

Two New Serranid Fishes of the Genus *Pseudanthias* from the Western Indian Ocean

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ABSTRACT. *Pseudanthias bimarginatus*, described from five specimens collected in 48 m at the Maldiv Islands, is characterized by 16 dorsal soft rays, 16 or 17 pectoral rays, 42–43 lateral-line scales, 10–11 + 22–25 gill rakers, slender body (depth 3.0–3.3 in SL), thickened front of upper lip, no serrae on subopercle or interopercle, orbital papillae, no elongate dorsal spines, lunate caudal fin, two narrow magenta bands dorsally on head that join across front of snout and medially on nape; caudal fin of male red grading to yellow posteriorly, with very broad, lavender-blue, upper and lower margins. *P. unimarginatus*, represented by one 52.6-mm male specimen collected in 53 m at Mauritius, shares the morphological characters of *P. bimarginatus* except for having 18 pectoral rays and 9 + 25 gill rakers; it differs in colour principally in having a yellow caudal fin with only a broad upper lavender-blue margin and a submarginal red band. Both species are close relatives of *P. parvirostris* from Indonesia, Solomon Islands, and Palau, which differs in having more numerous preopercular serrae, no serrae on subopercle and interopercle, modally fewer gill-raker, and in caudal-fin colouration.

RÉSUMÉ. L'espèce *Pseudanthias birginatus*, décrite à partir de 5 échantillons collectionnés à 48 m à Maldives, possède les caractéristiques suivantes : 16 douces raies dorsales, 16 ou 17 raies pectorales, 42–43 écailles sur les lignes latérales, corps mince, le devant de la lèvre supérieure incliné, papilles orbitales, pas de colonnes dorsales rallongées, nageoire caudale semi-lunaire, deux petites bandes dorsales magenta sur la tête joignant le museau frontal ; la nageoire caudale du male est rouge et jaunît petit à petit, avec des marges bleu-lavande supérieures et inférieures très larges. L'espèce *P. unimarginatus*, représentée par un échantillon de 52.6 mm pris à 53 m à l'Île Maurice possède les caractéristiques morphologiques de *P. bimarginatus*, à l'exception du fait de posséder 18 raies pectorales; la différence réside dans la couleur également en ceci qu'il possède une nageoire caudale jaune avec une seule marge supérieure bleu-lavande et une bande sous-marginale rouge. Toutes les deux espèces sont proches parentes de *P. parvirostris* d'Indonésie, des Îles Salomon, et Palau, avec la différence que ce dernier possède plus des serrae pré-operculaires et une coloration de nageoire caudale différente.

KEY WORDS: taxonomy, Serranidae, *Pseudanthias*, new species, Western Indian Ocean

INTRODUCTION

The Indo-Pacific fish genus *Pseudanthias* contains small, colourful, coral-reef fishes of the family Serranidae, subfamily Anthiinae, that are usually found in aggregations. They feed on zooplankton well above the substratum, but quickly take shelter in the reef when threatened. Males are larger, generally more colourful, and maintain a harem. If a male is removed, the dominant female changes in time to a male and assumes control of the harem (Shapiro, 1981).

Bleeker (1871; 1873) described the genus *Pseudanthias* for six species. Boulenger (1895), however, regarded it as a synonym of *Anthias*, and he was followed until Katayama in Masuda et al. (1984) and Katayama & Amaoka (1986) recognized *Pseudanthias* as a valid genus.

Randall & Pyle (2001) described four new species of *Pseudanthias* from the South Pacific.

They listed the 65 nominal species then placed in the genus *Pseudanthias*, of which 49 were regarded as valid. Two new species of *Pseudanthias* are described in the present paper, one represented by five specimens collected in 48 m in the Maldiv Islands in 1988 and misidentified by Randall & Anderson (1993) as *P. parvirostris* Randall & Lubbock, and the other by a single male specimen taken in 53 m at Mauritius in 1980. Regrettably, no additional specimens are known of either species.

