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Two New Labrid Fishes of the Genus *Oxycheilinus* from the South Pacific

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The fish family Labridae, popularly called wrasses, is the second largest family of marine fishes in the world (after the Gobiidae), with 453 species (Parenti and Randall 2000). Most species (82%) are found in the tropical and subtropical Indo-Pacific region, and ones previously unknown to biologists continue to be discovered. In a phylogenetic study of labrid fishes of the tribe Cheilinini, Westneat (1993) recognized two lineages, a "cheiline" lineage of five genera, all but one with species confined to the Indo-Pacific, and a "pseudocheiline" lineage. The genera of the "cheiline" lineage are *Cheilinus*, *Doratonotus*, *Epibulus*, *Oxycheilinus*, and *Wetmorella*. *Oxycheilinus* was proposed by Gill (1862) for *Cheilinus arenatus* Valenciennes. His genus was not recognized by Bleeker and Pollen (1874), Jordan and Snyder (1902), and later authors. However, Westneat provided characters to distinguish it from *Cheilinus*, and he has been followed by most recent authors. In addition to *O. arenatus*, Westneat classified the following species in *Oxycheilinus*: *O. bimaculatus* (Valenciennes), *O. celebicus* (Bleeker), *O. digrammus* (Lacepède), *O. mentalis* (Rüppell), *O. orientalis* (Günther), and *O. unifasciatus* (Streets).

In 1971, while diving in 49 m off Henderson Island in the Pitcairn Islands, the first author speared an unknown labrid fish with narrow dark stripes that seemed to be a species of *Cheilinus* (*Oxycheilinus* then not separated from *Cheilinus*), but it tore free. Later the same year off Tahiti in 76 m he speared the same species, but again it escaped. Richard L. Pyle collected what is probably the same species while diving in 85 m off Rarotonga, Cook Islands in 1991 and made it available for our description. It clearly represents an undescribed species of *Oxycheilinus*.

We also have nine specimens of a second new species of *Oxycheilinus* collected from 1988 to 2001 in the Chesterfield Bank of the Coral Sea, off New Caledonia, and New South Wales. The purpose of the present paper is to describe these two species to make the names available for a book on reef and shore fishes of the South Pacific that has been prepared by the first author. A revision of *Cheilinus* and *Oxycheilinus* is in progress by us which will provide a key, diagnoses, and illustrations of all the species.

Materials and Methods

Specimens of the new species of *Oxycheilinus* were deposited at the following institutions: Bernice P. Bishop Museum, Honolulu (BPBM); California Academy of Sciences, San Francisco (CAS); Field Museum of Natural History, Chicago (FMNH); Museum National d'Histoire Naturelle, Paris (MNHN); National Science Museum, Tokyo (NSMT); Museum Victoria, Melbourne (NMV); and the U.S. National Museum of Natural History, Washington, D.C. (USNM).

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Lengths given for specimens are standard length (SL), the straight-line distance from the front of the upper lip to the base of the caudal fin (posterior end of the hypural plate). Head length is measured from the same median anterior point to the end of the opercular membrane, and snout length from the same point to the fleshy edge of the orbit. Body depth is the maximum depth, and body width the greatest width just posterior to the gill opening. Orbit diameter is the greatest fleshy diameter, and interorbital width the least fleshy 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. Dorsal and anal-fin spines are measured from the tip to the point where they emerge from the body. Caudal-fin length is measured horizontally from the fin base to a vertical at the tip of the longest ray.

Pectoral-ray counts include the uppermost rudimentary ray. 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 contained in the lower-limb count.

Proportional measurements are presented in Table 1 as percentages of the standard length; those in the text are rounded to the nearest 0.05. Data in parentheses in the descriptions that follow refer to paratypes, if any, and if different from those of the holotype.

Species Descriptions

***Oxycheilinus lineatus* Randall, Westneat and Gomon, sp. nov.**
Plate 1, Fig. A; Table 1.

Material examined.— Holotype: BPBM 39091, male, 159.5 mm, Cook Islands, Rarotonga, east side, off residence of Charles J. Boyle, ledge on slope above drop-off, 85 m, hand net, R. L. Pyle, 5 January 1991.

