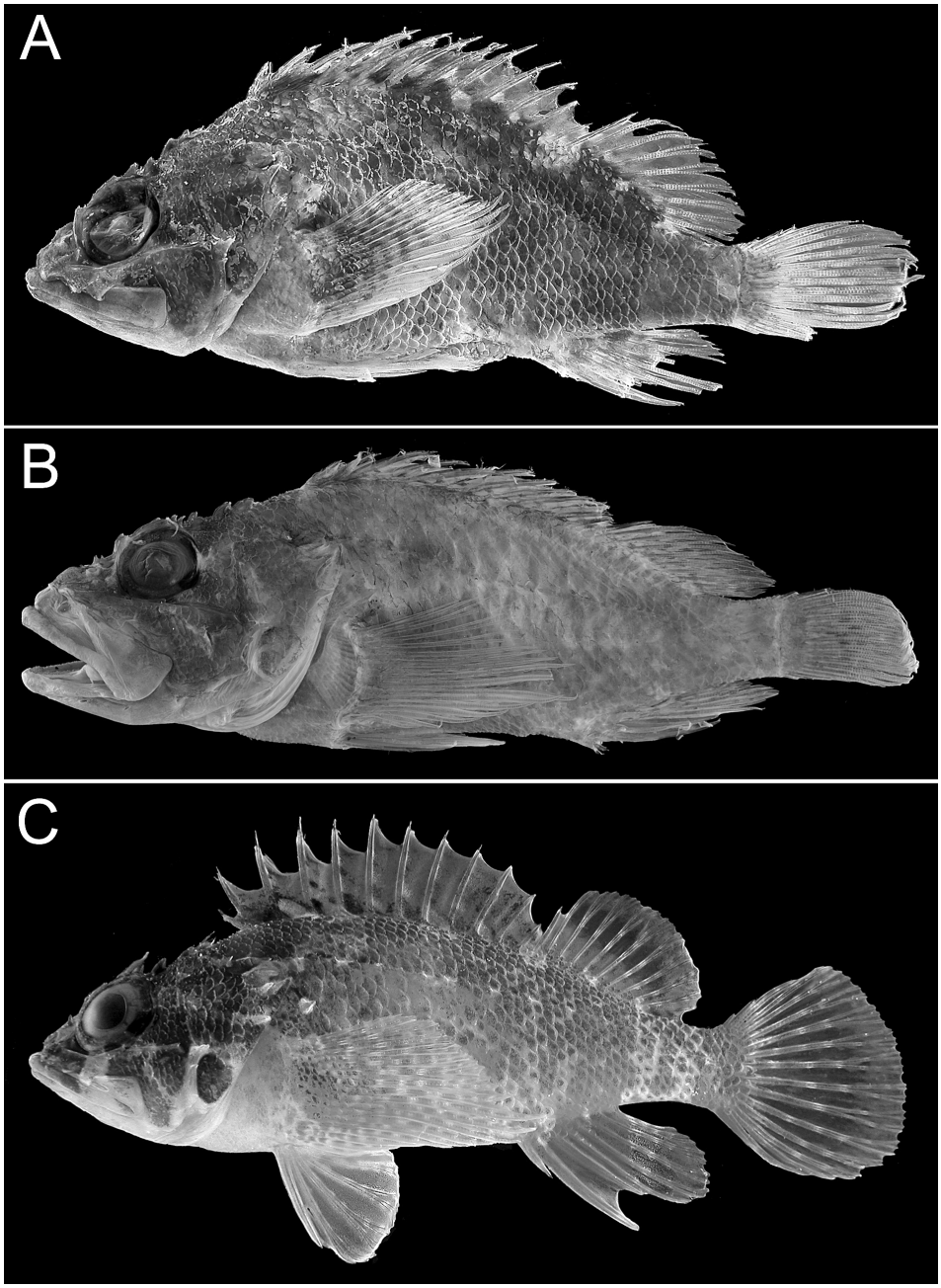

Fig. 1. *Scorpaenodes evides*. A, Holotype of *Thysanichthys evides*, FMNH 57082, 73.8 mm SL, Misaki, Kanagawa, Japan; B, holotype of *Sebastella littoralis*, ZUMT 7439, 75.5 mm SL, Misaki, Kanagawa, Japan; C, non-type of *Scorpaenodes evides*, KAUM-I. 4371, 46.6 mm SL, Minamisatsuma, Kagoshima, Japan.