MATERIALS AND METHODS

Type specimens have been deposited in the Bernice P. Bishop Museum, Honolulu (BPBM); the South African Institute for Aquatic Biodiversity, Grahamstown (SAIAB); and the U.S. National Museum of Natural History, Washington, D.C. (USNM).

Lengths given for specimens are standard length (SL), the straight-line distance from the median anterior point of the upper lip to the base of the caudal fin (posterior end of hypural plate). Head length (HL) is measured from the same anterior point to the posterior end of the opercular membrane, and snout length from the same point to the fleshy edge of the orbit. Body depth is the greatest depth from the base of the dorsal spines; body width is the greatest width measured just posterior to the gill opening. Orbit diameter is the greatest fleshy diameter, and interorbital width the least bony width. Caudal-peduncle depth is the least depth; caudal-peduncle length is measured horizontally from the rear base of the anal fin to the caudal-fin base. Predorsal, preanal, and prepelvic lengths are taken from the front of the upper lip to the origin of the respective fins. Lengths of fin spines and soft rays are measured to their extreme base.

Proportional measurements are given in the tables as a percentage of the standard length. Proportions in the text are ratios rounded to the nearest 0.05. Lateral-line scale counts include all pored scales. Gill-raker counts were made on the first gill arch and include rudiments; the upper-

limb count is given first, and the raker at the angle is included in the lower-limb count.

***Pseudanthias bimarginatus* sp. nov.**

Pl. 1 A-C; Tables 1, 3

Pseudanthias parvirostris (non Randall & Lubbock),
Randall & Anderson 1993: 14 (Maldive Islands).

Pseudanthias parvirostris (non Randall & Lubbock),
Kuitert 1998: 76, upper figs (Maldive).

Holotype. BPBM 34697, male, 48.0 mm, Republic of Maldives, North Malé Atoll, lagoon, east side of Furana Island, steep rocky bottom, 48 m, rotenone, J. E. Randall, R. C. Anderson & M. S. Adam, 29 October 1988.

Paratypes. BPBM 41006, 33.9 mm; SAIAB 86490, 2: 38.8–43.1 mm; USNM 398058, 36.8 mm, all with same data as holotype.

DIAGNOSIS. Dorsal-fin rays X,16; anal-fin rays III, 7; pectoral-fin rays 16–17 (usually 17); lateral-line scales 42–43; gill rakers 10–11 + 22–24; body depth 3.0–3.3 in SL; head length 2.9–3.1 in SL; papillae on posterior edge of orbit; no serrae on edge of subopercle or interopercle; snout length 3.75–4.45

Table 1. Proportional measurements of type specimens of *Pseudanthias bimarginatus* as percentages of the standard length

	Holotype	Paratypes			
	BPBM 34697	BPBM 41006	USNM 398058	SAIAB 86490	SAIAB 86490
Sex	male	female	female	female	male
Standard Length (mm)	48.0	33.9	36.8	38.8	43.1
Body depth	30.2	33.0	32.9	30.8	30.3
Body width	15.0	17.7	15.0	17.2	16.6
Head length	32.2	33.3	34.4	34.1	32.7
Snout length	7.5	8.9	8.2	7.7	8.3
Orbit diameter	9.1	11.6	11.1	10.4	9.7
Interorbital width	8.6	9.7	9.7	9.2	8.8
Upper-jaw length	16.6	16.4	16.6	16.7	16.5
Caudal-peduncle depth	13.9	15.4	15.9	15.1	15.5
Caudal-peduncle length	20.6	20.0	20.7	18.5	18.5
Predorsal length	32.7	34.9	33.8	34.0	33.3
Preanal length	59.3	60.4	60.0	60.2	59.5
Prepelvic length	33.4	34.1	34.2	33.8	34.0
Dorsal-fin base	54.3	53.9	53.7	53.9	54.1
First dorsal spine	5.8	5.6	5.6	5.4	6.0
Third dorsal spine	10.6	12.9	12.8	12.4	12.2
Tenth dorsal spine	11.6	14.1	13.9	12.6	13.4
Longest dorsal ray	broken	20.9	19.5	18.5	18.9
Anal-fin base	21.2	22.5	21.5	22.2	20.8
First anal spine	8.7	9.2	9.4	9.1	8.9
Second anal spine	11.8	12.1	13.3	12.8	11.9
Third anal spine	12.9	14.6	broken	14.5	13.5
Longest anal ray	broken	24.1	24.4	22.7	25.6
Caudal-fin length	41.7	40.9	40.5	39.4	42.1
Caudal concavity	26.3	27.2	24.7	24.3	27.6
Pectoral-fin length	31.7	34.9	31.4	32.2	33.0
Pelvic spine length	17.1	19.5	16.6	18.6	16.5
Pelvic-fin length	37.5	33.2	33.5	27.7	30.1

