Antimora Günther, 1878

MOR Ant

Genus with Reference : ***Antimora*** Günther, 1878, Ann.Mag.Nat.Hist., (5)2; 18

Diagnostic Features : Body shape variable, depending on condition; from notably robust to relatively elongate. Snout depressed to form a broadly V-shaped plate. No ventral light organs. Chin barbel present. Eye diameter less than postorbital length of head. Vomerine teeth present. Gill rakers short and stubby. First dorsal fin with five or more rays, the anterior one elongated; anal fin originating past midpoint of body, deeply indented at midlength; pectoral falling far short of anal fin origin, pelvic fins with six rays, one moderately elongated. **Colour**: variable, ranging from nearly black to grey or bluish.

Habitat, Distribution and Biology : The two species of the genus are widely distributed in temperate and subantarctic waters of the world's oceans, from about 350 to more than 3 000 m depth, but they have not been generally found in the deep waters of tropical seas. Their depth distributions tend to be shallower at higher latitudes. They are benthopelagic, and in many areas are among the most abundant fishes on the middle and deep slopes. Males attain a smaller size than females, the former rarely exceeding 40 cm, the latter sometimes growing to beyond 65cm. The sexes segregate to some extent by depth, with males normally concentrating at the shallow end of the depth spectrum; females span a greater range. This segregation results in a smaller average size of individuals at the shallow end of the depth range, leading to the apparent phenomenon of "bigger-deeper". The life-history of these fishes is poorly known; although, there is evidence to suggest times and places of spawning in the western North Atlantic and the possible role of migration. Aspects of the biochemistry and physiology of these fishes have been extensively studied and have given us a better understanding of how deepsea animals cope with the low temperatures and high pressures of their environment through changes in metabolic pathways and physiological processes. Feeding habits are poorly known because of the usual eversion of the stomach caused by the expansion of the swimbladder when the fish are brought to the surface. Shrimps, amphipods and other free-swimming crustaceans, as well as small cephalopods and fish, probably form the bulk of the diet.

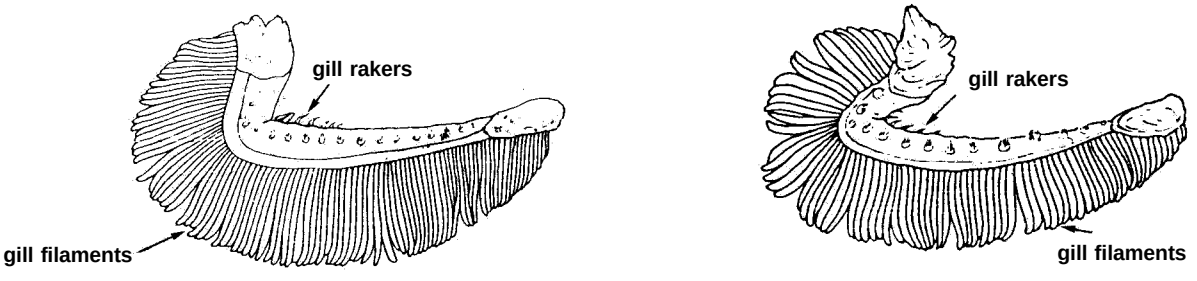
Interest to Fisheries : Currently of little significance to fisheries, although locally abundant in anti-tropical seas; they enter the bycatch of commercial trawl fisheries in several areas. The flesh is soft and watery and peak abundance of larger specimens is in deep water.

Remarks : In his review of the genus, Small (1981) recognized two species rather than six.

Key to species:

1a. Gill filaments on first arch relatively long, 93 to 103 (Fig.766a) ..... ***A. microlepis*** Bean, 1890

1b. Gill filaments on first arch relatively short, 76 to 90 (Fig.766b) ..... ***A. rostrata*** (Günther, 1878)



a. *A. microlepis* b. *A. rostrata*

first gill arch
(from Small, 1981)

