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**Taxonomic Status of the Sandperch *Percis caudimaculatum*
and Validity of *Parapercis ommatura*
(Actinopterygii: Perciformes: Pinguipedidae)**

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There are no significant morphological differences between the four syntypes of the pinguipedid sandperch *Percis caudimaculatum* Haly, 1875 and the holotype of *Parapercis ommatura* Jordan and Snyder, 1902. The former nominal taxon is thus a subjective senior synonym of the latter, but it is also a junior homonym of *Percis caudimaculata* Rüppell, 1838, and thus invalid. In addition, Rüppell's taxon, now assigned to the genus *Parapercis*, has been recognized as a junior synonym of *Parapercis hexophtalma* (Cuvier in Cuvier and Valenciennes, 1829). *Parapercis ommatura*, being the first available junior synonym of *Parapercis caudimaculata* (Haly, 1875), becomes the valid name for the species.

Key Words: Actinopterygii, Perciformes, Pinguipedidae, *Parapercis ommatura*, synonym, homonym, nomenclature.

Introduction

The pinguipedid fish *Percis caudimaculatum* Haly, 1875 was briefly described from four specimens collected from northern China without illustrations (Haly 1875). De Beaufort and Chapman (1951) placed it in the synonymy of *Parapercis hexophtalma* (Cuvier in Cuvier and Valenciennes, 1829) without explanation, and they were followed by Cantwell (1964). Our detailed examination of the four syntypes of *Percis caudimaculatum* has revealed that it is not conspecific with *Parapercis hexophtalma*, but is a senior synonym of *Parapercis ommatura* Jordan and Snyder, 1902 (*q. v.*). The latter is known from southern Japan, Korea, northern China, and the South China Sea (e.g., Cantwell 1964; Shimada 2002). The purpose of this study is to show the basis for the synonymy of *Percis caudimaculatum* and *Parapercis ommatura* and the nomenclatural validity of the latter name.

Materials and Methods

Counts and measurements were made according to Hubbs and Lagler (1958) and Randall (1984). Where disagreements were found between these methods, Randall's methods were used. Specimen lengths are expressed as standard length. The number of vertical cheek scales was counted in the scale row running posteroventrally from the middle of the lower margin of the eye. Measurements were made with calipers to the nearest 0.1 mm. Institutional abbreviations follow Leviton *et al.* (1985).

Material examined. *Parapercis ommatura* (16 specimens): SU 6540 (presently deposited at CAS), holotype (80.2 mm), Nagasaki, Japan, date unknown; BMNH 1862.11.1.189–192, 4 syntypes of *Percis caudimaculatum* Haly, 1875 (67.2–83.9 mm), northern China, Yellow Sea, date unknown (synonymized herein); BSKU 61753, 1 specimen (64.5 mm), Yoshima, Kagawa, Japan, 30 April 1999; BSKU 81918, 1 specimen (78.6 mm), off Kochi, Japan (33°28.40'N, 133°33.06'E to 33°28.57'N, 133°33.35'E), 13–15 m depth, 14 April 1994; BSKU 81924, 81925, 2 specimens (85.3, 85.5 mm), off Kochi, Japan (33°27.18'N, 133°32.52'E to 33°27.44'N, 133°33.02'E), 30 m depth, 4 September 1994; HUMZ 36462, 1 specimen (78.1 mm), data unknown; HUMZ 44569, 1 specimen (90.5 mm), off Onomichi, Hiroshima, Japan, August 1930; HUMZ 69519, 1 specimen (101.9 mm), Toshi, Shima, Mie, Japan, date unknown; NSMT-P 799, 1 specimen (69.8 mm), Wakanoura, Wakayama, Japan, 1889; NSMT-P 2675, 1 specimen (89.9 mm), Takamatsu, Kagawa, Japan, August 1959; NSMT-P 52960, 1 specimen (78.7 mm), Chijiwa, Nagasaki, Japan (32°46.5'N, 130°11.4'E), 11 November 1989; NSMT-P 53589, 1 specimen (87.0 mm), Aba Fishing Port, Nagasaki, Japan (32°46.1'N, 129°56.6'E), 18 December 1989.

Comparative material. *Parapercis hexophthalma* (4 specimens): ZMB 517, holotype (159.3 mm), Massawa, Eritrea, Red Sea, date unknown; HUMZ 165320, 165335, 2 specimens (159.3, 177.3 mm), Al-Wajh, Red Sea, fishing, 25 June 1999; HUMZ 16319, 1 specimen (172.7 mm), island off Al-Wajh, Red Sea, fishing, 17 June 1999.

Results and Discussion

Taxonomic status of *Percis caudimaculatum*

After examination of the four syntypes of *Percis caudimaculatum*, the following diagnostic characters were confirmed: 22 soft dorsal fin rays, 18 soft anal fin rays, spinous dorsal fin connected by membrane to base of first soft dorsal ray, and dark brown spot on upper portion of caudal fin base (Fig. 1). *Parapercis hexophthalma* usually has 21 soft dorsal fin rays and 17 anal fin rays, the last dorsal fin spine connected to the first soft dorsal ray opposite the tip of the last spine, and a very large black blotch in the center of the caudal fin (e.g., Randall 1995; this study). Therefore, the synonymy of *Percis caudimaculatum* and *Parapercis hexophthalma* is not supported.

