

ORIGINAL ARTICLE

New record of Randall's Basslet *Liopropoma randalli* from the northwestern Indian Ocean, with an annotated checklist of the species in the family Liopropomatidae (Teleostei: Perciformes)

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Abstract

Despite remarkable recent increase of research in mesophotic coral ecosystems (30–150 m depth), exploration at these depths is still resulting high rates of new species discovery, and new records worldwide, especially among taxa with low population size such as liopropomatid fishes. In the present study, a new record and significant range extension of a rare species, Randall's Basslet *Liopropoma randalli*, into the Sea of Oman is reported, and its morphological characteristics are provided. This species is distinguished by the several characters: Dorsal-fin rays VIII, 11 (the last ray divided at its base); anal-fin rays III, 8; pectoral rays 14; pelvic rays I, 5; weak and specific ctenoid scales on the body, and a complete lateral line (highly arched over the pectoral fin) with 47 pored scales on the body plus 3 pored scales beyond the end of hypurals. This study also presents an annotated checklist of the species of the family Liopropomatidae, including 41 species in two subfamilies, the Liopropomatinae with three genera and 36 species, and the Diploprioninae, with 3 genera and 5 species.

Keywords: Perciformes, Liopropomatids, New range extension, Western Indian Ocean, Biodiversity.

INTRODUCTION

Despite a noteworthy recent increase of research in mesophotic coral ecosystems (30–150 m depth), new investigations at these depths are still yielding high rates of new species discovery, and new records worldwide (Pinheiro et al. 2018, 2019), especially among taxa with low population size such as liopropomatid fishes. Hence, documentation of new records and new species, and preparing a list of fish species in different regional or worldwide scales, and different taxonomic levels (e.g., family, order) are significant for the study of systematics, conservation, and biogeography of fishes.

The family Liopropomatidae are a group of small marine fishes with 41 valid species (Fricke et al. 2022) that live demersal on coral or rocky reefs in all tropical, subtropical and warm-temperate oceans. This group has only been revised regionally in the Indo-West Pacific (Randall & Taylor 1988). They comprise primitive perciform fishes which were traditionally placed in the catchall suborder

Percoidei. Liopropomatids were long treated as a subfamily Liopropomatinae of the family Serranidae by several authors (e.g., Randall & Taylor 1988; Akhilesh et al. 2012, 2021; Parenti & Randall 2020), or as a tribe Liopropomini in the subfamily Epinephelinae (Parenti & Randall 2020). Nelson et al. (2016) defined the following characteristics for the subfamily Epinephelinae: larvae with one or more elongate anterior dorsal fin spines (usually the second) and, in the tribe Epinephelini, an elongate pelvic fin spine. However, Pinheiro et al. (2019) placed them in the family Epinephelidae, and Fricke et al. (2022) give a rank of family (Liopropomatidae) to the all known liopropomatids. The family Liopropomatidae is now divided into two subfamilies, the Liopropomatinae with about 3 genera and 36 species, and the Diploprioninae, with 3 genera and 5 species (Fricke et al. 2022).

The subfamily Liopropomatinae usually does not produce a poisonous, bitter-tasting skin mucus, while the epidermis of the Diploprioninae contains

numerous mucous cells that produce the skin peptide toxin known as grammistin with a hemolytic and ichthyotoxic effect (Baldwin & Johnson 1993).

The genus *Liopropoma* was originally described by Gill (1861) for *Perca aberrans* Poey (1860), a species based on a single specimen from deep reefs off Cuba (Akhilesh et al. 2012). Members of this genus are small to medium-sized, colourful fishes (Akhilesh et al. 2012) of the subfamily Liopropomatinae (Fricke et al. 2022) which occur circumglobally in tropical and subtropical oceans (Randall & Taylor 1988; Fricke et al. 2022). *Liopropoma* is characterized by VIII, 11-14 dorsal-fin rays, III, 8-11 anal-fin rays, 13-17 pectoral-fin rays; I, 5 pelvic-fin rays; 17 principal caudal-fin rays, 4-8+11-20 gill rakers, 7 branchiostegal rays; 2 predorsal bones, 24 vertebrae, 3 opercular spines, weak and specific ctenoid scales on the body, a complete lateral line (highly arched over pectoral fin with 44-66 pored scales), a band of villiform teeth in both jaws lacking canines, and a bony projection on the posteroventral corner of the maxilla (Randall & Taylor 1988; Kon et al. 1999; Akhilesh et al. 2012; Pinheiro et al. 2019).

Liopropoma is the largest genus of the family, with 32 valid species; among these, eight species are known to occur in the Indian Ocean for at least part of their range: *L. africanum* (Smith 1954); *L. dorsoluteum* Kon, Yoshino & Sakurai (1999) (based on Indonesian record referred to later in this paper); *L. lunulatum* (Guichenot 1863); *L. mitratum* Lubbock & Randall (1978); *L. multilineatum* Randall & Taylor (1988); *L. randalli* Akhilesh, Bineesh & White (2012); *L. susumi* (Jordan & Seale 1906); *L. tonstrinum* Randall & Taylor (1988) (see Lubbock & Randall 1978; Randall & Taylor 1988; Khalaf & Zajonz 2007; CMFRI 2009; Akhilesh et al. 2012, Heemstra 2022). Most species of *Liopropoma* are poorly represented in fish collections and as a result, a number of species are described based on only one to three specimens (Kon et al. 1999; Akhilesh et al. 2012; Wirtz &

Schliewen 2012; Baldwin & Robertson 2014; Pinheiro et al. 2019; Parenti & Randall 2020).

Liopropoma randalli has been known only from off the southwest coast of India in the Arabian Sea, at depths of 170-260 m, and off the island of Lombok in southern Indonesia (Akhilesh et al. 2012; Fricke et al. 2022), based on four specimens. In the present paper, we provide morphological evidence for the occurrence of *Liopropoma randalli* in the Gulf of Oman/Oman Sea for the first time, and expand its significant distribution range into the western Indian Ocean; we also present an annotated checklist of the species of the family Liopropomatidae.

MATERIAL AND METHODS

Taxon sampling: One specimen of *L. randalli* (165.7mm TL) was collected in the Sea of Oman off Suhar (Oman) (24°28'28.32"N, 56°54'54.48"E), in April 2022, at a depth of about 100m, using fishing with hook and line. The specimen was initially preserved with 10% formaldehyde, and subsequently transferred to 70% ethanol for long-term storage. It is deposited in the Zoological Museum of Shiraz University, Collection of Biology Department (ZM-CBSU OSLr01).

Morphological methods and definitions: The specimen was identified following Akhilesh et al. (2012). Morphometric measurements, expressed as percentages of standard length (SL) to the nearest 0.1mm, were made using a digital caliper (Table 1). Morphological methods and definitions of the characters follow Randall & Taylor Jr (1988) and Akhilesh et al. (2012). A stereomicroscope (Zeiss Stemi SV6) was used to count the meristic characters, which are abbreviated as follows: D-dorsal fin rays; P2- pelvic fin rays; A- anal fin rays; P1- pectoral fin rays; C- caudal fin rays.

Morphometric values are expressed as percentages of SL. The specimen was later x-rayed with a digital radiography system housed at Shiraz University, and the radiographs were used for the description of the vertebral column and caudal

Table 1. Morphometric and meristic characteristics of Randall's Basslet *Liopropoma randalli* from the northwestern Indian Ocean.

