

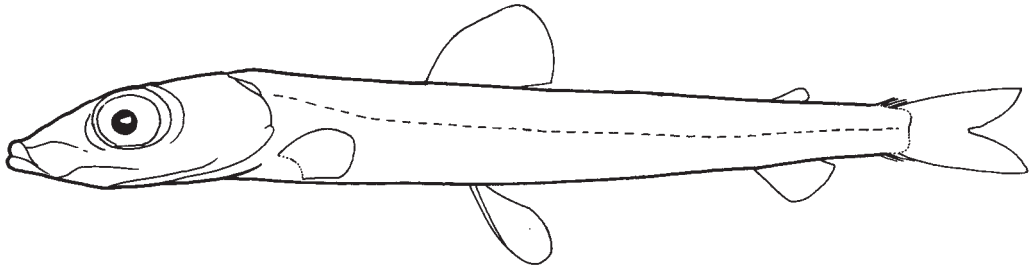
Order OSMERIFORMES

ARGENTINIDAE

Argentines

by J.R. Paxton and D.M. Cohen

Diagnostic characters: Small to moderate-sized (to 60 cm) osmeriform fishes, body slender to moderate, moderately compressed, and generally elongate. Head small. Eye moderate to large, not tubular; interorbital space not narrow. **Snout moderate, generally equal to eye diameter.** Mouth small; premaxilla present. Jaw teeth small; premaxilla and maxilla without teeth; dentary teeth present or absent; teeth on vomer and palatine; **teeth present or absent on tongue, sometimes enlarged and recurved.** Fins without spines; dorsal fin somewhat before middle of body, with 10 to 14 rays; anal fin far behind dorsal fin, with 10 to 17 rays; pelvic fins under or slightly behind dorsal fin, with 10 to 15 rays; **pectoral fins close to ventral edge of body, with 12 to 25 rays;** dorsal adipose fin present over anal fin. Lateral line running straight back on midline of body, not extending onto tail. Scales cycloid or spinose, deciduous. No light organs or luminous tissue. **Branchiostegal rays 4 to 6.** Total vertebrae 43 to 70. **Colour:** light, often with silvery and/or dark lateral band.



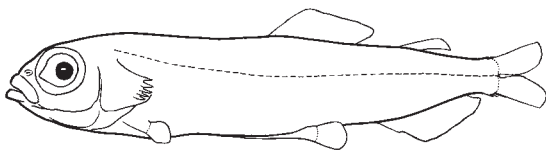
Habitat, biology, and fisheries: Benthopelagic on the outer shelf and upper slope, rarely to 1 400 m. Feed as carnivores on epibenthic and some pelagic invertebrates and fishes. Moderately common to rare fishes, rarely of commercial importance.

Remarks: Two genera with some 20 species throughout the world ocean in tropical to temperate and northern boreal latitudes; however, they are rarely found in the tropical Pacific. A comprehensive revision of the family is needed.

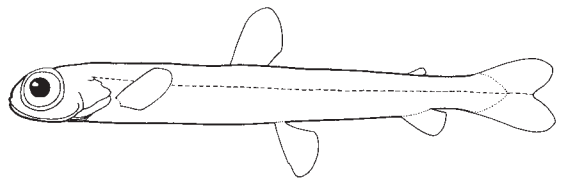
Similar families occurring in the area

Bathylagidae: pelvic fins with 6 to 11 rays; pectoral fins with 7 to 13 rays; branchiostegal rays 2 or 3; no silvery or dark lateral band.

Microstomatidae: anal fin with 7 to 10 rays; pectoral fins on side of body, with 7 to 14 rays; lateral line extending onto tail.



Bathylagidae



Microstomatidae

List of species occurring in the area

Argentina sp.

Glossanodon struhsakeri Cohen, 1970

Reference

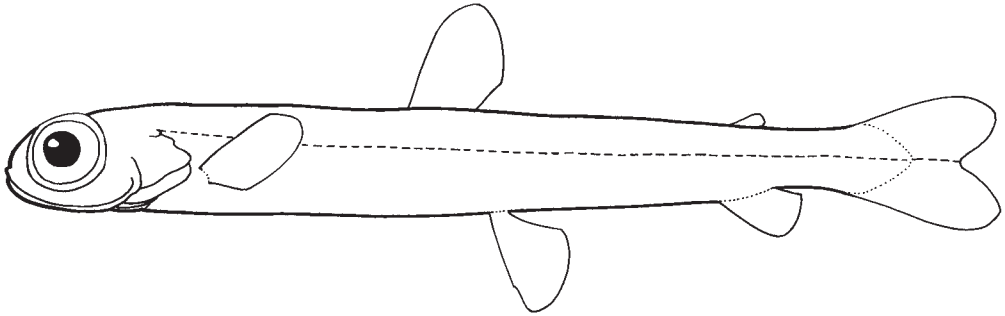
Ahlstrom, E. H., H. G. Moser, and D. M. Cohen. 1984. Argentinoidae: development and relationships. In *Ontogeny and systematics of fishes*, edited by H.G. Moser et al. *Amer. Soc. Ichthyol. Herpetol. Spec. Publ.*, (1):155-169.

