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I-Shiung Chen
Institute of Marine Biology, National Taiwan Ocean University, Keelung, Taiwan, R.O.C., isc@ntou.edu.tw

Tsung-Hsien Tsai
Institute of Marine Biology, National Taiwan Ocean University, Keelung, Taiwan, R.O.C.

Shao-Liang Hsu
Institute of Ocean Technology and Marine Affairs, National Cheng-Kung University, Tainan, Taiwan, R.O.C. Marine National Park Headquarters, Taiwan, Kaohsiung, Taiwan, R.O.C.

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A NEW *Parapercis* SPECIES FROM THE DONGSHA ISLAND, SOUTH CHINA SEA WITH COMMENTS ON A NEW RECORD FROM TAIWAN

I-Shiung Chen[1], Tsung-Hsien Tsai[1], and Shao-Liang Hsu[2, 3]

Key words: *Parapercis*, new species, new record, Taiwan, Pratas Island.

ABSTRACT

The sandperch genus, *Parapercis* Bleeker, 1863 is the most diverse group of Family Pinguipedidae in the perciforms. One unusual specimen of sandperches recently collected from the Dongsha Island (Pratas Island), South China Sea from 2011 expedition belonging to Taiwan, the Republic of China is turned to a new species as *Parapercis dongshaensis* n. sp. closely related to the newly recorded species, *Parapercis okamurai* Kamohara, 1960 which also firstly collected from Taiwanese waters would been also documented herein. The new species, *Parapercis dongshaensis* n. sp., can be well distinguished from other congeners by the following unique combination of features: (1) fins: dorsal fin rays V, 22 with spines larger posteriorly; anal fin rays I, 18; pectoral fin rays 17; (2) squamation: lateral-line scales 66, median predorsal scales 10; (3) opercular spines 2; (4) larger eye with eye/head length as 41.5%; (5) smaller mouth with mouth/head length as 30.4%; (6) mandibular pores: 4+2+4; and (7) specific coloration: body with dorsally 2/3 region generally creamy yellow; belly snow white; about 12 crossing yellow stripes below mid-lateral body; spiny dorsal fin region grayish to black; lower jaw snow white; a cluster of black marks above pectoral fin; caudal fin translucent with about 5 vertical yellow lines and its upper base with a deep black blotch.

I. INTRODUCTION

The fishes of the genus *Parapercis* are so-called sand-perch, the benthic perciform fish is the largest group of the Pinguipedidae, the family name that ever replaced Parapercidae and Mugilodidae [4, 7-9].

Randall ever reviewed the genus, raising the number of species of 40 in 1984. The number of newly discovered species of *Parapercis* is showing no sign of declines [1-3, 5, 7-9, 11]. There are more than 73 nominal species of *Parapercis* in the World, of which 2 are from the Atlantic, 1 from the eastern Pacific, and the rest from the Indo-Pacific region [7, 8]. Among them, there are 24 valid species of *Parapercis*, in Asutralian waters as well as same species number in Japanese waters [8, 9].

In recent year, Shao's team during 2010-2012 had published 4 newly described species from Taiwanese water including *P. randalli* Ho & Shao, 2010 [2]; *P. lutevittata* Liao *et al*., 2011 [5]; *P. kentingensis* Ho *et al*., 2012 [3]; and *P. rubromaculata* Ho *et al*., 2012 [3]. After the series of reports, there are also up to 23 species of *Parapercis* in Taiwanese waters.

More recently years, the research team of first author had gathered more fish collections of sandperches via bottom trawling expedition around Taiwan and South China Sea. The sanperches turned out with uniformly yellow coloration collected from different geographical regions seem to be very similar by overall morphological features. However, our detailed examined the fish materials revealed that belongs to two different species, one would be *P. okamurai* Kamohara, 1960 just collected from NE Taiwan, another unusual one collected from deepwater of Pratas Island (Dongsha Island), South China Sea turned out as the undescribed species of the genus.

The aims of this paper are not only describing the new species from the Pratas Island (Dongsha island), South China Sea, but also documenting the new record of *P. okamurai* Kamohara, 1960 from Taiwan.