Total length (mm)	165.7	Standard length (mm)	135.2
Proportions in % of SL			
Body depth	29.2	Eighth dorsal-spine length	2
Body width	17.2	First dorsal ray	12.3
Head length	40.3	Longest ray	17.5
Caudal-peduncle depth	17.2	Last dorsal ray	8.3
Caudal-peduncle length	21.2	Anal-fin base length	12.3
Predorsal length	43.8	First anal-spine length	7.3
Preanal length	70	Second anal-spine length	14.2
Prepelvic length	37.8	Third anal-spine length	17.9
Dorsal-fin base length	38.8	Longest anal ray	18.6
First dorsal-spine length	2.5	Caudal-fin length	25
Second dorsal-spine length	7.7	Pectoral-fin length	27.6
Third dorsal-spine length	8.3	Pelvic-spine length	10.8
Seventh dorsal-spine length	1.9	Pelvic-fin length	19.1
In percent of head length			
Snout length	30.4	Interorbital length	19.5
Orbit diameter	17.2	Upper-jaw length	42.26
Meristic characters			
Dorsal-fin rays	8+11	Scale rows above lateral line	4
Anal-fin rays	3+8	Scale rows below lateral line	19
Pectoral-fin rays	14	Caudal-peduncle scales	37
Pelvic-fin rays	1+5	Gill rakers	17
Lateral-line scales	47	Vertebrae	10+14

skeleton. The nomenclature of the skeletal elements follows Gierl & Reichenbacher (2017) and Echreshavi et al. (2021). Vertebral counts include the terminal centrum (TC).

Preparation of the checklist: This checklist is a collection of works listed in references (see selected Bibliography, e.g., Lubbock & Randall 1978; Randall & Taylor 1988; Kon et al. 1999; Khalaf & Zajonz 2007; CMFRI 2009; Akhilesh et al. 2012; Baldwin & Robertson 2014; Pinheiro et al. 2018, 2019; Parenti & Randall 2020; Fricke et al. 2022), and also, samples deposited in the Zoological Museum and Collection of Biology Department, Shiraz (ZM-CBSU). Genera and species are arranged alphabetically; the nomenclature and

authorities used for Liopropomatidae follow those of the online electronic version of Eschmeyer's Catalog of Fishes (Fricke et al. 2022). English vernacular names are provided. The IUCN Red List of threatened species was followed to document the conservation status of each species (IUCN 2022).

RESULTS

New record of *Liopropoma randalli* from the Oman Sea

Taxonomic position:

Order: Perciformes

Family: Liopropomatidae Poey, 1867

Subfamily: Liopropomatinae Poey, 1867

Genus: *Liopropoma* Gill, 1861



Fig.1. Fresh specimen of *Liopropoma randalli* collected off Oman, Sea of Oman, northwestern Indian Ocean.



Fig.2. Formalin-fixed specimen of *Liopropoma randalli* collected off Oman, Sea of Oman, northwestern Indian Ocean. (a): dorsal; (b): lateral; and (c): ventral views.

Species: *Liopropoma randalli* Akhilesh, Bineesh & White, 2012 (Figs. 1, 2)

Description: The specimen of *L. randalli* from Oman is characterized by the following combination of characters: Dorsal-fin rays VIII, 11 (last ray divided at its base); anal-fin rays III, 8; pectoral-fin rays 14; pelvic-fin rays I, 5; lateral-line scales about 47, plus 3 pored scales beyond the end of hypural; scales above lateral line to the origin of dorsal fin about 4; scales below lateral line to the origin of anal fin about 19; circumpeduncular scales about 37; 2+12 (+ 4-5 as rudiments) gill rakers on the first arch (total 17); vertebrae 10+14.

Body moderately elongate, depth at dorsal-fin

origin 29% of SL, body moderately compressed, width 59% in body depth; head long, its length 40% of SL; snout long, 30% of head length; eyes moderate in size, orbit diameter 17% of head length; interorbital space flat, least width 19.5% of head length; caudal peduncle length 52.6% of head length. Mouth terminal, large, maxilla extending posteriorly to vertical through a posterior third of eye, upper-jaw length 42.2% of head length; mouth oblique, lower jaw projecting; teeth in jaws and on palate small, tongue slender, its tip rounded. Opercle with three flat spines; upper spine blunt, covered by a scale, more anterior to other two; middle spine vertical with and closer to the lower spine than upper

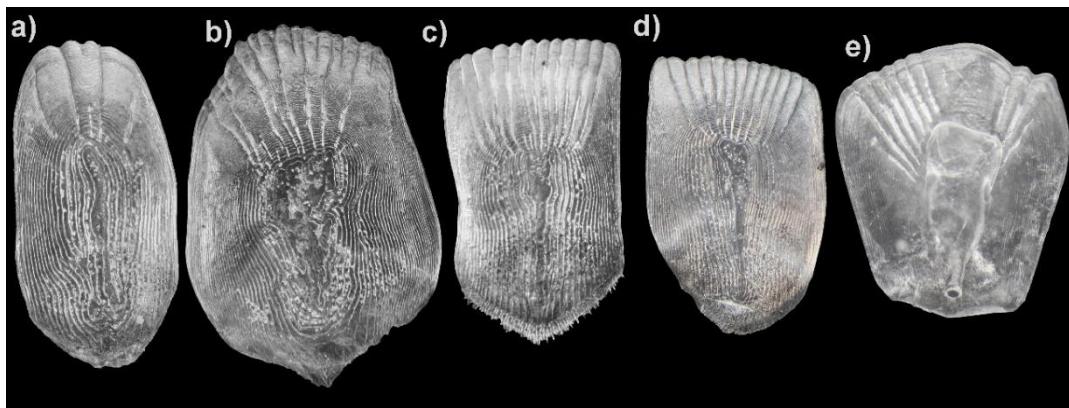


Fig.3. Scales of *Liopropoma randalli* collected off Oman, Sea of Oman, northwestern Indian Ocean. (a): head; (b): operculum; (c): caudal peduncle; (d): key scale; and (e): lateral line scale.

spine; preopercular margin broadly rounded at the corner; posterior margin of preopercle very finely serrate (more so on lower portion); margin of the corner and lower limb of preopercle thin and fleshy. Anterior nostril a thin membranous tube set directly in front of the eye at edge of the groove separating front of snout from upper lip; posterior nostril with a low fleshy rim, above centre of eye, separated from edge of orbit by a distance equal to about a third to half the space between nostrils; a large pore antero-medially to each posterior nostril and usually a pore antero-distally to each posterior nostril; a large pore medial to each anterior nostril at the edge of groove separating front of snout from upper lip; a pair of relatively small pores usually present on interorbital space (on each side above front of pupil).

Lateral line is strongly arched above pectoral region, 3 rows of scales between the highest point (below fifth dorsal-fin spine) and the lateral line. Head fully scaled except lips; maxilla with or without scales; about 10 diagonal rows of scales from edge of orbit to corner of preopercle; small scales extending about one-third distance to margin of soft dorsal and anal fins and most length of caudal fin; paired fins with small scales basally (Fig. 3).

Postcranial osteology

Vertebral column: The vertebral column is composed of precaudal (abdominal) and caudal vertebrae. The caudal vertebrae are characterized by complete haemal arches and the absence of pleural ribs. The first haemal spine defines the first caudal vertebra (Fig. 4): 10 abdominal and 14 caudal

vertebrae [including terminal centrum (TC) or urostyle], total vertebral count, 24.

Caudal skeleton: See Figure 4 for general morphology of caudal skeleton. It is composed of terminal centrum (TC) or urostyle, two preural vertebrae (PU2, PU3), the haemal spines of preural vertebra (HS), the neural spines of preural vertebra (NS), one parhypural (PHY), five hypurals bones, i.e., two triangular hypural plates (HPY1+2, and HPY3+4, fused to the urostyle) and HYP5, two epurals (Ep1, 2), dorsal procurent rays (DPR), ventral procurent rays (VPR), and principal rays. The number of dorsal and ventral procurent rays is 8 and 7, respectively.

Distribution: Indian Ocean (Fig. 5): Sea of Oman (new record); southwest coast of India; Lombok (Indonesia).

Annotated checklist of the family Liopropomatidae

The family Liopropomatidae is divided into two subfamilies, the Liopropomatinae with 3 genera and 36 species, and the Diploprioninae, with 3 genera and 5 species (Fricke et al. 2022).

