

Pseudochromis matahari, a new species of dottyback (Perciformes: Pseudochromidae) from Halmahera, Indonesia

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Abstract

Pseudochromis matahari n. sp. is described from the 44.7 mm SL holotype from Halmahera, Indonesia. It is distinguished from other pseudochromines in having the following combination of characters: Dorsal-fin rays III,26; anal-fin rays III,16; anal-fin spines moderately slender and weakly pungent, the second spine only slightly stouter than the third; lower lip weakly interrupted at symphysis; and circumpeduncular scales 16. It also has a distinctive live coloration.

Zusammenfassung

Pseudochromis matahari n. sp. wird anhand des Holotypus mit einer Länge von 44,7 mm SL von Halmahera, Indonesien, beschrieben. Die neue Art unterscheidet sich von anderen Pseudochrominen durch folgende Merkmale: Rückenflossenstrahlen III, 26; Afterflossenstrahlen III, 16; die Analflossenstacheln mäßig schlank und weich-stachelig, der zweite Stachel etwas kräftiger als der dritte; Unterlippe an der Symphyse etwas unterbrochen; 16 Schuppen um den Schwanzstiel herum. Die Vertreter dieser Art haben auch eine auffällige Farbgebung.

Résumé

Pseudochromis matahari n. sp. est décrit sur base de l'holotype de 44,7 mm de LS, en provenance de Halmahera, Indonésie. Il se distingue des autres *Pseudochromis* par combinaison des caractéristiques suivantes : rayons de la dorsale III, 26 ; rayons de l'anale III, 16 ; épines de l'anale modérément fines et peu piquantes, la deuxième épine à peine plus grosse que la troisième ; la lèvre inférieure est légèrement interrompue à la symphyse ; et 16 écailles circumpédonculaires. Il se distingue aussi par sa coloration *in vivo*.

Sommario

Pseudochromis matahari n. sp. è descritta sulla base di un solo esemplare di 44.7 mm SL (olotipo) raccolto a Halmahera, Indonesia. Si distingue dagli altri pseudocromini per la seguente combinazione di caratteri: raggi dorsali III, 26; raggi anali III,16; spine anali moderatamente affusolate e

leggermente appuntite, di cui la seconda solo un po' più robusta della terza; labbro inferiore lievemente interrotto a livello della sinfisi e scaglie circumpeduncolari 16. La specie possiede anche una colorazione caratteristica.

INTRODUCTION

The Indo-Pacific fish subfamily Pseudochrominae was recently revised by Gill (2004), who recognised 80 species in 10 genera. Since publication of Gill's revision, six additional species have been described (Gill & Allen 2004, Gill & Tanaka 2004, Allen & Erdmann 2007, Allen et al. 2008 a, b). Additional new species await description, particularly resulting from recent fieldwork in Indonesia and the Philippines. We herein describe one of these species, which we tentatively assign to the genus *Pseudochromis* Rüppell, 1835. Prior to Gill's (2004) revision, the vast majority of pseudochromine species were assigned to this genus. Gill refined it by removing some species to other genera, but it remains unwieldy (with 61 valid species, including the current new species), and undiagnosed as monophyletic. Placement of the new and other species in this genus is essentially by default, in that each of these species lack characters that diagnose the remaining genera in the subfamily (*Assiculoides* Gill & Hutchins, 1997; *Assiculus* Richardson, 1846; *Cypho* Myers, 1940; *Labracinus* Schlegel, 1858; *Manonichthys* Gill, 2004; *Ogilbyina* Fowler, 1931; *Oxycercichthys* Gill, 2004; *Pholidochromis* Gill, 2004 and *Pictichromis* Gill, 2004; see Gill 2004: 10). More refined generic placement of the new species (and other species currently assigned to *Pseudochromis*) must await the completion of phylogenetic studies currently underway by the first author.

MATERIALS AND METHODS

Methods of counting, measuring and presentation follow Gill (2004). The holotype is deposited in Pusat Penelitian dan Pengembangan Oseanologi, Jakarta, Indonesia (NCIP). Comparisons with other species are based on specimens listed by Gill (2004).

Pseudochromis matabari n. sp.

Sunburst Dottyback
(Fig. 1)

Holotype: NCIP 6343, 44.7 mm SL, Indonesia, Halmahera, North Tanjung Bobo (01°02.641'N 127°23.918'E), 35 m, clove oil, M.V. Erdmann, 14 April 2008.