MICROSTOMATIDAE

Microstomatids

by J.R. Paxton and D.M. Cohen

Diagnostic characters: Medium-sized (to 25 cm) osmeriform fishes, body slender, subcylindrical anteriorly, slightly compressed behind dorsal fin, and elongate to very elongate. Head small. Eye large and lateral, or tubular and directed anteriorly; interorbital space broad or narrow. Snout small to very small, much less than eye diameter. Mouth small; premaxilla present. Teeth small; premaxilla and maxilla without teeth; teeth present on dentary, vomer, and palatine; teeth absent on tongue. Fins without spines; dorsal fin somewhat before middle of body or posterior, with 9 to 12 rays; anal fin far or close behind dorsal fin, with 7 to 10 rays; pelvic fins far before to slightly behind dorsal fin, with 8 to 12 rays; **pectoral fins on side of body, with 7 to 14 rays**; dorsal adipose fin present or absent. **Lateral line running straight back on midline of body, extending onto tail.** Scales cycloid, deciduous. No light organs or luminous tissue. Branchiostegal rays 3 or 4. Total vertebrae 41 to 50. **Colour:** silvery, or dark with brassy sheen.



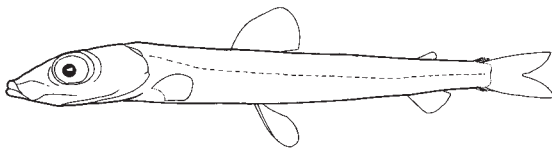
Habitat, biology, and fisheries: Meso- and perhaps benthopelagic. Feed as carnivores on zooplankton. Uncommon deep-sea fishes of no commercial importance.

Remarks: Three genera with about 16 species throughout the world ocean from subarctic to subantarctic latitudes. More species could be expected in the area.

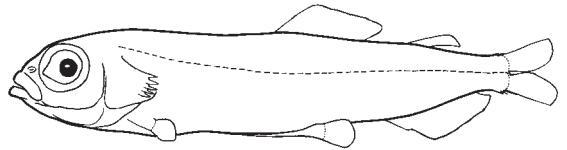
Similar families occurring in the area

Argentinidae: anal fin with 10 to 17 rays; pectoral fins close to ventral edge of body, with 12 to 25 rays; lateral line not extending onto tail.

Bathylagidae: pectoral fins close to ventral edge of body; lateral line when present not extending onto tail.



Argentinidae



Bathylagidae

List of species occurring in the area

Nansenia ardesiaca Jordan and Thompson, 1914

Nansenia pelagica Kawaguchi and Butler, 1984

Xenophthalmichthys danae Regan, 1925

Reference

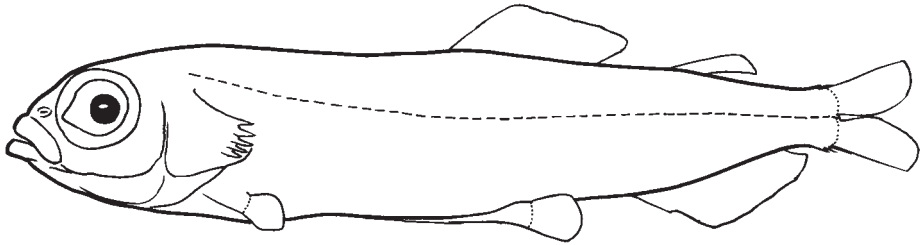
Kawaguchi, K. and J. L. Butler. 1984. Fishes of the genus *Nansenia* (Microstomatidae) with descriptions of seven new species. *Los Angeles Co. Mus. Nat. Hist. Contrib. Sci.*, (352):22 p.

BATHYLAGIDAE

Deepsea smelts

by J.R. Paxton and D.M. Cohen

Diagnostic characters: Small to moderate-sized (to 20 cm) osmeriform fishes, body slender to moderate, moderately compressed, and generally elongate. Head small. Eye moderate to large, not tubular; interorbital space not narrow. Snout small, much less than eye diameter. Mouth small; premaxilla present. Teeth small; premaxilla and maxilla without teeth; dentary teeth often compressed; teeth of vomer conical; palatine teeth present or absent. Fins without spines; dorsal fin at or somewhat before middle of body, with 6 to 13 rays; anal fin far behind dorsal fin, with 10 to 28 rays; pelvic fins under or slightly before dorsal fin, with 6 to 11 rays; **pectoral fins close to ventral edge of body, with 7 to 13 rays**; dorsal adipose fin present or absent. Lateral line when present running straight back on midline of body, not extending onto tail. Scales cycloid, deciduous. Light organs absent. **Branchiostegal rays 2 or 3**. Total vertebrae 38 to 55. Colour: either dark, with black skin fragments around scale pockets, or light, with considerable amounts of silvery pigment on head and body.



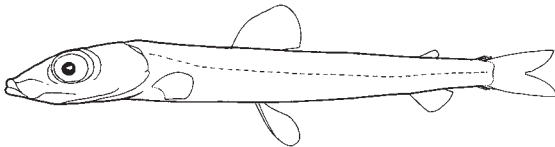
Habitat, biology, and fisheries: Meso- and bathypelagic. Feed as carnivores on zooplankton. Rare to abundant deep-sea fishes of no commercial importance.

Remarks: Eight genera with 22 species throughout the world ocean from tropical to polar latitudes. More species are expected in the area. This family has been lumped with the Microstomatidae by Johnson and Patterson (1996).

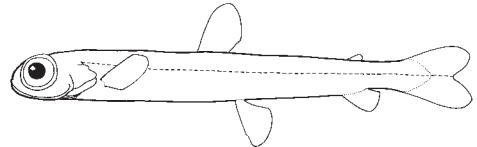
Similar families occurring in the area

Argentinidae: pelvic fins with 10 to 15 rays; pectoral fins with 12 to 25 rays; branchiostegal rays 4 to 6; silvery and/or dark lateral stripe usually present.

