

Congridae

(including Heterocongridae Clofnam Suppl.: 355, 82b)

Clofnam 82

by M.-L. Bauchot and L. Saldanha

Common names: Conger eels (En), Congres (Fr).

Very elongate fishes, usually snake-like body, scaleless; eyes well developed. Anterior nostril opening near snout extremity in a more or less flexible tube (except in *Pseudophichthys*); posterior nostril near anterior edge of eye. Conical or incisiform teeth; vomerine teeth, when present, usually no longer than the others. Gill openings lateral or sublateral. Dorsal and anal fins confluent with caudal fin; pectoral fins present, but pelvic fins absent.

Benthic on the continental shelf or slope. Carnivorous, feeding principally on fishes. Reproduction in warm hydrological season. Characteristic compressed transparent larval stage (leptocephalus) with an extended larval life, allowing transport by oceanic currents over great distances.

Genera 26; in Clofnam area 6.

Recent revisions; Kanazawa (1958, 1961), Blache & Bauchot (1976), Smith & Kanazawa (1977), Blache (1977—leptocephali).

KEY TO GENERA AND SPECIES

- | | | |
|----|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 1a | Rays of vertical fins segmented | 2 |
| 1b | Rays of vertical fins unsegmented | 6 |
| 2a | Mouth cleft short, very oblique | <i>Taenioconger longissimus</i> (p. 573) |
| 2b | Mouth cleft long, subhorizontal. | 3 |
| 3a | Mouth rictus at level of anterior edge of eye; dorsal fin origin behind pectoral fins | <i>Pseudophichthys splendens</i> (p. 572) |
| 3b | Mouth rictus behind level of anterior edge of eye; dorsal fin origin above or before the pectoral tip | 4 |
| 4a | Labial fold very large; outer maxillary and mandibular teeth incisiform, close set, form cutting edge | <i>Conger conger</i> (p. 569) |
| 4b | Labial fold narrow; all maxillary and mandibular teeth conical or granular, in bands | 5 |
| 5a | Vertebrae 130–141; 3 pores on post-orbital branch of infra-orbital canal | <i>Gnathophis mystax</i> (p. 570) |
| 5b | Vertebrae 144; 1 or 2 pores on post-orbital branch of infra-orbital canal | <i>Gnathophis codoniphorus</i> (p. 570) |
| 6a | Outer maxillary and mandibular teeth multiserial, conical, cardiform, on nearly entire jaws. | <i>Ariosoma balearicum</i> (p. 568) |
| 6b | Outer maxillary and mandibular teeth incisiform, close set, forming a cutting edge | <i>Paraconger macrops</i> (p. 571) |

ARIOSOMA Swainson, 1838

Clofnam 82.2

Body elongate, scaleless; mouth moderately large, the rictus at level of anterior edge or centre of eye; labial flange not well developed. In both

jaws several series of conical teeth in bands. Gill openings lateral, their upper edge opposite midpoint of pectoral fin base. Dorsal and anal fins confluent with caudal fin, their rays unsegmented; pelvic fins absent.

See family for biology, etc.

Species about 10; in Clofnam area 1.

