

***Pholidochromis cerasina*, a new species of pseudochromine dottyback fish from the west Pacific (Perciformes: Pseudochromidae)**

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Abstract.—*Pholidochromis cerasina* is described from the 43.9-mm SL holotype from Talisei Island, off the northern tip of Sulawesi, Indonesia. It is distinguished from its congener *P. marginata* (Lubbock) from Papua New Guinea and the northern Solomon Islands in lacking both dark submarginal markings on the median fins and prominent dark grey to black spots surrounding sensory pores on the head.

Fishes of the Indo-Pacific subfamily Pseudochrominae were recently revised by Gill (2003), who recognised 80 species in 10 genera, four of which were newly described. One of the newly described genera, *Pholidochromis*, was erected to accommodate a single species, *Pseudochromis marginatus* Lubbock, 1980, and distinguished from other pseudochromine genera in having the following combination of external characters: lower lip complete (uninterrupted at symphysis); dorsal-fin rays III, 22; anal-fin rays III, 13; scales in lateral series 28–32; dorsal and anal fins with well-developed scale sheaths; and predorsal scales extending anteriorly to or forward of posterior nostrils. It is also unique among pseudochromid genera in having the following combination of osteological characters: three equal-sized supraneural bones; first dorsal pterygiophore posterior lamina running most of the length of the bone; and 11–12 consecutive dorsal pterygiophores inserting in a 1:1 relationship with interneural spaces directly behind neural spine 4.

Gill (2003) recorded *Pholidochromis marginata* from the east coast of Papua New Guinea, Bougainville Island, and off the northern tip of Sulawesi, Indonesia. The latter record was based on a single speci-

men (USNM 136954) collected at Talisei Island in 1909 by the United States Bureau of Fisheries Steamer *Albatross*; it bears a silk tag with the number “2038.” The specimen differs from other examined specimens (all of which were collected 50 or more years after the Sulawesi specimen) in lacking conspicuous dark spots on the head and dark submarginal stripes on the median fins. Although no comments on the condition of these markings were made in his revision, the first author attributed their absence to the age of the specimen, with the assumption that it was badly faded.

In 1995, the first author received a colour illustration of an aquarium individual of a pseudochromid from W. E. Burgess (formerly of Tropical Fish Hobbyist Publications Inc.). It was a pale pink, deep-bodied fish with orange to red spots on the body and median fins, and a yellow ring around the eye. The first author was unable to identify it confidently with any known species, but suggested that it was perhaps an unusually coloured individual of either *Pseudochromis fuscus* Müller & Troschel, 1849 (which is often yellow with blue to grey spots and a similar body shape) or a poor illustration of *P. marshallensis* Schultz, 1953 (which, though usually more slender

with a darker ground coloration, has yellow to orange or red spots on the body).

In May 2000, the second author sent the first author a photograph of a pseudochromid from a recent article in the Japanese aquarium journal *Aqualife*, as well as additional aquarium photographs of the specimen. The fish depicted was very similar in coloration and shape to the one in Burgess's illustration, thus rekindling interest in its identity. A search of the first author's collection of pseudochromid photographs revealed an illustration of a similar specimen collected on the *Albatross* expedition (original housed in the National Museum of Natural History, Smithsonian Institution). The number "2038" was written in pencil next to the illustrated fish.

As Fowler (1931) had reported on pseudochromids collected by the *Albatross*, his paper was searched in attempt to locate a reference to the number "2038." No such reference was found, but a colour description closely matching the illustration was found for a specimen numbered "22731" from Talisse Island, which Fowler had identified as *Pseudochromis xanthochir* Bleeker, 1855 (a junior subjective synonym of *P. fuscus*). The number "22731" refers to a linen tag attached to a 45.0-mm-SL specimen of the pseudoplesiopine *Pseudoplesiops typus* Bleeker, 1858 (now registered USNM 146624). However, the *Albatross* illustration (and Fowler's description) is obviously not based on the specimen of *P. typus*. Although *P. typus* may be pale pink to pale grey with a ring around the eye (which is red to black in life), it does not possess red spots on the body. Moreover, the illustration depicts a fish with relatively short, broad pelvic fins, whereas they are long and slender in specimens *P. typus* (including the specimen in USNM 146624). The other illustration and photographs of aquarium specimens are also not referable to *P. typus*.

