CONGR

1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

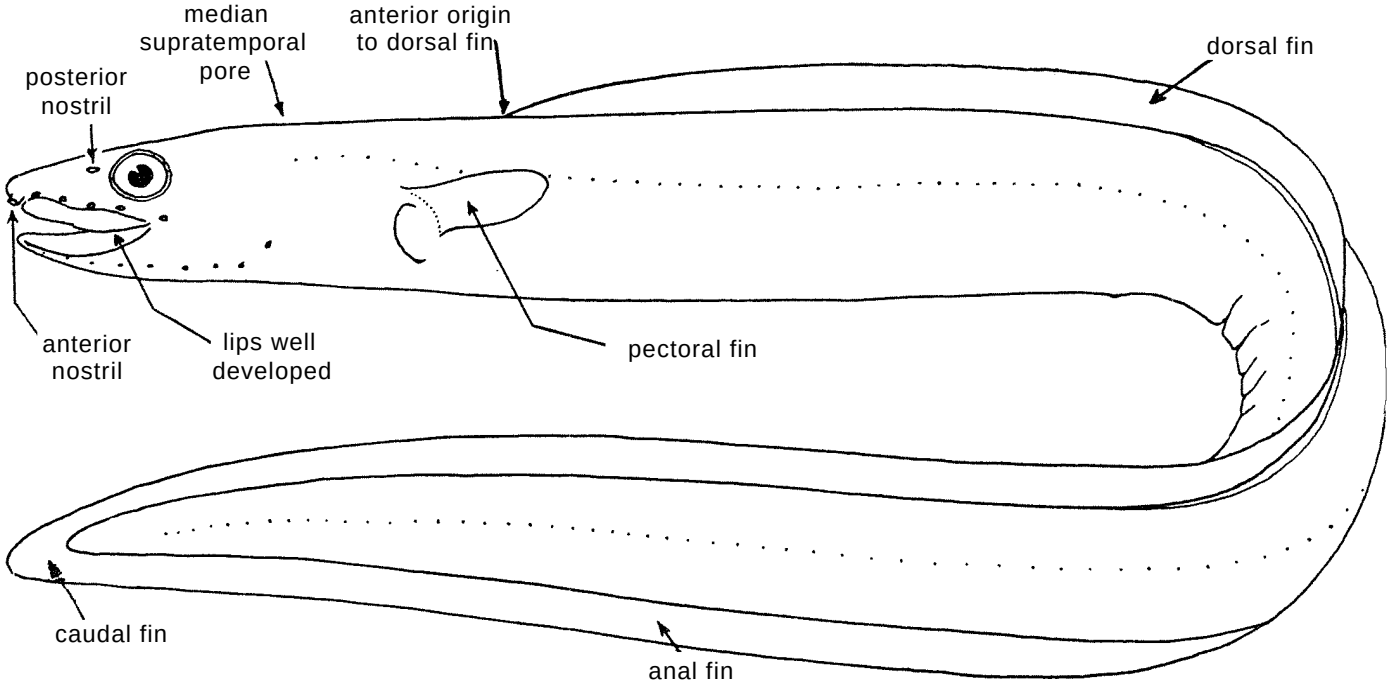
CONGRIDAE

Conger eels

Body long, extremely so in the Heterocongrinae, cylindrical anteriorly, and often with a thin, delicate tail region which is readily damaged. Snout blunt to pointed, mouth sometimes terminal but more often slightly inferior; teeth on jaws highly variable with the different genera, typically small, conical, sharp but rarely fang-like, multiserial, sometimes uniserial to form a cutting edge; teeth on vomer (roof of mouth) typically in a triangular or oval, multiserial patch but may also be uniserial; mouth moderately large but never extending back much beyond eye; eyes and lips well developed; nostrils separated, the anterior one a short, free tube which penetrates upper lip only in Heteroconger, the posterior one a simple aperture in front of eye, low on lip (Bathymyrus), or high up (Promyllantor); branchiostegal rays long but not overlapping ventrally; gill opening a slit on each side. No spines in fins; dorsal and anal fins continuous around tail except in Heteroconger and Gorgasia); dorsal fin begins more or less above gill opening; pectoral fins always present (much reduced in Heteroconger); no pelvic fins; no scales. Lateral line system prominent, extending on to head, the two sides of it connected through a supratemporal canal only.