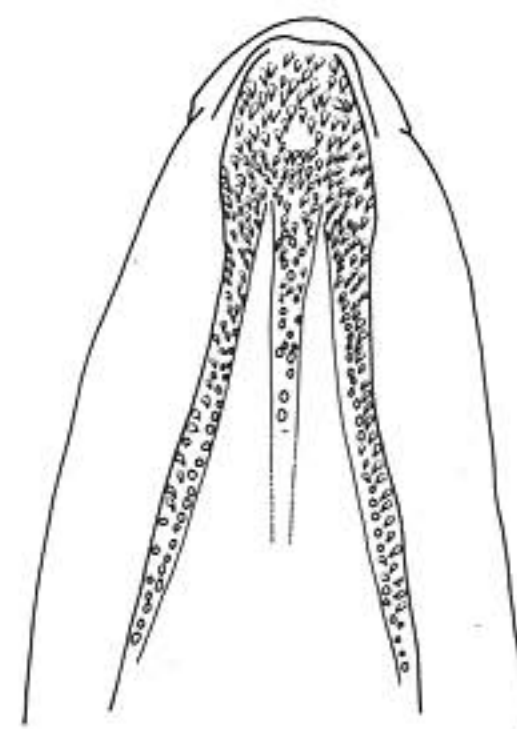
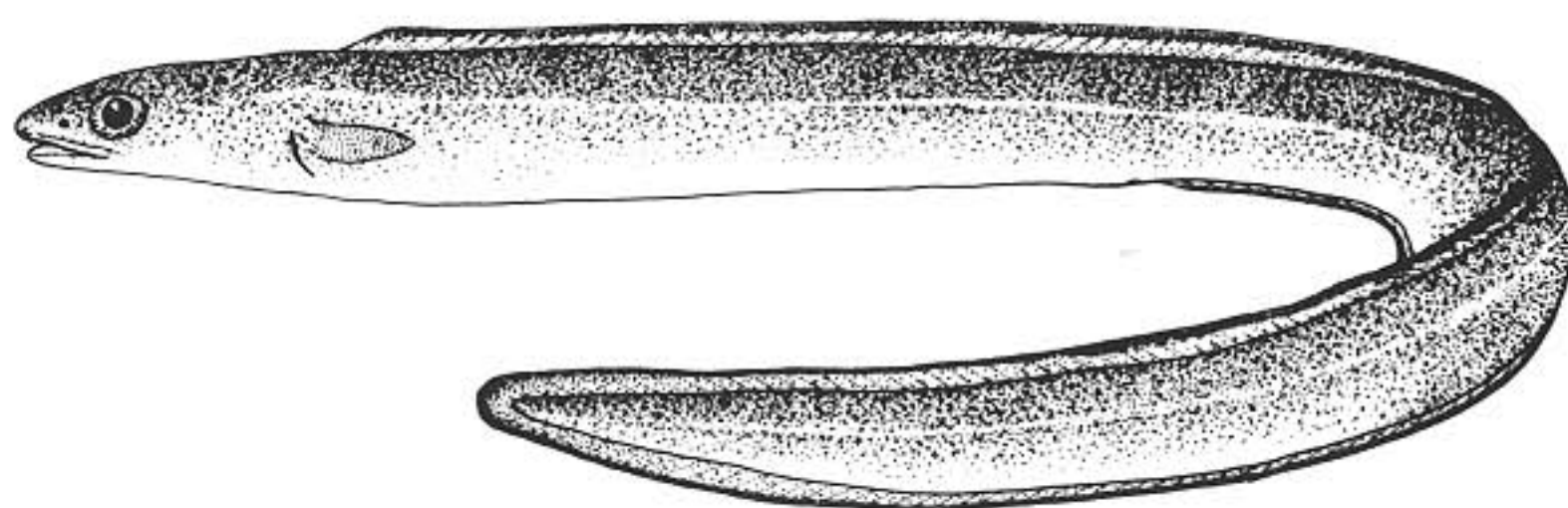
Recent revisions: Smith (1971), Blache & Bauchot (1976—on a regional basis only).

Ariosoma balearicum (Delaroche, 1809)

Clofnam 82.2.1
Suppl.: 355

Common synonyms: none.

Common name: Balearic conger (En).

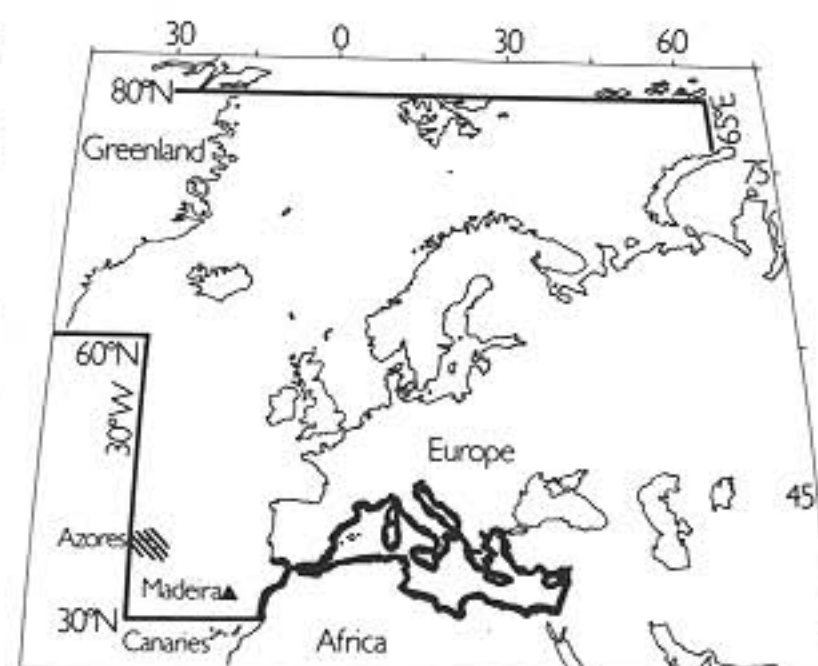


Teeth of upper jaw

Diagnosis: snake-like body, not very compressed except in caudal extremity; anus slightly anterior to midpoint of body. Eye large, inter-orbital space very narrow. Anterior nostril opening in a short tube, near snout tip; posterior nostril a round or oval pore, midway between eye and anterior nostril. Mouth rictus at level of anterior edge or centre of eye, snout slightly prominent, labial flange not very developed. In both jaws teeth conical, sharp, cardiform; premaxillary teeth longer, visible in part when mouth is closed. Gill openings lateral, slightly crescentiform. Dorsal and anal fins high, dorsal fin origin at about the level of pectoral base. Lateral line: 43–53 preanal pores; 9 prepectoral; 3 supra-temporal pores. Vertebrae: total 121–135; abdominal 65–67. **Colour:** yellow to ochre with well-spaced, small yellowish-red patches; dorsal and anal fins edged with black. **Size:** to 50 cm.