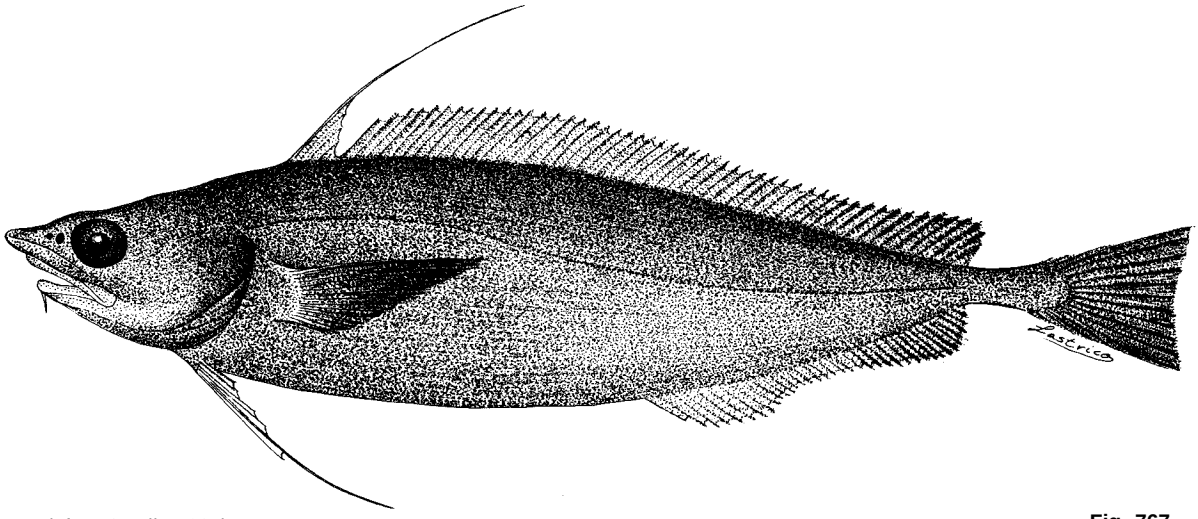
Fig. 766

Antimora microlepis Bean, 1890 **Fig. 767** **MOR Ant 2**

Scientific Name with Reference : ***Antimora microlepis*** Bean, 1890, Proc.U.S.Nat.Mus., 13:38.

Synonyms : None

FAO Names : **En -** Finescale antimora



(after Small, 1981)

Fig. 767

Diagnostic Features : Gill filaments on first arch 93 to 103.

Geographical Distribution : Eastern and western North Pacific, north of latitude 10° N at suitable depths including the tropical mid-Pacific, the Bering, Okhotsk and Kamchatka Seas, and Japan (Fig. 768).

Habitat and Biology : Benthopelagic in depths of about 510 to 2 800 m or more. Detailed life-history studies of the species has not been done as they have for ***A. rostrata*** along the United States east coast. It appears that sex segregation is also basic to this species, but whether or not the species migrates extensively or uses the North American west coast slopes only as feeding areas is not known.

Size : 65 cm total length or larger.

Interest to Fisheries : On the Canadian and United States Pacific coasts the species is frequently taken by trawlers fishing deep slope waters for Dover sole (***Microstomus pacificus***) and the deeper water species of rock fish (***Sebastes*** species). It is found in significant quantities in some areas, but so far as known is not utilized, probably because of its soft flesh and the relatively small average size usually taken.

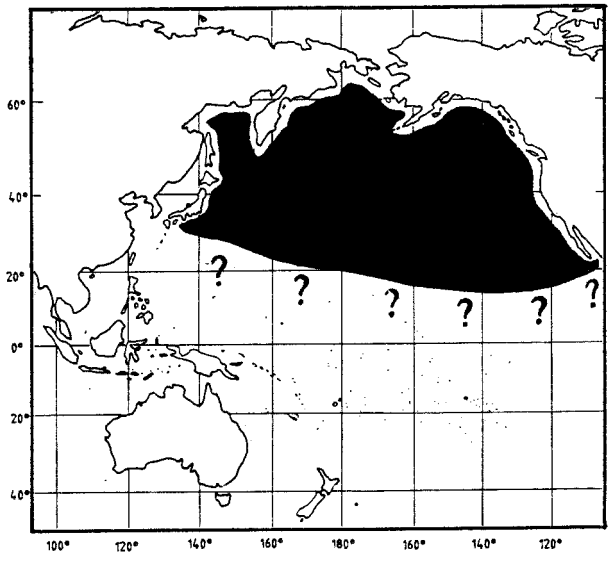


Fig. 768

Local Names : JAPAN: Sumidara; USA: Finescale codling.

Literature : Hart(1973); Iwamoto (1975); Small (1981)

Antimora rostrata (Günther, 1878)

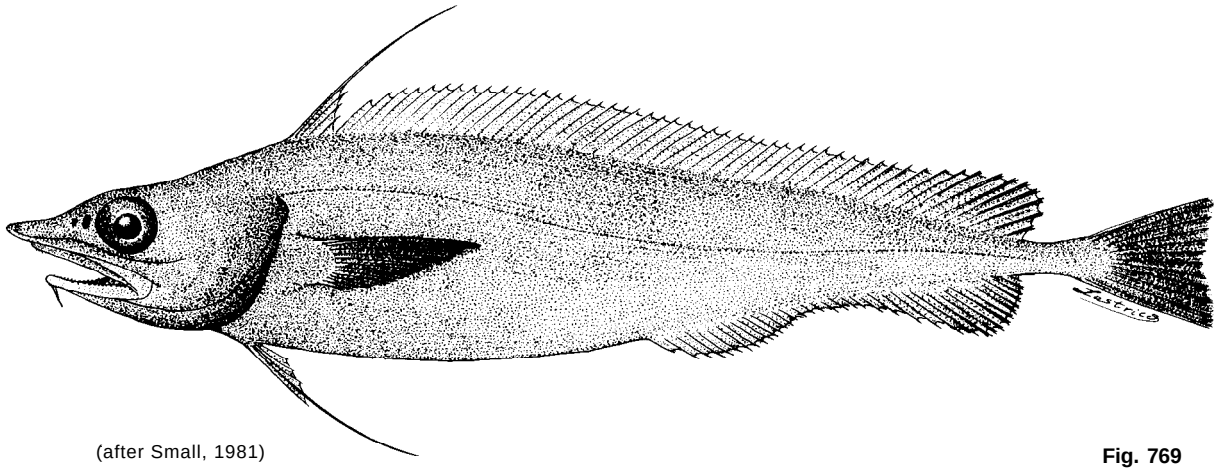
Fig. 769

MOR Ant 1

Scientific Name with Reference : ***Haloporphyrus (Antimora) rostratus*** Günther, 1878, Ann.Mag.nat.Hist., 5(2): 18.