Kasasa, Minamisatsuma, Kagoshima, 31°25′44″N, 130°11′49″E, 27 m, M. Ito, 18 Oct. 2006; KAUM-I. 3899, 61.0 mm SL, off Chiringa-shima Island, Ibusuki, Kagoshima Bay, 31°16′38″N, 130°40′18″E, 25 m, Orita Fishery, 20 May 2007; KAUM-I. 4371, 46.6 mm SL (Fig. 1C), 4775, 70.0 mm SL, Hirasaki, Bonotsu, Minamisatsuma, Kagoshima, 31°20′33″N, 130°12′26″E, 3–5 m, M. Ito, 20 Jun. 2007; KAUM-I. 5142, 45.8 mm SL, 5143, 68.8 mm SL, 5144, 50.0 mm SL, 5145, 57.3 mm SL, 5146, 50.3 mm SL, 5147, 48.0 mm SL, 5148, 39.7 mm SL, 13350, 44.3 mm SL, 13537, 44.6 mm SL, 13538, 49.4 mm SL, 13539, 41.1 mm SL, 13540, 31.3 mm SL, 13541, 43.2 mm SL, coast of Hanase, Wakiura, Kaimon, Ibusuki, Kagoshima, 31°11′36″N, 130°30′27″E, Jun. 1962; KAUM-I. 10765, 69.1 mm SL, Ohto Fishing Port, Kasasa, Minamisatsuma, Kagoshima, 31°25′19″N, 130°10′17″E, 4–5 m, M. Ito, 6 Jul. 2008; KAUM-I. 13262, 82.1 mm SL, Kataura Fishing Port, Kasasa, Minamisatsuma, Kagoshima, 31°25′N, 130°10′E, 2 m, M. Ito, 14 Sep. 2008; KAUM-I. 18249, 50.9 mm SL, 18250, 45.9 mm SL, 18255, 58.8 mm SL, 18311, 44.0 mm SL, 18313, 58.0 mm SL, 18314, 82.7 mm SL, 18317, 73.2 mm SL, 18348, 56.2 mm SL, Ryukyu Islands, 3 Jun. 1966. **TAIWAN:** ASIZP 58888, 2, 56.7 and 58.0 mm SL, Longdong, Taipei, 25°11′N, 121°54′E, L.-T. He, 29 Jul. 1993; ASIZP 63590, 2, 27.9 and 41.7 mm SL, Dapengwan, Pingtung, 22°44′N, 120°47′E, P.-L. Lin, 15 May 2000.