Diagnosis.— Dorsal rays IX,10; anal rays III,8; pectoral rays 13; lateral-line interrupted, the pored scales to caudal-fin base 16 + 7; gill rakers 4 + 8; body moderately elongate, the depth about 3.4 in SL; head length about 2.5 in SL; snout long and pointed, about 2.5 in head; dorsal profile of snout nearly straight, of nape slightly convex; lower jaw slightly projecting; maxilla ending a half-eye diameter before anterior margin of orbit; caudal fin (of adult male) slightly rounded, the upper three principal rays a little prolonged; membranes of spinous portion of dorsal fin incised one-third to one-half length of spines; pectoral fins short, about 3.2 in head; body below lateral line with 12 narrow, slightly irregular, dark brown stripes separated by white lines; body above lateral line with similar but more irregular bands; head with narrow dark brown bands radiating from eye except anteriorly; snout bluish gray with brown dots; a blackish blotch on basal half of first membrane of dorsal fin.

Description.— Dorsal rays IX,10; anal rays III,8; all dorsal and anal rays branched, the last to base; pectoral rays 13, the first rudimentary, the second unbranched; pelvic rays I,5; principal caudal rays 13, the middle 11 branched; upper procurrent caudal rays 5; lower procurrent caudal rays 4; lateral-line interrupted, the pored scales 16 + 7; 2 pored scales on caudal-fin base, the last very large and pointed; scales above lateral line to base of dorsal spines 1.5; scales below lateral line to origin of anal fin 5.5; median predorsal scales 5 (+ l or more embedded anteriorly); gill rakers 4 + 8; pseudobranchial filaments 19; branchiostegal rays 5; vertebrae 23.

Body moderately elongate, the depth 3.4 in SL; body width 1.95 in depth; head length 2.45 in SL; snout long and pointed, 2.5 in head; dorsal profile of snout nearly straight, of nape slightly convex; orbit diameter 5.55 in head; interorbital space strongly convex, the least fleshy width 3.9 in head; caudal-peduncle depth 2.7 in head; caudal-peduncle length 3.4 in head.

Lower jaw slightly projecting and mouth a little oblique, forming an angle of about 20° to horizontal axis of body; maxilla ending a half orbit diameter before anterior edge of orbit, the upper-jaw length 2.8 in head; a pair of broadly spaced incurved canine teeth anteriorly in each jaw, the lowers about half as long as uppers and fitting inside uppers when mouth closed; a row of 15 closely set conical teeth of moderate size along side of upper jaw, the largest anterior to mid-side; lower jaw with a row of 17 comparable conical teeth on side of lower jaw, but a little smaller on average than those of upper jaw; no inner rows of small teeth in jaws, and no teeth on palate. Tongue slender, the tip rounded, reaching anteriorly only a little more than half distance to front of jaws. Lips thick but not fleshy; no flap on side of lower lip. Gill rakers small and simple, those on lower limb nearly sessile; longest gill raker on lower limb about equal to longest gill filaments, about one-third orbit diameter. Nostrils as small as sensory pores, the anterior in a low membranous tube with a short posterior flap about three-fourths orbit diameter before upper part of eye; posterior nostril behind and slightly dorsal to anterior nostril, the internarial space about equal to pupil diameter.

Upper part of posterior edge of preopercle covered by a scale to level of a pupil diameter below orbit; ventral edge of preopercle free nearly to a vertical at posterior end of maxilla; outer and ventral part of preopercle thin and membranous, with a slight indentation in margin above rounded corner.

Scales cycloid, thin, and membranous, but adherent; head scaled except for membranous flange of preopercle, snout, chin, and anterior interorbital space; predorsal scales ending in an embedded lateral pair of scales in posterior interorbital space; scales of lateral line with a single horizontal tubule, ending in a pore; first lateral-line scale at upper end of gill opening; anterior lateral line following dorsal contour of body, the posterior part midlateral on caudal peduncle; scales on thorax only slightly smaller than largest on side of body; no scales on base of dorsal or anal fins except a few in middle of soft portions with about half scales extending onto base of fins; caudal fin with scales on basal half, the most posterior a vertical row of three very large scales, the middle one the last scale of lateral line; paired fins without scales except for a slender midlateral scaly process extending posteriorly from base of pelvic fins a little more than half length of pelvic spines; a slender axillary scale above base of pelvic fin, partly covered by an unusually large scale between bases of pelvic and pectoral fins.

