

**A new record of a dottyback fish *Pseudoplesiops rosae*
(Perciformes: Pseudochromidae) from Taiwan**
記臺灣海域產之新紀錄魚類 – 玫瑰擬鯨
(鱸形目：准雀鯛科)

Ming-Fon Yeh¹*, Tonisman Harefa²** and I-Shiung Chen²

葉明峰^{1*}、方威廷^{2**}、陳義雄²

¹ Taiwan Biodiversity Research Institute, 1 Min-Sheng E. Road, Jiji, Nantou
552, Taiwan, ROC.

¹ 農業部生物多樣性研究所 552 南投縣集集鎮民生東路 1 號

² Institute of Marine Biology, National Taiwan Ocean University, Keelung,
Taiwan, ROC.

² 國立臺灣海洋大學 202 基隆市中正區北寧路 2 號

* Corresponding author:yehmingfon@gmail.com

** The author shares equal contribution of this paper with first author
通訊作者：yehmingfon@gmail.com 作者與第一作者享有同等貢獻

Abstract

In the present study, the dottyback fish of the pseudoplesiopinae genus *Pseudoplesiops* is reported as a newly recorded fish in Taiwan waters. The fish can be identified as *Pseudoplesiops rosae* Schultz, 1943 by following characteristics including dorsal fin ray I, 22, anal fin ray I, 13, lateral scale 27-28, no intermandibular flap, and having black pigment behind the orbit. All specimens were collected from

Pingtung and Taitung Counties, Taiwan, and the redescription of their meristic, morphology, and coloration is reported herein.

Key words: *Pseudoplesiops rosae*, dottyback, fish taxonomy, new record, southeastern Taiwan.

摘要

本研究係描述臺灣沿岸魚類調查計畫，所採獲之海水准雀鯛科的新紀錄魚類 - 玫瑰擬鮨 *Pseudoplesiops rosae* Schultz, 1943。本新紀錄魚種，可經由以下外觀特徵與同屬物種區別：背鰭 I, 22, 臀鰭 I, 13, 側線鱗數 27-28，缺下頷外突皮摺，眼後方具黑色素等主要特徵。本種採自屏東及臺東縣海域。臺灣產標本之相關重要形態描述如：計數及測量形質與色斑特徵等，都一併在本文論述。

關鍵字：玫瑰擬鮨、准雀鯛、魚類分類、新紀錄、東南部臺灣

Introduction

The subfamily of Pseudoplesiopinae is one of the four derived families Pseudochromidae that is found widely associated with coral reef in the Indo-Pacific Ocean (Core and Gill 2000). Among five recognized genera of this subfamily, the genus *Pseudoplesiops* Bleeker, 1858 can be distinguished by having single synapomorphy, medial laminae of the pelvic bones expanded dorsally, and other external characters such as: 26–42 lateral scale series, lower lip complete (uninterrupted at symphysis), and preopercular pores usually 7 (rarely 6 or 8) with a pore present at the upper terminus of the preopercle (Gill & Edwards 1999, 2002).

To date, there are nine species of *Pseudoplesiops* that have been regarded as valid (Eschemeyer 2021). Only one species *P. immaculatus* Gill and Edwards 2002, was recorded on Taiping Island and in Houpihu, Kenting, Taiwan (Gill 2002; Shao *et al.* 2008; Shao, 2023). In

our recent survey of fish in southeastern Taiwan some dottyback fish *P. rosae* Schultz, 1943 specimens were collected. Therefore, herein described in detail include cephalic laterosensory pores, morphometry, meristic, and coloration.

Materials and methods

All fish specimens were collected by hand net and directly preserved in 10% formalin before transferring to 70% alcohol for long-term preservation. Measurements were recorded from the left side of the specimen using digital calipers to the nearest 0.1 mm. Meristic counts, morphometry measurements, and terminology of head cephalic laterosensory follow Gill and Edwards (2002). All examined specimens are deposited at National Taiwan Ocean University. All fish body lengths are expressed by standard length (SL).

Results and Discussions

Pseudoplesiops rosae Schultz, 1943

Figures 1, 2, Table 1.

Pseudoplesiops rosae Schultz, 1943.

(Type locality: Rose Island, Samoa).
Schultz, 1953: 401; Gill and Edwards,
1999: 144; Gill and Edwards, 2002: 25,
Nakabo 2002: 737.