Family: Liopropomatidae Poey, 1867

Subfamily: Liopropomatinae Poey, 1867

Basslet Fishes

Basslets are small (8cm) to large size (25cm) fishes, living on the rocky bottom or in deep recesses in coral reefs even at depth of about 100m, with no grammistin toxin in their skins.

The following characteristics are diagnostic for liopropomatins: presence of a prominent, anteriorly

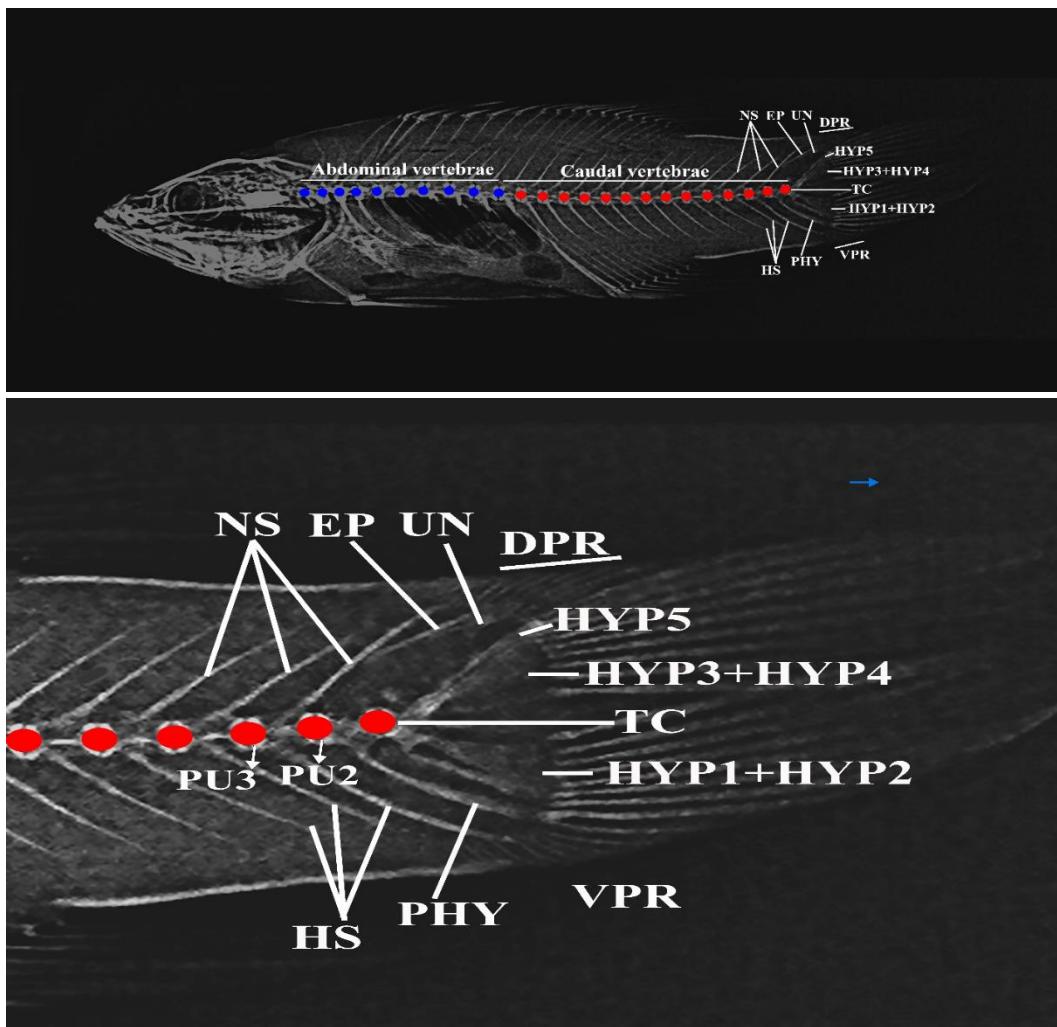


Fig.4. X-ray image of *Liopropoma randalli* collected off Oman, Sea of Oman, northwestern Indian Ocean showing the axial skeleton (Upper); and the caudal skeleton (Below): EP: Epural, HP: Hypurapophysis, HS: Haemal spine, HYP: Hypural plate, NS: Neural spine, PHY: Parhypural, PU: Preural centrum, TC: Terminal centrum, UN: Uroneural.

directed, hook-like process extending from the posteroventral corner of maxilla; subocular shelf extending from more than one infraorbital; and scales with cteni fused to open ends of at least medial most circuli. They are distributed circumglobally by having three genera and 36 species (Fig. 6).

Genus *Bathyanthias* Günther, 1880

Bathyanthias Günther 1880: 6 (Gender: masculine; type species: *Bathyanthias roseus* Günther, 1880 by monotypy).

1) *Bathyanthias atlanticus* (Schultz, 1958)

Pikea mexicanus atlanticus Schultz, 1958: 326 (off French Guiana, 7°18'N, 53°32'W, Oregon station 2021, depth 100 fathoms; holotype: USNM 185005)

EN: Atlantic bass.

Revision: None (taxonomic decision of Baldwin & Johnson 2014; Parenti & Randall 2020).

Figures: None.

Distribution: Western Atlantic: Venezuela to French Guiana.

Environment: Marine; demersal, at 183-225m depth.

IUCN: Not assessed (2022).

2) *Bathyanthias cubensis* (Schultz, 1958)

Pikea cubensis Schultz 1958: 322, fig. 1 (northeast of Caibarien, Cuba, 22°50'N, 79°08'W, depth 200-225 fathoms; holotype: USNM 158138).

EN: Cuban bass.

Revision: None (taxonomic decision of Parenti & Randall 2020: 103).

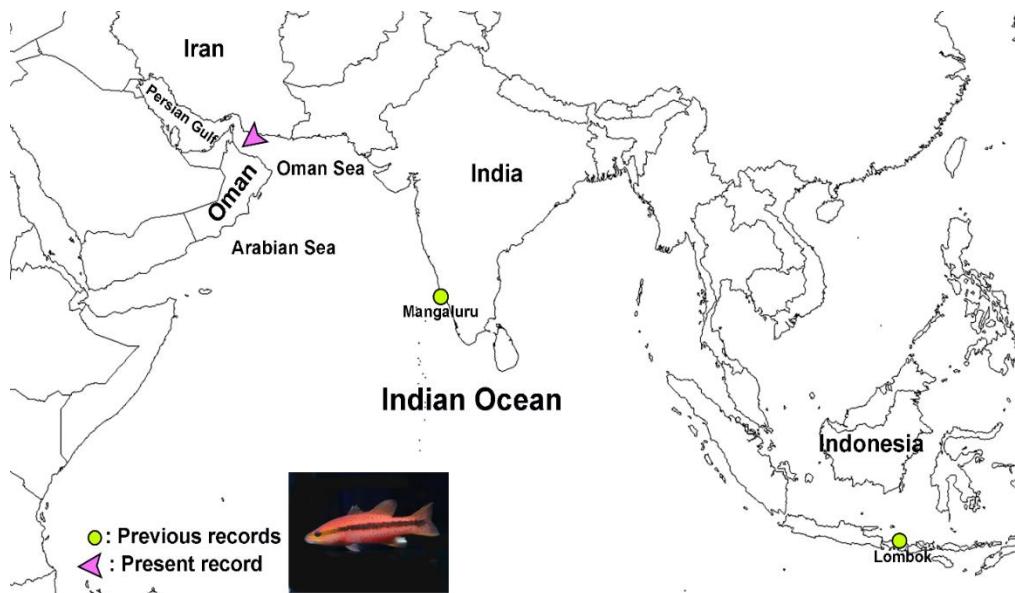


Fig.5. Map indicating previous and present records of *Liopropoma randalli*.