Comparative material of *Scorpaenodes* cf. *evides* examined in this study (50 specimens, 19.6–76.3 mm SL) — **SOUTH AFRICA:** CAS 48681, 2, 69.6 and 73.2 mm SL, wreck off Brighton, Natal, P. Heemstra, 29 Apr. 1980. **SRI LANKA:** CAS 207730, 4, 44.3–56.9 mm SL, Trincomalee, 7.6 m, C. Koenig, 4 Apr. 1970. **AUSTRALIA:** CAS 13855, 3, 66.4–70.7 mm SL, One Tree Island, Great Barrier Reef, Queensland, 6.1 m, B. Collette *et al.*, 23 Nov. 1969; MCZ 90620, 4, 45.6–62.9 mm SL, Elizabeth and Middleton Reefs, Great Barrier Reef, Queensland, 0–10 m, D. Williams, 1984; NMNZ P. 20605, 35.0 mm SL, Maroubra, south Sydney, New South Wales, 34°00′N, 151°15′E, J. Moreland and J. Yaldwyn, 23 Mar. 1967; WAM P. 27099-007, 2, 65.0 and 65.7 mm SL, Port Hacking, New South Wales, 34°04′S, 151°06′E, 6–7 m, J. Hutchins, 28 Jan. 1981; WAM P. 27590-011, 3, 37.5–67.2 mm SL, north end of Dicks Island, Abrolhos Islands, 28°30′S, 113°46′E, 30–32 m, G. Allen and N. Sinclair, 17 Apr. 1982. **NEW ZEALAND:** NMNZ P. 17768, 3, 19.6–25.7 mm SL, NMNZ P. 17774, 2, 30.8 and 36.6 mm SL, Meyer Island, off Raoul Island, Kermadecs, 29°10′S, 177°50′W, K. Bailey and M. Francis, 19 Aug. 1985; NMNZ P. 41051, 4, 20.0–33.7 mm SL, west side of Meyer Island, off Raoul Island, Kermadecs, 29°14′S, 177°53′W, 7 Nov. 2004; NMNZ P. 41067, 59.7 mm SL, south end of Denham Bay, Raoul Island, Kermadecs, 29°16′S, 177°57′W, 5 Nov. 2004; NMNZ P. 41084, 8, 23.0–54.1 mm SL, off Smith's Bluff, Denham Bay, Raoul Island, Kermadecs, 29°16′S, 178°57′W, A. Stewart *et al.*, 10 Nov. 2004; NMNZ P. 41097, Denham Bay, Raoul Island, Kermadecs, A. Stewart, 9 Nov. 2004. **FRENCH POLYNESIA:** USNM 379396, 2, 36.2 and 58.0 mm SL, off south side of Tarakoi Islet, Rapa, 27°35′33″S, 144°18′12″W, 20 m, J. Williams, 23 Sep. 2004. **HAWAIIAN ISLANDS:** CAS 13476, 2, 60.9 and 64.3 mm SL, Hauula Park, Honolulu, Oahu, W. Gosline *et al.*, 28 Jun. 1949; CAS 13477, 74.0 mm SL, Kaena Point, Oahu, W. Gosline and class, 4 Mar. 1950; CAS 33915, 76.3 mm SL, Hauula Park, Honolulu, Oahu, W. Gosline *et al.*, 11 May 1952.

Results and Discussion

The specimens examined here were recognized as *Scorpaenodes* Bleeker, 1857 (*q.v.*) because they had 13 dorsal-fin spines, three well-developed anal-fin spines, and exposed, spine-shaped caudal-fin procurrent rays, and lacked palatine teeth, characters diagnostic of *Scorpaenodes* (e.g., Greenfield and Matsuura 2002; Motomura *et al.* 2010; Motomura unpubl. data). *Sebastella* has previously been regarded as a junior synonym of *Scorpaenodes* [type species: *Scorpaena polylepis* Bleeker, 1851 (*q.v.*)] by Eschmeyer (1969) and Mandrytsa (2001).

Characters of the holotype (FMNH 57082, formerly registered as CM 6019a) and paratypes of *Thysanichthys evides* agreed with those of the holotype of *Sebastella littoralis* (ZUMT 7439) and a number of non-type specimens previously identified as *Scorpaenodes littoralis*. All specimens were characterized by having coronal and interorbital spines, and a dark blotch on the subopercle, a character combination unique to *Scorpaenodes littoralis* among the Indo-Pacific *Scorpaenodes*. Although the holotype of *T. evides* (Fig. 1A) had an unusually high body depth (40.1% of SL) compared with those of the holotype of *Sebastella littoralis* and non-type specimens of *Scorpaenodes littoralis* (30.8–38.2% of SL, mean 33.0%), X-ray examination of the former showed a strong curvature of the spine caused by deformed vertebrae.

