

## NOTES ON BLENNIID FISHES OF THE TRIBE OMOBRANCHINI, WITH DESCRIPTIONS OF TWO NEW SPECIES

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*Abstract.*—*Omobranchus robertsi* and *Omox lupus*, new species, are described from New Guinea. *Omobranchus meniscus* Springer and Gomon is synonymized with *Omobranchus smithi* (Visweswara Rao). Range extensions and miscellaneous information are provided for several species of Omobranchini.

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Springer (1972) revised all the genera, except *Omobranchus* Ehrenberg, of the blennioid fish tribe Omobranchini. Springer and Gomon (1975) revised *Omobranchus* and gave additional information on other genera and species of Omobranchini. Accumulation of information on species of Omobranchini since 1975 is presented in this report.

I follow the methods of Springer (1972) and Springer and Gomon (1975) except for enumeration of the cephalic sensory pores, for which I follow only Springer and Gomon (who included one more pore position in the supratemporal series than did Springer, 1972). Institutional abbreviations are the same as those used by Springer and Gomon, with the additions of: ROM = Royal Ontario Museum, Toronto; FSM = Florida State Museum, Gainesville; UMMZ = University of Michigan Museum of Zoology, Ann Arbor.

### *Enchelyurus kraussi* (Klunzinger)

Springer (1972) reported *E. kraussi* from numerous localities ranging from the Gulf of Aqaba south to Aldabra in the eastern Indian Ocean eastward to the Marianas, Trobriand, and southern Great Barrier Reef islands. Masuda *et al.* (1975) reported *E. kraussi* from the Ryukyu Islands. The following new collections, while not extending the range of *E. kraussi*, represent additional locality records: near Giligaon, Negros Oriental, Philippines, 09°06.5'N, 122°55.4'E (USNM 225060); near Maloh, Negros Oriental, 09°03.1'N, 122°59.1'E (USNM 225058); Maloh, Negros Oriental, 09°03.1'N, 122°59.7'E (USNM 225057); Solino Island, Mindanao, Philippines, 08°51.4'N, 123°24.6'E (USNM 225059); Umboi Island, Papua-New Guinea, 06°41.9'S, 147°53.1'E (USNM 225062); Lolorua Island, Port Moresby, Papua-New Guinea, 09°29'45"S, 147°06'40"E (USNM 225063); Panapompom Island, Louisiade Archipelago, Papua-New Guinea, 10°47'S, 152°24'E (USNM 225061).



*Laiphognathus multimaculatus* Smith

Springer (1972) reported *L. multimaculatus* from Tanzania, Mozambique, Ceylon, northern Gulf of Thailand, northern Borneo, and the Solomon Islands. Additional specimens are now available from: Kendrew Island, Dampier Archipelago, Western Australia, ca. 20°35'S, 116°35'E (WAM P.25111-019); Kampung Pasir Putih, Halmahera, Indonesia, 00°53'N, 127°41'E (USNM 224825); and Jalun Island, Hermit Islands, Papua-New Guinea, 01°31'12"S, 145°01'30"E (USNM 224419, 224420). I collected the Jalun Island specimens from a crevice in the face (dropoff) of a live reef on the inner protected (east) side of the island, which is in the Hermit Islands lagoon, at a depth of about 10 m. Specimens from other localities are reported from reefs and tide pools and at depths under 8 m. Except for a specimen reported as *Omobranchus* sp. by Springer and Gomon (1975), which was reportedly collected at a depth of 10.7–13.7 m, *Laiphognathus* is known from greater depths than any other species of Omobranchini, which are usually taken at depths under 3 m, and often much shallower.

*Omobranchus elegans* (Steindachner)

Springer and Gomon (1975) reported the range of *O. elegans* as occurring in southern Korea and southern Japan, at about 37°N latitude (see their Fig. 4). They missed Ueno's (1971) records of *O. elegans* from nonspecified areas along the coast of Hokkaido from 42–44°N latitude. The southern limit of *Omobranchus elegans* is about 35°N latitude. The species is, thus, the most northerly restricted and occurring of all Omobranchini.