However, the *P. typus* specimen was collected from Talisse (=Talisei) Island on the same date as the *Albatross* *Pholidochromis*

specimen (presumably from the same station), and this, coupled with the close similarity in body form and pelvic-fin shape, led us to question whether the illustration was of the *Pholidochromis* specimen, and whether the "2038" may refer to the silk tag number on that specimen. We therefore asked S. L. Jewett and J. T. Williams of the National Museum of Natural History to check whether there were further details that might corroborate this. Jewett consulted the original illustration and responded (pers. comm., 4 Aug 2000): 'It not only says 2038 in pencil, but Leonard Schultz [former Curator of Fishes at USNM, and author of a paper on the pseudochromid genus *Labracinus*, based mostly on *Albatross* specimens] wrote a note in the margin that says "see USNM 136954."' She also noted that there is a small tag in the jar containing USNM 136954 indicating that the specimen was drawn.

We therefore conclude that the illustration is based on the *Pholidochromis* specimen. Clearly, then, the absence of dark markings in the specimen are not due to fading, as such markings are not indicated in the *Albatross* illustration, nor are they evident in the illustrations or photographs of live aquarium specimens. Thus, we conclude that the specimens represent a species distinct from *P. marginata*, and therefore describe it as new.

Materials and Methods

Methods of counting, measuring and presentation follow Gill (2003). Institutional codes follow Leviton et al. (1985).

Pholidochromis cerasina, new species

Cherry Dottyback

Fig. 1

Pseudochromis xanthochir [non Bleeker, 1855]; Fowler, 1931: 32 (color description).

Pholidochromis marginata [non *Pseudochromis marginatus* Lubbock, 1980]; Gill,



Fig. 1. *Pholidochromis cerasina*, USNM 136954, 43.9 mm SL, holotype, Talisei Island, Sulawesi, Indonesia. (Photo by P. Hurst.)

2003:000, fig. 5 (description and distribution in part).

Holotype.—USNM 136954, 43.9 mm SL, Indonesia, Sulawesi, Talisei (=Talissee) Island, R/V *Albatross*, 9 November 1909.

Diagnosis.—*Pholidochromis cerasinus* is distinguished from other pseudochromines in having the following combination of characters: dorsal-fin rays III, 22; anal-fin rays III, 13; scales in lateral series 29–30; dorsal and anal fins with well-developed scale sheaths; predorsal scales extending anteriorly to just behind anterior nostrils; and no prominent dark grey to black spots surrounding sensory pores on head.

Description.—Dorsal-fin rays III, 22, at least last 18 segmented rays branched (ray preceding first apparent branched ray damaged); anal-fin rays III, 13, at least last 12 segmented rays branched (anteriormost ray damaged); pectoral-fin rays 19/19; upper procurrent caudal-fin rays 6; lower procurrent caudal-fin rays 5; total caudal-fin rays 28; scales in lateral series 29/30; anterior lateral-line scales 23/24; anterior lateral line terminating beneath segmented dorsal-fin

ray 17/17; posterior lateral-line scales 10 + 0/9 + 0; scales between lateral lines 3/3; horizontal scale rows above anal-fin origin 12 + 1 + 3/13 + 1 + 3; circumpeduncular scales 16; predorsal scales 21; scales behind eye 3; scales to preopercular angle 4; gill rakers 5 + 10; pseudobranch filaments 9; circumorbital pores 17/18; preopercular pores 9/8; dentary pores 4/4; posterior interorbital pores 0.

Lower lip complete; dorsal and anal fins with well-developed scale sheaths; predorsal scales extending anteriorly to just behind anterior nostrils; posterior margin of opercle with 4 inconspicuous serrations; outer gill rakers of ceratobranchial-1 with teeth mostly confined to raker tips; anterior dorsal-fin pterygiophore formula S/S/S + 3/1 + 1/1/1/1/1/1/1/1/1/1/1 + 1; dorsal-fin spines pungent and moderately slender; anterior anal-fin pterygiophore formula 3/1/1 + 1/1/1/1 + 1; anal-fin spines pungent and moderately slender to stout, second spine stouter than third; pelvic-fin spine slender, tip weakly pungent; second segmented pelvic-fin ray longest; caudal fin

rounded (inferred for holotype from *Albatross* illustration); vertebrae 10 + 16; epineurals 13; epurals 3.