Origin of dorsal fin on a vertical at posterior end of opercular membrane, the predorsal length 2.4 in SL; dorsal spines progressively longer, the first 6.45 in head, and the ninth 3.7 in head; membranes of spinous portion of dorsal fin incised one-third to one-half length of spines; each interspinous membrane of dorsal and anal fins extending above spine tips with support of a stout cirrus from near tip of each spine; first dorsal soft ray longest, 3.25 in head (but remaining rays except last two nearly as long); origin of anal fin below base of eighth dorsal spine, the preanal length 1.55 in SL; first anal spine 7.2 in head; second anal spine 4.35 in head; third anal spine 3.8 in head; first anal soft ray longest, 3.3 in head; caudal fin slightly rounded, the three uppermost principal rays a little prolonged, the fin length 4.0 in SL; fourth pectoral ray longest, 3.25 in head; origin of pelvic fins slightly posterior to lower base of pectoral fins, the prepelvic length 2.35 in SL; pelvic spine 3.7 in head; first pelvic soft ray longest, not approaching anus, 2.45 in head.

Color of holotype in alcohol: light brown with 12 slightly irregular, narrow, dark brown stripes on body below lateral line, the paler interspaces a little broader than dark stripes; dark stripes ending posteriorly below rear base of dorsal fin; a few scattered dark dots on upper half of caudal peduncle; body above lateral line and on nape with similar narrow bands but progressively more irregular dorsally and anteriorly, those extending from nape onto opercle forming a convoluted pattern; head otherwise light brown with narrow dark brown bands radiating from eye except posteriorly, the anterior ones dotted, the upper ones breaking into dots in interorbital; snout light grayish