*Omobranchus elongatus* (Peters)

Springer and Gomon (1975) gave the distribution of *O. elongatus* as extending from the east coast of Africa eastward to the Philippines and Ambon Island, Indonesia. Recent collections extend the range to: Batanta Island, Irian Jaya, Indonesia, 00°48.2'S, 130°52.8'E (USNM 224482); mainland in lee of Samei Island, Irian Jaya, Indonesia, 03°05.0'S, 132°29.8'E (USNM 224481); Muschu Island, Papua-New Guinea, 03°23.1'S, 143°33.2'E (USNM 224483); and Fairfax Harbor, Papua-New Guinea, 09°35.5'S, 147°04.0'E (USNM 224480).

*Omobranchus ferox* (Herre)

Springer and Gomon (1975) gave the distribution of *O. ferox* as Mozambique, Ceylon, India (northeast coast), Singapore, Nias Island (off northwest Sumatra), northeast Gulf of Thailand, Hong Kong, and Philippine Islands. Additional specimens are now available from East Vernon Island, Northern Territory, Australia, 12°05'S, 131°06'E (USNM 224477); Cape



Ward Hunt, Papua-New Guinea, 08°04.2'S, 148°08.4'E (USNM 224478); and Balikpapan Harbor, Borneo, 01°15'S, 116°50'E (AMS 19355-030).

The specimen from Papua-New Guinea, a male, had the following meristics: dorsal fin XII, 19 (total elements 31); anal fin II, 22; vertebrae 10 + 27 = 37. The numbers of segmented and total dorsal-fin elements and caudal and total vertebrae are each one less than the minimum previously reported for the species.

*Omobranchus germaini* (Sauvage)

Springer and Gomon (1975) reported *O. germaini* from Taiwan, Hong Kong, Philippines, Singapore, Ambon Island, New Caledonia, and western, northern, and eastern Australia. Specimens are now available from the following localities: Kampung Pasir Putih, Halmahera, Indonesia, 00°53'N, 127°41'E (USNM 224604, 224916); Misool Island, Indonesia, 02°03.1'S, 130°06.4'E (USNM 224605); Flores Island, Indonesia, ca. 08°30'S, 121°00'E (FSM 23836); and Croker Island, Northern Territory, Australia, 11°01.7'S, 132°32.7'E (USNM 224734).

*Omobranchus lineolatus* (Kner) and *Omobranchus punctatus*  
(Valenciennes)

Kner (1868b) described *Petroscirtes semilineatus* from Kandavu, Fiji Islands. Springer and Gomon (1975) placed *P. semilineatus* in the synonymy of *O. punctatus* and questioned the provenance of Kner's type because subsequent collecting had failed to show the presence of *O. punctatus* in the Fiji Islands. Recent collections from Viti Levu, Fiji Islands (AMS 1.19179-001) include specimens of *O. punctatus*. For this reason I now accept Kner's (1868a, b) type-locality for *O. lineolatus*, Kandavu, which Springer and Gomon also questioned.

One of the Viti Levu specimens of *O. punctatus* is a metamorphosed specimen 16.2 mm SL, one mm shorter than the smallest metamorphosed specimen available to Springer and Gomon (1975:Table 4).

Bath (1980) reported *O. punctatus* from the Suez Canal, a considerable range extension for the species, which was previously known in the western Indian Ocean area only from southeastern Africa, Persian Gulf, northwestern Arabian Gulf, and the Maldivé Islands.

*Omobranchus robertsi*, new species

Fig. 1

*Holotype* (only known specimen).—USNM 216985, male, 48.1 mm SL, mangrove lined tributary of Guiavi Creek on mainland opposite western end of Parama Island, Papua-New Guinea, 09°01.2'S, 143°21.6'E, T. R. Roberts (Fly 75-32), 15 December 1975.