Synonyms : ***Haloporphyrus viola*** Goode & Bean, 1879; ***Antimora rhina*** Garman, 1899; ***Antimora australis*** Barnard, 1925; ***Antimora meadi*** Pequeño, 1970.

FAO Names : **En** - Blue antimora; **Fr** - Antimore bleu; **Sp** - Mollera azul.



(after Small, 1981)

Fig. 769

Diagnostic Features : Gill filaments on first arch 76 to 90.

Geographical Distribution : All oceans except the North Pacific north of 10ºN (Fig. 770).

Habitat and Biology : Bentho-pelagic in about 350 to 3 000 m depth. May move offshore with age and spawn in the deep parts of its range. Off the eastern coast of the United States it is speculated that the population use the area only as feeding grounds with spawning taking place to the north.

Size : Reaching about 60 cm total length or larger.

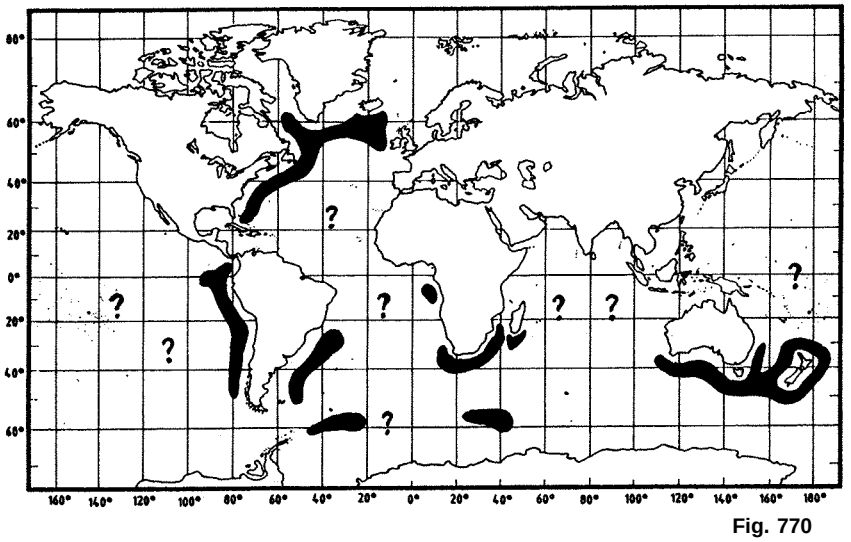


Fig. 770

Interest to Fisheries : The species is dominant in many temperate deep-slope communities between about 500 to 2 800 m depth. It is taken in the bycatch of trawlers and deep-set bottom longlines in many areas but so far as known, it is not utilized.

Local Names : USA: Blue hake; USSR: Antimora.

Literature : Iwamoto (1975); Wenner & Musick (1977); Small (1981).

Auchenoceros Günther, 1889

MOR Auch

Genus with Reference : ***Auchenoceros*** Günther, 1889 Challenger Rept., 78 (Zool.):24.

Remarks : A single species

Auchenoceros punctatus (Hutton, 1873)

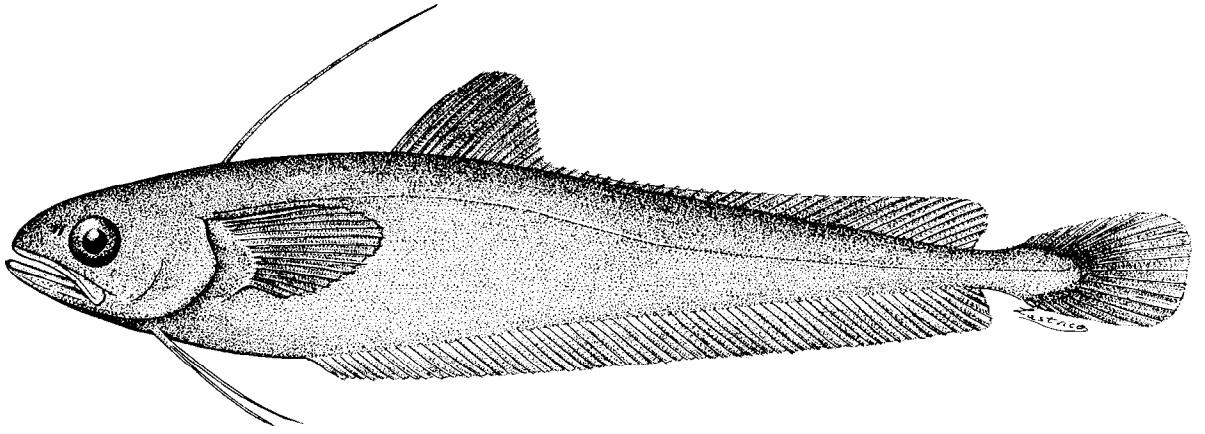
Fig. 771

MOR Auch 1

Scientific Name with Reference : ***Calloptilum punctatum*** Hutton, 1873, Trans.Proc.N.Z.Inst. , 5:267.

