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Liopropoma fasciatum, a new serranid fish and only known member of the genus from the tropical eastern Pacific Ocean

by

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Abstract: A new eight-spined basslet, *Liopropoma fasciatum,* is described from off Isla del Caño, Pacific coast of Costa Rica and is apparently closely related to *L. eukrines* of the southeastern United States. The former has a dark longitudinal band of roughly equal width along the body, whereas *L. eukrines* has a wedge-shaped band which broadens posteriorly.

Liopropoma longilepis, known from the Gulf of Panama and Costa Rica, is currently assigned to the genus *Pikea,* thus *L. fasciatum* is the sole representative of *Liopropoma* presently known from the eastern Pacific.

Collections made in recent years on the Pacific coast of Costa Rica have contained numerous undescribed fishes, many of which have been distributed to specialists for study and eventual description. Other specimens, especially those taken at depths greater than 200 m represent considerable range extensions of genera and even families (Bussing and López, 1978). The present paper describes a new *Liopropoma* from deep water which, as currently understood, is the first valid record of the genus for the eastern Pacific Ocean. *Liopropoma longilepis* Garman, a quite different fish originally described from the Gulf of Panama, has most recently been referred to the genus *Pikea* (Schultz, 1958; Randall, 1963).

The relationships of the basslets of the genus *Liopropoma* is unclear, but Robins (1967) established the priority of *Liopropoma* over *Chorististium* and listed ten known species. The new species is apparently closely allied to *L. eukrines* (Starck and Courtenay) known from Florida and North Carolina, U.S.A.

LIOPROPOMA FASCIATUM, new species

(Fig. 1)

Holotype: LACM 38650–1, 93.9 mm standard length, collected off Isla del Caño, 17 km west of Osa Peninsula, Pacific coast of Costa Rica. Taken by shrimp bottom trawl at a depth of 240 meters, on 17 December 1973, by Mario Zúñiga.

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Fig. 1. *Liopropoma fasciatum*, new species, LACM 38650-1, holotype, 93.9 mm SL, off Isla del Caño, Pacific coast of Costa Rica.

Diagnosis: *L. fasciatum* is distinguished from its congeners by a dark band from the tip of the snout to the posterior margin of the caudal fin, the band being narrowest (considerably less than horizontal eye diameter) on the head, of equal (slightly greater than one-half horizontal eye diameter) width along the flanks and indistinct on the caudal fin, except posteriorly. Meristic counts are: dorsal fin VIII, 12; anal fin III, 8; pectoral fin 15–15; total gill rakers on first arch including rudiments, 17–17; pored scales of lateral line 46–47.

Description: Proportions in percentage of standard length appear in Table 1. Body elongate, laterally compressed; greatest body depth (just behind dorsal fin origin) 4.1 times in SL (standard length). Dorsal body profile straight; ventral profile convex anteriorly, straight from anal-fin origin to caudal base. Least depth of caudal peduncle 6.4 times in SL. Length of caudal peduncle 4.7 times in SL.

Head length 2.5 times in SL. Eyes large, horizontal orbit diameter 5.0 times in HL (head length). Least width of fleshy interorbital 5.6 times in HL. Snout length greater than orbit diameter, 4.0 times in HL. Postorbital head length 1.7 times in HL. Anterior nares tubular, widely separated and projecting anteriorly over upper lip; posterior pair of nares slit-like, just anterior to eyes.

TABLE 1

Body proportions in percentage of SL of two closely allied species of Liopropoma

	Liopropoma fasciatum	*Liopropoma eukrines*	*Liopropoma eukrines*
	Holotype	Holotype*	3 Paratypes*
Standard length	93.9 mm	41.6 mm	65.1-84.3 mm
Head length	40.0	41	35-39
Eye diameter	8.1	8.2	8
Snout length	10.1	10	9-11
Length of upper jaw	18.2	18	16-17
Fleshy interorbital distance	7.1	5.3	
Postorbital head length	23.0	23	
Greatest body depth	24.6	29	22-25
Least depth of caudal peduncle	15.5	16	
Length of caudal peduncle	21.1	19	
Predorsal distance	43.9	47	43-48
Preanal-fin distance	70.3	69	69-73
Prepectoral distance	38.3		
Prepelvic distance	37.7		
Longest dorsal spine	11.9	12	
Longest dorsal soft ray	24.4	18	
Length of dorsal-fin base	35.8		
Longest anal spine	10.9	7	
Longest anal soft ray	22.5	22	
Length of anal-fin base	14.0		
Longest pectoral ray	24.8	25	
Longest pelvic ray	19.7	20	
Longest caudal ray	30.9	23	

* After Starck and Courtenay, 1962.

Head pores of supraorbital series conspicuous: first anterior pore large, adjacent to lip, another somewhat closer to posterior nares than anterior pore and numerous minute pores above posterior nares and eye. Pores of infraorbital and preopercular series variable in size, large pores sometimes covered by scales, or groups of minute openings. Pores of mandibular series conspicuous, four on each side of jaw.