Microstomatidae: pectoral fins at side of body; lateral line extending onto tail.



Argentinidae



Microstomatidae

List of species occurring in the area

Bathylagus nigrigenys Parr, 1931

Dolicholagus longirostris (Maul, 1948)

References

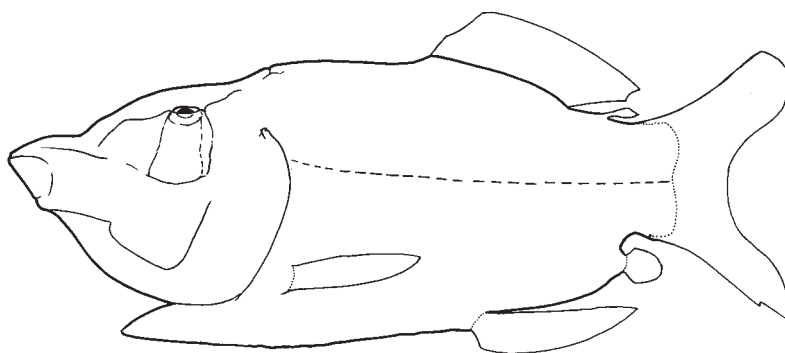
- Johnson, G.D. and C. Patterson. 1996. Relationships of lower euteleostean fishes. In *Interrelationships of fishes*, edited by M.L.J. Stiassny et al. San Diego, Academic Press, pp. 251-332.
- Kobyliansky, S.H. 1986. Materials for a revision of the family Bathylagidae (Teleostei, Salmoniformes). *Trudy Instit. Okeanol. Akad. Nauk*, 121:6-50. [in Russian]

OPISTHOPROCTIDAE

Barreleyes

by J.R. Paxton and D.M. Cohen

Diagnostic characters: Moderate-sized (to 50 cm) osmeriform fishes, body slender, subcylindrical, and elongate or short and laterally compressed. Head small to moderate. **Eye moderate, tubular in all but 1 species, directed anteriorly, dorsally, or dorsolaterally; interorbital space narrow. Snout moderate, pointed in most, equal to or longer than eye diameter.** Mouth small; **premaxilla much reduced or absent.** Teeth small; maxilla without teeth; dentary teeth present or absent; vomer with teeth; palatine teeth present or absent. Fins without spines; dorsal fin in posterior half of body, with 8 to 16 rays; anal fin behind dorsal fin, with 8 to 14 rays, none or only a few rays visible externally in 1 species of *Opisthoproctus*; **pelvic fins lateral in some, often elongate, under or slightly before dorsal fin, with 7 to 12 rays;** pectoral fins lateral or close to ventral edge of body, with 9 to 20 rays; dorsal adipose fin present or absent. Lateral line running straight back on midline of body, not extending onto tail. Scales cycloid, deciduous. **Light organ usually present as internal diverticulum off rectum; no other light organs.** Branchiostegal rays 2 to 4. Total vertebrae 31 to 84. **Colour:** head often transparent, body brown-black ventrally, or blotched, or dusky.



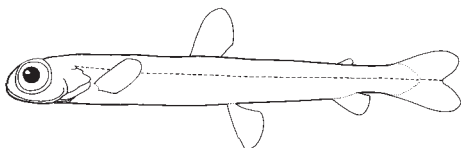
Habitat, biology, and fisheries: Meso- and bathypelagic. At least 1 species feeds on siphonophores. Rare deep-sea fishes of no commercial importance.

Remarks: Six genera with about 11 species throughout the world ocean in tropical and temperate latitudes. The Pacific species require revision. More species are expected in the area.

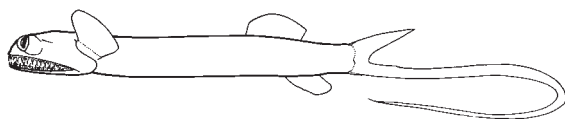
Similar families occurring in the area

Microstomatidae: snout not pointed, much shorter than eye diameter; lateral line extending onto tail; no photophores or light organs present.

Giganturidae: snout not pointed, shorter than eye diameter; mouth large with jaws extending far behind eyes; no gill rakers; no scales; lower caudal-fin rays greatly elongated.



Microstomatidae



Giganturidae

List of species occurring in the area

Dolichopteryx longipes (Vallant, 1888)

Opisthoproctus grimaldii Zugmayer, 1911

Opisthoproctus soleatus Vaillant, 1888

Winteria telescopa Brauer, 1901

Reference

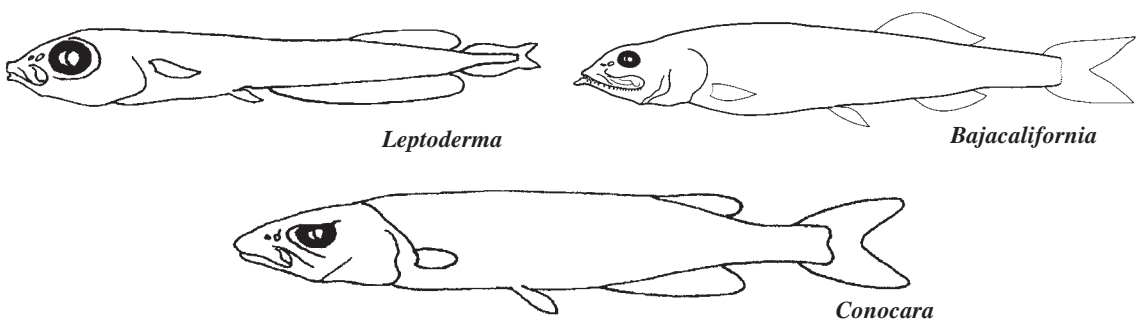
Heemstra, P.C. 1986. Family Opisthoproctidae. In *Smiths' sea fishes*, edited by M.M. Smith and P.C. Heemstra. Johannesburg, Macmillan, pp. 216-218.