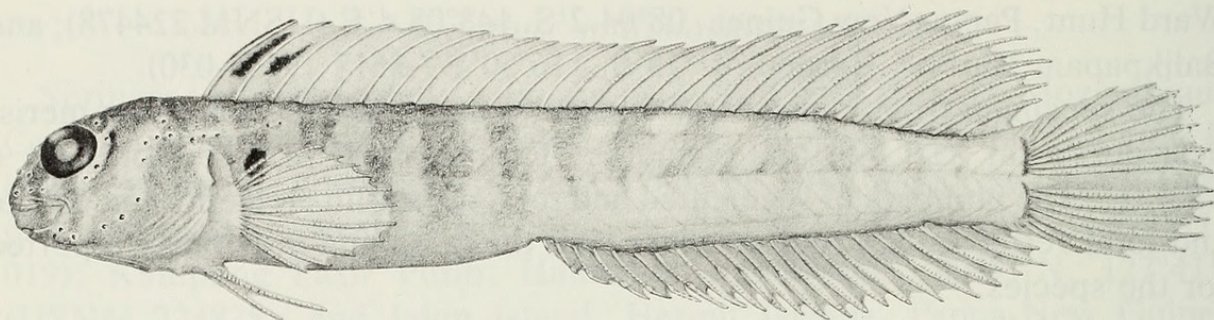


Fig. 1. *Omobranchus robertsi*, USNM 216985, holotype, male, 48.1 mm SL. Drawn by P. K. Hollingsworth.

*Description*.—Bilaterally paired structures are reported left-right. Dorsal fin XIII, 19. Anal fin II, 20 (genotypically II, 21; radiograph indicates that third from posteriormost anal-fin pterygiophore lacks an articulating fin ray). Pectoral fins 13-13. Pelvic fins I, 2-I, 2. Caudal fin 7-13-6. Vertebrae 12 + 26 (posteriormost pleural ribs articulate with 11th centrum, indicating normal precaudal count is probably 11; *ergo* 11 + 27). Epipleural ribs on 14 anteriormost vertebrae. Upper jaw teeth I-21-I. Lower jaw teeth I-22-I.

Sensory pores: interorbital 3; infraorbital 8-8; mandibular 3-3; preopercular 6-6; supratemporal 5 (includes median supratemporal); bi-pored lateral-line tubes 1-2, extending posteriorly on both sides to below third dorsal-fin spine; anterior and posterior nasal pores present.

Gill opening on each side reaching ventrally to opposite dorsalmost pectoral-fin ray. Lower-lip flap present. No median fleshy crest present dorsally on head. Ventral hypural plate autogenous; no autogenous hypural 5; one epural. Head length 21.6% SL; caudal-fin length 18.7% SL; fifteenth dorsal-fin ray length 17.2% SL.

The color pattern is indicated on Fig. 1, but is supplemented here. The most conspicuous dark markings are: two spots anteriorly on dorsal fin; spot just dorsal and posterior to axil of pectoral fin; and short, slender, dark marks just posterior to infraorbital pores at 2, 4, and 5 o'clock positions. Two dusky bands separated by pale interspaces extend ventrally from orbit, anteriormost extends across ventral surface of lower jaw to opposite side; dusky band incorporating short, slender, dark mark extending dorsally from about midlevel of cheek across top of head to midlevel of cheek on opposite side; broad, faint, dusky band extends dorsally from ventral level of opercular region across predorsal area to ventral level of opercle on opposite side. There are about 13 incomplete dusky bands on each side of the body.

*Comparisons*.—*Omobranchus robertsi* might be keyed to *O. punctatus*



or *O. verticalis* in Springer and Gomon's (1975) key to the species of *Omobranchus*, but does not conform with the majority of the characters given in either of the final two key couplets leading to these two species. *Omobranchus robertsi* differs from *O. punctatus* (and all other species of *Omobranchus*) in having a dark spot on the region of the body near the pectoral-fin axil as the most conspicuous marking on the body. It also differs from *O. punctatus* in having conspicuous dark spots in the anterior dorsal-fin membranes, in having both anal-fin spines of males conspicuous externally, and in having fewer teeth (males of *O. punctatus* of the same size as the type of *O. robertsi* have about 5 to 8 more teeth in either jaw; Springer and Gomon, 1975:figs. 49–50). *Omobranchus robertsi* can be differentiated from various *O. punctatus* populations on the basis of many meristic characters (see Springer and Gomon, 1975:Table 13). Compared with those populations of *O. punctatus* closest geographically (New Guinea; Bougainville) to the type-locality of *O. robertsi*, *O. robertsi* has at least three fewer lateral-line tubes; the tubes end below the third dorsal-fin spine, as opposed to the 7th–9th for the *O. punctatus* populations; and has 6–10 fewer epipleural ribs.