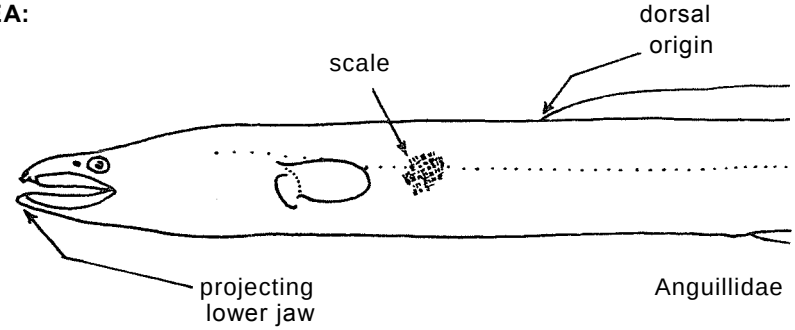
Colour: plain cream, brown, grey to black, often lighter below with a dark border to dorsal and anal fins; variously spotted or speckled in Heteroconger, Gorgasia and Poeciloconger.

Conger eels are small- to large-sized fishes (to about 120 cm total length) occurring in tropical to temperate waters from the coast out to the deep sea, but principally on the shelf and slope. Many burrow during the day and actively forage at night. The most curious group are the garden eels (Heterocongrinae) which live in burrows in coral sand and project the front portion of the body from the burrow to feed on zooplankton. There is at present little commercial interest in conger eels, although some species of Conger are utilized in this area and elsewhere, and others are frequently seen in markets.



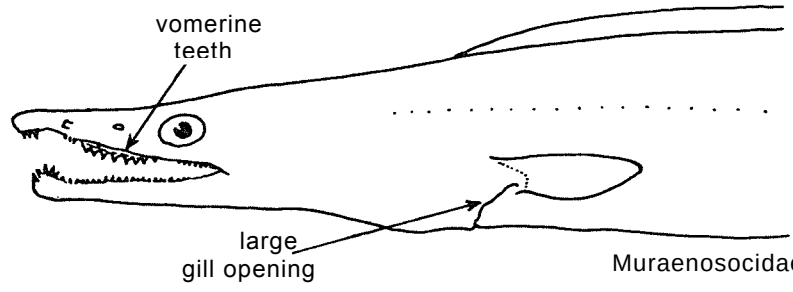
SIMILAR FAMILIES OCCURRING IN THE AREA:

Anguillidae: body covered with tiny embedded scales (scaleless in Congridae); lower jaw projecting slightly; dorsal fin begins about midway between pectoral fins and anus or over anus (always above or before pectoral tips in Congridae).

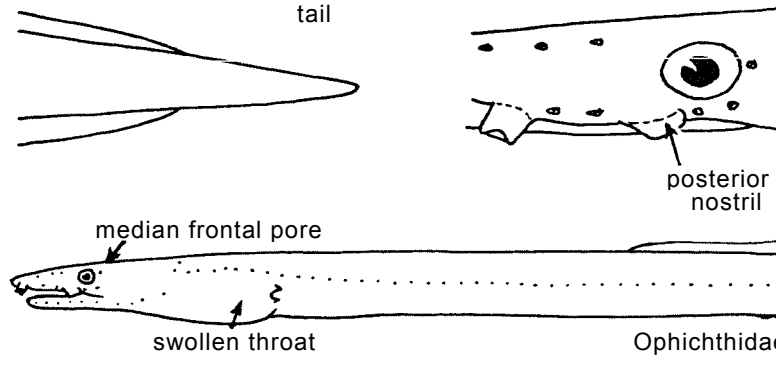


Muraenesocidae: mouth very large, extending to beyond eye (mouth in Congridae barely reaches rear margin of eye); vomerine teeth prominent, fang-like (relatively small in Congridae); gill openings nearly meet each other across ventral mid-line.

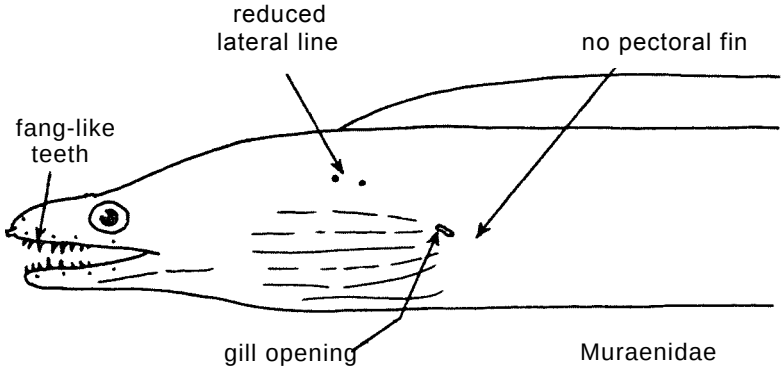
Ophichthidae: in most genera no caudal fin but tail tip a hard, burrowing point (caudal fin present in most Congridae); posterior nostril usually inside mouth or in some way penetrating upper lip (a simple aperture in Congridae); throat swollen, supported by many branchiostegal rays overlapping in mid-line; a median frontal pore on head (no such pore in Congridae, although there is a median supra-temporal pore).