ALEPOCEPHALIDAE

Slickheads

by Y.I. Sazonov and D.F. Markle

Diagnostic characters: Body usually fusiform (size from 60 to 70 cm standard length, usually 15 to 50 cm), more or less compressed laterally; rarely elongate, almost eel-like (*Leptoderma*), or moderately deep (*Einara*, some *Conocara* species). Head from very small, less than 20% standard length (*Photostylus*, *Xenodermichthys*), to extremely large, about 40% standard length (*Asquamiceps*, *Leptochilichthys agassizii*). Eyes usually moderate to large, rarely small (e.g. *Photostylus*), with aphakic aperture (pupil elliptical in shape, expanded in front of lens). Snout variable in shape and length, from short and obtuse (*Bathylaco*) to beak-like (*Narctes*, *Rinoctes*, *Alepocephalus longiceps*), or very long and tubular (*Aulastomatomorpha*). Premaxillae without anteriorly directed tusks bearing enlarged teeth, variable in shape and length, usually with teeth (except in *Leptochilichthys* and *Mirognathus*) in 1 to many series (multiserial in *Bathylaco* and *Narctes*, biserial in *Bathytroctes*, *Talismania*, some *Conocara*, and a few others; if biserial, teeth in outer series modified into horizontally directed, plate-like, subtriangular or semicircular in shape, and few in number). Maxilla from very short (*Aulastomatomorpha*) to extremely long (*Bathylaco*, *Leptochilichthys*), toothed (*Bathylaco* and *Narctes* with teeth in 2 or more rows, in 9 other genera uniserial) or toothless (in 10 genera). One or 2 supramaxillae. Dentary usually with small uniserial teeth (multiserial in 3 genera, toothless in *Mirognathus*, modified into low semicircular plates in *Herwigia*). Gill openings usually moderately wide (few exceptions). Gill rakers lanceolate, covered with small denticles laterally. All fin rays soft. **Dorsal and anal fins usually in posterior third of body**; origin of dorsal fin in advance of anal fin, opposite to it, or rarely, anal-fin origin in advance of dorsal-fin origin (*Einara*, *Conocara*, *Leptoderma*, *Aulastomatomorpha*). Caudal fin forked, with 10 principal rays in upper lobe and 9 principal rays in lower lobe (less in *Leptoderma*). Procurrent caudal-fin rays usually not numerous, but extending forward on caudal peduncle in *Conocara* and *Leptoderma*. In some *Leptoderma*, dorsal and anal fins confluent with caudal fin. Pectoral fins set low on body (except in *Bellocia*, *Conocara*, and few others), with narrow base (but fan-like in *Photostylus* and *Asquamiceps*); pectoral fins rudimentary or absent in *Mirognathus*. Pelvic fins abdominal, with 5 to 10 rays, sometimes with unpaired splint-like bone anteriorly. **Adipose fin absent.** Anus usually just in front of anal fin, rarely placed more anteriorly (in *Bellocia* and, especially, *Rinoctes* and *Photostylus*). **Head usually scaleless** (except in some *Bathytroctes*). Body covered with cycloid scales (almost non-imbricate in *Asquamiceps velaris*) in most (except in 6) genera. Scales variable in size, from 35 to more than 200 in longitudinal series, usually 40 to 130. Lateral line with modified scales in both scaled and naked forms (few exceptions). No postcleithral luminous gland. Photophores usually absent, except in *Photostylus*, *Microphotolepis*, *Xenodermichthys*, and some *Rouleina*. Upper elements of posterior 2 gill arches form an expanded pouch (cruminal organ) on each side. **Swimbladder absent.** **Colour:** all representatives usually darkly coloured without difference in coloration of dorsal and ventral parts; head usually black to dark brown, rarely light brown, blue or grey; body black, brown, or grey; fins dusky to blackish.

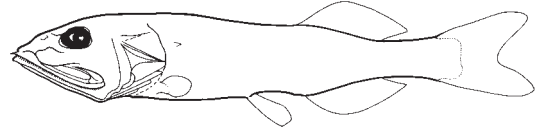


Habitat, biology, and fisheries: Most species are benthic, inhabiting water layers above the continental slope and oceanic ridges and rises from just over bottom to several hundred metres above it; few species penetrating into the bathy- and mesopelagic zone of the open ocean and only a single species (*Microphotolepis schmidti*) is known from the epipelagic zone; few species are known from abyssal plains. Depth range for the whole family is from 100 to more than 5 000 m, but most genera and species are known from 800 to 2 500 m. Many species of Alepocephalidae form small groups or schools but only a few of them (species from temperate and subtropical areas, e.g. *Alepocephalus agassizii*, *A. bairdii*, *A. australis*) occur in concentrations sufficient for deep-sea fisheries. There are many rare, probably solitary species known from few records. Food and feeding of most species are poorly known, but in those studied, jelly-fishes, salps, pyrosomes, ctenophores, etc. were the main food items; predators are few (*Bathylaco*,

Narctes, possibly, *Bathyprion*); some of the smallest species (*Rinoctes nasutus*, *Photostylus pycnopterus*, and a few others) may feed on mesoplanktonic crustaceans. Data on reproduction of most alepocephalids are unavailable. In general, fecundity is very low (from about 10 to several hundred eggs, rarely more than 1 000). The eggs are large (ovarian up to 8 mm in diameter) and most probably laid near bottom. There are no specialized fisheries for alepocephalids. They may be trawled as bycatch during deep-sea fisheries, but within the area, no alepocephalid species is of commercial importance.