In having dark spots anteriorly in the membranes of the dorsal fin, *O. robertsi* is similar, among the species of *Omobranchus*, only to *O. verticalis*, *O. aurosplendidus*, and possibly *O. smithi*. It differs from *O. verticalis* (known only from southern Queensland) in having more than 10 precaudal vertebrae, in having more teeth in either jaw for its size (21–22 vs. 17 for *O. verticalis*), and in not having the dusky bands on the body with dark margins. It differs from *O. aurosplendidus* and *O. smithi* in lacking a fleshy crest on top of the head, from the former species in having many fewer dorsal- and anal-fin rays and vertebrae and from the latter species in lacking a dark crescentic marking extending dorsally from the orbit.

*Etymology*.—Named for Tyson R. Roberts, who collected the holotype and made it available to me.

#### *Omobranchus rotundiceps obliquus* (Garman)

Springer and Gomon (1975) reported *O. r. obliquus* from numerous localities ranging from the Nicobar Islands east to the Hawaiian Islands. Two new collections, while not extending the eastward range, fill in noticeable gaps in the known distribution: Kat Island, Ninigo Islands, 01°07'45"S, 144°30'00"E (USNM 224697); and Ponape, Eastern Caroline Islands, ca. 07°00'N, 158°14'E (USNM 223013, 223474, 223355).

#### *Omobranchus smithi* (Visweswara Rao)

Visweswara Rao (1974) described *Cruantus smithi* from the Godavari Estuary (ca. 16.5°N, 82°E), India. The journal containing the description



was for the year 1973, but bore a printed publication date of 18 October 1974. Springer and Gomon (2 April 1975) synonymized *Cruantus* Smith with *Omobranchus* and described *O. meniscus* from Thailand. I believe that *O. meniscus* is a junior subjective synonym of *O. smithi*. My attempts to borrow specimens of *O. smithi* and obtain additional information on the species from its author were unsuccessful. The name *Cruantus smithi* first appeared as a *nomen nudum* (Visweswara Rao, 1971).

*Omox biporos* Springer

Springer (1972) and Springer and Gomon (1975) reported the distribution of *O. biporos* as northern Gulf of Thailand; Madang and Port Moresby, Papua-New Guinea; and Palau Islands. Specimens are now available from: Cuyo Island, Philippines, 10°48'54"N, 121°00'30"E (USNM 224469, 219306); Irian Jaya, Indonesia, 03°05.0'S, 132°29.8'E (USNM 224468); Misool Island, Indonesia, 02°03.1'S, 130°06.4'E (USNM 224237); Batanta Island, Indonesia, 00°48.2'S, 130°52.8'E (USNM 224236); Croker Island, Northern Territory, Australia, 11°01.7'S, 132°32.7'E (USNM 224696, 224734); Lizard Island, Queensland, Australia, 14°40'S, 145°30'E (AMS I.19467-002); Canala Bay, New Caledonia, ca. 21°S, 165°E (BPBM 22525); and Ponape, Eastern Caroline Islands, ca. 06°57'30"N, 158°00'08"E (USNM 224384).

*Omox lupus*, new species

*Holotype*.—USNM 223710, male, 28.0 mm SL, Cape Ward Hunt, Papua-New Guinea, 08°04.2'S, 148°08.4'E, 0–1 m, mangrove swamp, B. B. Collette (BBC 1696), 17 June 1979.