in HL; front of upper lip thickened and moderately protuberant; bony interorbital width 3.45–3.75 in HL; fourth to tenth dorsal spines subequal, 2.15–2.8 in HL; caudal fin lunate, 2.4–2.55 in SL; males lavender-pink, the head yellow dorsally with narrow magenta bands; caudal fin red with broad, upper and lower lavender-blue margins; females mainly yellow with flecks of magenta, the head with the same magenta bands as male; fins mainly yellow with a narrow magenta margin.

DESCRIPTION. Dorsal-fin rays X, 16; anal-fin rays III, 7; pectoral-fin rays 17 (17, one count of 16 on one side); pelvic-fin rays I, 5; principal caudal-fin rays 15, the median 13 branched; lateral-line scales 43 (42–43); scales above lateral line to origin of dorsal fin 5; scales below lateral line to origin of anal fin 14; circumpeduncular scales 21; gill rakers 10–11 + 22–24 (9 + 23–24); branchiostegal rays 7; vertebrae 26; supraneural (predorsal) bones 2.

Body moderately elongate, depth 3.0 (3.0–3.3) in SL, and compressed, width 2.0 (1.8–2.2) in body depth; head length 3.1 (2.9–3.05) in SL; snout length 4.3 (3.75–4.45) in HL; upper lip thickened medially and moderately protuberant; eye large, orbit diameter 3.75 (2.85–3.4) in HL; ventroposterior edge of orbit with prominent fleshy papillae (18 on holotype); interorbital space convex; bony interorbital width 3.75 (3.45–3.7) in HL; caudal-peduncle depth 2.3 (2.1–2.25) in HL; caudal-peduncle length 1.55 (1.65–1.85) in HL.

Mouth slightly inferior and oblique, forming an angle of about 35° to horizontal axis of body; maxilla reaching posterior to centre of eye, the upper-jaw length 1.95 (2.0–2.05) in HL; posterior end of maxilla strongly rounded dorsally, the lower corner only slightly rounded; greatest depth of maxilla 1.9 in orbit diameter; a small, recurved canine tooth on each side at front of upper jaw that angles anteriorly and laterally, separated by a gap about equal to pupil diameter, and followed by a row of forward-curving teeth (19 on holotype); teeth in middle of side of upper jaw longest; a band of villiform teeth in about 5 rows posterior to anterior canines, extending medially at front of jaw and narrowing to a single row as it passes posteriorly on side of jaw; a small stout canine on each side at front of lower jaw that projects strongly forward and laterally, fitting just medial to upper canine of that side when jaw closed; side of lower jaw with a row of about 18 forward-projecting, slightly curved teeth, preceded by two or three short, stout, conical teeth; a few rudimentary teeth in an approximate triangular shape on vomer; a single row of small conical teeth on palatines; tongue narrowly triangular, with a strongly pointed tip; gill rakers long and slender, the longest about 1.5 times longer than longest gill filaments.

Anterior nostril a short membranous tubule about equidistant to edge of orbit and front of

snout at base of upper lip, the tubule longest dorsoposteriorly; posterior nostril obliquely dorsoposterior to anterior nostril, about a nostril diameter before fleshy edge of orbit, with a well-developed narrow rim, except posteriorly.

