

Hoplobrotula Gill, 1863a

Type species: *Brotula armata* Temminck and Schlegel, 1846 by original designation.

Synonyms: None.

Number of recognized species: 3.

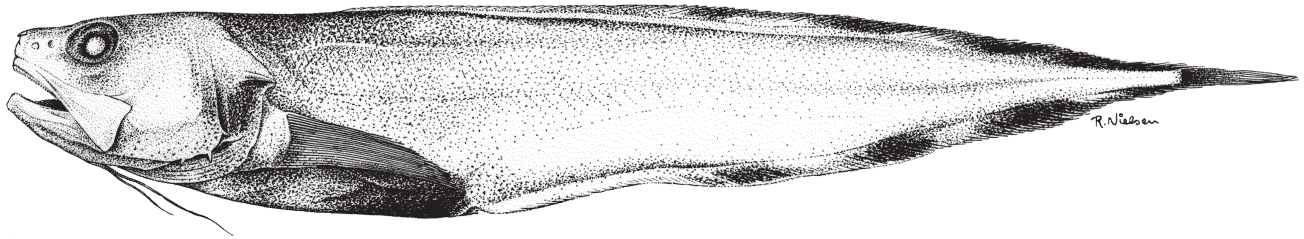


Fig. 66 *Hoplobrotula armata*

Diagnosis and description: Rather elongate body with **blunt head**; **eye almost as long as snout**; upper jaw ends well behind eye; **3 sharp spines on preopercle and 1 strong opercular spine**; 1 median and a pair of basibranchial tooth patches; **5 or 6 developed rakers on anterior gill arch**; pectoral-fin rays 19 to 23; **pelvic fins inserted beneath eye** with 2 rays in each; precaudal vertebrae 13 to 15. Body of juveniles with several black, vertical bars continuing onto dorsal and anal fins as blotches. Fig. 66 shows rests of juvenile coloration.

Revisions: Machida (1990).

Geographical distribution: From off Southeast Africa to Japan and East Australia.

Habitat and biology: Benthopelagic at bathyal depths (180 to 550 m).

Interest to fisheries: Often marketed in Japan.

Size: At least 360 mm.

Key to species (from Machida, 1990)

- 1a. Snout spine absent; dorsal-fin rays 99 to 103; precaudal vertebrae 15 *H. gnathopus*
- 1b. Snout spine present; dorsal-fin rays less than 95; precaudal vertebrae 13 → 2
- 2a. Snout spine long, sharp and strong; sensory pore just above anterior nostril present; dorsal-fin rays 85 to 90; pelvic fin not extending beyond head *H. armata*
- 2b. Snout spine extremely short and blunt; no sensory pore above anterior nostril; dorsal-fin rays 94; pelvic fin extending well beyond head *H. badia*

List of species

Hoplobrotula armata (Temminck and Schlegel, 1846). From off Australia to Japan at 220 to 330 m. Common.

H. badia Machida, 1990. Sagami Bay, Japan. Rare.

H. gnathopus Regan, 1921. Off Southeast Africa at 180 to 550. Uncommon.

***Hypopleuron* Smith and Radcliffe in Radcliffe 1913**

Type species: *Hypopleuron caninum* Smith and Radcliffe in Radcliffe, 1913 by original designation.

Synonyms: None.

Number of recognized species: 1.

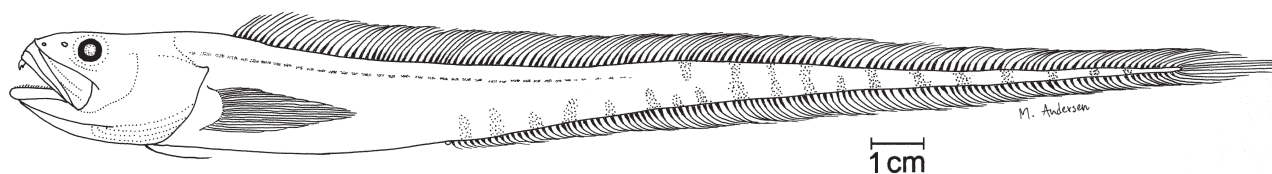


Fig. 67 *Hypopleuron caninum*

Diagnosis and description: Jaws equal in length or lower jaw slightly protruding; no spines on opercle or subopercle; a canine tooth at the front of each upper jaw bone; median basibranchial tooth patch 1; branchiostegal rays 8; lateral line with small scales that overlie an inner series of larger scales that bear neuromasts; pelvic fins with 1 ray in each; pectoral-fin rays 26; precaudal centra 22, parapophyses broad and inflated, inclosing the swimbladder.