*Paratypes*.—USNM 223711, male, 29.7 mm SL, cleared and stained, collected with the holotype; USNM 223712, male, 26.2 mm SL, mainland along SW corner in lee of Samei Island, Irian Jaya, Indonesia, 03°5.0'S, 132°29.8'E, 0–1.5 m, mangrove swamp along small river (freshwater), B. B. Collette (BBC 1737), 4 July 1979.

*Description*.—This description is based on all three types with the characters for each specimen given in the same order as presented above. Dorsal fin XII, 16; XII, 16; XII, 16. Anal fin II, 18; II, 19; II, 19. Pectoral fins (left-right) 12-12; 12-12; 10-12. Pelvic fins I, 2; I, 2; I, 2. Caudal fin 6-13-6; 6-13-5; 6-13-5. Vertebrae 10 + 25; 10 + 25; 10 + 25. Epipleural ribs (left-right, cleared and stained specimen only) 12-11. Upper jaw teeth I-26-I; 0-31-I; I-24-I. Lower jaw teeth I-24-I; I-26-I; II-24-I.

Sensory pores: interorbital 4; 4; 5; infraorbital 8; 8; 8; mandibular 3; 3; 3; preopercular 6; 6; 6; supratemporal 5; 5; 5 (median predorsal commissural pore absent in all specimens); no bi-pored lateral-line tubes in any specimen; anterior and posterior nasal pores present.



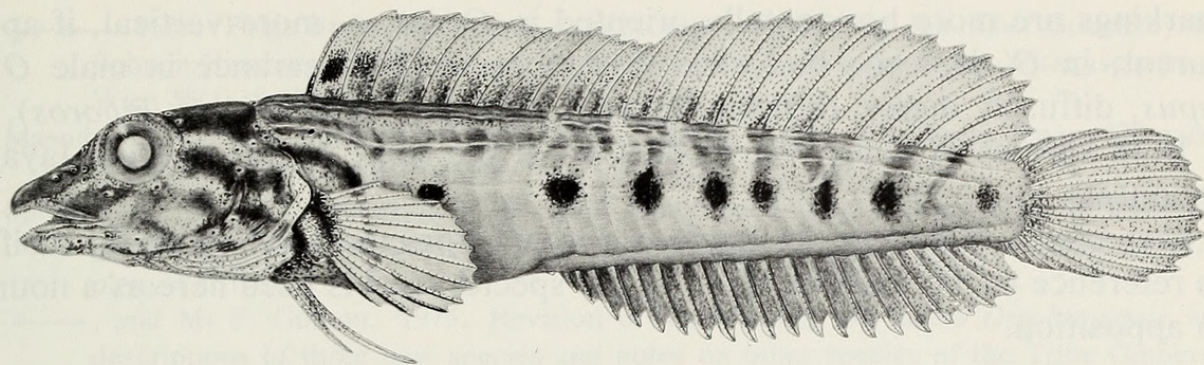


Fig. 2. *Omox lupus*, USNM 223711, paratype, male, 29.7 mm SL. Drawn by P. K. Hollingsworth.

Gill opening extending ventrally to opposite level of pectoral-fin ray (left-right) 9-8; 10-12; 10-10. No fleshy crest on top of head. Ventral hypural plate autogenous; no autogenous hypural 5; one epural. Dorsal and caudal fins attached by membranes anterior to caudal-fin base. Premaxillary and dentary canines about same height, but dentary canines stronger. Shortest pelvic-fin ray more than half length of longest.

The following characters are based on the cleared and stained specimen: rostral cartilage not ossified; infraorbital bones 4-4; nasal bones separate, not impinging; frontals separate, not fused; pterosphenoids, if present, not evidenced on external surface of cranium; basisphenoid with belophragm; post-temporal without ventral arm, with sensory canal incorporated; dentaries united by suturing joint; interopercle with posteriorly projecting spur; postcleithra, two on each side, normal.

Snout length 10.0, 10.5, 10.9% SL; snout tip to rictus 10.0, 10.2, 9.5% SL; greatest head width —12.5, 12.2% SL; body depth at anus 15.5, 15.2, 13.9% SL.