Maxillary long and scaled, broadly expanded at posterior extreme and reaching to below posterior margin of pupil (2.2 times in HL); supramaxillary present. Mouth oblique, lower jaw projecting. All teeth minute, conical and depressable. Dentary and premaxillary teeth in wide bands, inner rows of which are enlarged. Vomerine teeth enlarged and in a V-shaped patch. Palatine teeth in long patches 2 or 3 teeth wide. Tongue long and sharply turned upward at tip.

Most scales of body, where adherent, weakly ctenoid. Head completely covered by cycloid scales; remaining scales on cheeks and operculum cycloid. Cycloid scales along bases of dorsal and anal fins and extending on interradial membranes of proximal third of soft dorsal and anal fins. Lateral line arched anteriorly under spinous dorsal fin; pored scales of lateral series intact, 46 on left side and 47 on right side to caudal base, several other pored scales on caudal fin. Following counts based on scale pockets: transverse scale rows between lateral line and origin of dorsal fin 4; between lateral line and origin of anal fin 15; scale rows around caudal peduncle 39. Three flexible opercular spines. Margin of preopercle smooth. Gill rakers 17 including rudiments; upper limb with 1 gill raker and 4 rudiments; lower limb with 7 gill rakers and 5 rudiments.

Dorsal fin with 8 spines; the longest (second) 8.4 times in SL. The last 4 dorsal spines shorter and of about equal length and scaled nearly to their tips; origin of dorsal fin about an eye's diameter posterior to opercular margin. Dorsal-fin rays 12, the last divided to its base; the longest ray 4.1 times in SL; filamentous tip just reaching base of caudal fin. Length of dorsal fin base 2.8 times in SL. Predorsal distance 2.3 times in SL. Last four dorsal-fin spines nearly covered to tips by a flaccid scaled ridge (condition of a well-preserved specimen probably similar to that reported for *L. eukrines*). Anal spines 3, the second and third spines 9.2 times in SL; origin over third dorsal-fin ray. Anal soft rays 8, the last divided to its base; the longest ray 4.5 times in SL; extreme tip falling just short of caudal fin base. Preanal distance 1.4 times in SL. Length of anal fin base 7.2 times in SL.

Pectoral fins 15; origin just anterior to membranous tip of opercle and extending to a point below seventh dorsal-fin spine. Length of pectoral fin 2.6 times in SL. Prepectoral distance 2.6 times in SL. Pelvic fins I, 5; origin about pupil diameter anterior to base of pectoral fin and reaching to a point below fifth dorsal-fin spine. Length of pelvic fin 5.1 times in SL. Prepelvic distance 2.7 times in SL. Caudal fin with 19 principal rays (17 branched rays); basically truncate, but with filamentous extension on lower half; length from midpoint of caudal base to filamentous tip 3.2 times in SL.

Color in life unknown. Color in alcohol white with pinkish undertone; dorsum with a few scattered melanophores, belly white. A well defined, dark lateral band extending from snout tip to end of midcaudal fin rays; a narrow band on snout continuous across entire upper lip; band at maximum width on flank above base of pectoral fin and continuing without increasing in width, to caudal peduncle where its lower margin is coincident with lateral line scales (Fig. 1). Maximum width of lateral band only slightly greater than one-half horizontal diameter of eye. Second dorsal fin dusky, others hyaline.

Etymology: The specific name, *fasciatum*, refers to the single dark band running from the snout tip to the margin of the caudal fin.

Remarks: Robins (1967) reported that *Chorististium* Gill is a synonym of *Liopropoma* Poey and listed five Atlantic and five western Pacific or Indian Ocean species of *Liopropoma*. *L. fasciatum* is the first member of the genus reported from the eastern Pacific and is strikingly similar to *Liopropoma eukrines* (Starck and Courtenay, 1962) from Florida and North Carolina and probably represents its cognate species. *L. fasciatum* differs from *L. eukrines* in having slightly higher lateral line pore (46-47 vs. 44-46) and pectoral-fin ray (15 vs. 13-14) counts and in the narrower, non-tapering lateral band. In *L. eukrines* the black lateral band is wedge-shaped, reaching its maximum width (about equal to the horizontal eye diameter) on the caudal peduncle and caudal fin.

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RESUMEN

Se describe como especie nueva *Liopropoma fasciatum*, un pez pequeño perteneciente a la familia de los meros y cabrillas. Fue colectado a una profundidad de 240 m con red de arrastre frente a la Isla del Caño, Costa Rica. Se distingue de su congénero aparentemente más cercano (de la costa sureste de los Estados Unidos), por su diferente coloración.

Liopropoma longilepis, colectado en el Golfo de Panamá, actualmente se considera miembro del género *Pikea* por lo que *L. fasciatum* constituye el único representante de ese género reconocido en el Océano Pacífico oriental.

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