Similar families occurring in the area

Platyroctidae: black dermal papilla of postcleithral luminous gland present (absent in Alepocephalidae).



Platyroctidae

Key to the genera of Alepocephalidae

- 1a. Body completely scaleless (in some genera or species tubular scales present in lateral line only) → 2
- 1b. Body covered with scales (at least scale pockets or their remnants present) → 7

- 2a. Body notably elongate, low, almost eel-like (maximum body depth less than 15% standard length, usually about 10%); anal-fin base longer than dorsal-fin base, its origin well in advance of dorsal-fin origin; both dorsal and anal fins frequently confluent with caudal fin, or, if fins separate, procurrent caudal-fin rays numerous and extend far forward on caudal peduncle close to posterior end of dorsal and anal fins (Fig. 1). . . *Leptoderma*
- 2b. Body less elongate, not eel-like (maximum body depth usually more than 15% standard length); anal-fin base shorter than or approximately equal to dorsal-fin base, their origins approximately opposite, or dorsal-fin origin well in advance of anal-fin origin; dorsal and anal fins never confluent with caudal fin; procurrent caudal-fin rays well away from posterior end of dorsal and anal fins → 3

- 3a. Dorsal-fin origin well in advance of anal-fin origin, its base longer than anal-fin base; uniserial teeth present on premaxilla, maxilla, vomer, palatines, and basibranchials (sometimes in 2 series); teeth on lower jaw multiserial anteriorly, becoming uniserial posteriorly (Fig. 2) *Rinoctes*
- 3b. Vertical fins subequal and opposite; teeth, when present, in a single series; basibranchials and, usually, vomer and palatines toothless → 4



Fig. 1 *Leptoderma*



Fig. 2 *Rinoctes*

- 4a. Teeth in jaws and inside mouth completely absent; pectoral fins rudimentary or absent; no photophores on body (Fig. 3) *Mirognathus*
- 4b. Teeth present, at least, on premaxilla and dentary, sometimes on maxilla; pectoral fins well developed; photophores present or absent → 5

- 5a. Head small (less than 20% standard length), with oblique upper profile; photophores present, stalked; pectoral fins fan-like, with more than 15 rays; anus placed midway between origins of pelvic and anal fins (Fig. 4) *Photostylus*
- 5b. Head small (about 20% standard length) to large (about 40% standard length), with convex or arcuate upper profile; photophores, if present, not stalked, but nodular; pectoral fins narrow, with less than 10 rays; anus close to anal-fin origin → 6



Fig. 3 *Mirognathus*



Fig. 4 *Photostylus*

- 6a. Dorsal and anal fin each with 16 to 24 rays; 1 or 2 supramaxillae (if 1, photophores rudimentary or absent); maxilla with teeth (Fig. 5) *Rouleina*
- 6b. Dorsal and anal fin each with 25 to 33 rays; only 1 supramaxilla; photophores well developed; maxilla toothless (rarely, few rudimentary teeth present anteriorly) (Fig. 6) *Xenodermichthys*



Fig. 5 *Rouleina*

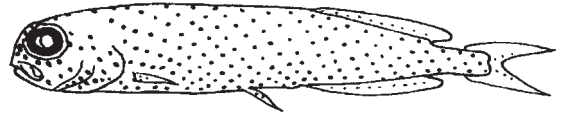


Fig. 6 *Xenodermichthys*

- 7a. Dorsal-fin origin well in advance of anal fin (anal-fin origin from below midlength of dorsal fin to just behind its posterior end); bases of both fins approximately equal, or dorsal-fin base longer than anal-fin base → 8
- 7b. Dorsal and anal fin subequal and opposite, or anal fin well in advance of dorsal fin and its base notably longer than dorsal-fin base. → 14

- 8a. Upper jaw toothless; tongue (basyhyal) absent; suprapreopercle present; branchiostegal rays 12 or 13; only 1 supramaxilla (Fig. 7) *Leptoichilichthys*
- 8b. Premaxilla and maxilla toothed; tongue developed (small in *Bathylaco*); suprapreopercle usually absent (present in *Herwigia*); 10 or less branchiostegal rays → 9

- 9a. Lower jaw appears toothless (low, semicircular plates replace normal conical teeth); teeth on premaxilla and maxilla uniserial; suprapreopercle (sometimes of 2 ossicles) present; 1 supramaxilla (Fig. 8) *Herwigia*
- 9b. Lower jaw with normal conical teeth in 1 or more series; teeth on premaxilla and maxilla from uni- to multiserial; suprapreopercle completely absent; 2, rarely 1, supramaxillae → 10