The color pattern of all three specimens is essentially the same as that portrayed in Fig. 2 (the cleared and stained paratype), except that in the holotype and other paratype the dusky bands extending dorsally from the dark midlateral body spots are dorsally as dark as the midlateral spots.

*Comparisons.*—*Omox lupus* keys to *O. biporos*, the only other species of *Omox*, in the key to the genera and species of Omobranchini in Springer (1972). *Omox lupus* differs from *O. biporos* in having: a longer snout (10.0–10.9% SL in the SL range of 26.2–29.7 mm vs. 7.1–8.1% in the SL range of 25.9–53.7 mm); a more compressed head (maximum width about 12% SL vs. about 15%); fewer pectoral-fin rays (typically 12 vs. 12–13, more than 90% of specimens with 13); more dentary incisor teeth at a given size (25–26 in males at SL range of 26.2–29.7 mm vs. 20–22 in males at SL range of 27.7–35.1 mm); the rostral cartilage unossified; and in color pattern (head



markings are more horizontally oriented in *O. lupus*, more vertical, if apparent, in *O. biporos*; body has distinct spotted appearance in male *O. lupus*, diffusely dusky, diffusely spotted, or dusky banded in *O. biporos*).

Both species of *Omox* were collected at the same station in Irian Jaya, Indonesia.

*Etymology*.—The species name is derived from the Latin word for wolf, in reference to the wolflike snout of the species, and is used here as a noun in apposition.

### *Parenchelyurus hepburni* (Snyder)

Springer (1972) and Springer and Gomon (1975) recorded *P. hepburni* from numerous localities from Mauritius and the Amirante Islands eastward to the Marshall and Samoa islands. Specimens from Tulear, southwestern Madagascar, 23°20'S, 43°41'E (UMMZ 186051) represent a slight western range extension for the species, which has not yet been recorded from, but should be expected to occur on, the east coast of Africa. Other new locality records are: Chagos Islands (ROM, 6°34'S, 72°24'E, R. Winterbottom, in litt.); and Ponape, Eastern Caroline Islands, 06°59'45"N, 158°11'00"E (USNM 223243).

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### Literature Cited

- Bath, H. 1980. *Omobranchus punctatus* (Valenciennes 1836) neu im Suez-Kanal (Pisces: Blennidae).—*Senckenbergiana Biologica*, 1979, 60(5/6):317–319.
- Kner, R. 1868a. Über neue Fische aus dem Museum der Herren Johann Cäsar Godeffroy und Sohn in Hamburg.—*Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien* 58(1), 7:26–31.



- . 1868b. Folge neuer Fische aus dem Museum der Herren Joh. Cäs. Godeffroy und Sohn in Hamburg.—Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien 58(1), 8:293–356.
- Masuda, H., C. Araga, and T. Yoshino. 1975. Coastal Fishes of Southern Japan. 379 pages. Tokai University Press, Tokyo.
- Springer, V. G. 1972. Synopsis of the Tribe Omobranchini with descriptions of three new genera and two new species (Pisces: Blenniidae).—Smithsonian Contributions to Zoology 130:1–31.
- , and M. F. Gomon. 1975. Revision of the blenniid fish genus *Omobranchus* with descriptions of three new species and notes on other species of the Tribe Omobranchini.—Smithsonian Contributions to Zoology 177:1–135.
- Ueno, T. 1971. List of the marine fishes from the waters of Hokkaido and its adjacent regions.—Scientific Reports of the Hokkaido Fisheries Experimental Station 13:61–102.
- Visweswara Rao, V. 1971. Breeding habits and early development of two blenniid fishes, *Omobranchus japonicus* (Bleeker) and *Cruentus smithi* Visweswara Rao, from Godavari Estuary.—Journal of the Marine Biological Association of India, 1970, 12(1 & 2):175–182.
- . 1974. Blenniid fishes from Godavari Estuary.—Journal of the Bombay Natural History Society, 1973, 70(3):480–487.

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Springer, Victor G. 1981. "Notes on blennioid fishes of the tribe Omobranchini, with descriptions of two new species." *Proceedings of the Biological Society of Washington* 94, 699–707.

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