Synonyms : ***Bregmaceros punctatus,*** Günther, 1876

FAO Names : **En -** Ahuru



(after Graham, 1956 and Paulin, 1983)

Fig. 771

Diagnostic Features : Chin barbel absent. First dorsal fin appearing as a single, elongate ray, widely separated from the second dorsal fin; second dorsal fin with very short rays at mid-length, sometimes appearing as two fins; anal fin long-based, not strongly indented, originating far forward on body, under the space between dorsal fins; pelvic fins with two rays. No ventral light organ. **Colour:** generally pale, variously reported as pink-tan with spots, silvery, and with a spot on side of head and a yellow lateral stripe.

Geographical Distribution : East coast of New Zealand from about 35º southward; also in the Cook Strait (Fig. 772).

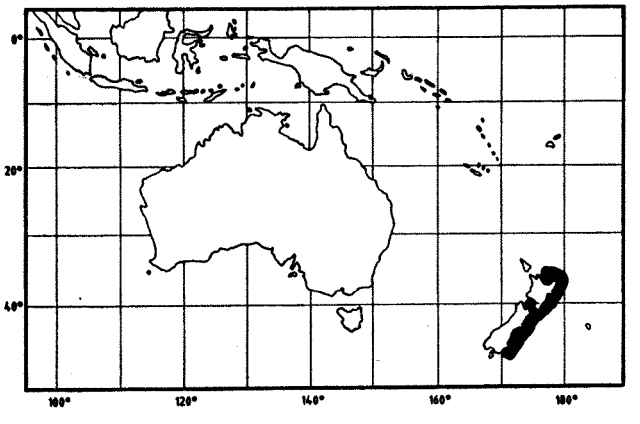


Fig. 772

Habitat and Biology : Apparently pelagic. Over sandy and muddy bottoms in inshore waters to depths of 420 m. Locally abundant, especially in the inner Hauraki Gulf and the Firth of Thames (New Zealand).

Size : Reaches about 13 cm total length, but more commonly 10 cm.

Interest to Fisheries : Not fished commercially at present, because of its small size. Possibly an important forage fish for commercial species.

Literature : Graham (1953); Paulin (1983).

Austrophycis Ogilby, 1897

MOR Aust

Genus with Reference : ***Austrophycis*** Ogilby, 1897, Proc.Linn.Soc.N.S.Wales, 22:90.

Remarks : So far as known, this genus includes a single species

Austrophycis marginata (Günther, 1878)

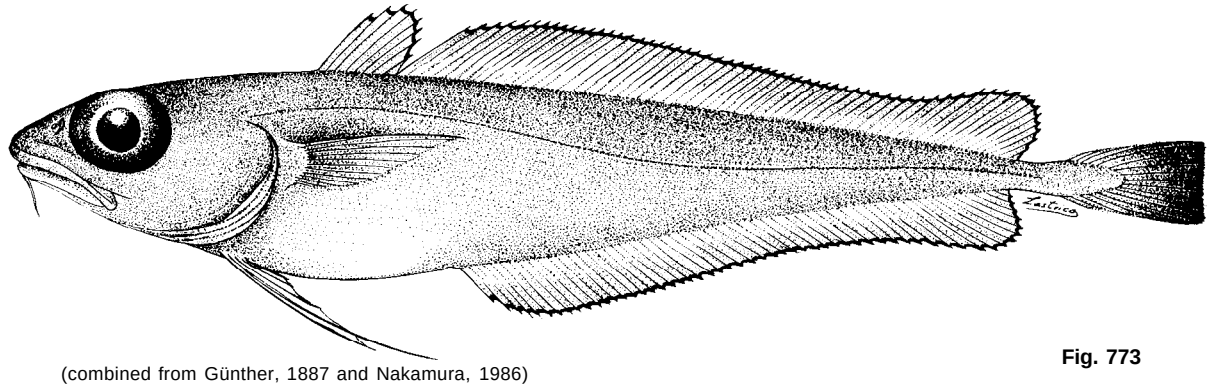
Fig. 773

MOR Aust 1

Scientific Name with Reference : ***Lotella marginata*** Günther, 1878, Ann.Mag.nat.Hist., (5)2: 19.

Synonyms : **?** ***Austrophycis megalops*** Ogilby, 1897; ***Physiculus marginatus,*** Norman, 1937; ***Actuariolum*** sp. Fitch & Barker, 1972.

