

## A New Hemerocoetine Fish, *Osopsaron karlik* (Percophidae, Trachinoidei) from the Nazca Submarine Ridge

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**Abstract** A new species of the Hemerocoetinae, *Osopsaron karlik* is described from 11 specimens 20–42 mm in SL collected on the Nazca Submarine Ridge at 300–395 m. It differs from other species of *Osopsaron*, *O. verecundum* (Jordan et Snyder) of Japan, *O. incisum* (Gilbert) of Hawaii and *O. natalensis* Nelson of Natal in number of gill rakers and fin rays, peculiar pigmentation of first dorsal fin, and longer head.

Eleven small specimens belonging to the percophid subfamily Hemerocoetinae were dredged at two unnamed seamounts of the Nazca Submarine Ridge in the eastern South Pacific. They are described here as the types of a new species, *Osopsaron karlik*.

In the following description, terminology as well as methods of counts and main measurements follow Nelson (1982). Data of the paratypes (when different from holotype) are given in parentheses.

### *Osopsaron karlik* sp. nov.

(Fig. 1)

*Pteropsaron incisum*(?): Parin, 1982: 75–76, fig. 2 (brief description from the same specimens as treated in the present paper).

**Holotype.** ZIL (Zoological Institute of the Academy of Sciences USSR, Leningrad) 46748, 30.5 mm in standard length (SL); Nazca Ridge (25°48'S, 86°13'W) at 300 m, October 3, 1980; benthic dredge; coll. S. D. Chistikov.

**Paratypes.** ZIL 46749, 2 specimens 24 mm (damaged) and 29 mm SL, same data as holotype; ZIL 46750, 4 specimens 20–42 mm SL (one specimen 33 mm SL stained with alizarin red), Nazca Ridge (25°44'S, 86°27.5'W) at 370–395 m, October 3, 1980; Sigsbee trawl, same collector; USNM (United States National Museum of Natural History, Washington, D.C.) 265048, 2 specimens 27 and 28 mm SL, Nazca Ridge (25°27'S, 85°05.5'W) at 330 m, October 6, 1980, benthic dredge, same collector; BPBM (Bernice P. Bishop Museum, Honolulu, Hawaii) 29194, 2 specimens SL 20.5 and 27 mm, same data as USNM 265048.

**Diagnosis.** First dorsal fin low, with 5 or 6 feeble closely set spines and large jet-black spot on the middle part of membrane. Second

dorsal fin with 19–20 unbranched soft rays. Anal fin with 22–23 soft rays, all except the extreme ones branched. Pectoral fin rays 19–20. Head 2.6–2.8 in SL, length of snout 1.3–1.7 in orbit length. Dorsal operculum in the eye present. Gill rakers 11–14. Vomerine teeth well developed.

**Description.** Body elongate, subcylindrical, tapering to tail. Scales large, cycloid, deciduous; two rows between base of dorsal fins and lateral line; (about 30 to 31 in a straight lateral line as counted partially from scale pockets in 2 paratypes). (Vertebrae 32 including hypural plate in stained paratype).

Head large, depressed; no evidence of scales anywhere (a few scales traced on opercles in larger paratypes). Mouth terminal, with lower jaw slightly shorter than upper. Upper jaw protractile, ending below center of eye, its posterior end slightly notched, anterior tip of maxillary with strong spine directed forward, protruding through skin. Eye with dorsal operculum (=dorsal iris flap or iris lappet; see Nelson, 1982); diameter of orbit 1.4 (1.3–1.7) times of snout length; interorbital very narrow. Anterior nostril tubed, posterior one a simple pore. Feeble spine along dorsal margin of opercle; subopercle pointed posterodorsally into another feeble spine (not evident in some paratypes). Opercular membrane enlarged, with serrations along upper margin. Branchiostegal membranes separated, extending far forward; (7 branchiostegals in stained paratype). Gill rakers short and broad, 1+11 (0 to 1+10 to 13, total 11–14 in 10 paratypes). Teeth small, villiform in two bands on both jaws. Each side