Opercle with three flat spines, the middle at level of centre of eye, clearly largest and most posterior, closer to lower than upper spine; upper opercular spine nearly covered by scales; posterior margin of preopercle with small serrae, 32 in holotype, ending with three very small serrae at upper part of rounded corner; no serrae on subopercle or interopercle.

Scales ctenoid; no auxiliary scales on body; head scaled except for throat and gill membranes, lips, extreme front of snout, and a broad zone on side of snout that includes nostrils; scales extending out on dorsal fin up to three-fourths distance to margin; scales on anal fin about half distance to margin of anal fin; small scales on caudal fin nearly reaching posterior margin; scales present on about basal fourth of pectoral fins; scales extending out on rays of pelvic fins almost to level of spine tip; a midventral triangular scaly process of about 10 large scales at base of pelvic fins extending about half distance to spine tip.

Lateral line a smooth curve following contour of back, ending at or slightly anterior to base of hypural plate; some pores of cephalic lateralis system obscured by scales; still prominent: a pore anterior to nostrils; one between nostrils; two in interorbital space, one behind the other, just anterior to centre of eye; a series around posterior part of eye, one between each pair of orbital papillae; and a series of five from above posterior end of maxilla to below nostrils (two below middle of eye very close together).

Origin of dorsal fin above second lateral-line scale, the predorsal length 3.05 (2.9–3.0) in SL; first dorsal spine 5.55 (5.45–6.3) in HL; third dorsal spine 3.0 (2.55–2.8) in HL; fourth to tenth dorsal spines subequal, the tenth 2.8 (2.35–2.7) in HL; longest dorsal soft ray (1.6–1.85) in HL; origin of anal fin below base of second dorsal soft ray, the preanal length 1.7 (1.65–1.7) in SL; first anal spine 3.7 (3.65–3.75) in HL; second anal spine 2.7 (2.5–2.75) in HL; third anal spine 2.5 (2.3–2.4) in HL; longest anal soft ray (1.3–1.5) in HL; caudal fin lunate, the lobe tips filamentous, 2.4 (2.4–2.55) in SL (upper lobe of caudal fin damaged after photograph taken; measurement of caudal-fin length taken from photo); caudal concavity 3.8 (3.65–4.1); pectoral fins pointed, the tenth ray longest, 3.15 (2.9–3.2) in SL; pelvic fins long, reaching beyond spinous portion of anal fin in male holotype, to or nearly to origin of anal fin in paratypes, 2.65 (3.0–3.6) in SL.

Colour in alcohol. Light beige with no dark markings; fins pale yellowish. Colour of male holotype when fresh: lavender-pink, the head yellow dorsally,

with a narrow magenta band across front of snout, continuing to edge of orbit on each side, and curving back to form a median band posteriorly on nape; a narrow magenta band from orbit at level of upper edge of iris to above upper end of gill opening, a broader but less distinct magenta band from orbit at level of centre of eye to yellow opercular flap; ventral part of head pinkish white; iris yellow and pale blue with a ventroposterior magenta arc; caudal fin red with broad upper and lower pinkish blue margins; dorsal and anal fins pinkish blue, the dorsal fin with an indistinct pink margin, and the anal fin with a narrow blue margin; pectoral fins with pale pink rays and transparent membranes; pelvic fins with pale yellowish rays and translucent membranes.

Colour of 33.9-mm female paratype when fresh: yellow, shading to pinkish white on abdomen and ventrally on head, with magenta flecks, mainly one per scale, on dorsal two-thirds of body; narrow magenta bands on head and iris as described for holotype; median and pelvic fins yellow, becoming darker yellow on scaled basal part, the margins pink except posteriorly.

ETYMOLOGY. This species is named *P. bimarginatus* for its most conspicuous colour feature, the broad, lavender-blue, upper and lower margins of the caudal fin.