II. MATERIALS AND METHODS

The fish specimens of sandperches were collected from bottom trawling either fishmen vessel or marine research vessel. The specimens listed below at the following institutions: the Pisces collections of National Taiwan Ocean University, Keelung (NTOUP); and Department of Biology, Faculty of Science, Kochi University, Kochi (BSKU).

Length of specimens is given as standard length (SL).

Paper submitted 10/30/13; revised 12/12/13; accepted 12/19/13. Author for correspondence: I-Shiung Chen (e-mail: isc@ntou.edu.tw).
[1] *Institute of Marine Biology, National Taiwan Ocean University, Keelung, Taiwan, R.O.C.*
[2] *Institute of Ocean Technology and Marine Affairs, National Cheng-Kung University, Tainan, Taiwan, R.O.C.*
[3] *Marine National Park Headquarters, Taiwan, Kaohsiung, Taiwan, R.O.C.*

Fig. 1. Holotype of *Parapercis dongshaensis*, NTOUP-2013-12-105, 95.6 mm SL, Pratas Island, Dongsha, South China Sea.

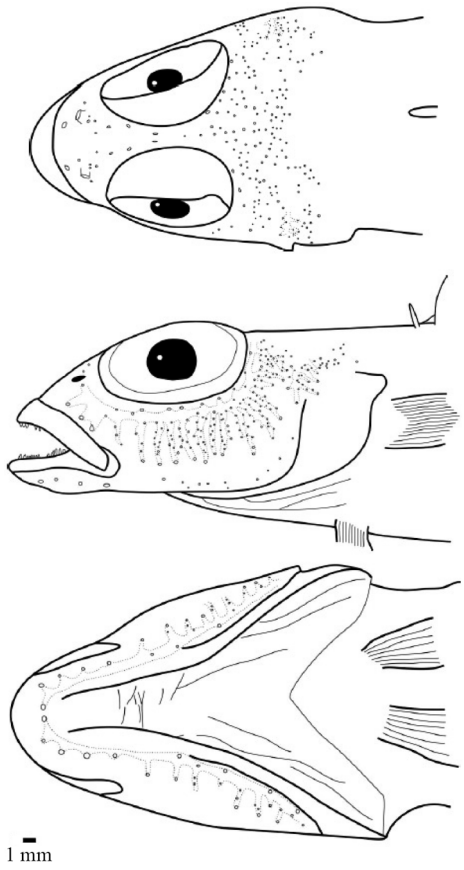

Fig. 2. Head lateral-line system of *Parapercis dongshaensis*, holotype, 95.6 mm SL.

The morphometrics and meristic features generally follow those in Randall [8] and Randall *et al*., [9]. Morphometric data presented in the Table are given as percentage of either SL or HL (head length).

III. SYSTEMATICS

***Parapercis dongshaensis* new species**
(Figs. 1-2)

Material examined:

Holotype.- NTOUP-2013-12-105, 95.6 mm SL, 291-321 m depth, French Bean- Trawls by Marine Research Vessel III, Dongsha-expedition 2011 Station No. 5, 20°41.183'N 116°58.550'E, coll. I-S. Chen, July 08, 2011, eastern open sea of large Atolls, Pratas Island (Dongsha Island), South China Sea.

Diagnosis.

The new species, *P. dongshaensis*, can be well distinguished from other congeners by the following unique combination of features: (1) fins: dorsal fin rays V, 22 with spines larger posteriorly; anal fin rays I, 18; pectoral fin rays 17; (2) squamation: lateral-line scales 66, median predorsal scales 10; (3) opercular spines 2; (4) larger eye with eye/head length as 41.5%; (5) smaller mouth with mouth/head length as 30.4%; (6) mandibular pores: 4+2+4; and (7) specific coloration: body with dorsally 2/3 region generally creamy yellow; belly snow white; about 12 crossing yellow stripes below mid-lateral body; spiny dorsal fin region grayish to black; lower jaw snow white; a cluster of black marks above pectoral fin; caudal fin translucent with about 5 vertical yellow lines and its upper base with a deep black blotch.

Description.