Upper jaw with 2 pairs of curved, enlarged caniniform teeth anteriorly, medial pair smallest, and about 6 (at symphysis) to 2–3 (on sides of jaw) irregular rows of small conical teeth, outermost of rows of teeth much larger and more curved than those of inner rows; lower jaw with 2 pairs of curved, enlarged caniniform teeth anteriorly, medial pair smallest, and about 5 (at symphysis) to 1 (on sides of jaw) inner rows of small conical to caniniform teeth, those on middle of jaw large and caniniform; vomer with 1–2 rows of small conical teeth arranged in chevron; palatine with 2–3 rows of small conical teeth arranged in elongate ovoid patch, anterior part of tooth patch more-or-less contiguous with posterolateral arm of vomerine tooth patch; ectopterygoid edentate; tongue moderately pointed and edentate.

As percentage of SL: head length 28.0; orbit diameter 9.1; snout length 7.7; fleshy interorbital width 6.2; bony interorbital width 3.9; body width 13.9; snout tip to posterior tip of retroarticular bone 15.9; predorsal length 35.3; prepelvic length 35.3; posterior tip of retroarticular bone to pelvic-fin origin 21.0; dorsal-fin origin to pelvic-fin origin 34.9; dorsal-fin origin to middle dorsal-fin ray 34.4; dorsal-fin origin to anal-fin origin 46.2; pelvic-fin origin to anal-fin origin 27.6; middle dorsal-fin ray to dorsal-fin termination 26.2; middle dorsal-fin ray to anal-fin origin 33.5; anal-fin origin to dorsal-fin termination 39.0; anal-fin base length 29.6; dorsal-fin termination to anal-fin termination 17.1; dorsal-fin termination to caudal peduncle dorsal edge 10.9; dorsal-fin termination to caudal peduncle ventral edge 19.6; anal-fin termination to caudal peduncle dorsal edge 19.8; anal-fin termination to caudal peduncle ventral edge 10.7; first dorsal-fin spine 2.7; second dorsal-fin spine 5.2; third dorsal-fin spine 7.1; first segmented dorsal-fin ray 13.7; fourth from last segmented dorsal-fin

ray broken; first anal-fin spine 3.0; second anal-fin spine 5.7; third anal-fin spine 7.1; first segmented anal-fin ray broken; fourth from last segmented anal-fin ray broken; third pectoral-fin ray broken (both sides); pelvic-fin spine 9.8; second segmented pelvic-fin ray 22.6; caudal-fin length not determined (ray tips broken).

Live coloration (based on a color illustration of holotype and photographs and an illustration of aquarium specimens).—Head and body pale pinkish grey to pinkish olive dorsally, becoming pale pink to pale yellow or white ventrally; posttemporal pore in dusky grey spot (not apparent in illustrations); orbital rim yellow to bright orange or bright red; pale blue to mauve stripe extending from anteroventral edge of eye to middle of upper lip (not apparent on illustration of holotype); iris silvery white, blue dorsally, with grey to blue suboval ring around pupil; body with small (about half pupil size) pale orange to bright orange or bright red spots, these best developed dorsally and posteriorly, and more or less arranged along horizontal scale rows; dorsal and anal fins pale pink to pale blue with blue distal margin, and 2–5 horizontal rows of pale orange to bright orange or crimson spots (crimson spots encircled with pale pink in photographed individuals); caudal fin pale pink to pale blue with blue distal margin and bright red to crimson spots (encircled with pale pink in photographed individuals), these irregularly arranged on basal part of fin, becoming arranged in convex columns on remainder of fin; pectoral fins hyaline with pinkish to yellowish hue; pelvic fins pale pink to pale blue.

Preserved coloration.—Head and body pale brown, paler ventrally; posttemporal pore in dusky grey spot; fins whitish hyaline to plain hyaline.