Diagnosis: The following combination of characters distinguishes *P. matabari* from all other pseudochromines: Dorsal-fin rays III,26; anal-fin rays III,16; anal-fin spines moderately slender and weakly pungent, the second spine only slightly stouter than the third; lower lip weakly interrupted at symphysis; and circumpeduncular scales 16. It also has a distinctive live coloration: head orange-brown, becoming bright yellow on lower part of operculum; posterior and ventral part of orbital rim bright yellow, edged posteriorly and ventrally by purple-blue arc; scales of cheek indistinctly

edged with mauve; body orange-brown, darker on scale edges, becoming bright yellow on breast and pectoral-fin base, bright red on abdomen and above anterior anal fin, then dark purplish red on caudal peduncle; dorsal fin golden to orange-brown anteriorly, becoming reddish brown posteriorly, with reddish brown distal margin; 1-3 rows of short, dark reddish brown streaks on middle of soft portion of fin; anal fin dark reddish brown, becoming golden brown over spinous portion of fin, with grey distal margin; caudal fin dark reddish grey basally, abruptly greyish hyaline on distal third of fin, with grey distal margin.

Description: Dorsal-fin rays III,26, at least last 25 segmented rays branched (first ray damaged); anal-fin rays III,16, all segmented rays branched; pectoral-fin rays 17/17; upper procurrent caudal-fin rays 6; lower procurrent caudal-fin rays 6; total caudal-fin rays 29; scales in lateral series 36/36; anterior lateral-line scales ?/28; anterior lateral line terminating beneath segmented dorsal-fin ray ?/20; posterior lateral-line scales 10 + 0/? + 1; scales between lateral lines ?/3; horizontal scale rows above anal-fin origin 13 + 1 + 3/13 + 1 + 3; circumpeduncular scales 16; predorsal scales 23; scales behind eye 3; scales to preopercular angle 4; gill rakers 6 + 12; pseudobranch filaments 8; circumorbital pores 17/17; preopercular pores 9/9; dentary pores 4/4; posterior interorbital pores one.

Lower lip weakly interrupted at symphysis; dorsal



Fig. 1. *Pseudochromis matabari* n. sp., live holotype, NCIP 6343, 44.7 mm SL, North Tanjung Bobo, Halmahera, Indonesia. Photo by M. Erdmann.

and anal fins without scale sheaths; predorsal scales extending anteriorly to posterior nasal pores; opercle with 5 indistinct serrations; teeth of outer ceratobranchial-one gill raker well developed only on raker tips; anterior dorsal-fin pterygiophore formula S/S/S + 3/1 + 1/1/1/1/1/1 + 1/1/1 + 1; dorsal-fin spines moderately slender and weakly pungent; anterior anal-fin pterygiophore formula 3/1 + 1/1/1 + 1/1/1 + 1; anal-fin spines moderately slender and weakly pungent, the second spine only slightly stouter than third; pelvic-fin spine ? (fins removed); second segmented pelvic-fin ray longest (determined from Fig. 1; fins removed during curation prior to detailed examination); caudal fin rounded; vertebrae 10 + 16; epineurals 14; epurals 3.

Upper jaw with 3 pairs of curved, enlarged caniniform teeth, and 5 (at symphysis) to 2 (on sides of jaw) inner rows of small conical teeth, outermost of rows of conical teeth much larger and more curved than inner rows; lower jaw with 4 pairs of curved, enlarged caniniform teeth anteriorly, and 4-5 (at symphysis) to 1 (on sides of jaw) inner rows of small conical teeth, conical teeth becoming slightly larger and more curved on middle of jaw; vomer with 1-2 rows of small conical teeth, forming chevron; palatine with 2-3 irregular rows of small conical teeth arranged in elongate, suboval 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 24.6; orbit diameter 9.2; snout length 5.8; fleshy interorbital width 5.8; bony interorbital width 4.0; body width 13.0; snout tip to posterior tip of retroarticular bone 15.0; predorsal length 33.3; prepelvic length 32.9; posterior tip of retroarticular bone to pelvic-fin origin 19.9; dorsal-fin origin to pelvic-fin origin 30.6; dorsal-fin origin to middle dorsal-fin ray 37.4; dorsal-fin origin to anal-fin origin 42.5; pelvic-fin origin to anal-fin origin 27.1; middle dorsal-fin ray to dorsal-fin termination 27.1; middle dorsal-fin ray to anal-fin origin 30.4; anal-fin origin to dorsal-fin termination 38.0; anal-fin base length 30.4; dorsal-fin termination to anal-fin termination 16.3; dorsal-fin termination to caudal peduncle dorsal edge 10.3; dorsal-fin termination to caudal peduncle ventral edge 19.0; anal-fin termination to caudal peduncle dorsal edge 20.1; anal-fin termination to caudal peduncle ventral edge 10.1; first dorsal-fin spine ? (broken); second dorsal-fin spine ? (broken); third dorsal-fin spine

6.7; first segmented dorsal-fin ray ? (broken); fourth last segmented dorsal-fin ray 18.3; first anal-fin spine ? (broken); second anal-fin spine ? (broken); third anal-fin spine 5.6; first segmented anal-fin ray 9.8; fourth last segmented anal-fin ray 14.1; third pectoral-fin ray 16.7; pelvic-fin spine ? (broken); second segmented pelvic-fin ray ? (broken); caudal-fin length 26.2.