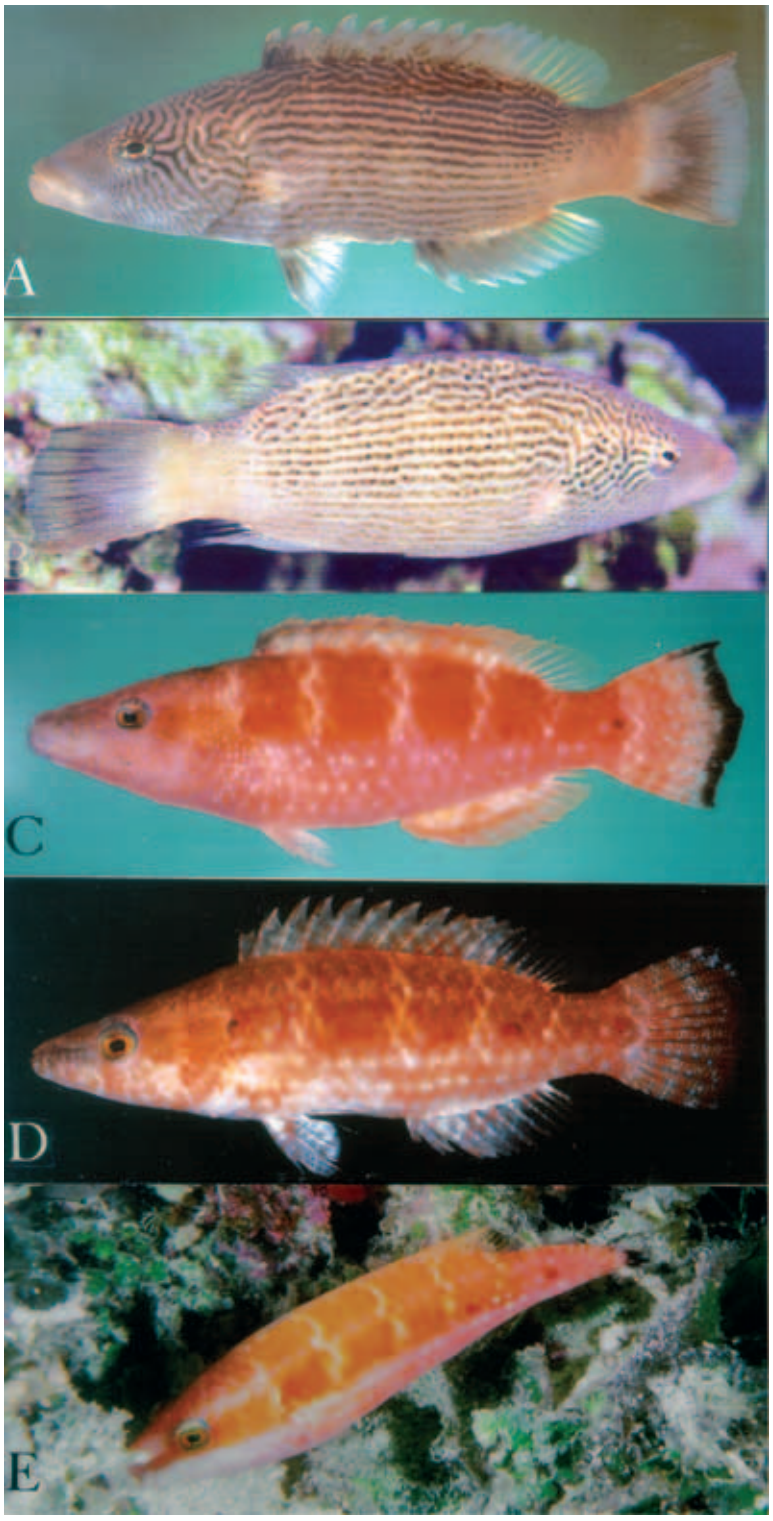

PLATE 1

A. Holotype of *Oxycheilinus lineatus* (BPBM 39091), male, 159.5 mm SL, Rarotonga, Cook Islands, 85 m (J. Randall).

B. Underwater photograph of *Oxycheilinus lineatus*, Rurutu, Austral Islands, 70 m (Y. Lefevre).

C. Holotype of *Oxycheilinus nigromarginatus*, BPBM 33686, male, 111.6 mm SL, Chesterfield Bank, Coral Sea, 10 m (J. Randall).

D. Paratype of *Oxycheilinus nigromarginatus*, BPBM 37942, male, 79.0 mm SL, Tongatapu, 12 m (J. Randall).

E. Underwater photograph of *Oxycheilinus nigromarginatus*, Chesterfield Bank, Coral Sea (J. Randall).

brown with dark brown dots; lips and chin without markings; dorsal fin with very faint pale yellowish brown markings in spinous portion, a blackish blotch in lower half of first membrane, and a lesser blotch on second membrane; anal and caudal fins slightly dusky, paler posteriorly; pectoral fins pale; pelvic fins dusky at base.

Color of holotype when fresh (Pl. 1A): body with narrow dark purplish brown stripes as described above, but the stripes now about twice as wide as pale interspaces which are pinkish white dorsally and bluish white ventrally (the edges of the dark stripes in the fresh specimen are not as darkly pigmented, and only the dark middle part remains in preservative); caudal peduncle brown except for a few scattered dark brown dots on upper half; head light lavender-gray, with narrow dark purplish brown bands radiating from eye except anteriorly, those extending ventrally from eye breaking into dashes or dots on lower part of head, and those dorsally into dots into interorbital space; snout with yellowish brown dots, a few extending onto basal part of upper lip; outer triangular part of each interspinous membrane of dorsal fin whitish, the supporting cirrus of each pale pink; first interspinous membrane with a large subtriangular purplish black spot on basal half; second membrane with a similar but smaller spot and less strongly pigmented, and the next membranes with similar but progressively smaller and lighter basal blotches; rest of spinous portion of fin light yellowish brown with small brown blotches; soft portion of dorsal fin pale brown anteriorly, gradually shading to translucent with pale yellowish rays posteriorly; anal fin brown anteriorly, the pigment nearly covering all of membranes, the lower part of first two membranes dark brown; brown portion of fin progressively shorter posteriorly, the rest of fin with translucent membranes and pale yellowish rays; caudal fin brown on proximal third except the three large basal scales which are pale yellowish, whitish on distal third; pectoral fins translucent with pale yellowish rays; pelvic fins purplish brown proximally and whitish distally, except for spine, first membrane, and first ray, purplish to tip.

ETYMOLOGY.— This species is named *Oxycheilinus lineatus* from the Latin *linea* for line, in reference to the strong linear pattern.

REMARKS.— Although described from a single adult male specimen from Rarotonga in the Cook Islands, the species is known from Tahiti and Henderson Island in the Pitcairn Islands where it was nearly collected by the first author. We also have an underwater photograph of it taken by Yves Lefevre in the Austral Islands (Pl. 1B). That fewer specimens have not been collected or photographed is undoubtedly due to its occurrence on deep reefs; the known depth range is 49–85 m.

Oxycheilinus lineatus is easily distinguished by its strong linear pattern. There appear to be no important differences in meristic data or body proportions to separate it from the other species of the genus. However, it can be separated, at least as an adult, by the strong incision of each interspinous membranes of the dorsal fin and the short pectoral fins, their length about 3.2 in the length of the head.