Habitat: benthic, on the shelf, littoral, burrowing in galleries on sandy mud bottoms at 20–100 m. **Food:** carnivorous. **Reproduction:** warm hydrological season; larval life of about 20–22 months (Blache, 1977); metamorphosis at about 20 cm.

Distribution: eastern tropical Atlantic and Mediterranean. Elsewhere, western tropical Atlantic, Red Sea and western Indian Ocean.



CONGER [Cuvier] Oken, 1817

Clofnam 82.1

Body elongate, scaleless; anterior nostril opening near snout extremity in a short tube, posterior nostril near anterior edge of eye; mouth large, rictus slightly behind posterior edge of eye. Teeth in jaws in 1 or 2 rows,

teeth of outer row compressed, close set, forming a cutting edge; inner teeth small, conical; larger conical teeth on premaxillary plate and vomer; labial flange very large. Gill openings sublateral. Dorsal and anal fins confluent with caudal fin, their finrays segmented. Pelvic fins absent.

See family for biology, etc.

Species 15; in Clofnam area 1.

Recent revisions: Kanazawa (1958), Smith (1971—on a regional basis only).

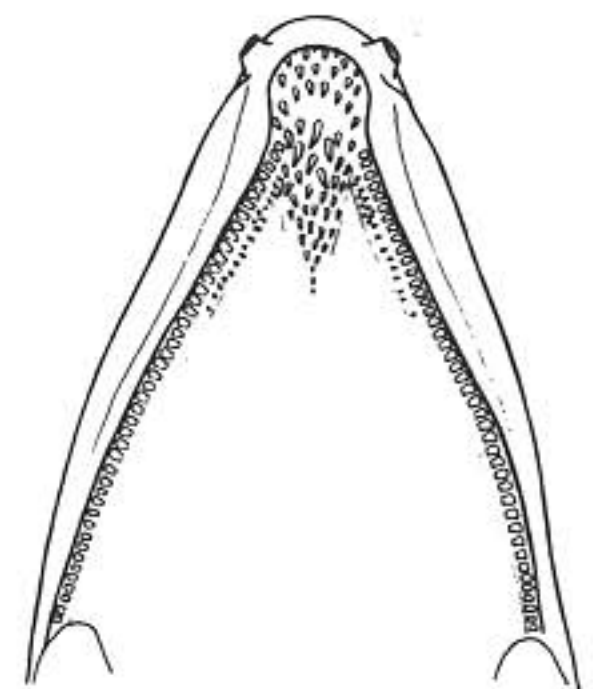
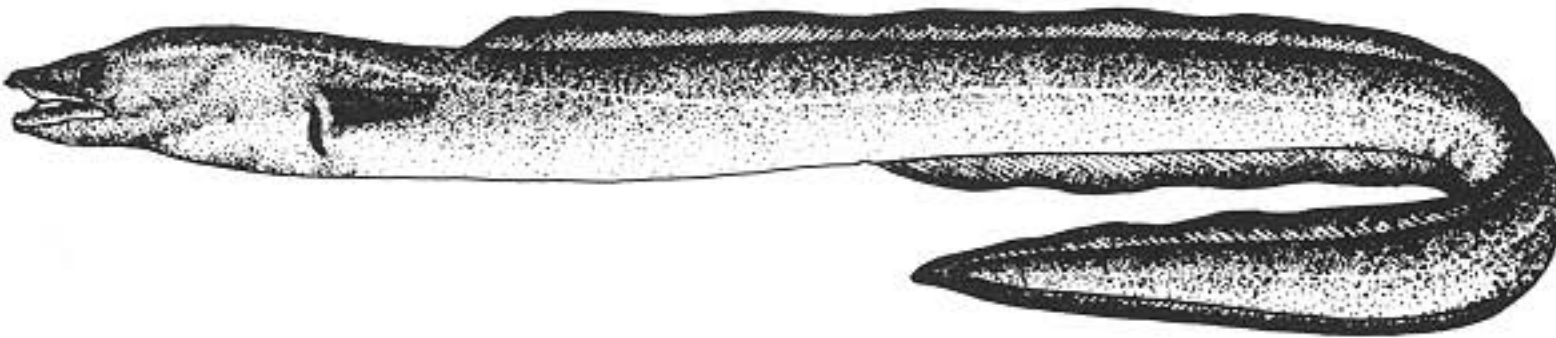
Conger conger ([Artedi, 1738] Linnaeus, 1758)

Clofnam 82.1.1

Suppl.: 355

Common synonyms: none.

Common names: Conger eel (En), Congre (Fr), Congrio (Sp).