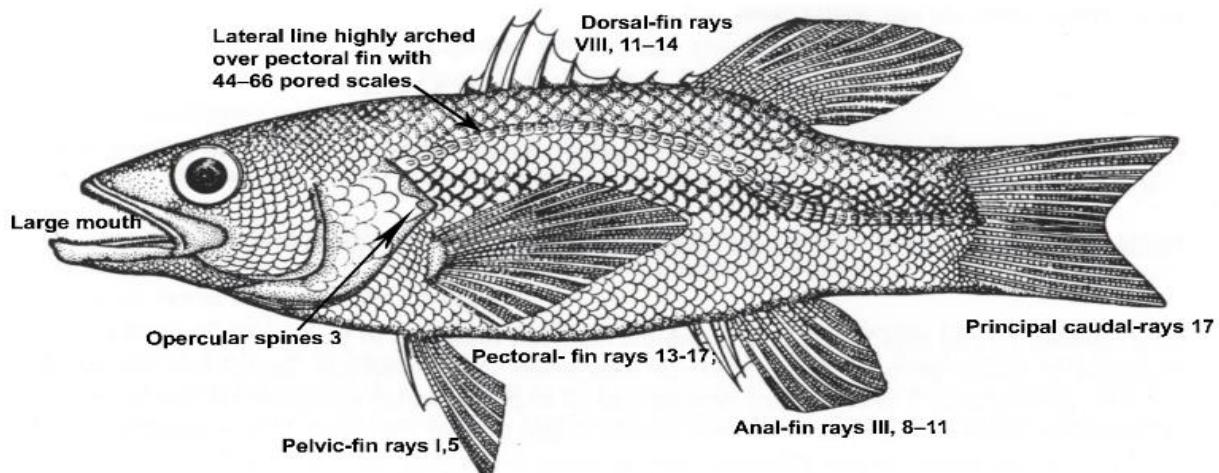


Fig.6. General morphology of a liopropomatid fish indication its main morphological characteristics. Modified from Randall & Taylor (1988).

Figures: McEachran & Fechhelm (2005: 132, fig.).

Distribution: Western Atlantic: Georgia (U.S.A.) south to French Guiana, including the Gulf of Mexico and the Caribbean Sea.

Environment: Marine, bathydemersal on soft and hard bottoms, at 28-450m depth.

IUCN: Least Concern (LC) (Robertson & Carpenter 2019a).

3) *Bathyanthias mexicanus* (Schultz, 1958)

Pikea mexicana mexicana Schultz, 1958: 323, fig. 2 (Gulf of Mexico, southeast of Corpus Christi, Texas, U.S.A., 27°22'N 96°08'W, depth 103 fathoms; holotype: USNM 158246).

EN: Yellowtail bass.

Revision: Bullock & Smith (1991: 154, as *Pikea mexicana*).

Figures: Bullock & Smith (1991: pl. 18, fig. D, as *Pikea mexicana*).

Distribution: Western Atlantic: Gulf of Mexico endemic.

Environment: Marine; demersal over hard and soft bottoms, at 70-274m depth.

IUCN: Least Concern (LC) (Robertson & Carpenter 2019b).

4) *Bathyanthias roseus* Günther, 1880

Bathyanthias roseus Günther, 1880: 6, pl. 1, fig. B

(off Pernambuco, Brazil, Challenger station 122, depth 30 or 350 fathoms; holotype: BMNH 1879.5.14.155).

EN: Rosy bass.

Revision: None.

Figures: Günther (1880: pl. 1, fig. B).

Distribution: Southwestern Atlantic: Rio Grande do Norte (Brazil) south to Uruguay.

Environment: Marine; demersal, on deep reefs, at 100-300m depth.

IUCN: Not Evaluated (2022).

Genus *Liopropoma* Gill, 1861

Liopropoma Gill 1861: 52 (Neuter; type species: *Perca aberrans* Poey 1860 by original designation).
Synonyms: *Chorististium* Gill 1862: 15 (Gender: neuter; type species: *Liopropoma rubre* Poey 1861 by original designation); *Pikea* Steindachner 1875: 375 (Feminine; type species: *Gryistes lunulatus* Guichenot 1863 by monotypy); *Labracopsis* (subgenus of *Pikea*) Steindachner & Döderlein 1883b: 235 (Gender: feminine; type species: *Labracopsis japonicus* Döderlein 1883 by monotypy); *Taeniodon* Döderlein in Steindachner & Döderlein 1883b: 235 (Masculine; type species: *Taeniodon maculatus* Döderlein 1883; not available, name mentioned in passing in the synonymy of *Pikea*); *Ypsigramma* Schultz in Schultz et al. 1953: 372 (Gender: female; type species: *Ypsigramma lineata* Schultz 1953 by original designation); *Flagelloserranus* Kotthaus 1970: 5 (Gender: masculine; type species: *Flagelloserranus meteori* Kotthaus 1970 by original designation).

Species with incertae sedis: *Liopropoma danae* Kotthaus, 1970: 20, fig. 15 (west of Virgin Islands, Lesser Antilles, 17°43'N, 64°56'W, depth about 35 metres; holotype: ZMUC P43208; juvenile specimen, almost certainly a synonym of a described species).

5) ***Liopropoma aberrans*** (Poey 1860)

Perca aberrans Poey, 1860: 125, pl. 12, figs. 2-3 (Cuba; holotype: whereabouts unknown).

EN: Eyestripe bass.

Revision: None.

Figures: Poey (1860: pl. 12, figs. 2-3).

Distribution: Western Atlantic: North Carolina (U.S.A.) south to Belize and Jamaica, including the Gulf of Mexico and the northern Caribbean Sea.

Environment: Marine; demersal on deep reefs, at 20-190m depth.

IUCN: Least Concern (LC) (Sadovy 2017a).

6) ***Liopropoma africanum*** (Smith, 1954)

Chorististion africanum Smith, 1954: 866, fig 1, pl. 27, fig. B (Tekomaji Island, Mozambique, 10°50'S, 40°40'E; holotype: SAIAB 155).

EN: African basslet.

Revision: Randall & Taylor (1988: 28).

Figures: Randall & Taylor (1988: pl. 3, fig. B).

Distribution: Indian Ocean: Tanzania, Djibouti, Comoroas, and Seychelles east to the Andaman Sea (Thailand) and Sumatra (Indonesia).

Environment: Marine; demersal on coral reefs, at 8-48m depth.

IUCN: Least Concern (LC) (Smith-Vaniz et al. 2018a).

7) ***Liopropoma aragai*** Randall & Taylor, 1988

Liopropoma aragai Randall & Taylor, 1988: 20, pl. 4, fig. D (off Okinawa Island, Ryukyu Islands, Japan; holotype: FAKU 205237).

EN: -

Revision: Koeda et al. (2019: 62).

Figures: Randall & Taylor (1988: pl. 4, fig. D); Koeda et al. (2019: 63, fig. 1).

Distribution: Northwest Pacific: southern Taiwan to Ryukyu Islands and Izu Islands (Japan).

Environment: Marine; demersal on deep reefs, at ca. 100m depth.

IUCN: Not Evaluated (2022).

8) ***Liopropoma aurora*** (Jordan & Evermann, 1903)

Pikea aurora Jordan & Evermann, 1903:178 (Hilo, Hawaii Island, Hawaiian Islands, U.S.A.); holotype: USNM 50675).

EN: Yellowmargin basslet.

Revision: Randall & Taylor (1988: 16).

Figures: Randall & Taylor (1988: pl. 1, fig. C).

Distribution: Central Pacific: Hawaiian Islands (U.S.A.).

Environment: Marine; demersal on deep rock bottoms, at 21-184m depth.

IUCN: Least Concern (LC) (Williams et al. 2016a).