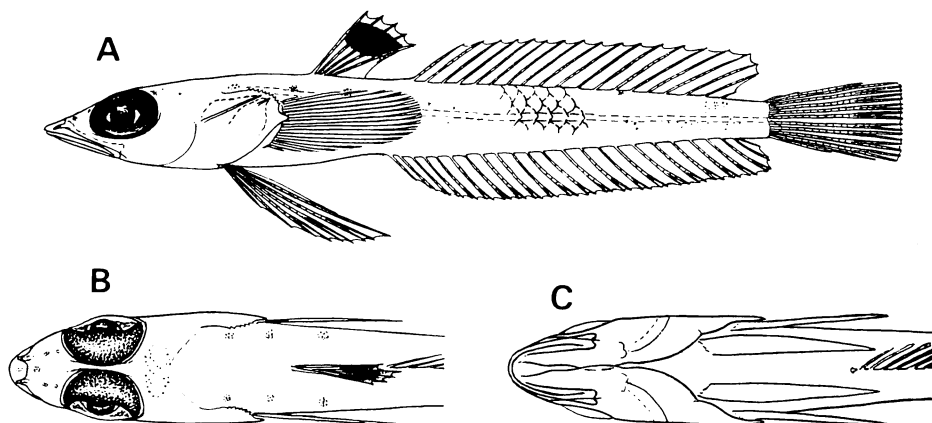


Fig. 1. *Osopsaron karlik*, holotype, ZIL 46748, 30.5 mm SL. A, lateral view (modified from Parin, 1982); B, dorsal view of head and predorsal region; C, ventral view of head and pelvic fin region.

of the head of vomer with 3 teeth arranged transversely (3–9 teeth in one or two rows in paratypes). Palatine teeth absent.

Two dorsal fins with bases well separated.  $D_1$ V (VI in 2 paratypes); spines subequal, thin and flexible (damaged in most paratypes), their bases contiguous and very slightly offset from midline.  $D_2$  19 (20 in 1 paratype only); all rays unbranched. A 23 (22 in 1 paratype); all except first and last branched.  $P_1$  20 (19–20), most rays branched. Pelvic fins well separated, inserted much before pectoral fins.  $P_2$  I, 5, first and last soft rays unbranched (first soft ray also

branched in larger paratypes), elements increasing in length from first, fourth soft ray longest. Caudal fin truncate, with 14 rays, 8 of them branched.

Selected proportional measurements (in percentage of standard length) of holotype and 10 paratypes (or 1 paratype 35 mm SL when indicated by an asterisk): head length 35.7 (35.2–38.4), head width 16.4 (15.0–18.7), snout length 7.9 (7.6–9.2), postorbital length 17.4 (15.2–17.3), length of orbit 10.8 (10.7–14.2), least bony interorbital width 0.7 (0.5–0.7), length of upper jaw 13.8 (13.1–15.2), body depth 13.1 (9.8–

Table 1. Comparison of *O. karlik* and three species placed in *Osopsaron* by Nelson (1982).

	<i>O. karlik</i> (from type series)	<i>O. natalensis</i> (after Nelson, 1982)	<i>O. verecundum</i> (after Jordan and Snyder, 1902)	<i>O. incisum</i> (after Gilbert, 1905)
Dorsal fin rays	V–VI, 19–20	IV–V, 19–20	IV, 18+	V, 17
Anal fin rays	22–23	23–25	22	22
Pectoral fin rays	19–20	18–19	18*	16*
L. l. scales	30–31	31–33	30	30
Gill rakers	(0–1)+(10–13)= 11–14	“about 9 on lower limb”	“very small or absent”	“10 on horizontal limb”
Vomerine teeth	present	“appear to be present”	absent	present
Head in SL	2.6–2.8	2.8–3.0	3.1	2.9
Snout in eye	1.3–1.7	1.8–2.0	1.1	1.3
Pigmentation of $D_1$ membrane	with black spot	“jet black”	“very dark”	“jet black”
Type locality	Nazca Submarine Ridge	Kosi Bay, northern Natal	Suruga Bay, Japan	vicinity of Laysan, Hawaii

\* Rays counted from illustrations (Jordan and Snyder, 1902: fig. 3; Gilbert, 1905: pl. 87).

14.0), caudal peduncle depth 5.0 (4.3–5.2), 1st predorsal length 39.0 (36.9–42.5), 2nd predorsal length 51.5 (50.7–53.6), preanal length 48.5 (46.0–50.8), interdorsal length (between last dorsal spine and first soft ray) 10.5 (9.4–12.4), length of 2nd dorsal fin base 42.7 (37.3–43.2), length of anal fin base 50.8 (45.8–51.7), length of dorsal fin spines: 1st 12.8, 2nd 13.1, 3rd 13.8, 4th 13.8 (11.4\*), 5th 13.8, longest dorsal soft ray 13.4 (10.0\*), longest anal fin ray 9.8 (8.0\*), longest pectoral fin ray 20.0 (16.2\*), length of pectoral fin 20.6 (19.5–21.4), length of pelvic fin 25.6 (25.0–27.2), interpelvic distance 4.3 (4.1–5.1).

Colour in alcohol: body and fins almost entirely pale except for large jet-black spot (or broad band) on the middle part of first dorsal fin membrane and a few scattered melanophores on trunk as shown in Fig. 1.