Teeth of upper jaw

Diagnosis: snake-like body, slightly compressed anteriorly, well compressed posteriorly to anus, the latter before midpoint of body; dorsal outline of head convex, depressed over eye. Eye small, inter-orbital space broad and flat. Anterior nostril opening on snout extremity in a short tube directed forward; posterior nostril an oval pore, before and near eye. Mouth rictus at level of posterior edge of eye; snout slightly prominent; very large labial flange. In both jaws, an outer row of big incisiform teeth, close set, forming a cutting edge and an inner row of small conical and sharp teeth; larger conical teeth on premaxillary plate and vomer. Gill openings sublateral, crescentiform. Lateral line: 44–47 preanal pores, 6 prepectoral; only 1 supra-temporal pore. Vertebrae: total 148–153; abdominal 53–57. **Colour:** more or less dark grey; lateral line pores marked with white; dorsal and anal fins with a black margin. **Size:** to 3 m, males usually smaller than females.

Habitat: benthic on the shelf on rocky or sandy bottoms at 0–100 m. **Food:** fishes, crustaceans and cephalopods. **Reproduction:** sexual maturity at 5–15 years old; spawning in summer, 3–8 million eggs per individual. Leptocephali with a long larval life; metamorphosis at 14–16 cm; very fast growth of young.

Distribution: eastern North Atlantic northward to Norway, also Mediterranean and western Black Sea. Elsewhere, southward to Senegal.



GNATHOPHIS Kaup, 1860

Clofnam 82.3

Body elongate, scaleless, anterior nostril opening in a short tube at snout extremity; posterior nostril near anterior edge of eye. In both jaws, bands of conical or granular teeth; labial flange narrow, including

the distal extremities of preorbital bones. Gill openings lateral, crescentiform. Dorsal and anal fins confluent with caudal fin, their finrays segmented. Pelvic fins absent.

See family for biology, etc.

Species about 10; in Clonam area 2.

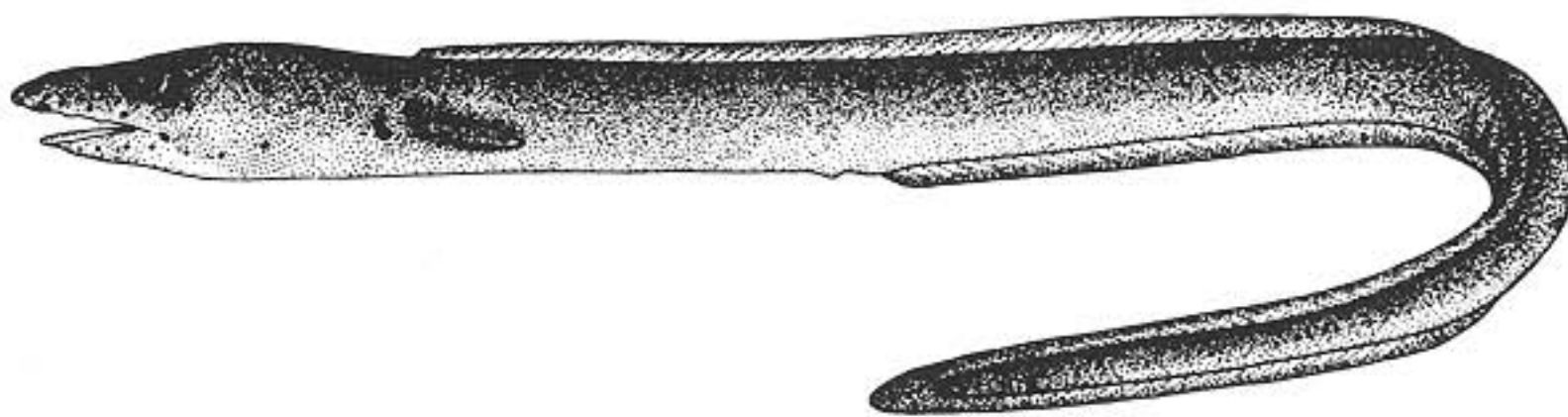
Recent revisions: Saldanha (1967), Smith (1971), Maul (1972—on a regional basis only).

Gnathophis codoniphorus Maul, 1972

Clonam Suppl. 82.3.2

Common synonyms: none.

Common names: none.