9) *Liopropoma carmabi* (Randall, 1963)

Chorististium carmabi Randall, 1963: 98, pl. 2, fig. B (6 miles south of La Parguera, 17°52'12"N, 65°2'30"W, Puerto Rico, depth 180 feet; holotype: USNM 179001).

EN: Candy basslet.

Revision: None (taxonomic decision of Baldwin & Johnson 2014).

Figures: Randall (1963: pl. 2, fig. B).

Distribution: Western Atlantic: southern Florida (U.S.A.) and the Bahamas south to Colombia, including the southern Gulf of Mexico and the Caribbean Sea.

Environment: Marine; demersal on coral, sand, and coral rubble bottoms of deep reefs, at 10-70m depth.

IUCN: Least Concern (LC) (Anderson Jr. et al. 2015a).

10) *Liopropoma collettei* Randall & Taylor, 1988

Liopropoma collettei Randall & Taylor, 1988: 30, pl. 3, fig. A (northwestern end of Kaneohe Bay, Oahu Island, Hawaiian Islands, depth 3-9m; holotype: BPBM 14652).

EN: Collette's basslet.

Revision: None.

Figures: Randall & Taylor (1988: pl. 3, fig. A).

Distribution: Western and central Pacific: eastern Indonesia, Philippines, Palau, Papua New Guinea, Johnston Atoll, Hawaiian Islands.

Environment: Marine; demersal near coral reefs, cryptic, at 1-35m depth.

IUCN: Least Concern (LC) (Williams et al. 2016b).

11) *Liopropoma dorsoluteum* Kon, Yoshino & Sakurai, 1999

Liopropoma dorsoluteum Kon, Yoshino & Sakurai, 1999: 67, figs. 1, 2A (Okinawa Fish Market, from Yaeyama Island, Japan; holotype: URM-P 29743).

EN: Yellowback basslet.

Revision: None.

Figures: Kon et al. (2019: figs. 1, 2A).

Distribution: Eastern Indian Ocean, western Pacific: Indonesia (Lombok); Taiwan north to Ryukyu Islands (Japan).

Environment: Marine; demersal, probably on deep reefs.

IUCN: Not Evaluated (2022).

12) *Liopropoma emanueli* Wirtz & Schliewen, 2012

Liopropoma emanueli Wirtz & Schliewen, 2012: 150, figs. 1-2 (dive site "Danger" near Tarrafal, Santiago Island, Cape Verde Islands, 15°15'51.22"N, 23°45'35.41" W, below overhanging large boulder, depth 20m; holotype: ZSM 41221).

EN: Cape Verdes basslet.

Revision: None.

Figures: Wirtz & Schliewen (2012: figs. 1-2).

Distribution: Eastern Atlantic: Cape Verde Islands; São Tomé and Príncipe.

Environment: Marine; demersal, on rocky reefs, at 20-32m depth.

IUCN: Not Evaluated (2022).

13) *Liopropoma erythraeum* Randall & Taylor, 1988

Liopropoma erythraeum Randall & Taylor, 1988: 15, pl. 4, fig. B (off Okinawa Island, Ryukyu Islands, Japan, about 100 meters depth; holotype: SMBL 73415; replacement name for *Pikea rubre* Yoshino & Araga, 1975, preoccupied in *Liopropoma* by *Lipropoma rubre* Poey, 1861).

EN: Red basslet.

Synonyms: *Pikea rubre* Yoshino & Araga in Masuda, Araga & Yoshino, 1975: 217, pl. 49, fig. f (bank off Okinawa Island, Ryukyu Islands, Japan, depth about 100 meters; holotype: SMBL 73145; preoccupied in *Liopropoma* -- see above).

Revision: None.

Figures: Randall & Taylor (1988: pl. 4, fig. B).

Distribution: Western Pacific: Taiwan north to Ryukyu Islands (Japan); Lord Howe Island (Australia); Society Islands (French Polynesia).

Environment: Marine; demersal on deep coral or rocky reefs, at 100-320m depth.

IUCN: Least Concern (LC) (Williams et al. 2016c).

14) *Liopropoma eukrines* (Starck & Courtenay,

1962)

Chorististium eukrines Starck & Courtenay, 1962: 159, figs. 1 a-b (2 1/2 miles south-southwest of Alligator Reef lighthouse, Monroe County, Florida, U.S.A.; holotype: ANSP 94357).

EN: Wrasse bass.

Revision: Bullock & Smith (1991: 124).

Figures: Bullock & Smith (1991: pl. 14, fig. D).

Distribution: Western Atlantic: North Carolina south to Florida Keys (U.S.A.), including the northeastern Gulf of Mexico.

Environment: Subtropical; demersal, on deep reefs, at 30-150m depth.

IUCN: Least Concern (LC) (Anderson Jr. et al. 2015d).

15) *Liopropoma fasciatum* Bussing, 1980

Liopropoma fasciatum Bussing, 1980: 147, fig. 1 (off Isla del Caño, 17 kilometers west of Osa Peninsula, Pacific coast of Costa Rica, depth 240m; holotype: LACM 38650-1).

EN: Wrasse ass bass.

Revision: None.

Figures: Bussing (1980: fig. 1).

Distribution: Eastern Pacific: southern California (U.S.A.) south to Peru, including the Gulf of California (Mexico), Clipperton Island (France), Cocos Island (Costa Rica), Malpelo Island (Colombia), and Galapagos Islands (Ecuador).

Environment: Marine; demersal, on deep coral and rocky reefs, at 24-250m depth.

IUCN: Least Concern (LC) (Smith-Vaniz et al. 2010).

16) *Liopropoma flavidum* Randall & Taylor, 1988

Liopropoma flavidum Randall & Taylor, 1988: 35, pl. 3, fig. C (reef off Avera, Rurutu, Austral Islands, French Polynesia, 58 m depth; holotype: BPBM 13701).

EN: Yellow basslet.

Revision: None.

Figures: Randall & Taylor (1988: pl. 3, fig. C).

Distribution: South Pacific: Austral Islands (French Polynesia).

Environment: Marine; demersal, on deep coral reefs,

around 58m depth.

IUCN: Least Concern (LC) (Williams et al. 2016d).

17) *Liopropoma incandescens* Pinheiro, Shepherd, Greene & Rocha, 2019

Liopropoma incandescens Pinheiro, Shepherd, Greene & Rocha 2019: 99, figs. 1-2 (west side of Ant Atoll, Pohnpei, Federated States of Micronesia, 6.75589°N, 157.91933°E; holotype: CAS 246199).

EN: Incandescent basslet.

Revision: None.

Figures: Pinheiro et al. (2019: figs. 1-2).

Distribution: Western Pacific: Micronesia (Pohnpei).

Environment: Marine; demersal on deep reefs, around 130m depth.

IUCN: Not Evaluated (2022).

18) *Liopropoma incomptum* Randall & Taylor, 1988

Liopropoma incomptum Randall & Taylor, 1988: 17, fig. 4 (outer reef slope off Kranket Island, Madang, New Guinea; holotype: BPBM 13436).

EN: Plain basslet.

Revision: None.

Figures: Randall & Taylor (1988: fig. 4).

Distribution: Western Pacific: Madang (Papua New Guinea).

Environment: Marine; demersal on the outer slope of deep reefs, around 61m depth.

IUCN: Not Evaluated (2022).

19) *Liopropoma japonicum* (Döderlein, 1883)

Labracopsis japonicus Döderlein in Steindachner & Döderlein, 1883a: 50 [Tokyo, Japan; Syntypes: NMW 76565 (2); species illustrated and described in more detail in Steindachner & Döderlein 1883b: 235, pl. 6, fig. 3].

EN: Spotlined basslet.

Revision: Randall & Taylor (1988: 13).

Figures: Randall & Taylor (1988: pl. 4, fig. A).

Distribution: Northwestern Pacific: Batanes Islands (Philippines) and Taiwan north to southern Korea and southern Japan, east to Ogasawara Islands (Japan).