Although *T. evides* has not been reported since its original description and *Scorpaenodes littoralis* has been widely used as a valid name by numerous researchers (see Introduction) [thereby meeting the condition of the Article 23.9.1.2 of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature 1999)], the species-group name of the former published in 1914 is of insufficient antiquity (post-1899) to meet the Article 23.9.1.1 of the Code. Thus, the provisions of the Article 23.9 for "reversal of precedence" cannot be applied so as to validate *Sebastella littoralis*. *Thysanichthys evides* is regarded herein as a valid species, *Scorpaenodes evides*, being a senior synonym of *Sebastella littoralis*. Although it is not directly relevant to the nomenclatural considerations here, the status of *Thysanichthys* Jordan and Starks, 1904 (*q.v.*) as a valid monotypic genus with palatine teeth (type species: *Thysanichthys crossotus* Jordan and Starks, 1904) (Poss 1999; Nakabo 2002) is also confirmed.

Meristics and morphometrics of *Scorpaenodes evides* from East Asia, including the type specimens of *Sebastella littoralis* and *T. evides*, are given in Table 1. Fifty specimens (19.6–76.3 mm SL) collected from outside the East Asian region were also examined for comparative purposes in this study (see Material and Methods) but were not included in Table 1 because they possibly represented more than one species or geographic subspecies or, at least, geographically distinct populations. We have recognized at least seven geographic populations in the species currently identified as *Scorpaenodes evides*, i.e. those from the southeastern coast of Africa, the northwestern and northeastern Indian Ocean, Australasia, East Asia, the Hawaiian Islands, and the southeastern Pacific, some of which represent disjunct distributions that make inter-populational gene flow unlikely. Molecular analysis and more detailed morphological comparisons will be required in the future to assess the taxonomic status of these populations. Incidentally, *Scorpaenodes littoralis* figured by Kim *et al.* (2005: 218, fig. 392) from Korea was re-identified here as *Scorpaena miostoma* Günther, 1877, and Kim *et al.*'s (2005: 217, fig. 389) *Scorpaena miostoma* was re-identified as *S. neglecta* Temminck and Schlegel, 1843.

Table 1. Meristic and morphometric characters of *Scorpaenodes evides*, including types of *Thysanichthys evides* and *Sebastella littoralis*.

	Thysanichthys evides		*Sebastella littoralis*	*Scorpaenodes evides*
	Holotype FMNH 57082 Japan	Paratypes n=5 Japan	Holotype ZUMT 7439 Japan	Non-types n=51 Japan and Taiwan
Standard length (SL, mm)	73.8	39.7–68.4	75.5	27.9–82.7
Meristics				
Dorsal-fin rays	XIII, 9	XIII, 9	XIII, 9	XIII-XIV(XIII), 6–9 (9)
Pectoral-fin rays (one side/other side)	18/18	17–19/ 17–18	18/18	16–19 (18)/ 17–19 (18)
Anal-fin rays	III, 5	III, 5	III, 5	III, 5
Scale rows in longitudinal series	45	43–47	45	42–49 (48)
Pored lateral-line scales	25	24–26	24	22–26 (25)
Scales above lateral line	5	4–6	5	4–6 (5)
Scale rows between last dorsal-fin spine base and lateral line	5	4–5	6	3–6 (4)
Scale rows between 6th dorsal-fin spine base and lateral line	5	4–5	5	3–5 (4)
Gill rakers (upper+ceratohyal +hypohyal)	5+8+3 =16	5–6+7–9+2–4 =14–18	6+9+3 =18	5–6 (5)+6–10 (9) +1–4 (3) =14–20 (17)
Morphometrics (% of SL)				
Body depth	40.1	32.8–41.9	34.6	30.8–38.2 (33.0)
Body width	25.1	19.2–22.6	19.1	17.0–25.8 (21.6)
Head length	42.6	38.8–42.3	40.9	36.9–45.4 (41.6)
Snout length	10.6	9.5–11.6	10.6	9.1–12.1 (10.4)
Orbit diameter	12.9	13.7–14.5	11.4	11.0–15.6 (13.2)
Interorbital width[1]	7.1	4.8–6.1	6.4	4.9–7.3 (5.9)
Interorbital width[2]	5.8	4.8–5.7	5.7	4.8–6.3 (5.4)
Head width	14.8	16.1–17.3	14.8	13.2–20.5 (16.9)
Upper-jaw length	23.2	21.1–22.7	22.1	19.9–24.3 (21.8)
Maxillary depth	6.9	6.4–7.1	8.5	6.0–8.2 (6.9)
Postorbital length	20.2	15.8–19.6	20.7	17.2–21.4 (19.3)
Between tips of opercular spines	4.7	4.6–6.1	5.0	4.0–6.8 (5.1)
Pre-dorsal-fin length	40.5	35.9–42.7	37.1	36.7–43.6 (39.1)
Pre-anal-fin length	72.1	69.9–73.6	72.9	68.9–77.2 (71.6)
Pre-pelvic-fin length	40.0	38.1–43.9	41.7	35.3–45.4 (39.0)
1st dorsal-fin spine length	6.6	4.5–6.5	6.8	5.1–8.8 (6.8)
2nd dorsal-fin spine length	12.1	7.1–11.4	–	8.8–15.1 (11.1)
3rd dorsal-fin spine length	14.6	12.6–15.2	13.8	11.7–17.2 (14.1)
4th dorsal-fin spine length	16.9	13.5–15.1	14.0	12.3–19.1 (14.8)
5th dorsal-fin spine length	16.3	14.2–16.7	14.2	11.7–17.6 (14.8)
6th dorsal-fin spine length	16.0	14.2–15.5	–	12.7–18.7 (15.0)
12th dorsal-fin spine length	7.2	6.4–7.6	7.3	4.9–9.7 (7.1)
13th dorsal-fin spine length	11.4	10.8–14.3	10.5	8.7–13.1 (11.0)