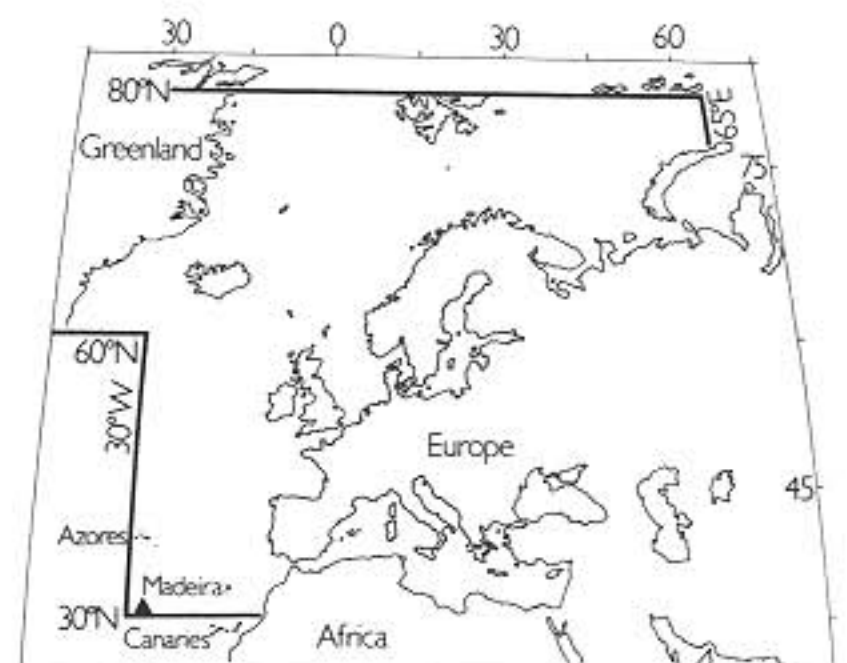


Diagnosis: resembles *G. mystax* but has the anterior nostril opening as a bell-shaped tube, only 1–2 pores on the post-orbital branch of the infra-orbital canal, and 144 vertebrae.

Habitat: benthic on shelf at 300–490 m. **Food:** no data. **Reproduction:** no data.

Distribution: on the Azorean slope at 30°03' N, 28°40' W. Elsewhere, southward at 20°50.2' N., 28°23.8' W.

Note. Known only from one juvenile and two post-larvae. Probably synonym of *Gnathophis mystax* (Delaroche, 1800).

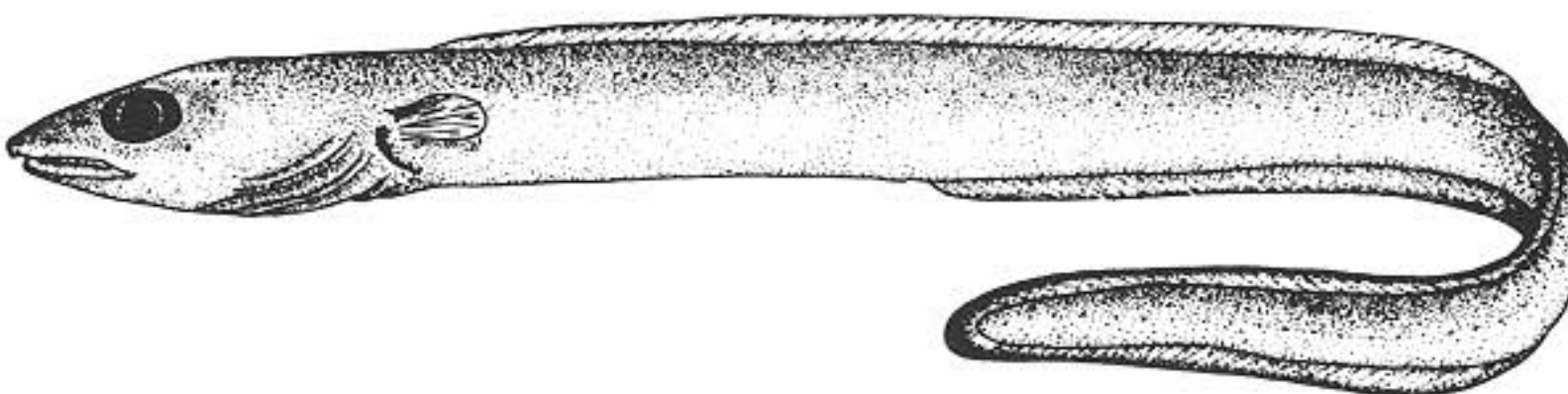


Gnathophis mystax (Delaroche, 1800)

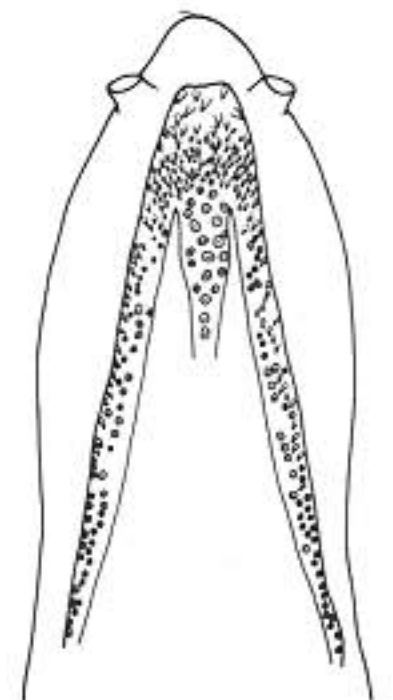
Clonam 82.3.1
Suppl.: 355

Common synonym: *Bathycongrus mystax* of authors.