Environment: Marine; demersal, on deep reefs and outer reef slopes, around 100m depth.

IUCN: Least Concern (LC) (Williams et al. 2016e).

20) *Liopropoma latifasciatum* (Tanaka, 1922)

Pikea latifasciata Tanaka 1922: 595, pl. 147, fig. 405 (Tanabe, Wakayama Prefecture, Japan; holotype: ZUMT 8000).

EN: Blackstripe basslet.

Revision: Randall & Taylor (1988: 15).

Figures: Randall & Taylor (1988: pl. 4, fig. C).

Distribution: Northwestern Pacific: Palau; Taiwan north to southern Korea and central Japan.

Environment: Marine; demersal on rocky reefs, at 10-90m depth.

IUCN: Least Concern (LC) (Williams et al. 2016f).

21) *Liopropoma lemniscatum* Randall & Taylor, 1988

Liopropoma lemniscatum Randall & Taylor, 1988: 23, fig. 5 (Naha fish market, Okinawa Island, Ryukyu Islands, Japan; holotype: BPBM 19185).

EN: Ribbon basslet.

Revision: None.

Figures: Randall & Taylor (1988: fig. 5).

Distribution: Western Pacific: eastern Indonesia and Philippines east to Palau, north to Taiwan, and Izu Islands (central Japan).

Environment: Marine; demersal in crevices of deep reefs, at 60-340m depth.

IUCN: Least Concern (LC) (Williams et al. 2016g).

22) *Liopropoma longilepis* Garman, 1899

Liopropoma longilepis Garman, 1899: 45 [south of Gulf of Panama, 7°33'N, 78°34'20"W, Panama, Albatross station 3397; syntypes: MCZ 28778 (3), USNM 153602 (1)].

EN: Scalyfin basslet.

Revision: None.

Figures: None.

Distribution: Eastern Pacific: Gulf of California (Mexico) south to Panama.

Environment: Marine; demersal on deep reefs, at 120-250m depth.

IUCN: Data deficient (DD) (Heemstra & Sadovy 2017).

23) *Liopropoma lunulatum* (Guichenot, 1863)

Gryistes lunulatus Guichenot 1863: C-4 (Réunion, western Mascarenes, southwestern Indian Ocean; holotype: MNHN 0000-1318).

EN: -

Synonyms: *Glaukosoma semilunifera* Bliss (ex Steindachner) 1883: 47 [Mauritius, Mascarenes, southwestern Indian Ocean; syntypes: MCZ 5986 (1), USNM 153568 [ex MCZ 5986] (1)]; *Anthias (Odontanthias) luteoroseus* Liénard in Sauvage, 1891: 136 (Mauritius, Mascarenes, southwestern Indian Ocean; holotype: whereabouts unknown).

Revision: Randall & Taylor (1988: 22).

Figures: Randall & Taylor (1988: pl. 4, fig. E).

Distribution: Red Sea; Indo-West Pacific: Mascarenes (La Réunion, Mauritius, Rodrigues); southwest coast of India east to the Mariana Islands and Society Islands (French Polynesia), north to southern Japan.

Environment: Marine; demersal on deep reefs, at 100-350m depth.

IUCN: Least Concern (LC) (Williams et al. 2016h).

24) *Liopropoma maculatum* (Döderlein, 1883)

Pikea maculata Döderlein in Steindachner & Döderlein, 1883a: 50 (Tokyo and Tokyo Bay, Japan; holotype: NMW 38846; species illustrated and described in more detail in Steindachner & Döderlein 1883b: 234, pl. 6, figs. 1-1b).

EN: Hanasuzuki.

Synonyms: *Taeniodon maculatus* Döderlein in Steindachner & Döderlein, 1883b: 235 [27] (not available, name mentioned in passing; Tokyo, Japan).

Revision: Randall & Taylor (1988: 12).

Figures: Randall & Taylor (1988: pl. 1, fig. B).

Distribution: Western and central Pacific: Guam, Taiwan, Ryukyu Islands, and Kyushu-Palau Ridge north to southern Korea and central Japan; Hawaiian Islands (U.S.A.).

Environment: Marine; demersal on deep rocky reefs, at 100-600 m depth.

IUCN: Least Concern (LC) (Williams et al. 2016i).

25) *Liopropoma mitratum* Lubbock & Randall, 1978

Liopropoma mitratum Lubbock & Randall, 1978: 191, fig. 2 (30 meters outside fringing reef, Al Korae, Jeddah, Saudi Arabia, Red Sea; holotype: BMNH 1976.7.13.8).

EN: Pinstriped basslet.

Revision: Randall & Taylor (1988: 34).

Figures: Randall & Taylor (1988: pl. 1, fig. D; pl. 2, fig. A).

Distribution: Red Sea; Indo-West Pacific: Christmas Island (eastern Indian Ocean) and Indonesia east to Tuamoto Archipelago, north to Amami Islands and Osumi Islands (southern Japan), south to Western Australia.

Environment: Marine; demersal on coral reefs, in caves, crevices and on ledges, at 3-55m depth.

IUCN: Least Concern (LC) (Williams et al. 2016j).

26) *Liopropoma mowbrayi* Woods & Kanazawa, 1951

Liopropoma mowbrayi Woods & Kanazawa, 1951: 633, fig. 134 (on beach after a storm, south shore of Bermuda; holotype: FMNH 48544).

EN: Cave bass.

Revision: None.

Figures: Smith-Vaniz et al. (1999: col. pl. 11-68).

Distribution: Western Atlantic: North Carolina (USA) and Bermuda south to Colombia, including northern and western Caribbean Sea.

Environment: Marine; demersal in deep reefs, often associated with sponges and soft corals, at 30-60 m depth.

IUCN: Least Concern (LC) (Anderson Jr. et al. 2015b).

27) *Liopropoma multilineatum* Randall & Taylor, 1988

Liopropoma multilineatum Randall & Taylor, 1988: 41, pl. 2, fig. C (south side of Tanavulu Pt., Florida Island, Solomon Islands, 9°02'44" S 160°04'07"E; holotype: BPBM 15662).

EN: Manyline perch.

Revision: None.

Figures: Randall & Taylor (1988: pl. 2, fig. C).

Distribution: Eastern Indian Ocean, western Pacific:

Indonesia east to Fiji, north to the Spratley Islands (South China Sea), and the Philippines, south to Rowley Shoals (Western Australia).

Environment: Marine; demersal in coral reefs, secretive in caves and under ledges, at 18-50m depth.

IUCN: Least Concern (LC) (Williams et al. 2016k).

28) *Liopropoma olneyi* Baldwin & Johnson, 2014

Liopropoma olneyi Baldwin & Johnson, 2014: 7, figs. 5-7, 8A (Curaçao, near 12.0832°N 68.8991°W, west of Substation Curaçao downline; holotype: USNM 426805).

EN: Yellow-spotted golden bass.

Revision: None.

Figures: Baldwin & Johnson (2014: figs. 5-7).

Distribution: Western Atlantic: Florida Straits (U.S.A.), Gulf of Mexico, Sint Eustatius, and Curaçao.

Environment: Marine; demersal on deep rocky slopes, secretive in caves and under ledges, at 123-220 m depth.

IUCN: Data deficient (DD) (Carpenter 2015a).

29) *Liopropoma pallidum* (Fowler, 1938)

Chorististium pallidum Fowler, 1938: 199, pl. 9, fig. 20 (Kiritimati, Line Islands; holotype: ANSP 68397).

EN: Pallid basslet.

Revision: Randall & Taylor (1988: 33).

Figures: Randall & Taylor (1988: pl. 3, fig. D).

Distribution: Western Pacific: Caroline Islands, Mariana Islands, and Marshall Islands east to Line Islands, Society Islands, and Pitcairn Group, north to Taiwan and southern Japan, south to Austral Islands.