REMARKS. The five specimens of this species from the Maldives were first identified by Randall & Anderson (1993: 14) as *Pseudanthias parvirostris* Randall & Lubbock, type locality Solomon Islands. The colour pattern of fish from the two island groups is very similar, in particular the pattern of the narrow magenta bands dorsally on the head, but the difference in caudal-fin colouration of the male phase (centrally yellow in the Solomons fish and red in the Maldives) prompted morphological comparison. No meristic difference was noted for fin rays or scales, but an unusual difference was found in the gill-raker counts, modally one fewer upper-limb rakers for Maldives fish and a higher average count of lower-limb rakers (Table 3). Other differences supporting recognition of the two as separate species include more numerous and smaller preopercular serrae in *P. bimarginatus*, compared to *P. parvirostris* of the same size, the serrae ending dorsally on the rounded corner of the preopercle in *bimarginatus*, but continuing onto the entire rounded corner in *parvirostris*, and no serrae on the margins of the subopercle and interopercle of *bimarginatus*, compared to well-developed serrae in *parvirostris*. *P. bimarginatus* has a distinct naked zone, about one-half pupil diameter in width, anteriorly on the snout. The scales dorsally on the snout of *P. parvirostris* extend forward to the base of the upper lip. Differences in body and fin proportions include the following:

snout length of *bimarginatus* 7.5–8.9% SL, compared to 6.1–7.3 % SL for *parvirostris*; longest dorsal spine of *bimarginatus* 11.6–14.1% SL, compared to 10.2–11.5% SL for *parvirostris*; third anal spine 12.9–14.6% for *bimarginatus*, compared to 10.1–12.0% SL for *parvirostris*.

As a reviewer of the manuscript for this paper, Gerald R. Allen recalled that he had taken underwater photographs of two males of *Pseudanthias parvirostris* in Indonesia that were unusual in having the central part of the caudal fin red, not yellow, and had succeeded in collecting the specimens. He provided the author with the photographs, and the specimens (WAM P.31526.017, 52 mm SL, from Pulau Weh at the western end of Sumatra and WAM P.32976.001, 49 mm SL, from Halmahera) were sent on loan from the Western Australian Museum. Based on the gill-raker and measurement differences given above, the WAM specimens proved to be *P. parvirostris*. The colour of the body on the Indonesian photographs was not entirely lavender-pink as on terminal males of *P. bimarginatus*, but yellow with pink or lavender spots, the Pulau Weh fish with some red continuing from the central part of the caudal fin dorsally on the body.

COMPARATIVE MATERIAL EXAMINED. *Pseudanthias parvirostris*, Solomon Islands, Alite Reef (off Malaita), BPBM 15603, 2: 24–32 mm; BPBM 15605, 48.3 mm (holotype); BPBM 16193, 51: 31–70 mm; BPBM 20448, 4: 23.5–26 mm (paratypes). Indonesia, Banda Sea, Lucipara Islands (west of Penyu Islands), BPBM 32334, 38 mm, BPBM 34196, 40 mm. Palau, Ngemlis Island, BPBM 37729, 39 mm.

Pseudanthias unimarginatus sp. nov.

Pl. 2A, B; Tables 2, 3

Holotype. BPBM 22924, male, 52.6 mm, Mauritius, west coast, reef about 2 miles north of Flic en Flac, 53 m, bottom mainly rock with little live coral, anaesthetic, D. Pelicier and J. E. Randall, 27 March 1980.

DIAGNOSIS. Dorsal-fin rays X, 16; anal-fin rays III, 7; pectoral-fin rays 18; lateral-line scales 43; gill rakers 9 + 25; body depth 3.05 in SL; head length 3.1 in SL; anterior end of upper lip thickened; papillae ventroposteriorly on edge of orbit; no serrae on edge of subopercle or interopercle; snout length 3.9 in HL; bony interorbital width 4.0 in HL; fourth to tenth dorsal spines subequal, 2.8 in HL; caudal fin lunate, 2.3 in SL; body orange-yellow, shading to pale lavender-yellow ventrally; head yellow, paler ventrally; a large elliptical orange area, bordered by magenta, dorsally on head from snout to nape; anterior end of upper lip pale