Common name: Blacktailed conger (En).



Diagnosis: snake-like body, scaleless, cylindrical in anterior half, more or less compressed behind anus, the latter slightly before midpoint of body. Eye large, inter-orbital space narrow. Anterior nostril opening in

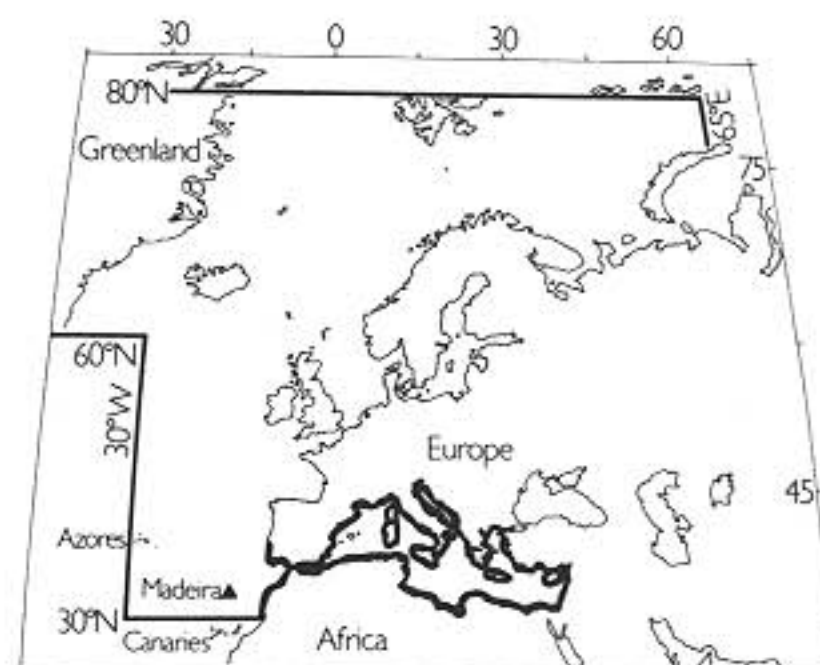


Teeth of upper jaw

a flexible tube at snout near to premaxillary teeth; posterior nostril a horizontal slit with a slightly crenulate edge, opening before and near eye. Mouth moderately large, rictus slightly before level of middle of eye; snout somewhat prominent; labial flange narrow on upper lip, broader on lower lip. In both jaws and vomer, conical teeth more or less sharp, in bands (4–6 rows); premaxillary teeth conical, elongate and sharp, ventrally visible when mouth is closed. Gill openings crescentiform, their upper edge opposite midpoint of pectoral fin base. Dorsal and anal fins well developed, their finrays segmented; dorsal fin origin at level of middle of pectoral fins. Lateral line: 30–33 preanal pores; 5–6 prepectoral; 3 supra-temporal pores; 3 pores on post-orbital branch of infra-orbital canal. Vertebrae: total 130–141; abdominal 43–47. *Colour*: brownish, darker dorsally, lighter ventrally; posterior part of dorsal and anal fins edged with black; caudal fin almost entirely black. *Size*: to 60 cm.

Habitat: benthic on the shelf and on upper slope, on muddy bottoms at 80–800 m. *Food*: benthic invertebrates and perhaps small fishes. *Reproduction*: spawning in warm season (August–October in Mediterranean), eggs 2.5–3.0 mm in diameter, leptocephali with a long larval life (12 months in tropical Atlantic).

Distribution: eastern Atlantic and Mediterranean.



PARACONGER Kanazawa, 1961

Clofnam 82.4

Body elongate, scaleless; anterior nostril opening in a short tube at tip of snout; posterior nostril located above groove of upper lip, between eye and anterior nostril; labial flange well developed. In both jaws an outer row of incisiform teeth, close set, forming a cutting edge; other teeth conical and small. Gill openings lateral, their upper edge opposite upper edge of pectoral fin base. Dorsal and anal fins confluent with caudal fin, their finrays unsegmented. Pelvic fins absent.

See family for biology, etc.

Species 6; in Clofnam area 1.