**Relationship.** The generic placement of *O. karlik* is open to discussion. Clearly, the new species is a member of the percophid subfamily Hemeroetinae and belongs to that poorly differentiated group of genera which includes *Acanthaphritis* Günther, *Pteropsaron* Jordan et Snyder and *Osopsaron* Jordan et Starks. Most of all it resembles *O. verecundum* (Jordan et Snyder), *O. incisum* (Gilbert) and *O. natalensis* Nelson assigned by Nelson (1982) to *Osopsaron* as having low dorsal and anal fins, branched rays in anal fin and scaled cheeks (two last characters were not checked in all species). Therefore the new species is considered here in the same genus rather than in *Pteropsaron* where it was tentatively placed as *P. incisum*(?) earlier (Parin, 1982).

Differences among the four known species of *Osopsaron* are not sharp but permit species recognition by combination of characters listed in Table 1. Also, their distributional ranges appear to be restricted and widely separated (*O. verecundum*, *O. incisum* and *O. natalensis* are known, correspondingly, only from Japan, Hawaii and Natal).

**Remarks.** Regretably, I had no opportunity to examine personally any species of *Osopsaron* other than *O. karlik*. All 17 specimens of “*incisum*” borrowed from the Bernice P. Bishop Museum in Honolulu (4 lots: BPBM nos. 23681, 23727, 24260 and 24871) proved to represent another undescribed hemeroetinae species char-

acterized by dorsal spines closely set (as in both *Pteropsaron* and *Osopsaron*), by high median fins and absence of dorsal operculum in the eye (as in *Pteropsaron*), and by branched anal fin rays (as in *Osopsaron*). Among other features these specimens differ from descriptions of the two known species of *Pteropsaron*, *P. evolans* Jordan et Snyder of Japan and *P. heemstrai* Nelson of Natal (*P. neocaledonicus* Fourmanoir et Rivaton, 1979 should be excluded from this genus as well as, probably, from the Hemeroetinae) in having not the fourth but first dorsal spine most elongated (extends near to the end of second dorsal fin) and in less numerous median fin rays (D V, 19 vs. VI, 21–22; A 23 vs. 25–27). They also have some minor morphometric and meristic differences distinguishing them from every species of *Osopsaron*: *O. karlik*, for example, has more numerous pectoral fin rays ( $P_1$  19–20 vs. usually 18, one count of 17 and one of 19 recorded in 34 examined fins) and longer interdorsal distance (9.4–12.4% SL vs. 6.5–8.9%).

Thus, the undescribed Hawaiian species shares diagnostic characters with both *Pteropsaron* and *Osopsaron* considered in the narrow sense of Nelson (1982). The necessity of revising the generic criteria in the Hemeroetinae is evident.

**Etymology.** The name *karlik* (meaning “a dwarf” in Russian) is proposed in accordance with the small size of examined specimens. Grammatically, it should be treated as a noun in apposition.

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#### Literature cited

- Fourmanoir, P. and J. Rivaton. 1979. Poissons de la pente récifale externe de Nouvelle-Calédonie et des Nouvelles-Hébrides. Cah. Indo-Pacif., 1(4): 405–443.
- Gilbert, C. H. 1905. The deep-sea fishes of the Hawaiian Islands. Bull. U.S. Fish Comm., 23: 577–713, pls. 66–101.
- Jordan, D. S. and J. O. Snyder. 1902. A review of

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- the trachinoid fishes and their supposed allies found in the waters of Japan. Proc. U.S. Natn. Mus., 24(1263): 461-497.
- Nelson, J. S. 1982. *Pteropsaron heemstrai* and *Osopsaron natalensis* (Perciformes: Percophidae), new fish species from South Africa, with comments on *Squamiceedia obtusa* from Australia and on the classification of the subfamily Hemerocoetinae. Spec. Publ. J.L.B. Smith Inst. Ichthyol., (25): 1-11.
- Parin, N. V. 1982. Additions to the list of fishes of the Nazca Submarine Ridge and adjacent area. In *Insufficiently studied fishes of the open ocean*. Inst. Okeanol. Akad. Nauk SSSR: 48-54. (In

Russian with English abstract).  
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**Nazca Submarine Ridge から採集されたホカケトラギス科の 1 新種 *Osopsaron karlik***

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Nazca Submarine Ridge の水深 300~395 m から、11 個体のホカケトラギス科の新種 *Osopsaron karlik* が採集された。本種は日本のヒメトラギス *O. verecundum*, ハワイの *O. incisum* およびナタールの *O. natalensis* から、鰓耙数、鱗条数、第 1 背鱗の色彩および長い頭部などの形質で区別される。