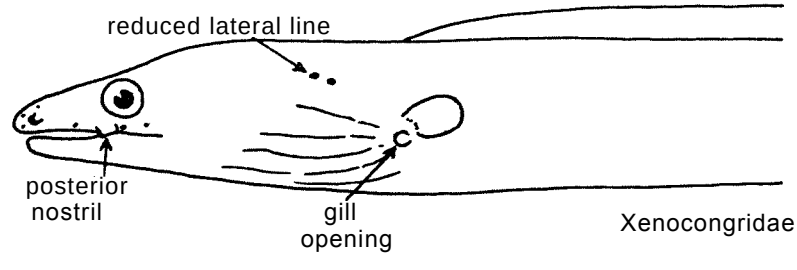


Muraenidae: no pectoral fins (always present in Congridae); gill opening a small hole (a vertical slit in Congridae); teeth fang-like or molar-like (small and conical in Congridae); typically brightly banded, spotted or mottled.



Xenocongridae: gill opening a small hole; vomerine teeth in two divergent rows (a single or several parallel rows in Congridae); lateral line system reduced (prominent in Congridae); posterior nostril low on snout or flap-like; pectoral fins present or absent.





KEY TO GENERA OCCURRING IN THE AREA :

1a. Tail shorter than head and trunk combined ..... Coloconger

1b. Tail longer than head and trunk combined

2a. Body extremely elongate; mouth very oblique; snout very short, much less than diameter of eye (Figs.1,2); pectoral fins reduced; caudal fin absent

3a. Anterior nostril penetrating through upper lip; mouth very small, its angle just level with anterior margin of eye (Fig.1)..Heteroconger

3b. Anterior nostril free from upper lip; mouth moderate, its angle reaching middle of eye (Fig.2) ..... Gorgasia

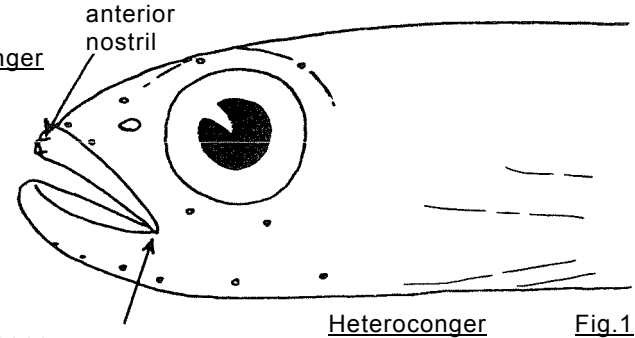
2b. Body moderately elongate; mouth slightly oblique; snout slightly less than, to somewhat greater than, diameter of eye; pectoral fins well developed; caudal fin present though often reduced

4a. Snout about equal to eye diameter; tail relatively stout, only a little longer than head and trunk combined

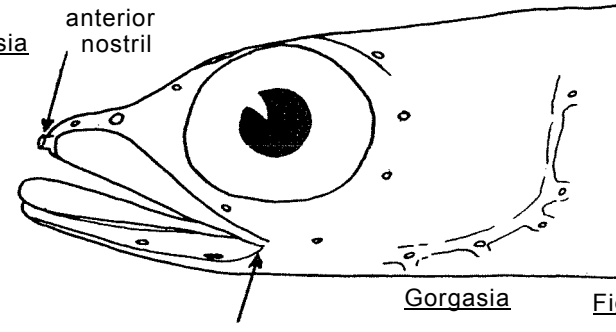
5a. Teeth essentially in a single row on each jaw except for some short extra rows anteriorly (Fig.3)

6a. Posterior nostril round, level with middle of eye, premaxillary tooth patch very slightly exposed in front of mouth but not curving upward on anterior face of snout (Fig.4) ..... Congriscus

6b. Posterior nostril slit-like, low down on snout; premaxillary tooth patch fully exposed and curving upward on anterior face of snout (Fig.5)..... Bathymyrus