Environment: Marine; demersal in lagoon and seaward coral reefs, at 6-40m depth.

IUCN: Least Concern (LC) (Williams et al. 2016l).

30) *Liopropoma randalli* Akhilesh, Bineesh & White, 2012

Liopropoma randalli Akhilesh, Bineesh & White, 2012: 44, figs. 1-2 (off Mangalore, Kochi Fisheries Harbor, Kerala State, southwestern India; holotype:

CMFRI GB.31.139.31.1).

EN: Randall's basslet.

Revision: Heemstra (2022: 86).

Figures: Akhilesh et al. (2012: figs. 1-2).

Distribution: Indian Ocean: southwest coast of India; Lombok (Indonesia).

Environment: Marine; demersal, on deep reefs, at 170-260m depth.

IUCN: Data deficient (DD) (Carpenter et al. 2018).

31) *Liopropoma rubre* Poey, 1861

Liopropoma rubre Poey, 1861: 418 [Habana, Cuba; syntypes: (2) MCZ 9691 (1, as holotype)].

EN: Peppermint bass, swissguard basslet.

Revision: None.

Figures: Robins & Ray (1986: pl. 27).

Distribution: Western Atlantic: southern Florida (USA) and Bermuda south to Colombia and Trinidad and Tobago, including the Gulf of Mexico and the Caribbean Sea.

Environment: Marine; demersal on coral reefs, secretive, at 3-45 m depth.

IUCN: Least Concern (LC) (Anderson Jr. et al. 2015c).

32) *Liopropoma santi* Baldwin & Robertson, 2014

Liopropoma santi Baldwin & Robertson, 2014: 74, figs. 2-4, 5A, 6A (Curaçao, off Substation Curaçao downline, near 12°05.069'N, 68°53.886'W, depth 241m; holotype: USNM 426811).

EN: Spot-tail golden basslet, spot-tail golden bass.

Revision: None.

Figures: Baldwin & Robertson (2014: figs. 2-4).

Distribution: Western Atlantic Ocean: Curaçao.

Environment: Marine; demersal, on deep reefs, at 182-241m depth.

IUCN: Data deficient (DD) (Carpenter 2015b).

33) *Liopropoma susumi* (Jordan & Seale, 1906)

Chorististium susumi Jordan & Seale, 1906: 256, fig. 48 (Apia, Upolu Island, Western Samoa; holotype: USNM 51738).

EN: Meteor perch, Meteor basslet.

Synonyms: *Ypsigamma brocki* Schultz in Schultz et al. 1953: 379, fig. 60 (lagoon coral head off Kieshiechi Island, Rongelap Atoll, Marshall Islands,

depth 20 feet; holotype: USNM 141876); *Ypsigamma lineata* Schultz in Schultz et al. 1953: 375, fig. 59 (lagoon reef off Namu Island, Bikini Atoll, Marshall Islands, western Pacific; holotype: USNM 141872); *Flagelloserranus meteori* Kotthaus, 1970: 11, fig. 1 (off the northwestern coast of Papua, Indonesia, 0°18'S, 132°52'E, depth about 100 meters; holotype: ZMUC P43207).

Revision: Randall & Taylor (1988: 22).

Figures: Randall & Taylor (1988: pl. 2, fig. D).

Distribution: Red Sea; Indo-West Pacific: Aliwal Shoal (South Africa), East Africa, Seychelles, Comoros, Madagascar and Mascarenes (La Réunion, Mauritius, Rodrigues) east to Samoa and Tonga, north to Izu Islands (central Japan), south to Queensland (Australia), Middleton Reef (Australia) and Loyalty Islands (New Caledonia).

Environment: Marine; demersal, in coral reefs, secretive in caves and crevices, at 2-34 m depth.

IUCN: Least Concern (LC) (Williams et al. 2016m).

34) *Liopropoma swalesi* (Fowler & Bean, 1930)

Chorististium swalesi Fowler and Bean, 1930: 186 (Tongan Bay, Tongan Island, Gulf of Tomini, Sulawesi, Indonesia; holotype: USNM 89983).

EN: Swales' basslet.

Revision: Randall and Taylor (1988: 10).

Figures: Randall and Taylor (1988: pl. 1, fig. A).

Distribution: Western Pacific: eastern Indonesia and the Philippines east to New Britain (Papua New Guinea), Solomon Islands, and Vanuatu.

Environment: Marine; demersal, in coral reefs, at 20-110m depth.

IUCN: Least Concern (LC) (Williams et al. 2016n).

35) *Liopropoma tonstrinum* Randall & Taylor, 1988

Liopropoma tonstrinum Randall & Taylor, 1988: 38, pl. 2, fig. B (Augulpelu Reef, Palau Is, depth 33.5-52 meters; holotype: BPBM 9531).

EN: Redstriped basslet.

Revision: None.

Figures: Randall & Taylor (1988: pl. 2, fig. B).

Distribution: Eastern Indian Ocean, western Pacific: Christmas Island (Indian Ocean) and Indonesia east to Palau, Caroline Islands and Society Islands, north

to Osumi Islands (southern Japan).

Environment: Marine; demersal, on coral reefs, secretive in caves and under ledges, at 11-50m depth.

IUCN: Least Concern (LC) (Williams et al. 2016o).

Genus *Rainfordia* McCulloch, 1923

Rainfordia McCulloch 1923: 119 (Gender: feminine; type species *Rainfordia opercularis* McCulloch, 1923 by monotypy).

36) *Rainfordia opercularis* McCulloch, 1923

Rainfordia opercularis McCulloch, 1923: 120, pl. 16, fig. 3 (Middle Island, Edgecumbe Bay, Whitsunday Passage, Queensland, Australia; holotype: AMS IA.923).

EN: Flathead perch.

Figures: Allen & Swainston (1988: 60, fig.).

Distribution: Eastern Indian Ocean, southwestern Pacific: Northwest Shelf (Western Australia); Queensland (Australia).

Environment: Marine; demersal in coral reefs, secretive in caves and crevices, at 0-22m depth.

IUCN: Least Concern (LC) (Sadovy 2017b).

Subfamily: Diploprioninae Bleeker, 1874

Barred Soapfishes

Barred soapfishes of the subfamily Diploprioninae have their skin coated with viscid mucus containing the toxin grammistin, which imparts a bitter taste and serves as an effective deterrent against predators. They are carnivorous fishes that feed mainly on benthic crustaceans and small fishes. Neurocranium and infraorbitals in barred soapfishes are rugose. Base of dorsal and anal fins is covered with ridges of tissue and they present a unique scale morphology (Baldwin & Johnson 1993). Three genera with five species.

Genus *Aulacocephalus* Temminck & Schlegel, 1843

Aulacocephalus Temminck & Schlegel, 1843: 15 [Gender: masculine; type species: *Aulacocephalus temminckii* Bleeker, 1855, by subsequent monotypy; original description without species; one species added by Bleeker (1855: 12)].

37) *Aulacocephalus temminckii* Bleeker, 1855

Aulacocephalus temminckii Bleeker, 1855: 12

[Nagasaki, Japan; no types known; appeared without description with reference to the "Aulacocephalus" of Temminck & Schlegel (1843: 15)].

EN: Goldribbon soapfish.

Synonyms: *Grammistes compressus* Liénard, 1834: 117 (Mauritius, Mascarenes, southwestern Indian Ocean; no types known); *Aulacocephalus schlegelii* Günther 1859: 173 [Mauritius, Mascarenes, southwestern Indian Ocean; Japanese seas; syntypes: BMNH 1841.6.0.1762 (1, stuffed), 1841.6.0.1784 (1, stuffed)]; *Centropristes saponaceus* Valenciennes, 1862: 1167 [Réunion, Mauritius; syntypes: MNHN 0000-2586 (1), 0000-7298 (1)].

Revision: Heemstra (2022: 79).