Habitat and Distribution.—No habitat data are known for the holotype. We also lack precise locality or habitat information for aquarium individuals of the species; however, K. Endoh (pers. comm.) informed

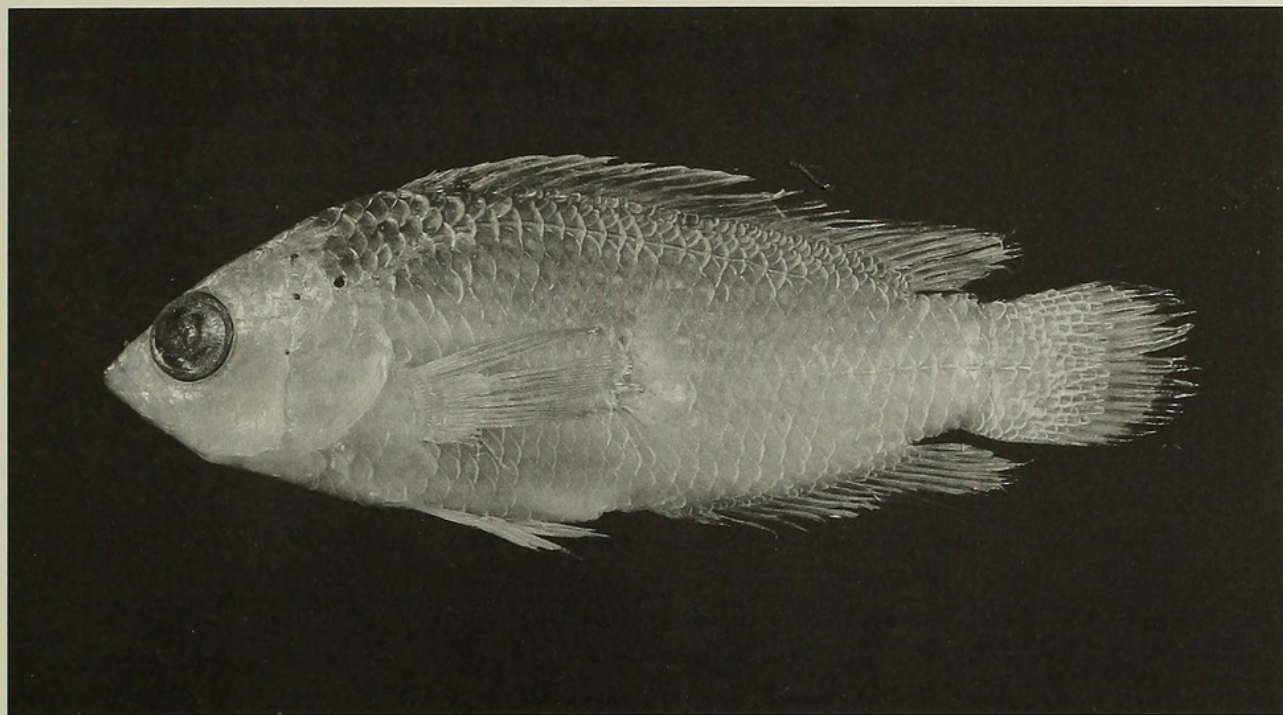


Fig. 2. *Pholidochromis marginata*, CAS 65783, 32.4 mm SL, southern side of Nagada Harbour, Madang Province, Papua New Guinea. (Photo by P. Crabb; after Gill, 2003:fig. 20.)

us that they were collected in the Philippine Islands.

Comparisons.—*Pholidochromis cerasina* agrees closely with its congener, *P. marginata* (Fig. 2), in most details, but differs in lacking conspicuous dark spots around the sensory pores on the head (only the posttemporal pore of *P. cerasina* has an inconspicuous dusky grey spot whereas *P. marginata* has conspicuous dark grey to black spots on at least the posterior suborbital, upper preopercular, anterior interorbital, posttemporal and parietal pores) and in lacking dark submarginal markings on the median fins (present as dark grey to black convex marking on the caudal fin, and short dark grey to black stripe on the posterior part of the dorsal and anal fins in *P. marginata*).