On the other hand, the characters of *Percis caudimaculatum* agree well with those of *Parapercis ommatura*. Comparison of the syntypes of *Percis caudimaculatum* and the holotype of *Parapercis ommatura* revealed no significant differences in counts and proportions; however, there were slight differences in the numbers

of upper gill rakers, lateral line scales, and scales between the anal fin origin and lateral line (three or four upper gill rakers, 58 lateral line scales, and 13 scales between the anal fin origin and lateral line in *Percis caudimaculatum* syntypes vs. one, 56, and 10, respectively, in the *Parapercis ommatura* holotype (Table 1). Non-type specimens identical with *Parapercis ommatura* (and also *Percis caudimaculatum*) examined for this study bear one to five upper gill rakers and 56–58 lateral line scales; numbers that fill the gap in these counts between the type material of these two nominal species. In addition, *Parapercis ommatura* is reported to have either two or three upper gill rakers (e.g., Kamohara 1960; Okamura 1984) and 56–60 lateral line scales (e.g., Okamura 1984; Shimada 2002). The five available non-type specimens with scales in the abdominal region had 12–14 scales between the anal fin origin and lateral line, but Cantwell (1964) reported *Parapercis ommatura* as having scale counts in the range of 10 (or 11) to 12 (or 13). Therefore, we consider *Percis caudimaculatum* and *Parapercis ommatura* to be conspecific.

Validity of *Parapercis ommatura*

From the above-mentioned results, *Percis caudimaculatum* Haly, 1875 is a senior synonym of *Parapercis ommatura*. It is more proper to refer to it as *Parapercis caudimaculata* (Haly, 1875), owing to the following reasons: (1) the pinguipedid genus *Percis* Bloch and Schneider, 1801 is invalid because of being preoccupied by the agonid genus *Percis* Scopoli, 1777, and thus was replaced by *Parapercis* Bleeker, 1863; and (2) the gender of *Parapercis* is feminine (see Eschmeyer 1998).

This is a moot point, however, for *Percis caudimaculata* Haly, 1875 is a junior homonym of *Percis caudimaculata* Rüppell, 1838, and thus invalid. Rüppell's species, originally described based on specimens collected from the Red Sea, has also been synonymized under *Parapercis hexophtalma* (e.g., Günther 1860; de Beaufort and Chapman 1951; Cantwell 1964).

If a rejected junior homonym has one or more available and potentially valid synonyms, the oldest of these becomes the valid name of the taxon with its own authorship and date (International Commission on Zoological Nomenclature 1999, Art. 60.2). No other junior synonyms of *Parapercis caudimaculata* (Haly, 1875) except for *Parapercis ommatura* Jordan and Snyder, 1902 are known; therefore, we conclude that the latter is the valid name of the present species.



Fig. 1. Lateral view of the the largest syntype of *Percis caudimaculatum* Haly, 1875 (83.9 mm). BMNH 1862.11.1.189–192.

Table 1. Counts and proportional measurements of *Percis caudimaculatum* Haly, 1875 and *Parapercis ommatura* Jordan and Snyder, 1902.

	<i>Percis caudimaculatum</i>	<i>Parapercis ommatura</i>	
	4 syntypes	Holotype	11 non-types
SL (mm)	67.2-83.9	80.2	64.5-101.9
Counts			
Dorsal fin rays	V, 22 (4)	V, 22	V, 21-22 (11) (usually 22 soft rays)
Anal fin rays	I, 18 (4)	I, 18	I, 18-19 (11) (usually 18 soft rays)
Pectoral fin rays (upper: unbr.+middle: br.+lower: unbr.)	1+14+0=15 (4)	1+14+0=15	1+14-15+0=15-16 (11)
Pelvic fin rays	I, 5 (4)	I, 5	I, 5 (11)
Branched caudal fin rays (up.+low.)	7-8+7=14-15 (3)	8+7=15	7-8+7=14-15 (8) (usually 8+7=15)
Lateral line scales (LLS)	58 (4)	56	56-58 (10)
Scales between dorsal fin origin and LLS	4-6 (2)	4	5-6 (8)
Scales between anal fin origin and LLS	13 (1)	10	12-14 (5)
Scales anterior to dorsal fin origin	6-8 (3)	6	6-8 (6)
Vertical cheek scales	6 (3)	6	6-7 (9)
Gill rakers	3-4+7-9=12-13 (2)	1+7=8	1-5+7-9=9-13 (10)
Canine teeth on lower jaw	4 (4)	4	4-7 (10) (usually 4)
Proportion as % SL			
Head length	26.4-27.5 (4)	26.1	25.6-27.6 (11)
Snout length	6.6-7.7 (4)	7.1	6.6-7.9 (11)
Orbital diameter	6.8-7.6 (4)	6.9	6.5-8.4 (11)
Interorbital width	1.1-1.3 (4)	1.4	1.2-1.4 (11)
Upper jaw length	7.9-8.5 (4)	8.1	7.7-8.8 (11)
Lower jaw length	10.4-11.6 (4)	10.0	9.8-11.0 (10)
Predorsal length	27.9-29.5 (4)	27.2	25.7-29.1 (11)
Preanal length	44.6-48.4 (4)	44.3	45.0-47.1 (11)
Length of dorsal fin base	62.8-69.5 (4)	65.1	63.0-69.0 (11)
Length of anal fin base	49.0-49.4 (4)	48.0	45.5-49.3 (11)
Pectoral fin length	18.3-21.9 (4)	18.5	17.9-20.6 (11)
Pelvic fin length	18.9-22.9 (4)	19.5	19.3-21.7 (9)
Caudal fin length	18.3-18.4 (2)	19.1	17.6-19.8 (9)
First dorsal spine length	2.1-3.0 (4)	2.5	1.6-3.6 (11)
Longest dorsal spine (fourth) length	7.5-9.7 (4)	8.5	8.1-11.3 (8)
Anal spine length	3.5-5.5 (4)	5.2	4.5-6.0 (11)

Number in parenthesis indicates that of examined specimens.

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