***Oxycheilinus nigromarginatus* Randall, Westneat and Gomon, sp. nov.**
Plate 1, Figs. C–E; Table 1

MATERIAL EXAMINED.— HOLOTYPE: BPBM 33686, male, 111.6 mm, Coral Sea, Chesterfield Bank, southeast end of lagoon, 19°53.5′S, 158°28.2′E, sand with small thickets of *Acropora*, 10 m, spear, J.E. Randall, 28 August 1988. PARATYPES: BPBM 37942, male, 79.0 mm, Tongatapu, Monuafe Islet, southwest side, 12 m, spear, J.E. Randall, 28 February 1983; BPBM 33693, female, 73.2 mm, Coral Sea, Chesterfield Bank, southeast end of lagoon, at anchorage, 27–28 m, small coral heads and patches of foraminifera sand, spear, J.-L. Menou and J.E. Randall, 27 August 1988; CAS 216844, 69.7 mm, Coral Sea, Chesterfield Bank, M. Kulbicki, 21 August 1988; NSMT-

TABLE 1. Proportional measurements of type specimens of two species of *Oxycheilinus* expressed as percentages of the standard length.

	O. lineatus	*O. nigromarginatus*						
	Holotype	Holotype	Paratypes					
	BPBM	BPBM	NSMT	BPBM	NMV	NMV	NMV	USNM
	39091	33686	65066	33693	A8578	A8578	A11834	371349
Sex	male	male	female	female	female	intersex	male	male
Standard length (mm)	159.5	111.6	64.3	73.2	82.3	99.8	101.0	113.4
Body depth	29.7	29.8	28.3	28.3	28.5	31.0	32.2	30.0
Body width	15.1	15.8	15.9	14.8	15.3	15.2	15.7	14.9
Head length	40.5	40.7	41.1	41.2	40.0	40.1	39.7	39.6
Snout length	16.2	15.1	14.3	15.2	14.3	14.6	14.7	15.3
Orbit diameter	7.3	6.5	8.8	8.2	7.7	6.8	7.0	6.6
Interorbital width	10.3	9.4	9.4	9.5	9.6	9.8	9.9	9.9
Upper-jaw length	14.3	15.6	14.4	14.6	13.8	14.6	14.6	15.2
Caudal-peduncle depth	15.1	13.4	12.8	12.3	13.4	14.1	14.4	13.6
Caudal-peduncle length	11.8	11.6	11.2	11.9	10.9	12.0	11.8	11.2
Predorsal length	41.6	39.5	41.7	40.4	41.5	40.2	38.8	39.6
Preanal length	64.8	64.7	65.8	65.2	64.6	65.1	64.6	64.4
Prepelvic length	42.8	41.4	43.2	42.6	41.6	42.8	42.1	41.2
Dorsal-fin base	50.7	52.8	52.8	51.0	54.5	53.0	55.4	54.5
First dorsal spine	6.3	6.0	6.1	7.1	7.2	7.0	6.4	6.2
Ninth dorsal spine	11.0	11.5	11.7	11.5	11.0	11.2	11.0	deformed
Longest dorsal ray	12.5	12.6	14.0	14.9	13.2	13.9	13.0	14.0
Anal-fin base	25.1	25.6	20.9	23.8	24.2	25.2	24.3	26.4
First anal spine	5.6	4.0	4.2	5.5	5.6	4.2	4.0	4.8
Second anal spine	9.3	7.8	8.3	9.5	8.2	7.6	7.9	8.1
Third anal spine	11.7	12.1	12.0	12.9	12.1	12.0	12.4	11.9
Longest anal ray	12.3	12.4	12.3	14.1	13.3	14.0	12.8	13.5
Caudal-fin length	25.0	24.4	21.4	24.6	25.1	27.2	25.8	25.7
Pectoral-fin length	12.5	15.2	14.0	15.3	14.8	14.1	14.9	15.2
Pelvic-spine length	10.9	11.0	11.7	11.0	12.3	11.3	11.9	10.0
Pelvic-fin length	16.5	16.9	16.2	17.5	16.4	17.3	17.5	17.9

P65066; female, 64.3 mm, same data as preceding; USNM 371349, male, 113.4 mm, same data as holotype; NMV A8578, females and intersex, 3: 81.3–99.8 mm, New Caledonia, St.Vincent South, 15 m, M. Kulbicki, 18 October 1989; NMV A11834, male, 101 mm, Australia, New South Wales, Sydney Harbor, Camp Cove, 33°50′S, 151°16′E, R.H. Kuiter, May 1991.