Heteroconger Fig.1



Gorgasia Fig.2

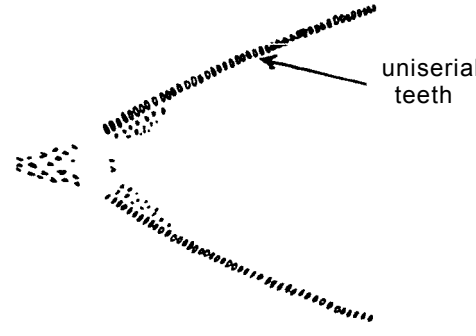
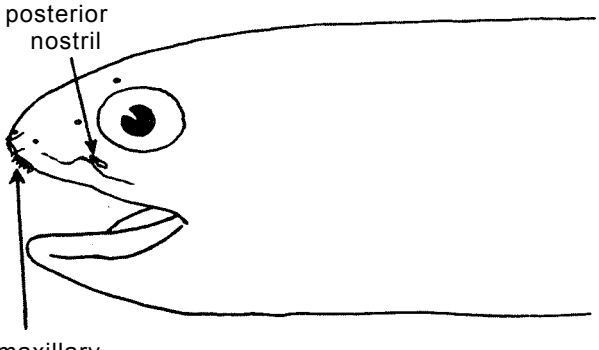
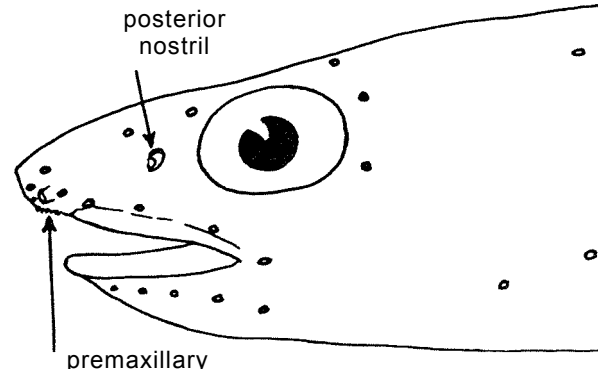


Fig.3



Bathymyrus Fig.5



Congriscus Fig.4

5b. Teeth in several rows on jaws (Fig.6) .....Ariosoma

4b. Snout much longer than eye diameter; tail relatively slender and thin, longer than head and trunk combined

7a. Teeth biserial on jaws, the outer row forming a conspicuous cutting edge (Fig.7) ..... Conger

7b. Teeth multiserial on jaws, forming narrow to broad bands, the teeth not in contact

8a. Colour spotted or banded ..... Poeciloconger

8b. Colour plain cream, brown, grey or black, but often lighter below

9a. Vomerine teeth in several longitudinal rows forming an elongate patch on roof of mouth

10a. Postorbital pores present

11a. Cephalic and lateral line pores forming a double row (Fig.8).....Diploconger

11b. Cephalic and lateral line system as a series of single pores (Fig.9)..Gnathophis

10b. No postorbital pores

12a. Posterior nostril level with middle of eye... Rhynchoconger

12b. Posterior nostril high on snout, in front of antero-dorsal corner of eye .....Promyllantor

9b. Vomerine teeth not forming a multiserial band on roof of mouth

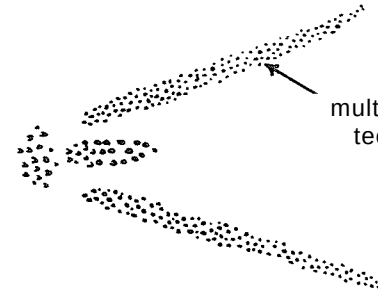
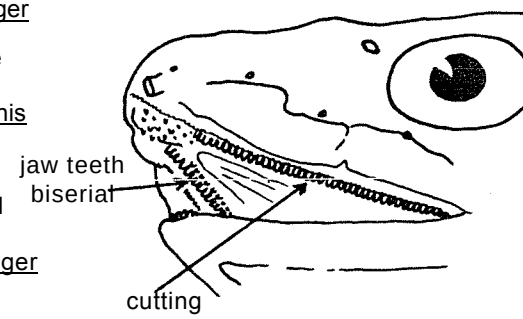
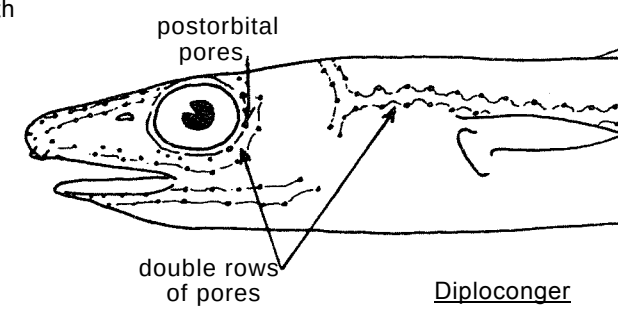


