

A New Species of the Genus *Laemonema* (Moridae, Gadiformes) from the Tropical Southeastern Pacific

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Abstract *Laemonema yuvto* sp. nov. is described from a single specimen 191 mm SL from the Sala y Gomez Ridge. Although this species is similar to *L. robustum* and *L. filodorsale* in most proportions of head and body, it differs from both in having shorter second ray in first dorsal fin and more rays in second dorsal and anal fins. It also differs from *L. robustum* in maxillary not reaching the vertical from posterior margin of orbit and shorter pelvic fin, and from *L. filodorsale* in longer pelvics, fewer oblique rows of scales above lateral line and the absence of enlarged teeth in both jaws.

The fish fauna of guyots rising from the crests of the Nazca and Sala y Gomez submarine Ridges in the tropical southeastern Pacific Ocean is very distinctive. Of 170 species of fishes recorded from this area at depths of 160–580 m, 62 species (44%) are not known to occur outside of the region between the Easter Island in the west and the Juan Fernandez Islands in the east.

Yet another species of *Laemonema* Günther was discovered here in addition to *L. rhodochir* (Parin, 1984). This species was superficially very similar to *L. filodorsale* Okamura which, too, was recorded together with *L. rhodochir* (described under the name *L. palauense*) from the Kyushu-Palau Ridge (Okamura, 1982). However, fish from the Sala y Gomez Ridge was distant from both *L. filodorsale* and its near relative, *L. robustum* Johnson, as well as from any other known *Laemonema*. Therefore, we decided to describe this specimen as a new species.

Laemonema yuvto sp. nov.

(Fig. 1)

Holotype. ZIN (Zoological Institute, Leningrad) 49186, mature female, 191 mm SL, Sala y Gomez Ridge, 25° 10' S, 90° 19' W, R/V Professor Shtokman, Sta. 1977, 1–2 May 1987, bottom shrimp trawl at 545–600 m.

Diagnosis. A species of *Laemonema* with a not globular head, almost terminal mouth; maxillary extending to a vertical from posterior margin of pupil; both jaws without enlarged teeth, all teeth uniform; oral cavity unpigmented and well developed barbel; snout naked except for a band of embedded scales extending on each side from interorbital to level of

anterior nostril; vertebrae 15 + 36 = 51; modified lateral line scales 29–30; scales in longitudinal row about 135, scales between origin of first dorsal fin and lateral line 13; gill rakers on first arch 18; D₂ 62, A 53, P₁ 30–31; 2nd ray of first dorsal fin elongated into a short filament; pelvic fins reaching far beyond anal fin origin; all fin membranes scaleless.

Description of holotype. Body elongate, compressed posteriorly, deepest at anus, gradually tapered. Vertebrae 15 + 36 (ural complex of pu₁ + u₁ and u₂ not included). Scales small, covering entire body and posterior part of head behind middle of eye; only three uniserial, embedded scale rows extending anteriorly to middle of eye: supraorbital row reaching level of anterior nostril (Fig. 2A), suborbital row reaching anterior margin of eye, and mandibular row extending along posterior half of lower jaw; no scales on fin membranes, snout, lips, gular and branchiostegal membranes. Lateral line with ca. 5 continuous scales anteriorly and 25 (24 on right side) interrupted scales, running straight behind its mid-length, most probably, reaching posterior end of caudal peduncle. Scales in longitudinal row just above lateral line ca. 135, between origin of first dorsal fin and lateral line 13. Anus below 8th ray of second dorsal fin. Body cavity not extending behind anal fin origin. Pyloric caeca 7.

Head rather large, depressed anteriorly. Interorbital space almost flat, equal to eye diameter. Nostrils before eye, anterior one tubular. Snout blunt, evenly rounded. Mental barbel well developed. Mouth large, almost terminal, maxillary extending to a vertical from posterior margin of pupil. Teeth minute, rough, of equal size, in broad bands in both

jaws; anterior portions of maxillary and dentary with 8–9 and 6 tooth rows respectively. Vomerine teeth in round patch. Palatines edentate. Branchiostegals 7. Gill openings wide, branchiostegal membranes connected with each other just behind a vertical from posterior margin of eye, united with isthmus at level of posterior margin of pupil. Last gill slit restricted to middle third of 4th arch. Gill rakers on first arch slender, except for two anterior and one dorsalmost, 5+13 in external row and 3+11 in internal row.