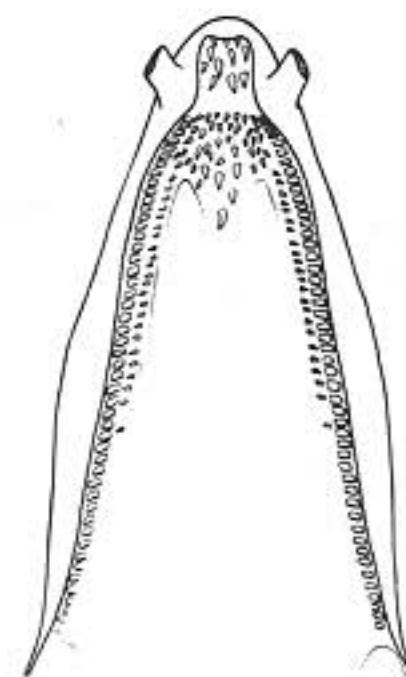
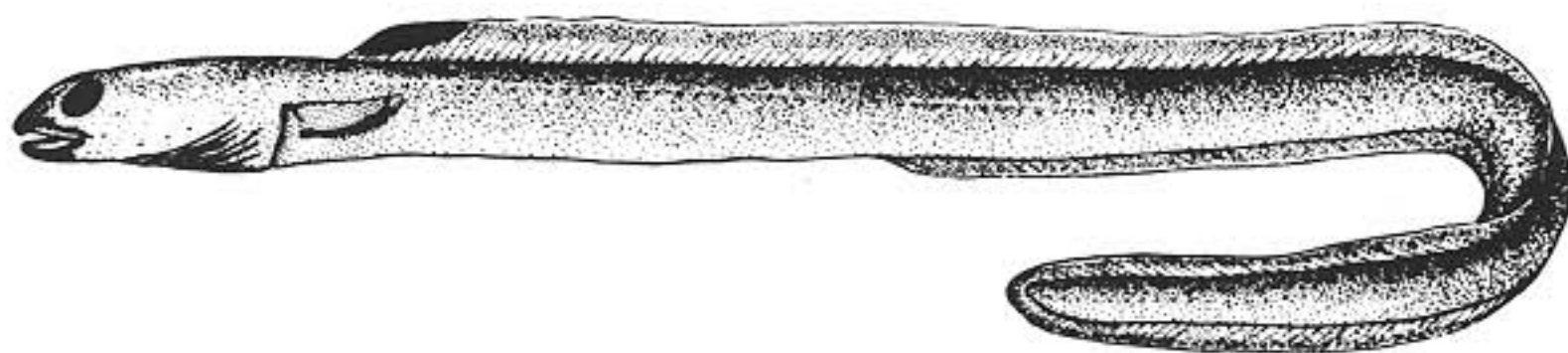
Recent revisions: Kanazawa (1961), Smith (1971), Blache & Bauchot (1976—on a regional basis only).

Paraconger macrops (Günther, 1870)

Clofnam 82.4.1

Common synonyms: none.

Common name: Blackspot conger (En).

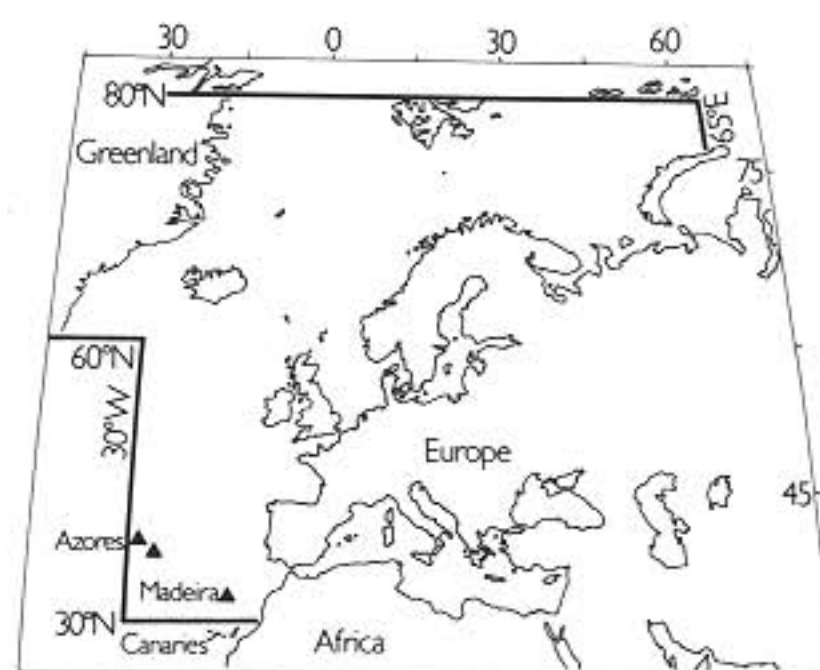


Teeth of upper jaw

Diagnosis: body elongate, cylindrical anterior to anus, progressively compressed posteriorly, the anus anterior to midpoint of body. Interorbital space broad and flat. Anterior nostril opening in a short tube on tip of snout; posterior nostril an oval pore, slightly fringed, midway between eye and anterior nostril. Mouth moderately large, rictus slightly anterior to level of posterior margin of eye, labial flanges very well developed. In both jaws an outer row of incisiform teeth forming a cutting edge, with an inner row of conical teeth, also present on vomer and premaxillae, the last ones visible when mouth is closed. Gill openings lateral, nearly straight, their upper limit to upper edge of pectoral fin base. Dorsal and anal fins confluent with caudal fin, their finrays unsegmented, dorsal fin origin at midway between gill opening and tip of pectoral fin. Lateral line 50–53 preanal pores, 8 prepectoral, 1 or 2 supra-temporal pores. Vertebrae: total 145–147; abdominal 65–67. **Colour:** light brown, lighter ventrally; tip of snout and lower jaw greyish; a large dark patch on first eight dorsal rays; outer half of dorsal and anal fins dusky brown, basal half and distal edge whitish. **Size:** to 50 cm.