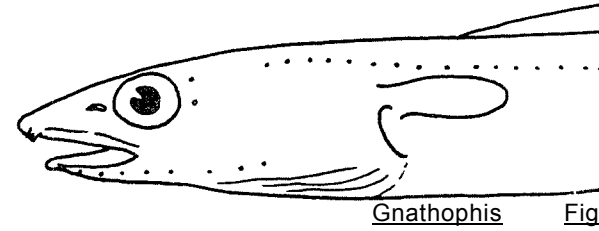
Fig.6



Conger Fig.7



Diploconger Fig.8



Gnathophis Fig.9

13a. Vomerine teeth in a single row extending far back on roof of mouth, sometimes with a few larger teeth anteriorly (Fig.10) ..... Uroconger

13b. Vomerine teeth in only a small cluster of sharp teeth anteriorly (Fig.11)

14a Mouth terminal, body soft and flabby, gill opening an oval hole (Fig.12) .....Bathyuroconger

14b. Snout projecting in front of lower jaw, body firm, gill opening a vertical slit (Fig.13) ..... Rhechias

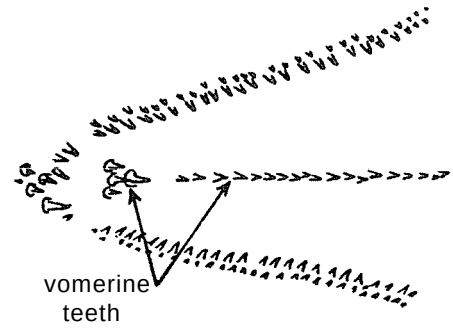


Fig.10

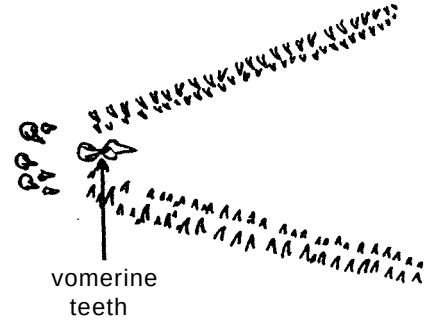
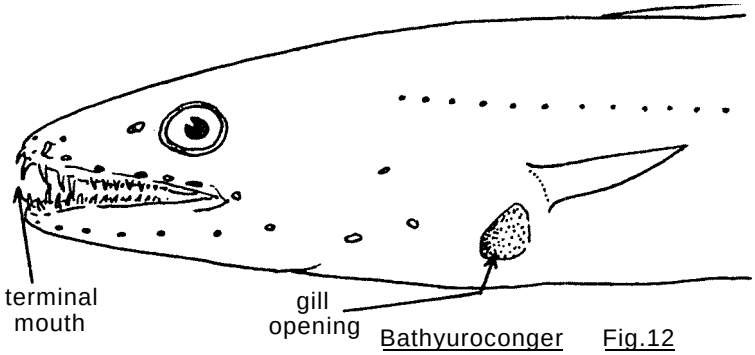
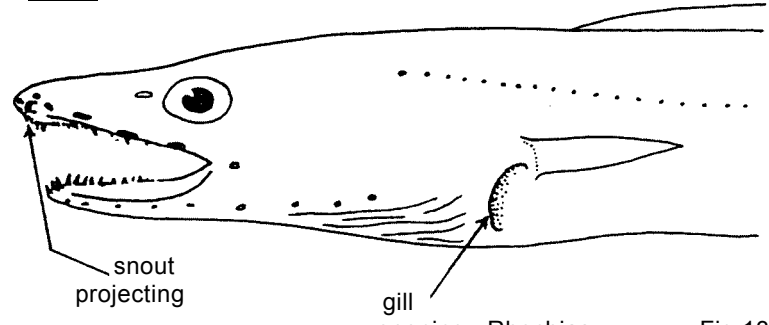


Fig.11



Bathyuroconger Fig.12



Rhechias Fig.13

LIST OF SPECIES OCCURRING IN THE AREA*:

Code numbers are given for those species for which Identification Sheets are included.

Ariosoma anago (Temminck & Schlegel, 1842)
Ariosoma gnanadossi Talwar & Mukherjee, 1977**
Ariosoma mauritianum (Pappenheim, 1914)
Ariosoma nigrimanum Norman, 1939
Ariosoma scheelei Stromman, 1896)
Ariosoma somaliense Kotthaus, 1968

Bathymyrus echinorhynchus Alcock, 1889
Bathymyrus smithi Castle, 1968

*List provisional
**Known from the east coast of India

Bathyuroconger braueri (Weber & de Beaufort, 1916)

Coloconger raniceps Alcock, 1889
Coloconger scholesi Chan, 1967

Conger cinereus cinereus Rüppell, 1828 CONGR Cong 5
Conger wilsoni (Bloch & Schneider, 1801)

Congriscus maldivensis Norman, 1939

Diploconger polystigmatus Kotthaus, 1968

Gnathophis heterolineus (Kotthaus, 1968)