D₁ 6, D₂ 62, A 53, P₁ 31 (30 on right side), P₂ 2, C 28. First dorsal fin origin behind a vertical from insertion of pectoral fin, anteriormost ray diminutive, hidden under skin, 2nd ray longest, elongated into a short filament. Second dorsal fin well separated from first dorsal fin. Anal fin origin below 10th ray of second dorsal fin. Pectoral fins reaching 3rd ray of anal fin. Pelvic fins inserted below angle of preopercle, reaching 4–5th ray of anal fin. Caudal fin rather rounded.

Selected measurements (in percentage of SL): head 28.0, eye 5.1, interorbital 5.1, snout 8.5, maxillary 13.9, barbel length 3.5, head depth 15.6, head width 16.6, suborbital 2.8, internarial 1.0, body depth 19.9, body width 11.8, depth of caudal peduncle 2.5, snout to anus 45.4, pelvic fin insertion to anus 21.5, predorsal 30.0, preanal 47.6, prepelvic 22.0, interpelvic 7.4, pectoral fin length 17.8, pelvic 26.9, longest (2nd) ray of first dorsal fin 9.2, first dorsal fin base 2.3, second dorsal fin base 61.3, anal fin base 50.7.

Colour in alcohol: body yellowish, mottled with grayish; upper part of head, snout, suborbital space, jaws and barbel gray; oral and branchial cavities unpigmented; peritoneum jet-black; dorsal and anal fins blackish, other fins grayish.

Distribution. The only known specimen was collected from the table of a rather deep seamount located in the middle part of the Sala y Gomez Ridge at 545–600 m.

Etymology. As a species name, the abbreviation “*yuvto*” is proposed which should be treated as a noun in apposition. It is based on the vernacular term used by Russian fishermen for the southeastern Pacific Ocean (“Yugo-Vostochnaya chast Tikhogo Okeana”).

Comparisons. Genus *Laemonema* s. str. comprises about 14 species (Paulin, 1989). There are several species groups within the genus and its revision seems necessary. Such a revision, however, is outside the scope of this study, and we shall not

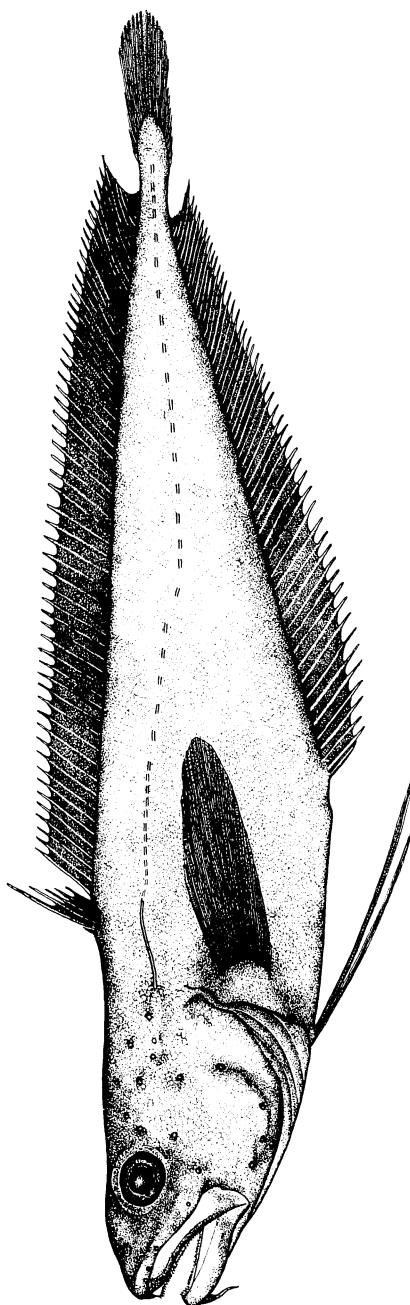


Fig. 1. *Laemonema yuvto* sp. nov., ZIN 49186, holotype, 191 mm SL, Sala y Gomez Ridge, 25° 10' S, 90° 19' W at 545–600 m.

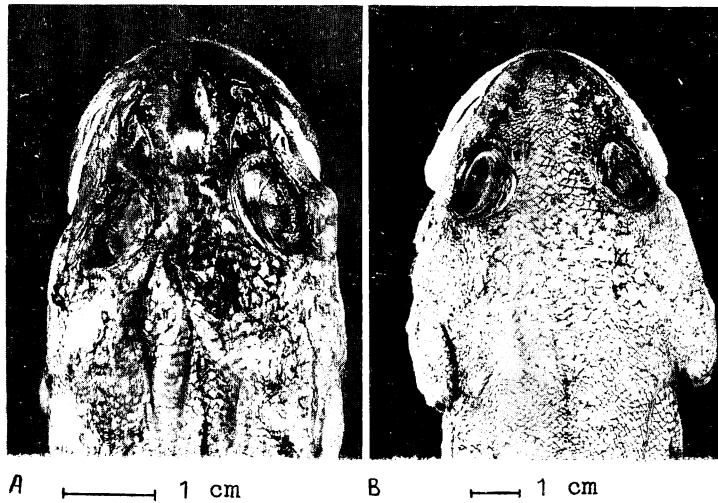


Fig. 2. Squamation of head. View from above. A, *Laemonema yuvto* sp. nov., ZIN 49186 holotype; B, *L. filodorsale* Okamura, MSU (Zoological Museum, Moscow State University) 16049, 285 mm SL, from the Kyushu-Palau Ridge.