Dorsal fin rays V, 22, its spines larger posteriorly, no any deep gap between membranes of spiny dorsal and branched-ray dorsal region; anal-fin rays I, 18; all dorsal and anal fin rays branched, last to base; pectoral-fin rays 17, branched except uppermost; pelvic fin rays I, 5; lateral-line scales 66; scales above first lateral-line scale to origin of dorsal fin 7; scales below lateral-line posteroventrally to origin of anal fin about 11; median predorsal scales 10; and branchiostegal rays 6.

Body morphometrics shown in detail as Table 1. Head triangular in section and rather depressed. Eye rather large, even larger then snout length, with eye diameter/head length as 41.5%. Interorbital width very narrow. Mouth small, the maxilla merely reaching a vertical slightly in front of anterior margin of pupil, with maxillary/head length as 30.4%. Snout rather short, but sharply pointed. Upper jaw projecting; front of lower jaw. Both jaws with a series of conical teeth and side of lower jaw with 8 larger canines. Tongue broadly rounded. Cheek with very numberous pores as transverse pattern seen in Fig. 2. Mandibular pores 4+2+4. Opercle with two sharp spines.

Scales finely ctenoid on body, becoming cycloid forward anteriorly on the nape, prepelvic fin region, and opercle. Origin of dorsal fin inserted above 5^{th} to 6^{th} lateral-line scales. Pectoral fin large, its rear tip up to a vertical of anus. Caudal peduncle region rather short.

Color of holotype in fresh as following description. Body pale white with dorsally 2/3 region generally creamy yellow. Belly snow white. About 12 crossing yellow stripes below mid-lateral body. Spiny dorsal fin region grayish to black. Head uniformly yellow except the ventral side. Upper jaw with yellow median area and lower jaw snow white. Other

Table 1. Morphometry of two *Parapercis* species.

Species	*P. dongshaensis* n. sp.	*P. okamurai*
Type ststus	Holotype	Non-type
body depth (mm)	95.6	110.5
body width	16.7	18.8
head length	25.3	29.9
Snout length	7.6	8.0
Eye diameter	10.5	11.4
Cheek depth	9.7	18.7
Interorbital width	1.9	2.11
Caudal peduncle length	5.3	9.8
Caudal peduncle depth	7.3	7.6
Predorsal length	31.7	36.2
Preanal length	45.8	53.4
Prepelvic length	23.9	28
Prepectoral length	27.1	33.9
Dorsal-fin base	60.8	71.3
First dorsal spine	2.5	3.7
Fourth spine length	6.0	5.7
Fifth dorsal-spine length	3.7	4.3
Longest dorsal-spine length	6.0	6.2
Longest dorsal branched ray	10.6	13.2
Anal-fin base	41.2	48.4
Anal spine	2.8	3.5
Anal-fin spine	10.3	12.1
Pectoral-fin length	19.1	23.3
Lower jaw length	7.7	10.4

reaming region of dorsal fin translucent with many thin parallel, oblique yellow stripes. Anal fin similar to branched-ray region of dorsal fin. A cluster of black marks above pectoral fin. Caudal fin translucent with about 5 vertical yellow lines. Caudal fin base with a deep black blotch on its upper basal region. Pectoral fin yellow, the large black mark beneath its basal region. Pelvic fin snow white.

Distribution:

It is highly possible that it also occurs in nearby region with similar habitats around South China Sea.

Etymology:

The specific name, *dongshaensis*, is referred to the type locality: Dongsha Island (Pratas Island) of South China Sea.

Remarks:

This new species is the most similar species related to *P. okamurai* Kamohara, 1960 as diagnosed in following section by overall uniformly yellow coloration pattern, first dorsal fin shape, as well as head pore pattern on cheek than any other congeners. However, the new species, *P. dongshaensis* can be well distinguished from the related species, *P. okamurai* by the following features: (1) less fin-rays counts of dorsal fin V, 22 (*vs.* 23), anal fin I, 18 (*vs.* I, 19-20), and pectoral fin 17 (*vs.* 18); (2) more scales counts of lateral-line scales 66 (*vs.* 60-61); (3) larger eye as eye diameter/head length as 41.5% (*vs.* 36.1-38.8% with average 37.7%); (4) smaller mouth as maxillary/ head length as 30.4% (*vs.* 34.7-35.2% with average 35.1%); and (5) mandibular pores 4+2+4 (*vs.* 3+2+3). The geographical distribution seems to be not overlapped for these two very similar species.