Table 2. Proportional measurements of holotype of *Pseudanthias unimarginatus* as percentages of the standard length

	BPBM 22924
Sex	male
Standard length (mm)	52.6
Body depth	32.7
Body width	16.8
Head length	32.2
Snout length	8.2
Orbit diameter	9.5
Interorbital width	8.1
Upper-jaw length	16.4
Caudal-peduncle depth	14.8
Caudal-peduncle length	22.4
Predorsal length	33.8
Preanal length	57.3
Prepelvic length	32.3
Dorsal-fin base	54.3
First dorsal spine	5.4
Third dorsal spine	11.4
Tenth dorsal spine	13.0
Longest dorsal ray	17.7
Anal-fin base	20.9
First anal spine	7.6
Second anal spine	10.3
Third anal spine	12.1
Longest anal ray	25.2
Caudal-fin length	43.8
Caudal concavity	29.6
Pectoral-fin length	32.0
Pelvic-spine length	14.3
Pelvic-fin length	34.2

lavender-pink; caudal fin yellow with a broad pale blue upper margin and red submarginal band that narrows posteriorly; remaining fins translucent yellow, the dorsal fin with a pink margin, and the anal and pelvic fins with a narrow blue margin.

DESCRIPTION. Dorsal-fin rays X, 16; anal-fin rays III, 7; pectoral-fin rays 18; scales above lateral line to origin of dorsal fin 5; scales below lateral line to origin of anal fin 14; circumpeduncular scales 23; gill rakers 8 + 25 (9 + 25 on other side); branchiostegal rays 7; vertebrae 26; supraneural (predorsal) bones 2.

Body moderately elongate, depth 3.05 in SL, and compressed, width 2.0 (1.95) in body depth; head length 3.1 in SL; upper lip thickened medially and slightly protuberant; snout length 3.9 in HL; orbit diameter 3.4 in HL; ventroposterior edge of orbit with 22 fleshy papillae; interorbital space

convex; bony interorbital width 4.0 in HL; caudal-peduncle depth 2.3 in HL; caudal-peduncle length 1.45 in HL.

Mouth slightly inferior and oblique, forming an angle of about 35° to horizontal axis of body; maxilla nearly reaching a vertical at posterior edge of orbit, the upper-jaw length 1.95 in HL; posterior end of maxilla strongly rounded dorsally, the lower corner only slightly rounded; greatest depth of maxilla 1.8 in orbit diameter; a recurved canine tooth on each side at front of upper jaw, the symphyseal gap nearly equal to pupil diameter; an outer row of 19 moderately large, forward-curving teeth on side of upper jaw; a stout canine on each side at front of lower jaw (two adjacent teeth on right side) that project strongly forward and slightly lateral; a band of villiform teeth in lower jaw, the outer row enlarged; a few tiny teeth in a chevron-shape on vomer; an irregular row of very small conical teeth on palatines; tongue narrowly triangular, the tip strongly pointed; gill rakers long and slender, the longest 1.7 in orbit diameter.

Anterior nostril a short membranous tubule, higher dorsoposteriorly, anterior to upper edge of pupil, about half distance to front of snout; posterior nostril obliquely dorsoposterior to anterior nostril, its greatest diameter about half internarial space.

Opercle with three flat spines, the middle at level of centre of eye, largest and most posterior, equidistant to upper and lower spines; upper opercular spine nearly covered by scales; posterior margin of preopercle with 22 small serrae; most of rounded corner and ventral margin preopercle smooth; no serrae on subopercle or interopercle.