Table 1. Continued.

	Thysanichthys evides		*Sebastella littoralis*	*Scorpaenodes evides*
	Holotype FMNH 57082 Japan	Paratypes $n=5$ Japan	Holotype ZUMT 7439 Japan	Non-types $n=51$ Japan and Taiwan
Morphometrics (% of SL)				
Longest dorsal-fin ray length	16.5	–	18.2	15.6–19.9 (17.2)
1st anal-fin spine length	9.2	7.3–9.7	–	7.2–10.7 (8.7)
2nd anal-fin spine length	21.5	20.7–22.6	20.4	18.6–26.4 (22.0)
3rd anal-fin spine length	–	16.5–18.0	17.5	13.2–21.8 (16.8)
Longest anal-fin ray length	–	19.3–23.9	22.5	17.8–25.6 (21.5)
Pectoral-fin ray length	32.3	33.3–35.9	33.9	28.9–38.8 (33.5)
Pelvic-fin spine length	19.2	16.8–19.7	16.4	14.8–20.3 (17.8)
Longest pelvic-fin ray length	26.7	22.3–27.6	13.3	19.5–26.5 (23.3)
Caudal-fin length	27.0	25.4–27.4	27.2	22.9–30.4 (27.0)
Caudal-peduncle length	17.1	17.8–19.4	16.3	14.1–27.7 (18.8)
Caudal-peduncle depth	10.5	10.3–11.8	10.2	9.0–11.9 (10.8)

Morphometrics are expressed as percentages of standard length. Means in parentheses include type data. [1] At vertical midline of eye; [2] at posterior end of preocular spine base; – broken.