FAO Names : **En** - Dwarf codling



(combined from Günther, 1887 and Nakamura, 1986)

Fig. 773

Diagnostic Features : Eye diameter equal to or greater than postorbital length of head. Interorbital space narrow, equal to or less than snout length; chin barbel present. First dorsal fin rays 8 to 10; anal fin long-based, originating on anterior half of body, below space between dorsal fins, not strongly indented; pelvic fins with 5 rays, the outer 2 somewhat elongated. **Colour:** pale pinkish; a dark spot at tip of first dorsal fin; caudal fin dusky distally.

Geographical Distribution : So far, found off Southern Patagonia along the Argentine slope to 40ºS, and the Chilean coast to about 46ºS, on the rises to the east and south of New Zealand, and off New South Wales and Tasmania (Fig. 774).

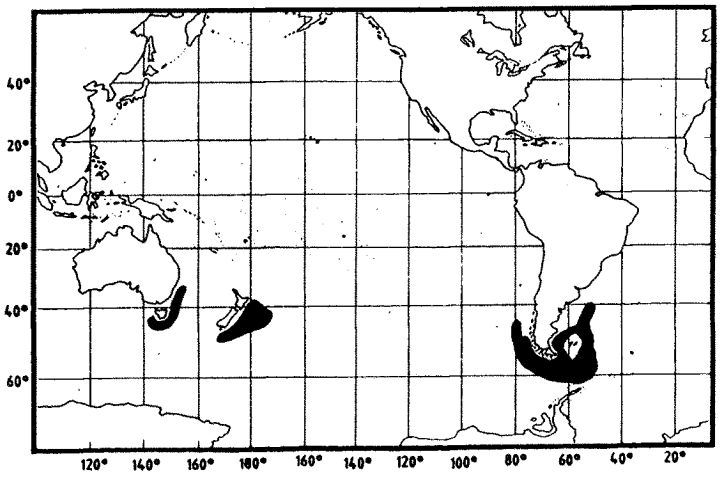


Fig. 774

Habitat and Biology : A benthopelagic species, apparently living from the inner shelf, in far southern South America, to depths beyond 1 000 m. According to Paulin (1983) possibly one of the most common morid species in the New Zealand Antarctic region in depths of 300 to 700 m.

Size : Maximum total length 24 cm.

Interest to Fisheries : None at present, but apparently sufficiently abundant to suggest potential as an industrial fish for reduction to fishmeal (Bellisio, López & Tomo, 1979; Paulin, 1983). In New Zealand not taken commercially because of its small size.

Local Names : ARGENTINA: Brotola, Pescada de ojo grande; NEW ZEALAND: Dwarf cod.

Literature : Bellisio, López & Tomo(1979); Paulin (1983); Nakamura (1986); Last, Scott & Talbot (1983).

Eeyorius Paulin, 1986

MOR Eey

Genus with Reference : ***Eeyorius*** Paulin, 1986, Mem.Mus.Victoria, 47:201

Remarks : A single species.

Eeyorius hutchinsi Paulin, 1986

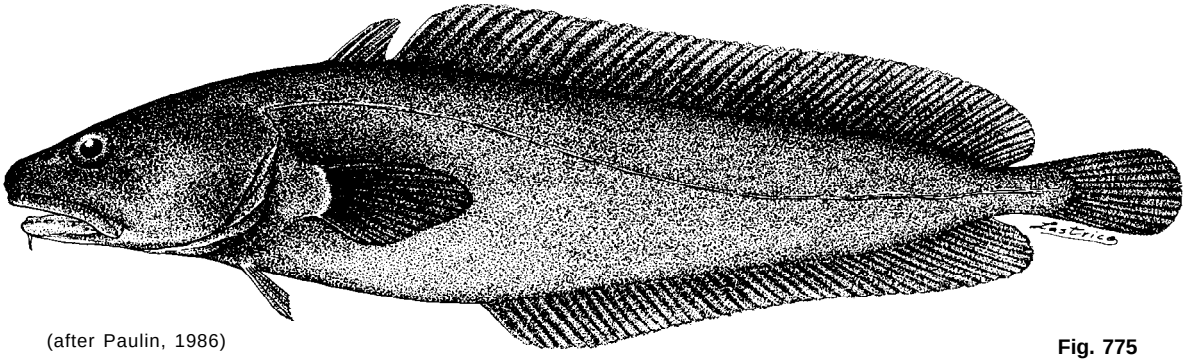
Fig. 775

MOR Eey 1

Scientific Name with Reference : ***Eeyorius hutchinsi*** Paulin, 1986, Mem.Mus.Victoria, 47:204

Synonyms : None

FAO Names : **En** - Tasmanian codling



(after Paulin, 1986)

Fig. 775

Diagnostic Features : Chin barbel present. Jaw teeth in brush-like band; outer teeth of upper jaw only slightly larger than others; lower jaw teeth equal-sized. First dorsal fin with 6 rays, none greatly elongated; anal fin not greatly indented. No luminescent organ. Scales very small, about 20 in a transverse row betwen the lateral line and the first dorsal fin. **Colour:** in preservative, brownish grey, paler beneath head; fins uniformly brownish grey.

Geographical Distribution : Five localities in the Australian states of Western Australia, Victoria, Tasmania (Fig. 776).