discuss the position of our new species in the genus as a whole. Proportions of the head and body as well as counts of *L. yuvto* are most closely similar to *L. robustum* Johnson from off Madeira and *L. filodorsale* Okamura from the Kyushu-Palau Ridge. We examined one specimen from the latter species, 285 mm, SL collected October 1984 from near the type-locality: 27° 55' N, 134° 44' E, depth 800–1,200 m. However, both of these (as characterized by Maul, 1952; Okamura, 1982; Cohen, 1986) have fewer dorsal fin rays (51–54 and 52–56 vs. 62) and anal fin rays (46–49 and 49–52 vs. 53), and a long and filamentous second ray in first dorsal fin (vs. relatively short and non-filamentous). Additionally *L. yuvto* differs from *L. filodorsale* in having a snout not scaled dorsally (vs. scaled; see Fig. 2), unpigmented oral cavity (vs. grayish), longer pelvics (vs. not reaching anus), and fewer oblique scale rows between origin of 1st dorsal fin and lateral line (13 vs. 17–19), no enlarged teeth in the external row of both jaws (vs. presence of those in external rows in premaxillary and dentary). It also differs from *L. robustum* in having a shorter upper jaw not reaching the vertical from the posterior rim of orbit and shorter pelvics (reaching the base of 4–5th anal fin ray vs. 9–10th).

L. yuvto may be distinguished from *L. rhodochir* Gilbert known from off Hawaii (type locality), Kyushu-Palau Ridge (Okamura, 1982 as *L. palauense*), and seamounts of the Sala y Gomez Ridge (Parin, 1984) by having shorter second ray of the

first dorsal fin (32.9 vs. 36.6–47.9% head length, one specimen 58.5), more pectoral fin rays (30–31 vs. 22–24), fewer anal fin rays (53 vs. 57–63), and a different pattern of vomerine teeth patch (round vs. elongate).

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Literature cited

- Cohen, D. M. 1986. Moridae. Pages 713–723 in P. J. P. Whitehead, M. L. Bauchot, J.-C. Hureau, J. Nielsen and E. Tortonese, eds. Fishes of the Northeastern Atlantic and the Mediterranean. Vol. II. UNESCO, Paris.
- Maul, G. E. 1952. Monografia dos peixes do Museu Municipal do Funchal. Familia Gadidae e Bregmacerotidae. Bol. Mus. Municip. Funchal., 6(15): 5–51.
- Okamura, O. 1982. *Laemonema filodorsale* Okamura, *Laemonema palauense* Okamura. Pages 132–139, pls. 82–83 in O. Okamura, K. Amaoka and F. Mitani, eds. Fishes of the Kyushu-Palau Ridge and Tosa Bay. Japan Fisheries Resource Conservation Assoc., Tokyo.
- Parin, N. V. 1984. Three new species of the genus *Physiculus* and other Moridae (Gadiformes) from submarine rises in the southeastern Pacific. Vopr. Ikhtiol., 24(4):

531-544. (In Russian.)

Paulin, C. D. 1989. Moridae: overview. Pages 243-252 in D. M. Cohen, ed. Papers on the systematics of gadiform fishes. Nat. Hist. Mus. Los Angeles Cty., Sci. Ser., (32).

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南太平洋東部産チゴダラ科の1新種

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南太平洋東部の Sala y Gomez 海嶺 (25°10' S, 90°19' W, 545-600 m) で採集された1個体に基づき、チゴダラ科イトヒキダラ属の新種 *Laemonema yuvto* を記載した。本種は体形では *L. robustum* と *L. flodorsale* に似る。しかしながら、両種とは第1背鰭の第2鰭条が糸状に延長しないこと、第2背鰭と臀鰭の鰭条が多いことで区別される。さらに、前者とは腹鰭が短いこと、主上顎骨が短いことで、後者とは腹鰭が長いこと、側線上横列鱗数が少ないこと、吻部有鱗域が狭いこと、口腔が着色していないこと、両顎に肥大した歯がないことでも区別される。