Scales ctenoid; no auxiliary scales on body; head scaled except for throat and gill membranes, lips, and a broad zone on side of snout that includes nostrils; scales dorsally on snout extending to base of upper lip; scales extending out on dorsal fin about three-fourths distance to margin at juncture of spinous and soft portions of fin, progressively less anteriorly and posteriorly in fin; scales basally in anal fin about half way out on fin anteriorly in soft portion, progressively less posteriorly; small scales on caudal fin reaching at least three-fourths distance to posterior margin; pectoral fins with scales on about basal fourth; pelvic fins with a triangular midventral process of about 12 scales that reaches about half distance to tip of pelvic spines; small scales extending out on rays almost to tip of pelvic spine; lateral line a smooth curve following contour of back, the last pored scale at base of hypural plate. Pores of cephalic lateralis system as described for *P. bimarginatus*.

Origin of dorsal fin above second lateral-line scale, the predorsal length 2.95 in SL; first dorsal spine 8.5 in HL; third dorsal spine 3.4 in HL; fourth to tenth dorsal spines subequal, the tenth 2.8 in HL; longest dorsal soft ray 1.85 in HL; origin of anal fin below base of second dorsal soft ray, the

Table 3. Gill-raker counts of species of *Pseudanthias*

No. of gill-rakers	Upper limb			Lower limb			
	9	10	11	22	23	24	25
<i>P. bimarginatus</i>		10	5	2	9	4	
<i>P. parvirostris</i>	5				2	2	1
<i>P. unimarginatus</i>	1						1

preanal length 1.75 in SL; first anal spine 4.45 in HL; second anal spine 3.15 in HL; third anal spine 2.7 in HL; longest anal soft ray 1.3 in HL; caudal fin lunate, the lobe tips filamentous, 2.3 in SL; caudal concavity 3.4 in SL; pectoral fins pointed, the tenth ray longest, 3.1 in SL; pelvic fins long, reaching to base of third anal soft ray, 2.9 in SL.

Colour in alcohol pale yellowish. Colour of body in life light orange-yellow dorsally, pale pink ventrally, the scale centres with a an indistinct pale lavender-pink blotch; head orange-yellow, shading to pale pinkish yellow ventrally; a large elliptical orange area, bordered in magenta, dorsally on head from base of upper lip to nape, the two magenta borders joining to a median dorsal band posteriorly on nape and continuing to origin of dorsal fin; front of upper lip very pale lavender-pink; lips with a streak of pinkish orange; caudal fin yellow with a broad lavender-blue upper margin and red submarginal band that narrows posteriorly; remaining fins translucent yellow, the dorsal fin with a pink margin, and the anal and pelvic fins with a narrow blue margin.

ETYMOLOGY. This species is named *P. unimarginatus* for the colourful broad margin dorsally on the caudal fin that is not duplicated on the ventral margin.

REMARKS. The only specimen of this species was collected in Mauritius with veteran aquarium fish collector Daniel Pelicier in 1980 from a patch reef in 53 m, where he often collected *Chaetodon mitratus* and *Pseudanthias pulcherrimus*. Pelicier observed only one individual of this fish. The near-white tip of its upper lip was the most conspicuous mark at that depth. He often tried to collect it, but it quickly took refuge in a crack in the reef. It was finally caught with the use of an anaesthetic. He believes this species will be found on deeper reefs.

Pseudanthias unimarginatus is a close relative of both *P. parvirostris* and *P. bimarginatus*. It shares many characters with both, and it aligns with one or the other in some characters, such as snout length with *bimarginatus* and interorbital width and gill-raker count with *parvirostris*. All three have the unique magenta-line colour pattern dorsally on the

head. *P. unimarginatus* differs from both in caudal-fin colouration and in having 18 pectoral rays, but more than one specimen is needed to verify the pectoral-count difference.