Habitat and Biology : Captured at depths ranging from 7.5 to 12 m.

Size : Reaches 26 cm total length.

Interest to Fisheries : None at present.

Literature : Original description only.

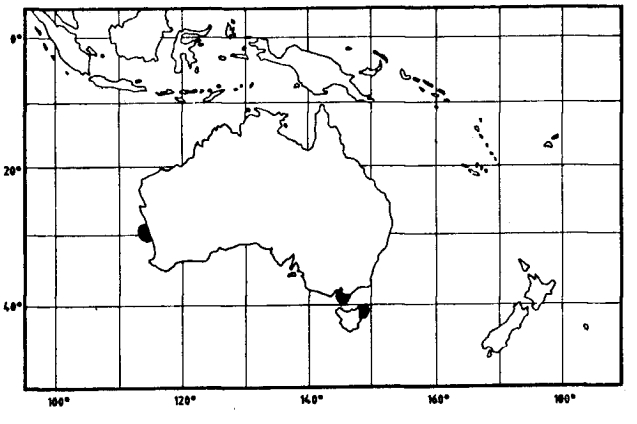


Fig. 776

Gadella Lowe, 1843

MOR Gadel

Genus with Reference : ***Gadella*** Lowe, 1843, Proc Zool.Soc.London, 11:91.

Diagnostic Features : Chin barbel absent. First dorsal fin with 7 to 11 rays; anal fin long based, not greatly indented; pelvic fin with two outermost rays filamentous and slightly extended. Ventral light organ present.

Habitat, Distribution and Biology : Outer shelf to mid-slope depths in tropical and subtropical seas worldwide

Interest to Fisheries : None

Remarks : Recently revised by Paulin, 1989, who presents a key to the species

List of species:

Gadella edelmanni (Brauer, 1908) -Western Indian Ocean off coast of Africa
Gadella filifer (Garman, 1899) - Galapagos region
Gadella imberbis (Vaillant, 1888) - Western Atlantic from Cape Cod to southern Brazil
Gadella jordani (Böhlke & Mead, 1951) - East coast of Japan and Kyushu-Palau Ridge
Gadella maraldi (Risso, 1810) - Mediterranean, Portugal, Madeira, Azores, Great Meteor Bank, northwest coast of Africa
Gadella molokaiensis Paulin, 1989 - Hawaiian Islands
Gadella norops Paulin, 1989 - New Zealand, Australia, Mascarene Ridge in western Indian Ocean
Gadella obscurus (Parin, 1985) - Nazca Ridge.

Gadella imberbis (Vaillant, 1888)

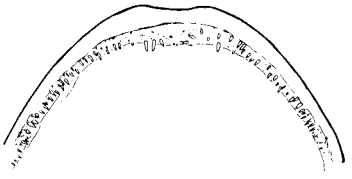
Fig. 777

MOR Gadel 1

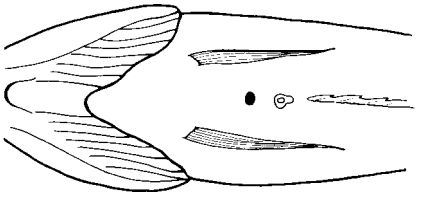
Scientific Name with Reference : ***Brosmiculus imberbis*** Vaillant, 1888, Exp.sci."Travailleur" et "Talisman", 1:293.

Synonyms : ***Uraleptus maraldi*** (not of Risso), Poll, 1953.

FAO Names : **En -** Beardless codling



teeth in upper jaw



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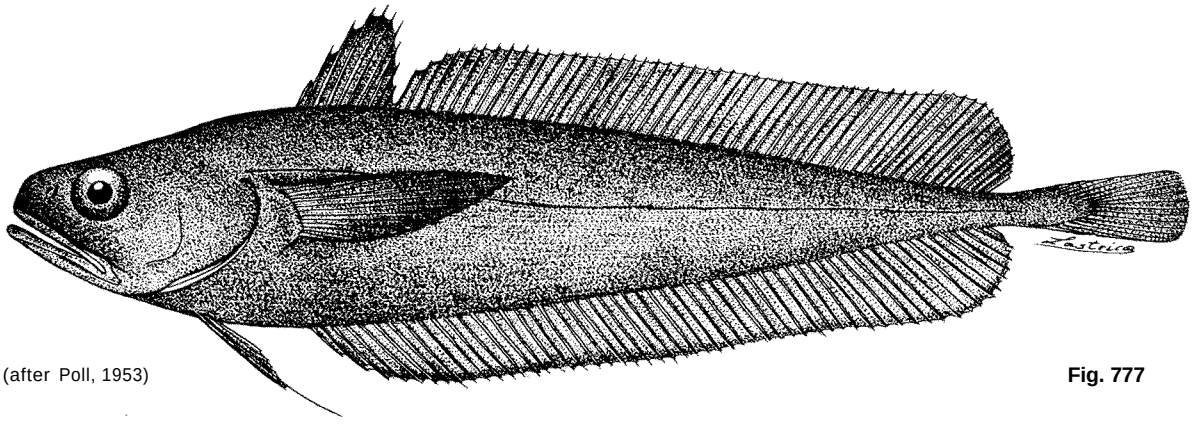


(after Poll, 1953)

Fig. 777

Diagnostic Features : Upper jaw teeth sometimes slightly larger in the outer part of band. Anal fin originating on anterior third of body under front part of first dorsal fin. Pectoral fins extending far past anal fin origin; filamentous ray of pelvic fins extending slightly beyond anal fin origin. **Colour** : dark; dark, anchor-shaped pigment pattern on roof of mouth.