Material examined

Two specimens, NTOUP 2020-12-098 26.0-26.4 mm SL, Tiaoshi, Kenting, Hengchun Township, Pingtung, Taiwan. Coll. T. Harefa, J. Z. He, and I. S. Chen. Depth 5-6 m

Three specimens, NTOUP 2020-09-110 28.9 mm SL, NTOUP 2020-09-111 26.7 mm SL, NTOUP 2020-09-112 25.9 mm SL, Jifei Harbor, Chenggong, Taitung, Taiwan. Coll. T. Harefa, Y. Y. Xia, and I. S. Chen. Depth 6-7 m. 29 September 2020; 1 Specimen, NTOUP 2021-09-132 24.1 mm SL, same locality. Coll. T. Harefa, D. Y. Hong, H. E. Li, Depth 8 m. 21 September 2020

Descriptions

Dorsal fin I, 22, branched rays in dorsal fin 6-7 (7); anal fin I, 13, branched rays in anal fin 5-6 (5); pectoral fin rays 16-17, upper 2-3 (2) and lower 2-3 (2) unbranched rays in pectoral fin; pelvic fin I, 3; caudal fin rays 9+8, upper 1-2 (1) and lower 1-2 unbranched rays in caudal fin, upper procurrent caudal fin rays 1-3 (2); lower procurrent caudal fin rays 1-2 (2); lateral scales 27-28 (28); predorsal scale 8; transverse scale 11-12 (11); scales behind eye (2); scale to preopercular angle 4 (4); circumpeduncular scale 16; gill raker 3+8-9 = 11-12 (12); pseudobranch filament 5.

Body oblong and moderately compressed, lower lip complete and slightly projecting; mouth slightly oblique, no prominent intermandibular flap; anterior nostril not tubular; dorsal and anal fin spine weak and flexible, second segmented pelvic fin-ray longest (reaching the anus or anal fin origin when depressed), caudal and pectoral fin rounded, head and body with ctenoid



Fig. 1. Photograph of *Pseudoplesiops rosae* specimen from Jifei, Chenggong, Taiwan. NTOUP 2020-09-112. 28.9 mm SL

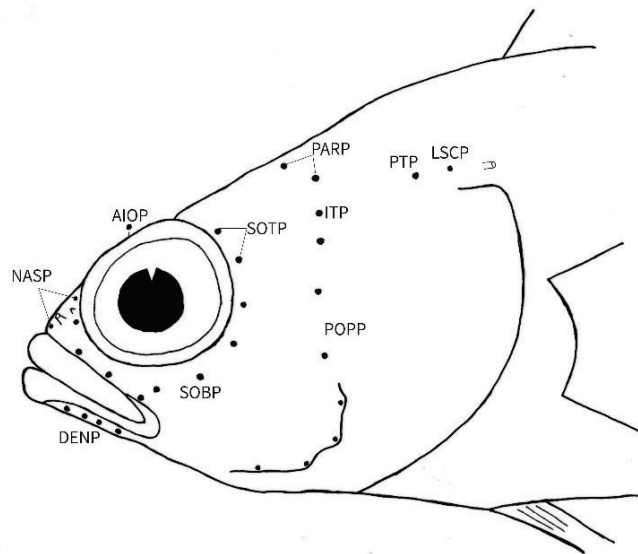


Fig. 2. Head cephalic laterosensory of *Pseudoplesiops rosae*, AIOP anterior interorbital pore, DENP Dentary pores, ITP intertemporal pore, LSCP pore in tubed lateral-line scale, NASP nasal pore, PARP parietal pore, POPP preopercular pore, PTP posttemporal pore, SOBP suborbital pore, SOTP supraoptic pore. Scale bar = 1 mm.

scale, scale present on cheek, snout region naked, eye and pupil rounded, small scales on base pectoral fin and pelvic fin, no lateral line, greatest body depth from base of dorsal fin origin to base of pelvic fin.

Coloration

Live coloration: head and body plain light brown; snout, lips, and interorbital area orange to reddish; black pigment behind eyes between suborbital pore and supraoptic pore; dorsal, anal, caudal and pelvic fin bright pinkish to reddish with margin pale or whitish gray, pectoral fin pale brownish.