Fig. 7 *Leptoichilichthys*



Fig. 8 *Herwigia*

- 10a. Upper jaw extends notably behind posterior margin of orbit; teeth in jaws (at least, on premaxilla and anterior part of dentary) multiserial, none modified. → 11
- 10b. Upper jaw extends to about posterior margin of orbit (usually before, rarely slightly behind); teeth on maxilla and dentary uniserial, on premaxilla uniserial (*Bajacalifornia*) to biserial with outer row of plate-like horizontally directed teeth → 12

- 11a. Snout short, obtuse; premaxillae very short, often absent; only 1 supramaxilla; supraorbital moderately long, bordering dorsal margin of orbit (Fig. 9) *Bathylaco*
- 11b. Snout long (longer than orbit), pointed; premaxillae long and deep, those from left and right side meet in front of ethmoid, forming beak-like snout tip; 2 supramaxillae; supraorbital reduced, restricted to anterodorsal part of orbit (Fig. 10) *Narcetes*



Fig. 9 *Bathylaco*



Fig. 10 *Narcetes*

- 12a. Tip of lower jaw with prominent knob ventrally; teeth uniserial (including premaxilla), none modified (Fig. 11) *Bajacalifornia*
- 12b. Tip of lower jaw without prominent knob; teeth on premaxilla biserial, those in external series few, horizontally directed rounded plates (sometimes extending onto maxilla) → 13

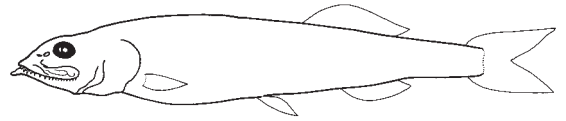


Fig. 11 *Bajacalifornia*

- 13a. Anal fin with 13 to 17 rays; usually more than 29 gill rakers on first arch; caudal vertebrae more than 20 (Fig. 12) *Bathytroctes*
- 13b. Anal fin with 9 to 13 rays; usually less than 31 gill rakers on first arch; caudal vertebrae less than 20 (Fig. 13) *Bellocia*



Fig. 12 *Bathytroctes*



Fig. 13 *Bellocia*

- 14a. Maxilla with teeth → 15
- 14b. Maxilla toothless → 16

- 15a. Teeth on maxilla widely spaced, fang-like; body low (maximum depth about 10 to 13% standard length), elongated; pectoral fins short; 10 to 13 branchiostegal rays (Fig. 14) . . . *Bathypriion*
- 15b. Teeth on maxilla small, densely set; body depth more than 15% standard length; pectoral fins from moderately long to very long (with extremely elongate thread-like first ray); 6 to 8 branchiostegal rays (Fig. 15). *Talismania*

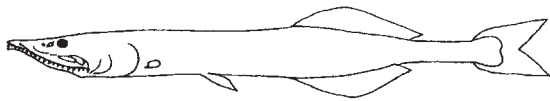


Fig. 14 *Bathypriion*



Fig. 15 *Talismania*

- 16a.** Photophores present on head and body (almost on each scale pocket in adults; suprapreopercle present (Fig. 16) *Microphotolepis*
- 16b.** Photophores absent; no supra-preopercle → 17

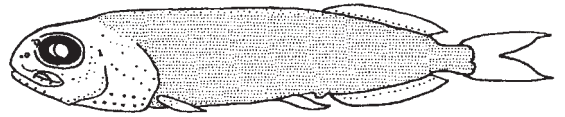


Fig. 18 *Microphotolepis*

- 17a.** Dorsal and anal fin subequal and opposite (except in *Alepocephalus bicolor* with anal fin longer than dorsal fin) → 18
- 17b.** Origin of dorsal well behind anal-fin origin (slightly behind in *Einara*), dorsal-fin base shorter than anal-fin base → 19

- 18a.** Palatine teeth present; 2 supramaxillae; pectoral fins narrow, with 9 to 11 rays (Fig. 17) *Alepocephalus*
- 18b.** Palatine teeth absent; 1 supramaxilla; pectoral fins fan-like, with more than 13 rays (Fig. 18) *Asquamiceps*



Fig. 19 *Alepocephalus*



Fig. 20 *Asquamiceps*

- 19a.** Scales large, less than 70 in longitudinal series just above body midline (Fig. 19) *Einara*
- 19b.** Scales small, more than 80 (usually from about 100 to more than 200) in longitudinal series just above lateral line → 20



Fig. 21 *Einara*

- 20a.** Snout not tubular, upper jaw about equal to or slightly longer than snout (Fig. 20) *Conocara*
- 20b.** Snout tubular, upper jaw more than twice shorter than snout (Fig. 21) *Aulastatomorpha*



Fig. 16 *Conocara*

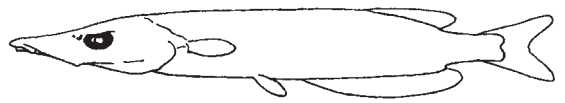


Fig. 17 *Aulastatomorpha*

List of species occurring in the area

Species with a question mark have not yet been reported from the area but are expected to occur there.