Geographical Distribution : Rather widespread in the Caribbean and tropical western Atlantic, apparently more restricted in the tropical eastern Atlantic, where it is found from the Cape Verde Islands to about 11ºS (Fig. 778).

Habitat and Biology : Benthopelagic on the upper slope. Often rather abundant.

Size : Maximum total length 23 cm, but rarely reaching more than about 18 cm.

Interest to Fisheries : Commonly taken as bycatch by deep-water shrimp trawlers in the western Atlantic; but apparently not utilized for food.

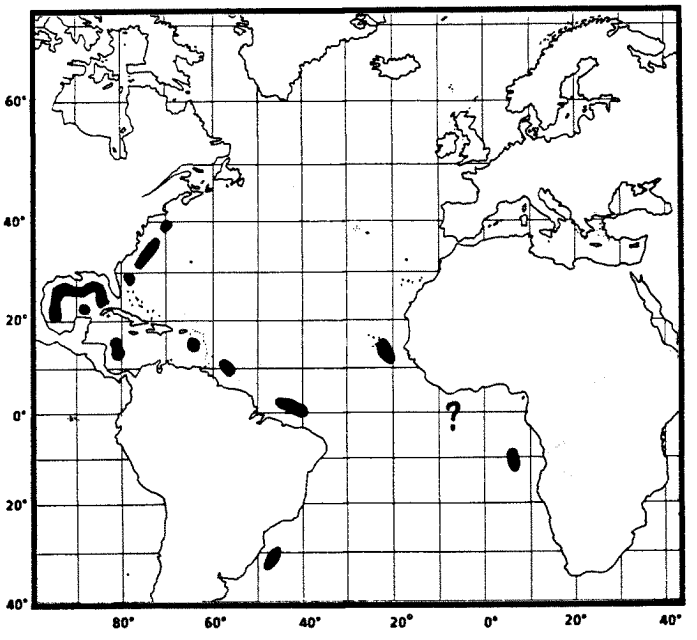


Fig. 778

Gadella maraldi (Risso,1810)

Fig. 779

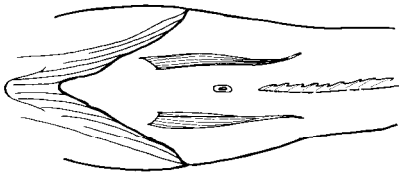
MOR Gadel 2

Scientific Name with Reference : ***Gadus maraldi*** Risso, 1810, Ichth.Nice:123.

Synonyms : ***Merluccius maraldi,*** Risso, 1826; ***Merluccius attenuates*** Cocco, 1829; ***Strinsia tinca*** (not of Rafinesque), Bonaparte, 1832; ***Merluccius ambiguous*** Lowe, 1840; ***Uraleptus maraldi,*** Costa, 1849; ***Merlucius uraleptus*** Costa, 1849.

FAO Names : **En** - Gadella.

teeth in upper jaw



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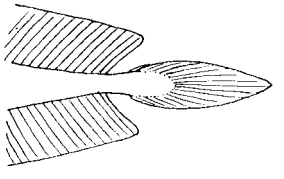
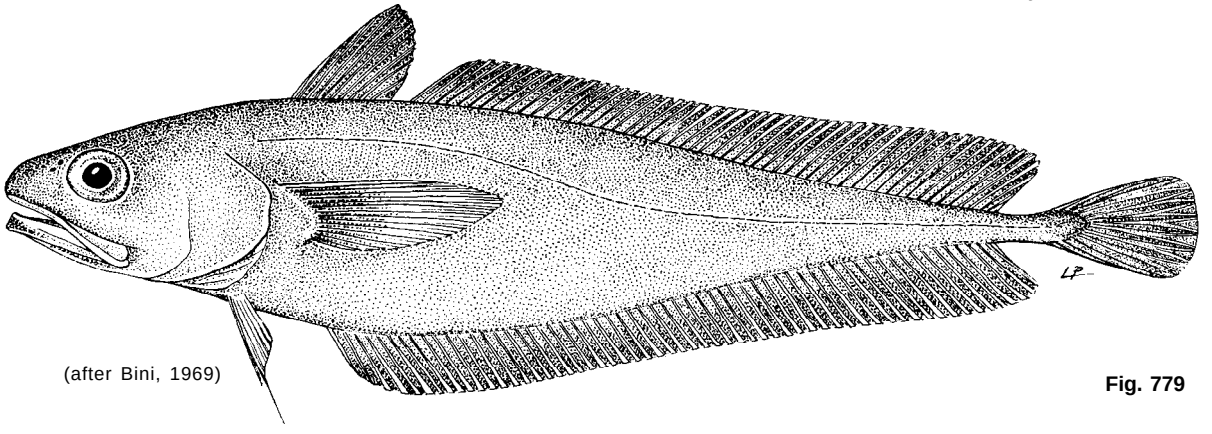


caudal fin in juveniles



(after Bini, 1969)