Preserved coloration: head and body brown, ventrally paler; dorsal, caudal and fin whitish gray and basally brown; pectoral fin brown and basally pale; pelvic fin whitish gray basally pale; lips, snout and cheek pale; black pigment behind eyes still distinct.

Cephalic laterosensory pores

Cephalic laterosensory (all bilaterally paired, Fig. 2): nasal pores 2; anterior interorbital pore 1; posterior interorbital pore 0; supraotic pores 2; suborbital pores 8; posterior otic pore 0; preopercular pores 7; dentary pores 4; intertemporal pore 1; anterior temporal pore 0; posttemporal pore 1; parietal pores 2.

Distribution and habitat

The distribution of this newly-recorded *Pseudoplesiops* species from Taiwan ranges from the Eastern Indian Ocean to western Pacific, including South China Sea and Western Australia, with a northern most distribution to the Ryukyu Islands (Hutchins 2001; Nakae *et al.* 2018; Randall *et al.* 2000). It inhabits small caves or shades formed by coral reefs in shallow waters. The specimens examined are collected from a coral cave with sandy bottom and dead coral rubble.

Remarks

The examined specimens collected from

Table 1. Morphometry specimens of *Pseudoplesiops rosae* collected from south-eastern Taiwan.

Characteristics	NTOUP-			
	2020-09-110	2020-09-111	2020-09-112	2021-09-132
Standard length, SL (mm)	28.9	26.7	25.9	24.1
Body depth at dorsal fin origin (% of SL)	22.8	24.4	24.4	24.0
Greatest body depth	24.2	25.2	25.2	25.7
Body width	13.6	14.6	14.4	12.2
Head length	29.2	29.6	30.2	32.5
Snout length	4.2	4.3	4.1	4.2
Orbit diameter	8.6	9.0	8.1	8.6
Interorbital width	3.5	3.2	3.3	3.2
Upper jaw length	7.9	7.8	7.9	7.9
Caudal peduncle depth	14.3	15.0	14.3	14.8
Caudal peduncle length	8.4	8.2	7.9	8.0
Predorsal length	32.0	34.0	33.8	32.7
Preanal length	60.0	63.0	58.2	59.6
Prepelvic length	28.6	29.0	29.0	29.1
First segmented dorsal fin ray length	10.8	10.0	9.3	9.9
Third from last segmented dorsal fin ray length	15.0	14.5	14.4	14.9
Dorsal fin base length	59.0	58.1	59.6	57.9
First segmented anal fin ray length	9.8	9.5	9.4	8.8
Third from last segmented anal fin ray length	15.0	15.4	14.9	15.2
Anal fin base length	31.5	30.7	30.2	29.6
Caudal fin length	22.2	21.7	22.1	24.4
Pectoral fin length	19.1	21.8	20.7	21.0
Pelvic fin length	29.5	32.3	33.3	29.5

Jifei, Chenggong, Taiwan, met all the following characteristics required to identify *Pseudoplesiops rosae* given by Schultz (1943, 1953) and Nakabo (2002): scale in operculum, lateral line absent with only one pored scale above upper end of gill opening, second pelvic fin ray extended reaching to anus or anal fin origin when depressed. However, the present Taiwanese specimens differed slightly in branched caudal fin rays 9+8 (vs 7+7), branched dorsal fin rays 6-7 (vs 4), branched anal fin rays 5-6 (vs 4) from the Holotype and paratype given by Schultz (1943, 1953). *Pseudoplesiops rosae* can be easily distinguished from other congener *P. immaculatus* occurred in Taiwan by dorsal fin ray I, 22 (vs I, 26-28), anal fin ray I, 13 (vs I-II, 16-18) no intermandibular flap (vs present), having black pigment behind the orbit (vs absent) (Koeda *et al.* 2017).

Acknowledgements

ISC wishes to express gratitude to the

grant support of National Academy of Marine Research, Kaohsiung, and also partly from the Fisheries Agency, Council of Agriculture, Taipei, for the projects on investigations of fish communities in the intertidal zones and subtidal zones. The support gave us the opportunity to explore the diversity of the fish fauna in Taiwan. We also thank Dr. Shih-Pin Huang, Curator of Biodiversity Museum of Academia Sinica, for helping us to locate essential specimens for the morphological comparisons in the research.

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