DIAGNOSIS.— Dorsal rays IX,10; anal rays III,8; pectoral rays 13; lateral-line interrupted, the pored scales to caudal-fin base 15 + 6; gill rakers 5-6 + 8-9; body moderately elongate, the depth 3.1–3.55 in SL; head length 2.45–2.55 in SL; snout long and pointed, 2.6–2.8 in head; dorsal pro-

file of snout straight or with a slight concavity of snout to above eye; lower jaw slightly projecting; maxilla reaching or nearly reaching a vertical at anterior margin of orbit; caudal fin of females slightly rounded, the upper three principal rays slightly prolonged; fin of males rhomboid with the upper three rays more strongly projecting; pectoral fins 2.6–2.95 in head; body and fins pale yellowish in preservative with a blackish posterior margin on caudal fin, broader and black in male; first interspinous membrane of dorsal fin dusky; red in life on about upper half of body with five irregular pale bars, pale red on lower half with three pale stripes containing small white spots; posterior edge of caudal fin blackish to black.

Description.— Dorsal rays IX,10; anal rays III,8; all dorsal and anal rays branched, the last to base; pectoral rays 13, the first rudimentary, the second unbranched; pelvic rays I,5; principal caudal rays 14, the middle 12 branched; upper procurrent caudal rays 5 ; lower procurrent caudal rays 5; lateral-line interrupted, the pored scales to caudal-fin base 16 + 7; 2 pored scales on caudal-fin base, the last very large and pointed; scales above lateral line to base of dorsal spines 1.5; scales below lateral line to origin of anal fin 5.5; median predorsal scales 5, preceded by a lateral pair of scales in posterior interorbital space, usually with a small scale anterior to these (often embedded); gill rakers 5 + 8 (5-6 + 8–9); pseudobranchial filaments 19 (19–23); branchiostegal rays 5; vertebrae 23.

Body moderately elongate, the depth 3.4 (3.1–3.55) in SL; body width 1.95 in depth; head length 2.45 (2.4–2.55) in SL; snout long and pointed, 2.7 (2.6–2.8) in head; dorsal profile of snout straight or with a slight concavity on snout to over eye; orbit diameter 6.25 (4.7–6.0) in head; interorbital space strongly convex, the least fleshy width 4.35 (4.0–4.4) in head; caudal-peduncle depth 3.05 (2.75–3.35) in head; caudal-peduncle length 3.4 (3.45–3.65) in head.

Lower jaw slightly projecting; mouth oblique, forming an angle of about 20° to horizontal axis of body; maxilla ending about a half orbit diameter before anterior edge of orbit, the upper-jaw length 2.6 (2.6–2.9) in head; a pair of broadly spaced, incurved, canine teeth anteriorly in each jaw, the lowers a little smaller than uppers and fitting inside uppers when mouth closed; a row of close-set conical teeth of moderate size along side of upper jaw (19 in holotype); lower jaw with a row of smaller conical teeth on side (23 in holotype); no inner rows of small teeth in jaws, and no teeth on palate. Tongue slender, the tip rounded, reaching anteriorly about two-thirds distance to front of jaws. Lips thick but not fleshy; a ventrally directed flange on side of lower lip. Gill rakers small and simple, those on lower limb nearly sessile; longest gill raker on lower limb about three-fourths length of longest gill filaments, about equal to pupil diameter. Nostrils as small as sensory pores, the anterior in a low membranous tube with a short posterior flap equal in perpendicular distances to edge of orbit and edge of snout above upper lip; posterior nostril behind and slightly dorsal to anterior nostril, the internarial space about 4 in orbit diameter.

Upper part of posterior edge of preopercle covered by a scale to level of lower edge of orbit; the ventral edge of preopercle free nearly to a vertical at anterior edge of orbit; outer and ventral part of preopercle thin and membranous, with a slight indentation in margin above rounded corner.