Fig. 779

Diagnostic Features : Upper jaw with two rows of teeth, the outer one with small teeth interspersed with notably large ones; the inner one with small teeth only. Anal fin originating on anterior third of body, under front part of first dorsal fin; pectoral fins extending far past anal fin origin; filamentous ray of pelvic fin extending slightly beyond anal fin origin. **Colour:** generally dark, oral cavity pale.

Geographical Distribution : Found throughout the Mediterranean, off Portugal, at Madeira, the Azores and the Great Meteor Bank. Its southern distribution along the west coast of Africa is not clear (Fig. 780).

Habitat and Biology : A benthopelagic species ranging from 150 to at least 700 m depth. Spawning takes place in spring and the first maturity is attained at 15 cm total length.

Size : Maximum total length 30 cm.

Interest to Fisheries : No separate statistics, but taken as bycatch in fisheries operating bottom trawls, and bottom longlines. Found occasionally in markets, but not of significant commercial importance.

Literature : Bini (1969).

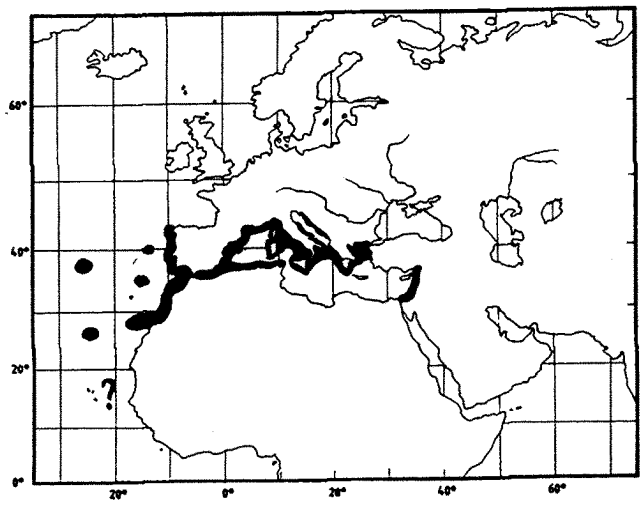


Fig. 780

Halargyreus Günther, 1862

MOR Hal

Genus with Reference : ***Halargyreus*** Günther, 1862, Cat.Fish.Brit.Mus., 4:342.

Remarks : This genus includes a single species according to Cohen, 1973.

Halargyreus johnsonii Günther, 1862

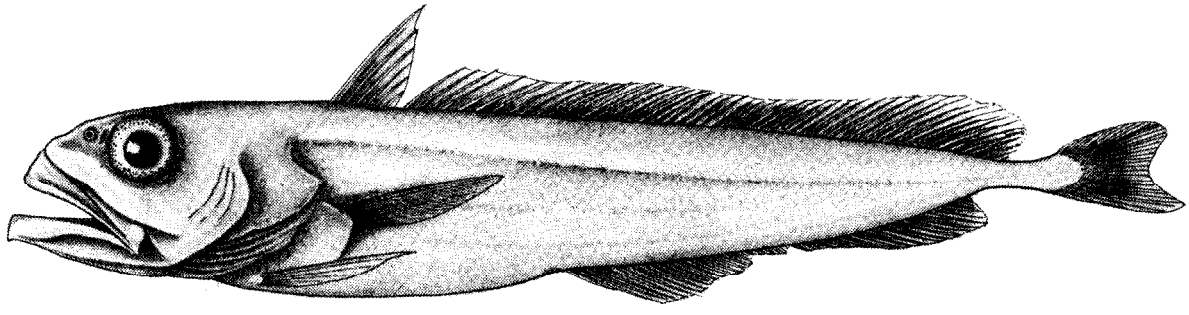
Fig. 781

MOR Hal 1

Scientific Name with Reference : ***Halargyreus johnsonii*** Günther, 1862, Cat.Fish.Brit.Mus., 4:342.

Synonyms : ***Halargyreus brevipes*** Vaillant, 1888; ***Halargyreus affinis*** Collett, 1904

FAO Names : **En** - Slender codling



(from Cohen, 1973)

Fig. 781

Diagnostic Features : Eye diameter about equal to snout length, less than postorbital length of head. Lower jaw slightly projecting; no chin barbel. Jaw teeth finely granular; no teeth on vomer or palatines. First dorsal fin with 6 to 8 rays, none greatly elongated; anal fin originating near mid-length of body, deeply indented; pectoral fins falling short of anal fin origin. Pelvic fins with 5 or 6 rays, none greatly elongated. Ventral light organ absent. **Colour:** generally pale, silvery in fresh specimen; orobranchial cavity black.

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