Revisions: None.

Geographical distribution: Arabian Sea, Andaman Sea and the Philippines.

Habitat and biology: Trawled on the continental shelf at depths of 300 to 575 m.

Interest to fisheries: None.

Size: At least 570 mm.

List of species

Hypopleuron caninum Smith and Radcliffe in Radcliffe, 1913. Information see above. Common.

***Lamprogrammus* Alcock in Wood-Mason and Alcock, 1891**

Type species: *Lamprogrammus niger* Alcock in Wood-Mason and Alcock, 1891 by monotypy.

Synonyms: *Bassobythites* Brauer, 1906. Type species *Bassobythites brunswigi* Brauer.

Number of recognized species: 5 or 6.

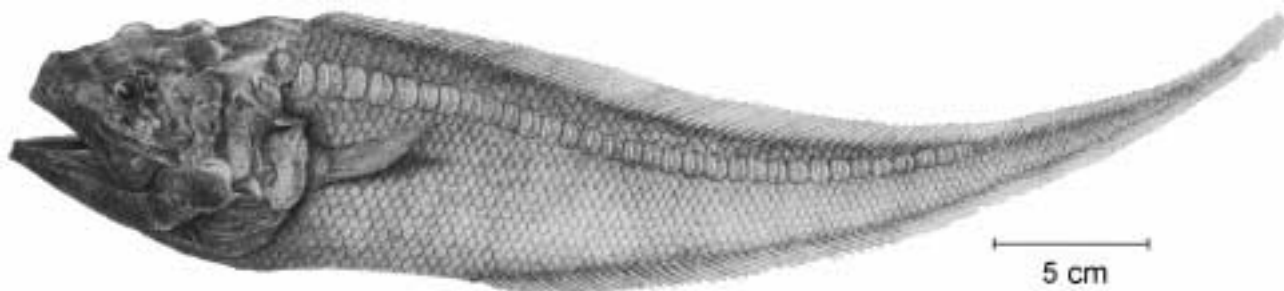


Fig. 68 *Lamprogrammus niger* (from Alcock, 1892a)

Diagnosis and description: Mouth terminal; branchiostegal rays 8; median basibranchial tooth patches 0 or 1; teeth granular, none enlarged; lateral line covered with small scales, beneath which lie vertically oriented, spindle-shaped neuromasts, each of which is mounted on a large, vertically elongate scale (Fig. 69); pelvic fins absent in adults; caudal-fin rays 8 or 9; precaudal vertebrae 11 to 14.

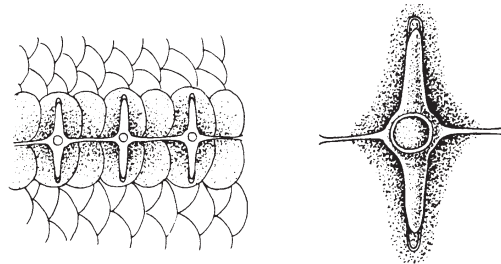


Fig. 69
Lateral-line scales of
Lamprogrammus illustris
(after Garman, 1899)

Revisions: Nybelin (1957), Cohen et al. (1991), Cohen and Rohr (1993).

Geographical distribution: Circumtropical, with some species caught occasionally in subtropical waters.

Habitat and biology: Small specimens apparently live in the meso- to bathypelagic; larger fish are most often taken with bottom trawls fished at bathyal depths, although largest specimen known, the holotype of *Lamprogrammus shcherbachevi*, was taken in a midwater trawl.

Interest to fisheries: None.

Size: *L. shcherbachevi* reaches 193 cm in standard length, *L. brunswigi* 103 cm length. Other species are smaller.

Key to species

- 1a. Maxilla free, not sheathed posteriodorsally *L. brunswigi*
- 1b. Maxilla sheathed posteriodorsally → 2
- 2a. Median basibranchial tooth patch absent *L. niger, L. illustris*
- 2b. Median basibranchial tooth patch 1 → 3
- 3a. Body elongate, depth at anus 10.0 to 11.7 in standard length *L. shcherbachevi*
- 3b. Body shorter, depth at anus 5.2 to 8.0 in standard length → 4
- 4a. Depth at anus 5.2 to 6.3 in standard length; developed gill rakers on lower arm of first arch 14 to 17; posterior margin of opercle smooth *L. fragilis*
- 4b. Depth at anus 6.2 to 8.0 in standard length; developed gill rakers on lower arm of first arch 9 to 12; posterior margin of opercle weakly fimbriate *L. exutus*

List of nominal species

Lamprogrammus brunswigi (Brauer, 1906). Circumtropical except for eastern Pacific, trawled from 800 to 1 600 m; 4 out of 7 specimens larger than 90 cm were collected floating at the surface in the Marshall and Hawaiian islands and at Puerto Rico. Rare.