Live coloration (based on photograph of holotype when alive): head orange-brown, becoming bright yellow on lower part of operculum; posterior and ventral part of orbital rim bright yellow, this edged posteriorly and ventrally by purple-blue arc; scales of cheek indistinctly edged with mauve; iris orange-brown to bright yellow, with dark blue suboval ring around pupil; body orange-brown, darker on scale edges, becoming bright yellow on breast and pectoral-fin base, bright red on abdomen and above anterior anal fin, then dark purplish red on caudal peduncle; dorsal fin golden to orange-brown anteriorly, becoming reddish brown posteriorly, with reddish brown distal margin; fin rays bright golden (anteriorly) to reddish brown (posteriorly); 1-3 rows of short, dark reddish brown streaks on middle of soft portion of fin, becoming less distinct posteriorly; anal fin dark reddish brown, becoming golden brown over spinous portion of fin, and greyish hyaline distally, with grey distal margin; caudal fin dark reddish grey basally, abruptly greyish hyaline on distal third of fin, with grey distal margin; pectoral fins yellowish hyaline; pelvic fins bright yellow basally, becoming pinkish hyaline distally, with grey distal margin.

Preserved coloration: Head and body dusky brown, darker on snout and dorsal part of head, becoming pale tan on abdomen and lower part of body; bright yellow marking on orbital rim becomes pale tan; blue and mauve markings on orbital rim and cheek become greyish brown; dorsal fin greyish brown, reddish brown streaks becoming dark grey-brown; anal fin greyish brown; caudal fin greyish brown basally, abruptly paler on remainder of fin; pectoral fins pale tan.

Habitat and Distribution: Known only from the type locality of North Tanjung Bobo (01°02.641'N 127°23.918'E), Halmahera, Indonesia. A total of seven individuals were observed on a gradual, current-swept reef slope at depths of 32-45 m. The fish were seen solitarily under large *Xestospongia* barrel sponges; other surrounding benthos were primarily gorgonian sea fans and

low-growing hard corals and coral rubble. The fish were extremely shy and retiring and disappeared immediately under barrel sponges when approached by the second author.

Remarks: Using Gill's (2004) key to *Pseudochromis* species, *P. matahari* keys to couplet 48, but is ambiguous for characters at that couplet distinguishing *P. kolythrus* Gill & Winterbottom, 1993 (from New Caledonia) from couplet 49 (*P. jamesi* Schultz, 1943, southwest Pacific, and *P. luteus* Aoyagi, 1943, southern Japan, Taiwan and northern Philippines). Aside from several noteworthy key characters (e.g., relatively weak fin spines, lower lip weakly or not interrupted at symphysis), *P. matahari* shares the single defining character of a clade consisting of those species and their near relatives *P. flammicauda* Lubbock & Goldman, 1976 from the Great Barrier Reef and *P. wilsoni* (Whitley, 1929) from northern Australia: rib on ultimate precaudal vertebra relatively long (rib greater than 50% of the length of rib on penultimate precaudal vertebra). However, it lacks the defining character of a more inclusive clade of species that Gill & Winterbottom (1993) termed the *Pseudochromis tapeinosoma*-complex: lateral wing of cleithrum expanded anteriorly well past the anterior profile of the cleithral shaft. Aside from this character, it is distinguished from the couplet 48 species and all other members of the *P. tapeinosoma*-complex in having more segmented anal-fin rays (16 versus 12-15), and distinct dark markings on the posterior orbital rim and cheek.

The live coloration of *P. matahari* is reminiscent of *P. kristinae* Gill, 2004 from the Western Indian Ocean (east coast of Africa, Madagascar and the Comoros Islands; see Gill 2004: plate 8E). It is readily distinguished from that species in having fewer circumpeduncular scales (16 vs. 18-20, usually 20) and the second anal-fin spine only slightly stouter than the third (versus much stouter).

Etymology: The specific epithet is from the Indonesian for sun, and alludes to the sunburst-like live coloration. To be treated as a noun in apposition.

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