Gorgasia maculata Klausewitz & Eibl-Eibesfeldt, 1959
Gorgasia sillneri Klausewitz, 1962

Heteroconger hassi Klausewitz & Eibl-Eibesfeldt, 1959

Poeciloconger fasciatus Günther, 1871

Promyllantor purpureus Alcock, 1890

Rhechias guttulatus (Günther, 1887)
Rhechias wallacei Castle, 1968)

Rhynchoconger ectenurus (Jordan & Richardson,1909)

Uroconger lepturus (Richardson, 1848) CONGR Uroc 1
Uroconger erythraeus Castle, 1982

Incertae sedis:

Bathycongrus nasicus (Alcock, 1893)***

Congromuraena macrocercus Alcock, 1894***
Congromuraena musteliceps Alcock, 1894***
Congromuraena squaliceps Alcock, 1893***

Pseudophichthys macroporis Kotthaus, 1968

Prepared by P.H.J. Castle, Department of Zoology, Victoria University of Wellington, New Zealand

Illustrations provided by author

*** These nominal species are known from the east coast of India and could be expected to occur at least in the northeast part of Area 51. However, their status requires further study before they can be correctly placed within the Congridae

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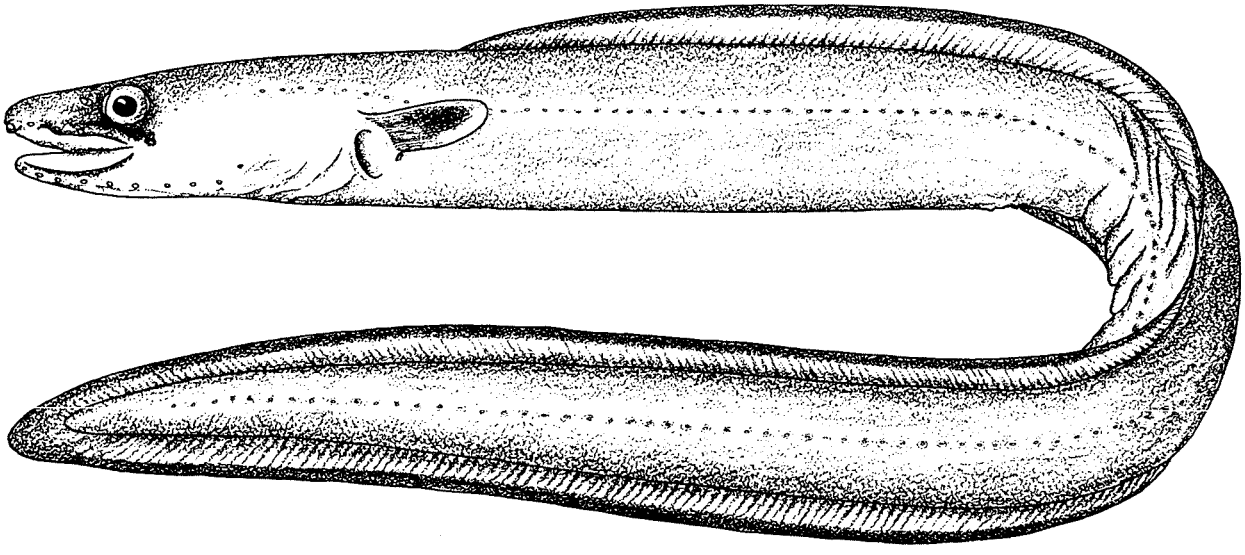
FAO SPECIES IDENTIFICATION SHEETS

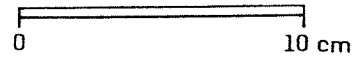
FAMILY: CONGRIDAE

FISHING AREA 51
(W. Indian Ocean)

Conger cinereus cinereus Rüppell, 1828

OTHER SCIENTIFIC NAMES STILL IN USE: Conger cinereus Rüppell, 1828





VERNACULAR NAMES:

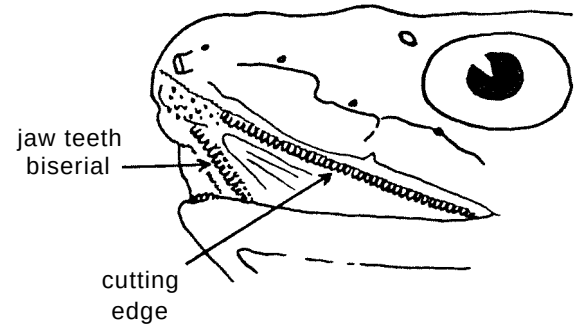
FAO : En - Longfin African conger
Fr - Congre oiro
Sp - Congrio de aleta larga (Africa)

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate and cylindrical, compressed along tail. Head length contained 7 to 9 times in total length; upper and lower lips well developed; 2 rows of teeth in jaws, those of outer row larger, close-set, and compressed to form a cutting edge; mouth reaching to slightly beyond centre of eye. Dorsal fin originating about over middle of pectoral fins; pectoral fin larger than eye, with 15 to 21 rays; lateral line pores in front of a vertical through anus 37 to 42; vertebrae 139 to 146.