L. exutus Nybelin and Poll, 1958. Tropical eastern Atlantic, caught with bottom trawls at depths of 260 to 700 m. Uncommon.

L. fragilis Alcock, 1892b. Tropical Indian Ocean at depths 745 to 1240 m. Uncommon.

L. illustris Garman, 1899 (probably junior synonym of *L. niger*).

L. macropterus Smith and Radcliffe *in* Radcliffe, 1913 (junior synonym of *L. brunswigi*).

L. niger Alcock in Wood-Mason and Alcock, 1891. Circumtropical and sometimes into subtropical waters as well; small specimens are occasionally caught in midwater trawls fishing in the mesopelagic. Adults may reach 610 mm and are locally abundant to 1 500 m.

L. shcherbachevi Cohen and Rohr, 1993. Caught off Chile, northwest coast of Australia, Angola, northeastern coast of South America and off the Faroe Islands in midwater and bottom trawls to about 1 000 m. Rare.

Leptobrotula Nielsen, 1986

Type species: *Leptobrotula breviventralis* Nielsen, 1986 by original designation.

Synonyms: None.

Number of recognized species: 1.

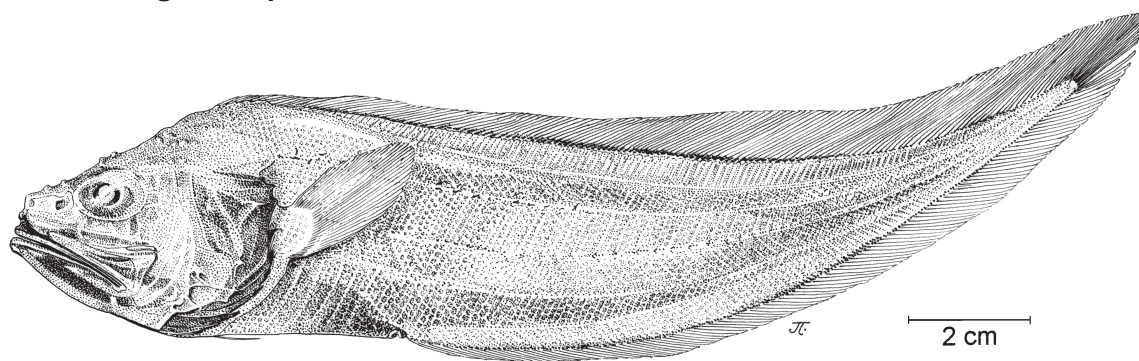


Fig. 70 *Leptobrotula breviventralis* (from Nielsen, 1986)

Diagnosis and description: Body short, high and compressed; origin of dorsal fin in front of first vertebra; orbit slightly shorter than snout; head bones with thin crests; opercular spine thin and narrow; 1 median and a pair of basibranchial tooth patches; 15 to 17 developed rakers on anterior gill arch; pelvic fins each with 1 ray, shorter than diameter of orbit; pectoral fins with 26 to 28 rays each; precaudal vertebrae 12.

Revisions: None.

Geographical distribution: Known from off Hawaii and South Africa.

Habitat and biology: Benthopelagic at bathyal depths (220 to 780 m).

Interest to fisheries: None.

Size: At least 320 mm.

List of species

Leptobrotula breviventralis Nielsen, 1986. Information see above. Rare.

Leucicorus Garman, 1899

Type species: *Leucicorus lusciosus* Garman, 1899 by monotypy.

Synonyms: None.

Number of recognized species: 2.

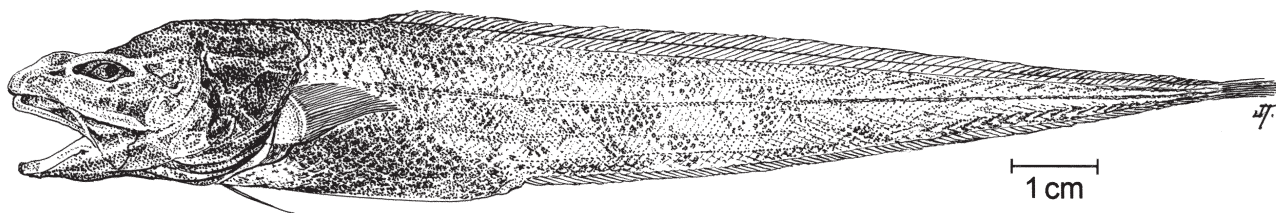


Fig. 71 *Leucicorus atlanticus* (from Nielsen, 1975a)

Diagnosis and description: Body elongate; orbit large with rudimentary or lacking lens; head with prominent mucous cavities and distinct rows of pores, opercular spine weak; basibranchial tooth patch single; 8 to 12 developed rakers on anterior gill arch; pectoral-fin rays 22 to 25; pelvic fins with 2 rays in each; precaudal vertebrae 13 or 14.