Values for 13 morphometric characters of the holotype of *P. cerasina* lay at the extreme or outside ranges observed in *P. marginata* (15 specimens, 27.2–45.6 mm SL). Although more specimens are needed to determine whether these are truly diagnostic, they are at least suggestive. We also document these in order to correct Gill's (2003)

description of *P. marginata*, as this included data from the holotype of *P. cerasina*. The characters are as follows (values expressed as % SL, and given first for *P. cerasina*, followed by *P. marginata*): fleshy interorbital width (6.2; 5.0–6.1); predorsal length (35.3; 36.0–39.0); middle dorsal-fin ray to dorsal-fin termination (26.2; 20.5–25.2); anal-fin termination to caudal peduncle ventral edge (10.7; 10.8–12.4); first dorsal-fin spine (2.7; 2.7–5.1); second dorsal-fin spine (5.2; 5.1–7.9); third dorsal-fin spine (7.1; 7.0–10.3); first segmented dorsal-fin ray (13.7; 11.0–13.9); first anal-fin spine (3.0; 3.7–5.7); second anal-fin spine (5.7; 6.8–9.6); third anal-fin spine (7.1; 7.0–11.1); pelvic-fin spine (9.8; 9.6–13.2); and second segmented pelvic-fin ray (22.6; 22.6–26.3).

Pholidochromis cerasina might also be confused with *Pseudochromis fowleri* Herre, 1934, from Sabah and the Philippine Islands, and *Pseudochromis fuscus*, from throughout the West Pacific, which it resembles in general body shape. These species differ from *Pholidochromis cerasina* in having an incomplete lower lip (interrupted

at symphysis) and more segmented dorsal-fin rays (23–25, usually 24 in *fowleri* and 25–29 in *fuscus* versus 22 in *cerasina*).

Remarks.—The live coloration of *P. marginata* is unknown, but, accepting the dark pigmentation on the head and median fins, is likely to be similar to *P. cerasina*. Moreover, as noted by Gill (2003), some specimens of *P. marginata* have pale spots on the body and median fins, and these possibly correspond with the red to orange spots shown by *P. cerasina*.

Etymology.—The specific epithet is from the Latin *cerasinus*, meaning “of cherry.” It alludes to the cherry-like bright orange to red spots on the body and median fins.

Material examined.—See above.

Acknowledgments

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Literature Cited

- Bleeker, P. 1855. Zevende bijdrage tot de kennis der ichthyologische fauna van Celebes.—*Natuurkundig Tijdschrift Nederlandsch Indië* 8:435–444.
- . 1858. Bijdrage tot de kennis der vischfauna van den Goram Archipel.—*Natuurkundig Tijdschrift Nederlandsch Indië* 15:197–218.
- Fowler, H. W. 1931. Contributions to the biology of the Philippine Archipelago and adjacent regions. The fishes of the families Pseudochromidae, Lobotidae, Pempheridae, Priacanthidae, Lutjanidae, Pomadasysidae, and Teraponidae, collected by the United States Bureau of Fisheries Steamer “Albatross”, chiefly in Philippine seas and adjacent waters.—*United States National Museum Bulletin* 100(11):1–388.
- Gill, A. C. 2003. Revision of the Indo-Pacific dotty-back fish subfamily Pseudochrominae (Perciformes: Pseudochromidae).—*Smithiana Monograph* 1:1–213, 12 pls.
- Herre, A. 1934. Notes on fishes in the Zoological Museum of Stanford University. 1. The fishes of the Herre Philippine Expedition of 1931. The Newspaper Enterprise, Hong Kong, 106 pp.
- Leviton, A. E., R. H. Gibbs, Jr., E. Heal, & C. E. Dawson. 1985. Standards in herpetology and ichthyology: Part 1. Standard symbolic codes for institutional resource collections in herpetology and ichthyology.—*Copeia* 1985(3):802–832.
- Lubbock, R. 1980. Five new basslets of the genus *Pseudochromis* (Teleostei: Pseudochromidae) from the Indo-Australian Archipelago.—*Revue Suisse de Zoologie* 87(3):821–834.
- Müller, J., & F. H. Troschel. 1849. *Horae Ichthyologicae. Beschreibung und Abbildung neuer Fische*. 3. Verlag von Kleit and Comp., Berlin, 28 pp, 5 pls.
- Schultz, L. P. 1953. Family Pseudochromidae, pp. 380–411, pl. 33a in L. P. Schultz, E. S. Herald, E. A. Lachner, A. D. Welander, & L. P. Woods, *Fishes of the Marshall and Marianas Islands*; vol. 1. Families from Asymmetriontidae through Siganidae.—*United States National Museum Bulletin* 202(1):1–685.



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