- Alepocephalus andersoni* Fowler, 1934
- Alepocephalus antipodanus* (Parrott, 1948)
- Alepocephalus asperifrons* (?) Garman, 1899
- Alepocephalus australis* Barnard, 1925
- Alepocephalus bicolor* Wood-Mason and Alcock, 1891
- Alepocephalus longiceps* Lloyd, 1909
- Alepocephalus longirostris* Okamura and Kawanishi, 1984
- Alepocephalus owstoni* Tanaka, 1908
- ? *Alepocephalus productus* Gill, 1883
- Alepocephalus triangularis* Okamura and Kawanishi, 1984
- Alepocephalus* sp. (*Alepocephalus* sp. 1 of Sazonov and Ivanov, 1980)
- ? *Asquamiceps caeruleus* Markle, 1980
- Asquamiceps hjorti* (Koefoed, 1927)

- Asquamiceps velaris* Zugmayer, 1911
- Aulastomatomorpha phospherops* Alcock, 1890
- Bajacalifornia aequatoris* Miya and Markle, 1993
- ? *Bajacalifornia arcylepis* Markle and Krefft, 1985
- Bajacalifornia calcarata* (Weber, 1913)
- Bajacalifornia microstoma* Sazonov, 1988
- ? *Bathylaco nielseni* Sazonov and Ivanov, 1980
- ? *Bathylaco nigricans* Goode and Bean, 1896
- Bathytroctes microlepis* Günther, 1878
- Bathytroctes squamosus* Alcock, 1890
- Bellocia macrolepis* (Günther, 1887)
- Bellocia pappenheimi* (Fowler, 1934)
- Conocara fiolehti* Sazonov and Ivanov, 1979
- Conocara microlepis* (Lloyd, 1909)
- ? *Conocara murrayi* (Koefoed, 1927)
- Conocara nigrum* (Günther, 1887)
- Conocara krefftii* Sazonov, 1997
- Einara edentula* (Alcock, 1892)
- ? *Einara macrolepis* (Koefoed, 1927)
- ? *Herwigia krefftii* (Nielsen and Larsen, 1970)
- ? *Leptochilichthys agassizii* Garman, 1899
- Leptochilichthys pinguis* (Vaillant, 1888)
- ? *Leptoderma affine* Alcock, 1899
- Leptoderma retropinna* Fowler, 1943
- ? *Leptoderma* sp. n. 1 [Markle and Sazonov]
- Leptoderma* sp. n. 2 [Markle and Sazonov]
- Microphotolepis schmidti* (Angel and Verrier, 1931)
- ? *Narcetes erimelas* Alcock, 1890
- Narcetes lloydi* Fowler, 1934
- Narcetes stomias* (Gilbert, 1890)
- Photostylus pycnopterus* Beebe, 1933
- ? *Rinoctes nasutus* (Koefoed, 1927)
- Rouleina attrita* (Vaillant, 1888)
- Rouleina danae* Parr, 1951
- Rouleina eucla* Whitley, 1940
- Rouleina guentheri* (Alcock, 1899)
- Rouleina livida* (Brauer, 1906)
- Rouleina maderensis* Maul, 1948
- Rouleina squamilatera* (Alcock, 1898)
- Rouleina* sp. n. [Sazonov]
- Talismania antillarum* (Goode and Bean, 1896)
- ? *Talismania brachycephala* Sazonov, 1981
- Talismania longifilis* (Brauer, 1906)
- ? *Talismania mekistonema* Sulak, 1975
- Xenodermichthys copei* (Gill, 1884)
- Xenodermichthys nodulosus* Günther, 1878

References

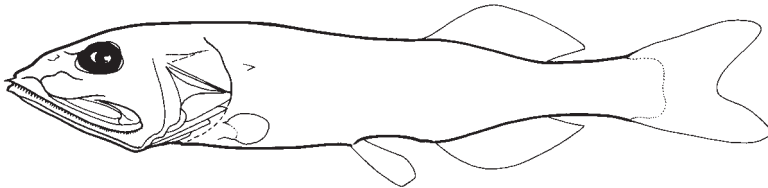
- Sazonov, Y.I. and A.N. Ivanov. 1980. Slickheads (Alepocephalidae and Leptochilichthyidae) from the thalassobathyal zone of the Indian Ocean. *Tr. Inst. Okeanol. Akad. Nauk. SSSR*, 110:7-104. [In Russian, English summ.]
- Sazonov, Y.I., A.A. Balanov, and V.V. Fedorov. 1993. Alepocephaloid fishes (Alepocephaloidei) from the western North Pacific Ocean. *Tr. Inst. Oceanol. Russian Acad. Sci.*, 128:40-68. [In Russian, English summ.]