Revisions: Nielsen (1975a).

Geographical distribution: East Pacific and Atlantic Ocean.

Habitat and biology: Benthopelagic at abyssal and hadal depths (2 710 to 6 800 m).

Interest to fisheries: None.

Size: At least 245 mm.

Remarks: 1 or 2 undescribed species are being studied.

Key to species

- 1a. Head scales present; pectoral-fin rays 25 or 26; dorsal-and anal-fin rays 110 to 114 and 96 to 100, respectively *L. lusciosus*
- 1b. Head scales strongly reduced; pectoral-fin rays 22 to 24; dorsal- and anal-fin rays 82 to 98 and 68 to 80, respectively *L. atlanticus*

List of species

Leucicorus atlanticus Nielsen, 1975a. West Atlantic. Benthopelagic at 4 580 to 6 800 m. Rare.

L. lusciosus Garman, 1899. East Pacific. Benthopelagic at 2 710 to 3 435 m. Rare.

Luciobrotula Smith and Radcliffe in Radcliffe, 1913

Type species: *Luciobrotula bartschi* Smith and Radcliffe in Radcliffe, 1913 by original designation.

Synonyms: *Volcanus* Gosline, 1954, type species *Volcanus lineatus* Gosline.

Number of recognized species: 4.

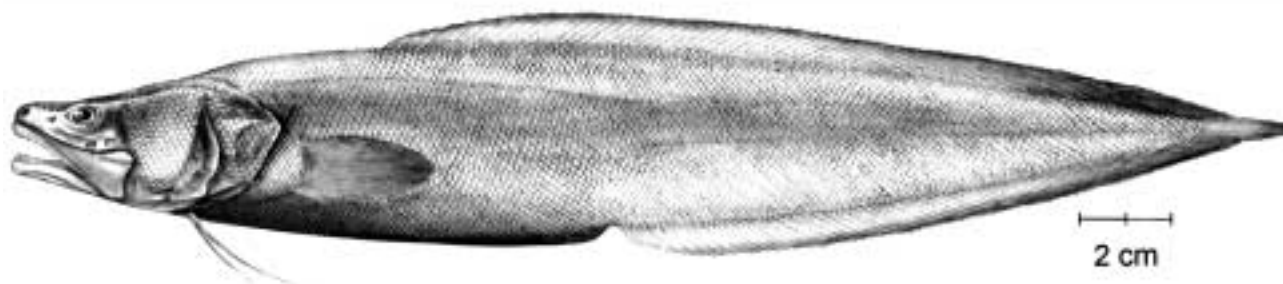


Fig. 72 *Luciobrotula bartschi* (from Smith and Radcliffe in Radcliffe, 1913)

Diagnosis and description: Head large, equal to about 1/2 preanal length; snout depressed, naked, bearing fleshy flaps and ridges at the tip; rear margin of preopercle free, lacking spines; opercle with spine at upper angle; developed gill rakers 3; teeth granular; median basibranchial tooth patches 1; branchiostegal rays 8; caudal-fin rays 10 to 12; pelvic fins with 2 rays in each; precaudal vertebrae 14 to 16.

Revisions: Cohen (1981a).

Geographical distribution: Circumtropical; occasionally taken in the subtropics.

Habitat and biology: Benthopelagic at depths to about 1 000 m.

Interest to fisheries: None.

Size: At least 610 mm.

Remarks: Unidentified specimens of *Luciobrotula* have been trawled off the Pacific coast of Panama.