Colour: grey to brown with a broad black margin on median fins, a black spot on pectorals (absent on juveniles) and a black bar under eye; in life with dark crossbars.

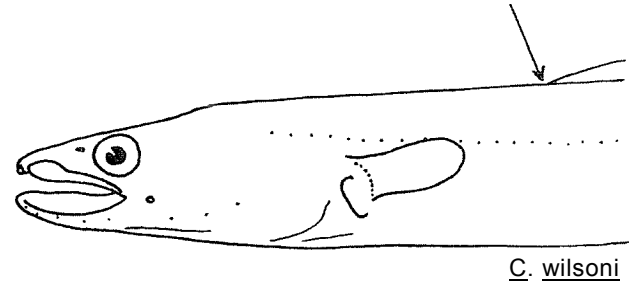


DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Conger wilsoni: dorsal begins well behind tip of pectoral fin; last sensory pore on upper lip level with corner of mouth, not above it; inner row of teeth on jaws poorly developed in large specimens; plain coloration without dusky patches.

Congriscus maldivensis: snout very short (about equal to eye diameter); tail about equal in length to head and trunk combined.

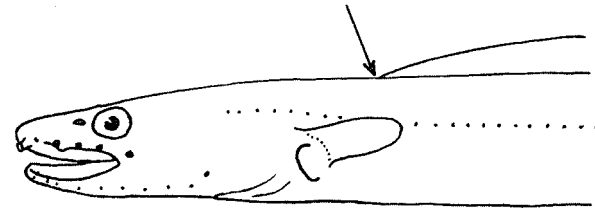
Ariosoma species: multiserial teeth on jaws.



C. wilsoni

SIZE:

Maximum: 80 cm; common to about 50 cm.



C. cinereus cinereus

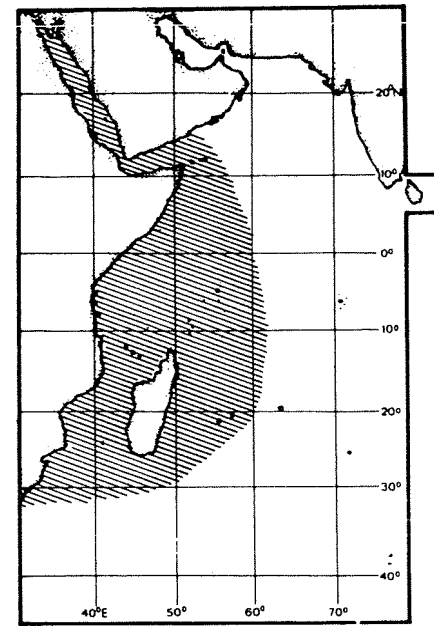
GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

East Africa from Natal to the Red Sea, eastward to include Madagascar, Seychelles, Réunion and Mauritius. Also widespread in the Indo-west Pacific, eastward to Pacific Central America.

A common reef species, active at night, feeding variously on small reef animals.

PRESENT FISHING GROUNDS:

No definite fishing grounds; caught over reefs and offshore to about 50 m.



CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught by various types of nets, trawls and by hook and line.

Marketed fresh.

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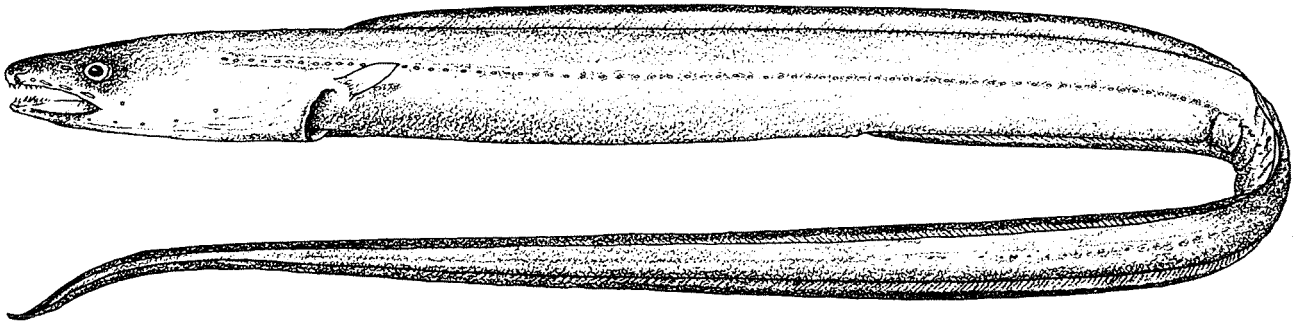
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CONGRIDAE