A morphological description of *Scorpaenodes evides* from East Asia follows. Body not strongly compressed anteriorly, progressively compressed posteriorly. Nape and anterior body not strongly arched. Body depth moderate, less than head length. Short, broad tentacle on posterior edge of low membranous tube associated with anterior nostril. Pectoral-fin axil without skin flaps. Numerous scales covering occiput, area behind orbit, and cheek; few scales in interorbital space; no scales on lateral surface of maxilla and anteroventral surface of head. Well-exposed ctenoid scales on lateral surface of trunk, scales becoming cycloid on abdomen. Exposed cycloid scales on anteroventral surface of body and pectoral-fin base. Body scales extending onto basal parts of fin rays or fin membranes, except for bases of pelvic fins. Lateral line nearly straight from upper end of gill opening to caudal-fin base. Underside of dentary with three distinct sensory pores on each side. Pair of small pores behind symphysial knob of lower jaw in ventral view. Posterior margin of maxilla usually not reaching (or rarely extending slightly beyond) a vertical through posterior margin of orbit. No distinct longitudinal ridge on lateral surface of maxilla. Width of symphysial gap separating premaxillary teeth bands subequal to width of each band. Upper and lower jaws with villiform teeth, lacking canine teeth. Villiform teeth forming Y-shaped patch on vomer. Palatine teeth absent. Underside of lower jaw without ridges. Gill rakers relatively short and spinous; slit present behind fourth gill arch. Swimbladder present. Dorsal profile of snout steep, forming angle of about 40 degrees to horizontal axis of head and body. Ascending process of premaxilla slightly intruding into interorbital space, its posterior margin extending well beyond level of posterior margin of posterior nostril in dorsal view. Median interorbital ridge absent. Interorbital ridges weakly developed, separated by relatively shallow channel; interorbital spines usually

present at level of midline of eye. Interorbital space shallow, with about one-tenth of orbit extending above dorsal profile of head. Preocular spine simple, slightly flattened anteriorly and posteriorly; anterior surface of spine without distinct ridges. Supraocular, postocular, and tympanic spines simple. Coronal spines usually present (sometimes absent on one side of head) between origins of tympanic spines. Pretympanic spines absent. Occipital region flat, with no distinct ridges on either front or rear part of occiput. Parietal and nuchal spines joined at base. Sphenotic with several small spines. Tube-shaped postorbital bone usually without spines. Pterotic spine simple, directed posteroventrally. Upper and lower posttemporal spines present; length of upper spine about one-third of that of lower spine. Supracleithral and cleithral spines simple. Lateral lacrimal spine simple, well developed. Anterior and posterior lacrimal spines simple, triangular or rounded, not strongly developed. Dorsal margin of lacrimal without spines. Suborbital ridge with 2 well developed spines; first spine tip below posterior margin of pupil; second spine at end of suborbital ridge. Additional weak spine sometimes present below tip of first suborbital spine. No space between ventral margin of eye and suborbital ridge. Suborbital pit small. Preopercle with 3 spines; uppermost spine largest, with supplemental preopercular spine on its base; space between second and third spines slightly broader than that between first and second spines. Preopercle, between uppermost preopercular spine and upper end of preopercle, usually without serrae or spines (rarely with small spines). Upper and lower opercular spines simple without distinct median ridge. Space between upper and lower opercular spines without ridges. Posterior tip of upper opercular spine not reaching opercular margin; posterior tip of lower opercular spine reaching or extending slightly beyond opercular margin. Origin of first dorsal-fin spine above supracleithral spine. Posterior margin of opercular membrane reaching a vertical through base of third dorsal-fin spine. Posterior tip of pectoral fin extending slightly beyond a vertical through origin of anal fin. Origin of pelvic-fin spine slightly posterior to a vertical through origin of pectoral fin. Posterior tip of depressed pelvic fin not reaching origin of anal fin. Origin of first anal-fin spine anterior to a vertical through last dorsal-fin spine.

Fresh coloration of East Asian *S. evides* as follows: head reddish-black dorsally and laterally, reddish ventrally, with distinct blackish blotch on subopercle (blotch subequal in size to pupil diameter); trunk variegated, mottled with brown, red, and/or orange blotches and spots. Spinous portion of dorsal fin blackish anterobasally, remaining parts reddish or orange with white spots scattered on membranes; no distinct black blotch on posterior spinous portion of dorsal fin. Soft-rayed portion of dorsal fin semitransparent with reddish areas basally and distally. Pectoral, pelvic, and anal fins with reddish spots (anal fin sometimes with broad red band basally). Caudal fin semitransparent with reddish submarginal band; reddish spots on caudal-fin rays. In underwater photographs of *S. evides* in Japan, many individuals with broad, white saddle, its anterior edge behind eye, and posterior edge level with middle of spinous portion of dorsal fin (saddle width subequal to head length).

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