Key to species

- 1a. Tubular lateral line ends near level of dorsal-fin origin *L. lineata*
- 1b. Tubular lateral line ends near level of anal-fin origin → 2
- 2a. Body and fins dark; head pale in specimens larger than about 200 mm. *L. nolfi*
- 2b. Body usually pale; lighter than fins, head variable → 3
- 3a. Pronounced concavity in dorsal rim of otolith in larger specimens (Fig. 73a)
 *L. corethromycter*
- 3b. No pronounced concavity in dorsal rim of otolith (Fig. 73b) *L. bartschi*

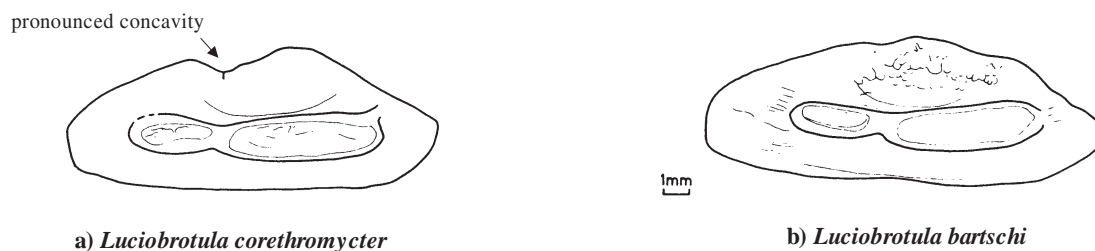


Fig. 73 Inner surface of left otolith

List of species

Luciobrotula bartschi Smith and Radcliffe, 1913. Widely distributed at depths to 1 000 m in the Indo-Pacific, from the Gulf of Aden and Natal to the Philippines, Japan and Hawaii. Rare.

L. corethromycter Cohen, 1964a. Tropical Atlantic at depths from 260 to 1 200 m. Not often encountered but may be locally abundant.

L. lineata (Gosline, 1954). Hawaii. Type taken where lava flow entered ocean. Rare.

L. nolfi Cohen, 1981a. Tropical eastern Atlantic. Trawled at depths to 980 m. Rare.

Mastigopterus Smith and Radcliffe in Radcliffe, 1913

Type species: *Mastigopterus imperator* Smith and Radcliffe in Radcliffe, 1913 by original designation.

Synonyms: None.

Number of recognized species: 2.

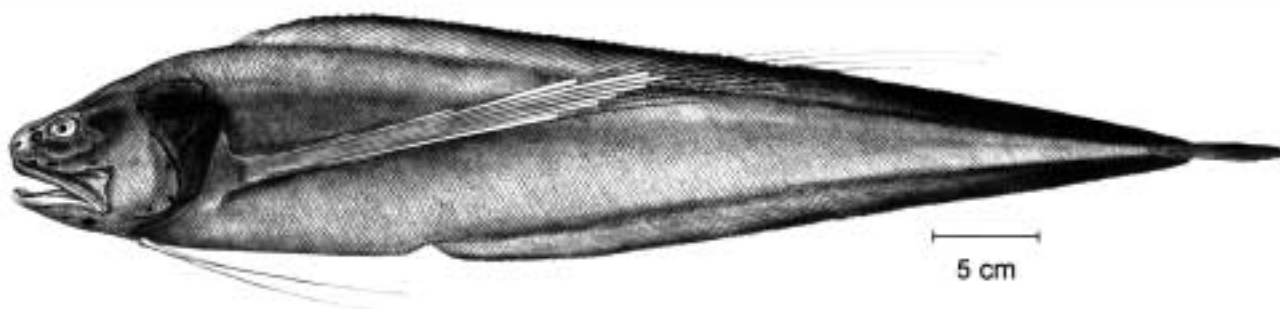


Fig. 74 *Mastigopterus imperator* (from Smith and Radcliffe in Radcliffe, 1913)

Diagnosis and description: Head large with subterminal mouth; **eye diameter much shorter than snout; large mucous cavities on head; opercular spine broad and weak;** 2 median basibranchial tooth patches; 10 developed rakers on anterior gill arch; **pectoral fin with narrow base and 12 to 14 rays at least as long as 1/2 of standard length,** pelvic fins with 2 joined rays in each; precaudal vertebrae 15.

Revisions: None.

Geographical distribution: From off Madagascar to the Philippines.

Habitat and biology: Benthopelagic at bathyal depths (1 500 to 2 365 m).

Interest to fisheries: None.

Size: At least 510 mm.

Remarks: More material will probably show that the 2 species are conspecific.

Key to species

- 1a. Dorsal-fin rays 133 to 146; anal-fin rays 116 to 125 *M. praetor*
- 1b. Dorsal-fin rays 144; anal-fin rays 132 *M. imperator*

List of species

Mastigopterus imperator Smith and Radcliffe in Radcliffe, 1913. The Philippines. Benthopelagic at 1 785 m. Rare.

M. praetor Smith and Radcliffe in Radcliffe, 1913. From off New Guinea and the Philippines to Madagascar. Benthopelagic at 1 500 to 2 365 m. Rare.