Scales cycloid, thin, and membranous, but adherent; head scaled except for membranous flange of preopercle, snout, chin, and anterior interorbital space; predorsal scales ending in a lateral pair of scales in posterior interorbital space, usually with a small median scale before (often embedded); scales of lateral line with a single horizontal tubule, ending in a pore; first lateral-line scale at upper end of gill opening; anterior lateral line following dorsal contour of body, the posterior part midlateral on caudal peduncle; scales on thorax only slightly smaller than largest on side of body; no scales on base of dorsal or anal fins; caudal fin with scales on basal half, the most posterior a vertical row of three very large scales, the middle one the last scale of lateral line; paired fins without scales except for a slender midlateral scaly process extending posteriorly from base of

pelvic fins a little more than half length of pelvic spines; a pointed axillary scale above base of pelvic fin, its lower edge straight.

Origin of dorsal fin slightly anterior to a vertical at posterior end of opercular membrane, the predorsal length 2.55 (2.4–2.6) in SL; dorsal spines progressively longer, the first 6.8 (5.6-6.75) in head, and the ninth 3.55 (3.5–3.65) in head; membranes of spinous portion of dorsal fin of holotype not incised (membranes of smallest female incised at most nearly one-half spine length); each interspinous membrane of dorsal fin supported distally by a stout cirrus, but extending at most slightly above spine tips; first dorsal soft ray longest, 3.2 (2.75–3.05) in head (but remaining rays except last two nearly as long); origin of anal fin below base of eighth dorsal spine, the preanal length 1.55 (1.5–1.55) in SL; first anal spine 10.1 (7.2–9.8) in head; second anal spine 5.15 (4.35–5.25) in head; third anal spine 3.35 (3.2-3.4) in head; first anal soft ray longest, 3.3 (2.85–3.35) in head; caudal fin of holotype rhomboid, the three uppermost principal rays slightly prolonged, the fin length 4.1 (3.7–4.7) in SL; fourth pectoral ray longest, 2.7 (2.6–2.95) in head; origin of pelvic fins below lower base of pectoral fins, the prepelvic length 2.4 (2.3–2.4) in SL; pelvic spine 3.7 (3.25–3.95) in head; first pelvic soft ray longest, not approaching anus, 2.4 (2.2–2.5) in head.

Color of holotype in alcohol: pale yellowish with a faint dusky stripe on side of snout; three faint purplish brown lines across anterior half of upper lip, the posterior two continuing more faintly across lower lip, but the first leading to a broader purplish band across lower lip, the two bands converging and joining on chin; spinous portion of dorsal fin with slightly dusky membranes, the darkest on first membrane; soft portion of dorsal fin and all of anal fin with near-transparent membranes and pale yellowish rays; caudal fin with transparent membranes and pale yellowish rays except for a broad dark purplish brown posterior margin that is more than a half orbit diameter at broadest place; paired fins pale.

Color of holotype when fresh (Pl. 1C): upper half of body red with four irregular narrow whitish bars (from white edges on scales) and a similar short bar on nape; lower half of body light red with small white spots, mainly in three lengthwise series (the lower on abdomen); a small red spot midlaterally on body below base of fifth dorsal soft ray; head red, paler ventrally, with narrow light orange lines radiating from eye, those passing ventrally most numerous, sometimes broken and branching on lower part of head; numerous white dots on postorbital head, larger posteriorly; a broad diffuse dusky stripe on side of snout extending narrowly onto front of upper lip; a few near-vertical light orange lines on side of snout, some crossing those extending anteriorly from eye; three faint dusky-edged light orange lines crossing side of lips; a broad dark purplish brown bar on each side of upper lip, converging onto chin; dorsal fin pale red with scattered whitish flecks and red blotches along base; first membrane of fin black; a dusky-edged orange stripe in outer part of spinous portion of fin, continuing faintly without dusky edges onto soft portion of fin; posterior half of soft portion of fin with transparent membranes and whitish rays blotched with red; anal fin pale red with scattered white flecks and red blotches on basal half, and a light orange-red stripe near middle of fin; caudal fin pale red, dotted with white, the rays with narrow red transverse bands; posterior edge of caudal fin with a broad black border, the black continuing more proximally on second principal ray; a small dusky spot on first basal pored scale of caudal fin; pectoral fins with pale orange rays and transparent membranes; pelvic fins pale red with small whitish flecks.