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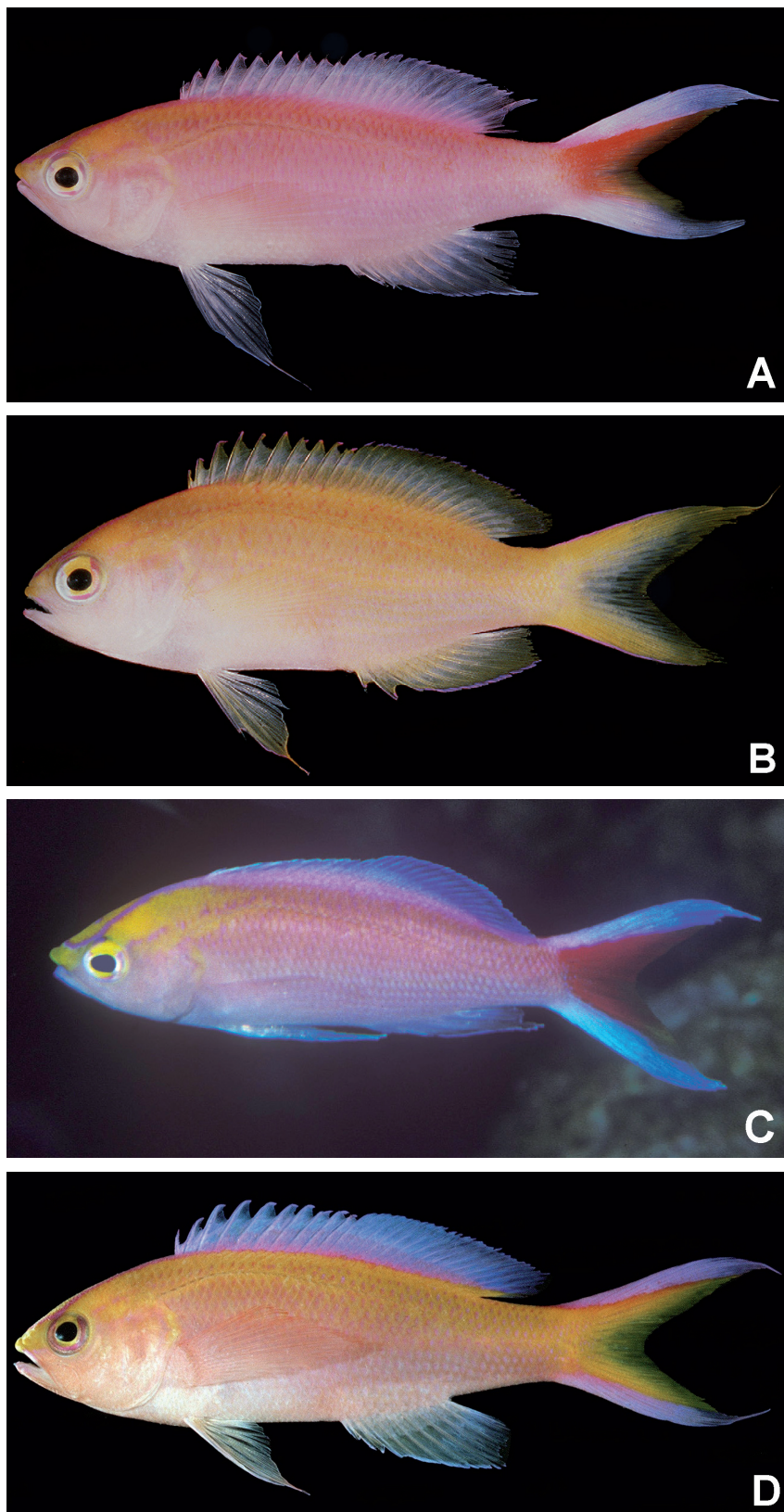


Plate 1

- A. Holotype of *Pseudanthias bimarginatus*, BPBM 34697, male, 48.0 mm, North Malé Atoll, Maldives Islands.
B. Paratype of *Pseudanthias bimarginatus*, BPBM 41006, female, 33.9 mm, North Malé Atoll, Maldives Islands.
C. Underwater photo of male of *Pseudanthias bimarginatus*, Maldives Islands.
D. Holotype of *Pseudanthias parvirostris*, BPBM 15605, male, 48.3 mm, Solomon Islands.



Plate 2

- A.** Holotype of *Pseudanthias unimarginatus*, BPBM 22924, male, 52.6 mm, Mauritius.
B. Underwater photo of holotype of *Pseudanthias unimarginatus*, Mauritius.