PLATYTROCTIDAE

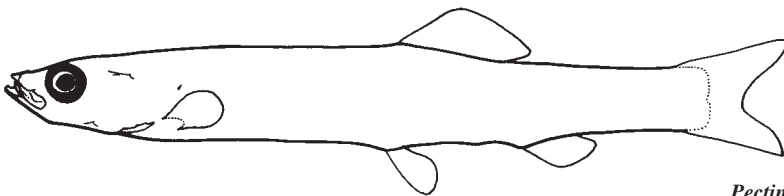
Tubeshoulders

by Y.I. Sazonov

Diagnostic characters: Body fusiform (size to 35 cm, usually between 10 and 25 cm), more or less compressed laterally (rarely deep, leaf-like in *Platytrectes apus* or low, elongate in *Pectinantus parini*). Eyes moderate to large, with well-developed aphakic aperture (pupil elliptical in shape, expanded in front of lens). Premaxillae with anteriorly directed tusks bearing enlarged teeth (absent in *Platytrectes apus*, *Pectinantus parini*, *Barbantus curvifrons*, *Matsuichthys aequipinnis*, *Mirorictus taningi*, and *Sagamichthys gracilis*). Two well-developed supramaxillae. Small uniserial teeth always present on premaxilla, maxilla, and dentary; additional short row of teeth often present on dentary anteriorly (1 to 10 laterally directed teeth in adults, sometimes in juveniles only, rarely absent). Teeth usually present on vomer, palatines, mesopterygoids, and on other bones in oral and branchial cavities (tongue, basibranchials, etc.), rarely absent on all or some of these bones. Branchiostegal rays 6 to 9, uppermost often expanded. Gill openings wide (except in *Pectinatus parini*); gill rakers lanceolate, covered with small denticles. All fin-rays soft; dorsal-fin rays 13 to 25, anal-fin rays 10 to 25; **bases of dorsal and anal fins subequal and opposite in posterior third of body, or dorsal-fin origin well in advance of anal-fin origin**. Caudal fin forked, with 10 principal rays in upper lobe and 9 principal rays in lower lobe. Pectoral fins placed low on body, with 13 to 30 rays (usually 15 to 20), none elongated. Pelvic fins abdominal, with 6 to 10 rays; pelvic girdle absent in *Platytrectes apus*. Anus just in front of anal-fin origin. Body completely covered with cycloid scales, about 40 to 130 in longitudinal series. **Head usually scaleless**, but in *Pectinantus parini* and *Sagamichthys gracilis*, head covered with scales showing same reverse imbrication as in scales on anterior half of body. Tubular lateral-line scales present (about 45 to 60), or absent. Scale pockets in most species (all except members of subfamily Platytrictinae) with 1 to 25 tiny pores of the subcutaneous system of canals. Some species with regular photophores serially arranged on head and body near its lower profile (including belly), variable in shape but never nodular or stalked. **A large subcutaneous gland producing luminous secretion behind shoulder girdle (between lateral line and pectoral-fin base), with external opening at tip of small black papilla**. Upper elements of posterior 2 gill arches form an expanded pouch (cruminal organ) on each side. **Swimbladder absent**. **Colour:** head and body uniformly dark (blackish, brown, or dark grey) without differences in coloration of dorsal and ventral parts; fins dusky; photophores, when present, whitish or yellowish.



Mentodus



Pectinantus

Habitat, biology, and fisheries: Engyobenthic to bathy- or mesopelagic, usually over continental slopes, submarine rises or mountains. Some small species or juveniles of larger forms are often caught in open parts of the ocean. Most species are common at depths between 800 and 2 000 m, rarely deeper or shallower. All platytrictid species are rare fishes and do not form groups or schools. This family is of no commercial importance.

Remarks: At present, 2 different classifications of the Platytrictidae are known, the first of which was suggested in the revision of the family by Matsui and Rosenblatt (1987). The second classification was worked out by the present author (Sazonov, 1986, 1992; Sazonov et al., 1993). In contrast to the classification of Matsui and Rosenblatt, the family was divided into 2 subfamilies (Platytrictinae and Searsiinae). In addition, 2 genera, *Pectinantus* and *Matsuichthys*, were separated from *Barbantus*, *Paraholtbyrnia* was synonymized with *Holtbyrnia*, the genus *Mentodus* was recognized to be separate from *Holtbyrnia*, and *Tragularius* and *Pellisulus* were synonymized with *Mentodus*.

Similar families occurring in the area

Alepocephalidae: all species in this family differ from platyroctids by the absence of black papilla of the postcleithral luminous gland; other differences are much less pronounced, do not distinguish all platyroctids from all alepocephalids, or represent internal anatomical characters.



Alepocephalidae

List of species occurring in the area

Species with a question mark have not yet been reported from the area but are expected to occur there.

- Barbantus curvifrons* (Roule and Angel, 1931)
- Holtbyrnia conocephala* Sazonov, 1976
- Holtbyrnia cyanocephala* (Kreff, 1967)
- ? *Holtbyrnia innesi* (Fowler, 1934)
- Matsuichthys aequipinnis* (Matsui and Rosenblatt, 1987)
- Maulisia acuticeps* Sazonov, 1976
- ? *Maulisia argipalla* Matsui and Rosenblatt, 1979
- ? *Maulisia isaacsi* Matsui and Rosenblatt, 1987
- ? *Maulisia maui* Parr, 1960
- Mentodus facilis* (Parr, 1951)
- ? *Mentodus longirostris* (Sazonov and Golovan, 1976)
- ? *Mentodus mesalirus* (Matsui and Rosenblatt, 1987)
- Mentodus perforatus* Sazonov and Trunov, 1978
- ? *Mentodus rostratus* (Günther, 1878)
- Mirorictus taningi* Parr, 1947
- Pectinantus parini* (Sazonov, 1976)
- Platyroctes apus* Günther, 1878
- ? *Sagamichthys gracilis* Sazonov, 1978
- Searsia koefoedi* Parr, 1937
- Searsioides calvala* (Matsui and Rosenblatt, 1979)
- Searsioides multispinis* Sazonov, 1977

References

- Matsui, T. and R.H. Rosenblatt. 1987. Review of the deep-sea fish family Platyroctidae (Pisces: Salmoniformes). *Bull. Scripps Instit. Oceanogr.*, 26:1-159.
- Sazonov., Y.I. 1986. Morphology and classification of fishes of the family Platyroctidae (Salmoniformes, Alepocephaloidei). *Trudy Inst. Okeanol. Akad. Nauk. SSSR*, 121:51-96. [In Russian, English summ.]
- Sazonov., Y.I. 1992. *Matsuichthys* gen. novum -a new genus of fishes of the family Platyroctidae with notes on classification of the subfamily Platyroctinae. *Voprosy Ikhtiol.*, 32(1):3-12. [In Russian, English transl. in *J. Ichthyol.*]