FISHING AREA 51 (W. Indian Ocean)

Uroconger lepturus (Richardson,1848)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Slender ronger
Fr - Congre gracile
Sp - Congrio coludo

NATIONAL:

DISTINCTIVE CHARACTERS:

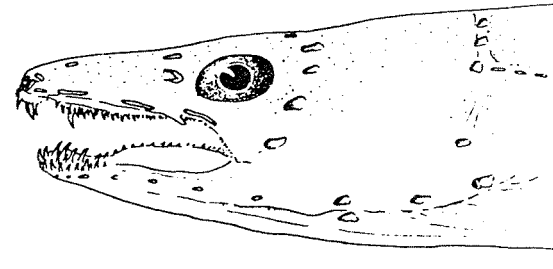
Body very elongate and slender, cylindrical in front, compressed along the tail which is very thin and delicate. Head about 8 times in total length, with a rounded snout, small eye and poorly developed lips, the upper lip with 2 or 3 bony supports projecting downward and backward to edge of lip; teeth very sharp, prominent, those on jaws not in contact or forming a cutting edge, anterior most intermaxillary teeth forming a line across and outside mouth when mouth closed; about 20 small teeth in a single line on vomer (roof of mouth). Dorsal fin originating directly over gill opening; pectoral fins small and delicate. No obvious head pores except around anterior nostril; lateral line pores before a vertical through anus 42 to 44. Vertebrae about 210 but the delicate tail is subject to damage and an accurate count is often difficult to make.

Colour: light greyish brown, darker on opercle, the lower surface of head and trunk white; lateral line pores white; posterior parts of dorsal and anal fins black.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA :

Uroconger erythraeus: Red Sea only; larger and more numerous head pores; a fleshy flap partly covering anterior nostril; 49 to 52 lateral line pores before anus (42 to 44 in U. lepturus).

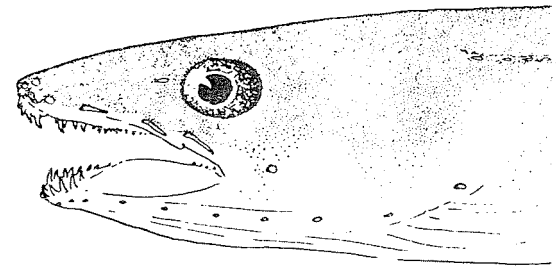
Rhechias guttulatus and R. wallacei: a small group of teeth on front part of vomer (roof of mouth); no uniserial line of teeth behind this patch; prominent head pores; vertebrae 158 to 161 and about 168, respectively (about 210 in U. lepturus).



U. erythraeus

Bathyuroconger braueri: only 1 or 2 teeth on front part of vomer; larger teeth on jaws; snout blunt; prominent head pores; a circular gill opening.

Rhynchoconger ectenurus: multiserial teeth on vomer; prominent head pores.



U. lepturus

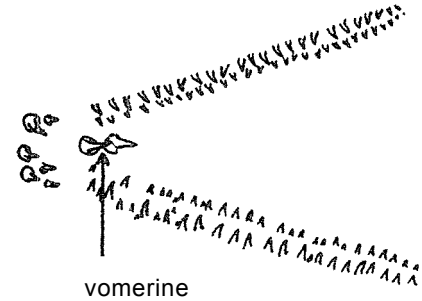
SIZE:

Maximum: 40 cm. common to about 30 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

East coast of Africa from Natal to the Red Sea; west coast of India. Also eastward and northward to China and Japan.

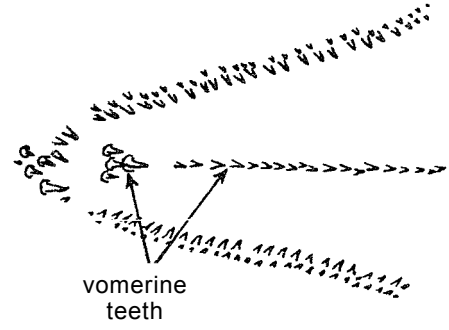
This is a relatively small eel living offshore on soft sandy mud, feeding mainly on small bottom-dwelling crustaceans teeth taceans.



Bathyuroconger

PRESENT FISHING GROUNDS:

No definite fishing grounds but frequently trawled in depths of up to 50 m off the west coast of India.



Uroconger

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly by fine-meshed shrimp trawls.

Marketed fresh.