Figures: Heemstra (2022: pl. 15).

Distribution: Red Sea; Indo-West Pacific: antitropical: KwaZulu-Natal (South Africa), southern Mozambique, Comoros & Mascarenes (La Réunion, Mauritius, Rodrigues) east to Rapa (French Polynesia), south to New Zealand and Kermadec Islands; Thailand east to Marshall Islands, north to Japan and Ogasawara Islands (Japan).

Environment: Marine; demersal, on deep coral and rocky reefs, secretive in caves and crevices, at 20-350 m depth.

IUCN: Least Concern (LC) (Williams et al. 2016p).

Genus *Belonoperca* Fowler & Bean, 1930

Belonoperca Fowler & Bean, 1930: 175, 181 (Gender: feminine; type species: *Belonoperca chabanaudi* Fowler & Bean, 1930 by original designation).

38) *Belonoperca chabanaudi* Fowler & Bean, 1930

Belonoperca chabanaudi Fowler & Bean, 1930: 182, fig. 4 (Una Una Road, Binang Unang, Gulf of Tomini, Sulawesi, Indonesia; holotype: USNM 89982).

EN: Arrowhead soapfish.

Revision: Randall et al. (1980: 2).

Figures: Randall et al. (1980: pl.).

Distribution: Indo-West Pacific: KwaZulu-Natal (South Africa), East Africa (Mozambique,

Tanzania, Kenya), Comoros, Mascarenes (Mauritius), Maldives and Chagos Archipelago east to Tuamotu Archipelago (French Polynesia), north to southern Japan, south to Kimberleys (Western Australia), northern Queensland (Australia), New Caledonia and Austral Islands.

Environment: Marine; nocturnal, hovering in caves on steep slopes of coral-rich areas, at 4-50m depth.

IUCN: Least Concern (LC) (Williams et al. 2016q).

39) *Belonoperca pylei* Baldwin & Smith, 1998

Belonoperca pylei Baldwin & Smith, 1998: 326, figs. 1-3 (Rarotonga, Cook Islands, depth 85-122 metres; holotype: BPBM 37615).

EN: Orange-spotted soapfish.

Revision: None.

Figures: Baldwin & Smith (1998: figs. 1-3).

Distribution: Western Pacific: Philippines; Marshall Islands; Cook Islands.

Environment: Marine; demersal, on deep reefs, at 68-122 m depth.

IUCN: Least Concern (LC) (Williams et al. 2016r).

Genus *Diploprion* Cuvier, 1828

Diploprion Cuvier (ex Kuhl & van Hasselt) in Cuvier & Valenciennes 1828: 137 (Gender: masculine; type species: *Diploprion bifasciatum* Cuvier 1828 by monotypy).

40) *Diploprion bifasciatum* Cuvier, 1828

Diploprion bifasciatum Cuvier (ex Kuhl & van Hasselt) in Cuvier & Valenciennes, 1828: 137, pl. 21 [Java, Indonesia; syntypes: MHN 0000-7296 (1), ZMB 6377 (1, stuffed); based on the manuscript description by Kuhl & van Hasselt, and on underlying specimens which may be treated as syntypes].

EN: Barred soapfish.

Revision: Baldwin et al. (1991).

Distribution: Indo-West Pacific: Maldives, India, and Sri Lanka east to the Philippines, Palau, Solomon Islands, and Vanuatu, north to the southern Sea of Japan, south to Rottnest Island (Western Australia), southern New South Wales (Australia), Lord Howe Island (Australia) and New Caledonia.

Environment: Marine; demersal on coral and rocky

reefs, often in semi-silty conditions, in caves and crevices, at 0-100m depth (including tidal pools).

IUCN: Least Concern (LC) (Williams et al. 2016s).

41) *Diploprion drachi* Roux-Estève, 1955

Diploprion drachi Roux-Estève in Roux-Estève & Fourmanoir, 1955: 197 (Abu Latt, Saudi Arabia, Red Sea, 19°58.0'N, 40°07.60' E; holotype: MNHN 1952-0253).

EN: Yellowfin soapfish.

Revision: Heemstra (2022: 80).

Figures: Heemstra (2022: 80, fig.; pl. 9).

Distribution: Red Sea; northwestern Indian Ocean: Gulf of Aden.

Environment: Marine; found on coral reefs, at 0-10m depth.

IUCN: Least Concern (LC) (Smith-Vaniz et al. 2018b).

DISCUSSION

Liopropoma randalli was described by Akhilesh, Bineesh, & White (2012: 44, fig. 1-2) based on the holotype (CMFRI GB. 31. 139. 31. 1, 112mm SL, Kochi Fisheries Harbor, Kerala State, gillnetted off Mangalore, southwestern India, Arabian Sea), and three paratypes (CMFRI GB. 31. 139. 31. 1, 132mm SL, collected with holotype; CSIRO H 7218-02, 113mm SL, Tanjung Luar fish landing site, Lombok, East Nusa Tenggara, Indonesia; MZB LM648, 92mm SL, Tanjung Luar fish landing site, Lombok, East Nusa Tenggara, Indonesia) from Mangalore, Kochi Fisheries Harbor, Kerala State, southwestern India). We here present the first new record and significant range addition since the original description. Extensive fishing efforts during the last few years in the northwestern Indian Ocean resulted in the collection of a single specimen of this taxon. This finding demonstrates i) possible low population size of this fish as observed in other members of the genus *Liopropoma* (see Randall & Taylor Jr 1988; Kon et al. 1999; Akhilesh et al. 2012, Wirtz & Schliewen 2012; Pinheiro et al. 2018, 2019), ii) a difficult accessibility by fishing methods of small fish species in deep reef areas, iii) the

presence of this species in the Sea of Oman providing a significant range extension of *L. randalli* into the northwestern Indian Ocean, and iv) that the northwestern Indian Ocean harbors a higher fish diversity than expected.

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مقاله کامل

گزارش جدید از ماهی باسلت راندال *Liopropoma randalli* از شمال غربی اقیانوس هند، به همراه چک لیست گونه‌های متعلق به خانواده Liopropomatidae (ماهیان استخوانی: سوف ماهی شکلان)

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چکیده:

علی‌رغم افزایش قابل توجه مطالعات اخیر در اکوسیستم‌های مرجانی (عمق ۳۰ تا ۱۵۰ متر)، اکتشاف در این اعمان همچنان منجر به کشف گونه‌ها و گزارش‌های جدید در سراسر جهان، به ویژه در میان گونه‌هایی با جمعیت کم، مانند ماهیان شعاد باله می‌شود. در مطالعه حاضر، یک گزارش جدید و افزایش دامنه پراکنش چهارگانی گونه نادر باسلت راندال *Liopropoma randalli* در دریای عمان ثبت و همچنین ویژگی‌های ریخت‌شناسی آن ارائه شده است. باسلت راندال با چندین ویژگی متمایز می‌شود که عبارتند از: شعاد های باله پشتی 11، (آخرین شعاد تقسیم شده در پایه آن)، شعاد های باله مخرجی 8، III شعاد های باله سینه‌ای ۱۴، شعاد های باله لگنی 5، I، فلس‌های شانه‌ای با شکل خاص و ضعیف، و یک خط جانبی کامل (دارای خمیدگی روی باله سینه‌ای)، با ۴۷ فلس منفذدار روی بدن، به علاوه ۳ فلس منفذدار که تا انتهای هیپورال‌ها کشیده شده‌اند. این مطالعه همچنین یک فهرست کامل از گونه‌های خانواده Liopropomatidae، که شامل ۴۱ گونه در دو زیرخانواده *Liopropomatinae* و *Diploprioninae* با ۳۶ گونه و ۳ جنس است.

کلمات کلیدی: شعاد بالگان، ماهیان شعاد باله ای، دامنه گسترش جدید، اقیانوس هند غربی، تنوع زیستی.