Color of 79-mm paratype when fresh (Pl. 1D): pale red, finely blotched with red; narrow whitish bars on body and nape as in holotype; a faint whitish stripe following lateral line, and three ventral pale stripes, each containing a series of small white spots; a small but prominent midlateral red spot below base of fifth dorsal soft ray, and a slightly smaller one on penultimate lateral-line scale on caudal-fin base; head with whitish lines radiating from eye except anteriorly, separated by

indistinct broader red lines; postorbital head with white dots; a dusky stripe on side of snout in line with lower half of eye and extending onto upper lip; white dots and vertical white lines on snout, the dots mainly dorsal and onto dusky, stripe and the lines ventral, including lips, chin, and a few on isthmus; spinous portion of dorsal fin, first two membranes of soft portion, anterior two-thirds of anal fin, and pelvic fins translucent whitish with oblique red bands and indistinct white spots, the posterior part of dorsal and anal fins with transparent rays and pale rays with red and white spots basally; caudal fin pale red with irregular red cross bands, white spots, and a posterior reddish black border (does not show well on Pl. 1D due to black background); pectoral fins with transparent membranes and pale rays narrowly edged in red.

ETYMOLOGY.— This species is named *Oxycheilinus nigromarginatus* from the Latin, meaning black-margined, in reference to the conspicuous black posterior margin on the caudal fin, the only obvious color marking persisting in preservative.

REMARKS.— *Oxycheilinus nigromarginatus* appears to be restricted to the southwest Pacific. We have specimens from New South Wales, Chesterfield Bank in the Coral Sea, New Caledonia, and Tonga. They were collected in protected waters of lagoons or harbors on mixed sand and coral-reef habitats in the depth range of 10–27 m.

This species is most closely related to *Oxycheilinus orientalis* (Günther 1862), a new name for *Cheilinus coccineus*, non Rüppell, Bleeker, type locality Batjan, Indonesia.

Randall and Khalaf (2003) showed that *C. rhodochrous* Günther in Playfair and Günther, 1867, type locality Zanzibar, is a synonym of *O. orientalis*, redescribed the species, and recorded it from the Red Sea, Lombok in Indonesia, Okinawa, and the Marshall Islands.

Oxycheilinus nigromarginatus shares such characters with *O. orientalis* as a slender body, pointed snout with projecting lower jaw, caudal-fin shape, interspinous membranes of dorsal fin incised in females but extending to spine tips in males, fin-ray and gill-raker counts, and some features of color, such as the following: red with five narrow whitish bars on upper half of body (less distinct in *orientalis*, especially in males), two small midlateral deep red spots posteriorly, becoming dusky in males, a black area posteriorly on eye (more readily seen by rotating the eyeball forward), and white lines ventrally on head (or in the case of the male *O. nigromarginatus*, of pale orange lines). *O. orientalis* differs in having 12–14 anterior lateral line scales, compared to 15 for *O. nigromaginatus*, in dentition (upper jaw of *O. orientalis* with a row of 4 or 5 canine teeth on each side, with 1–4 stout conical teeth between canines; *O. nigromarginatus* with only an anterior pair of canines); a large black blotch usually present in humeral region of adults, and in lacking a black posterior margin on the caudal fin, three longitudinal series of white spots ventrally on the body, and white dots on postorbital head except for a few on nape sometimes extending onto upper part of opercle.

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LITERATURE CITED

BLEEKER, P. AND F.P.L. POLLEN. 1874. *Recherches sur la Faune de Madagascar et de ses Dépendances, d'après les Découvertes de François P.L. Pollen et D.C. van Dam.* Part 4. *Poissons et Peches*. E.J. Brill, Leiden. 104 pp.

GILL, T. 1862. Catalogue of the fishes of Lower California in the Smithsonian Institution, collected by Mr. J. Xantus. *Proceedings of the Academy of Natural Sciences, Philadelphia* 14 (3–4):140–151.

JORDAN, D.S., AND J.O. SNYDER. 1902. A review of the labroid fishes and related forms found in the waters of Japan. *Proceedings of the United States National Museum* 24:595–662.

PARENTI, P., AND J.E. RANDALL. 2000. An annotated checklist of the species of the labroid fish families Labridae and Scaridae. *Ichthyological Bulletin, J.LB. Smith Institute of Ichthyology*, no. 68, pp. 1–97.

RANDALL, J.E., AND M. KHALAF. 2003. First record of the labrid fish *Oxycheilinus orientalis* (Günther), a senior synonym of *O. rhodochrous* (Günther), from the Red Sea. *Zoological Studies* 42(1):135–139.

WESTNEAT, M.W. 1993. Phylogenetic relationships of the tribe Cheilinini (Labridae: Perciformes). *Bulletin of Marine Science* 52(1): 351–394.