Fig. 3. *Parapercis okamurai*, NTOUP-2013-12-106, 110.5 mm SL, Darshi, Ilan County, Taiwan.

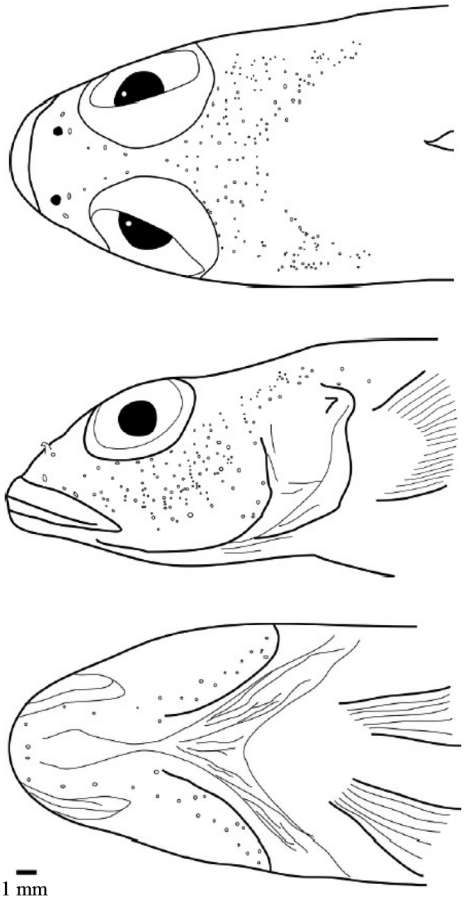

Fig. 4. Head lateral-line system of *Parapercis okamurai*, 110.5 mm SL.

Parapercis okamurai Kamohara, 1960

(Figs. 3-4)

Parapercis okamurai Kamohara, 1960: 9 (Type locality: Mimase, Kochi City, Japan) [4].

Parapercis okamurai, Okamura in Masuda *et al*., 1984: 291 [5].

Materials examined:

Holotype. BSKU 8872, 108.7 mm SL, March 22, 1960, Coll. O. Okamura and K. Amaoka, Mimase, Kochi City, Japan.
Paratype. BSKU 8917, 93.6 mm SL, other data same as holotype.

Others (Taiwanese collection)

NTOUP-2013-12-106,110.5 mm SL, October 25, 2011, Coll. T. H. Tsai, Darshi, Ilan County, Taiwan, ROC.

Diagnosis.

The species, *P. okamurai*, can be well distinguished from other congeners by the following unique combination of features: (1) fins: dorsal fin rays V, 23 with spines larger posteriorly; anal fin rays I, 19-20 (modally 19); pectoral fin rays 18; (2) squamation: lateral-line scales 60-61, median predorsal scales 9-10; (3) opercular spines 2; (4) moderate eye with eye/head length as 36.1-38.8% (mean 37.7%); (5) somewhat large mouth with mouth/head length as 34.7-35.2% (mean 35.1%); (6) mandibular pores: 3+2+3; and (7) specific coloration: body with dorsally 2/3 region generally creamy yellow, about 11-12 crossing yellow stripes below mid-lateral body; spiny dorsal fin region pale; upper jaw mostly yellow; a cluster of black marks above pectoral fin; caudal fin uniformly yellow in lower half with about 4 vertical yellow lines and its upper base with a large deep black blotch.

Distribution

This species only found from Japanese waters in Kochi Province, Japan before this study. Our current report is the firstly record from Taiwanese waters.

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We are very grateful for kindly help of Prof. K.T. Shao for sharing his collections to enrich our examination of types and further materials of sandperches in Taiwan.

We are also thank K.T. Shao and Mr. C.Y. Lee for helping and gathering the detailed data from type information of *P. okamurai*.

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