Habitat: benthic on the shelf on sandy areas of rocky sublittoral zone at 30–100 m; burrow in the sediment during the day and swim actively during the night in search of prey. **Food:** (few data) fish. **Reproduction:** leptocephalus unknown.

Distribution: Madeira and the Azores.



PSEUDOPHICHTHYS Roule, 1916
(as *Promyllantor* in Clofnam 82.5)

[Clofnam 82.6]
Clofnam Suppl. 82.5

See species for diagnosis, biology, etc.

Species 1.

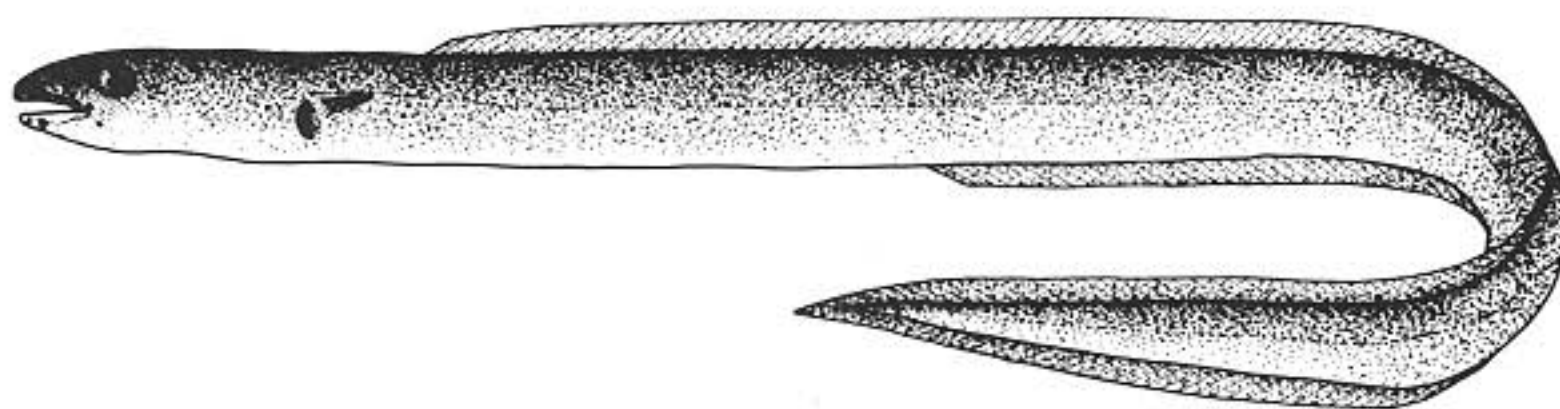
Recent revisions: Smith (1971), Blache & Bauchot (1976—on a regional basis only), Smith & Kanazawa (1977).

Pseudophichthys splendens (Lea, 1913)

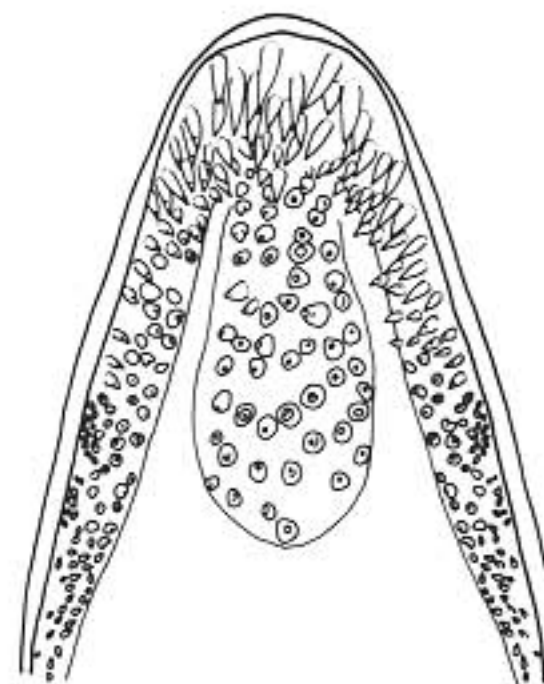
Clofnam Suppl. 82.5.1

Common synonyms: *Promyllantor latedorsalis* (Roule, 1915),
Pseudophichthys schmitti Hildebrand, 1940.

Common name: Purplemouthed conger (En).



Diagnosis: snake-like body, scaleless, well compressed, caudal part tapering progressively to a point. Head more or less cylindrical, its

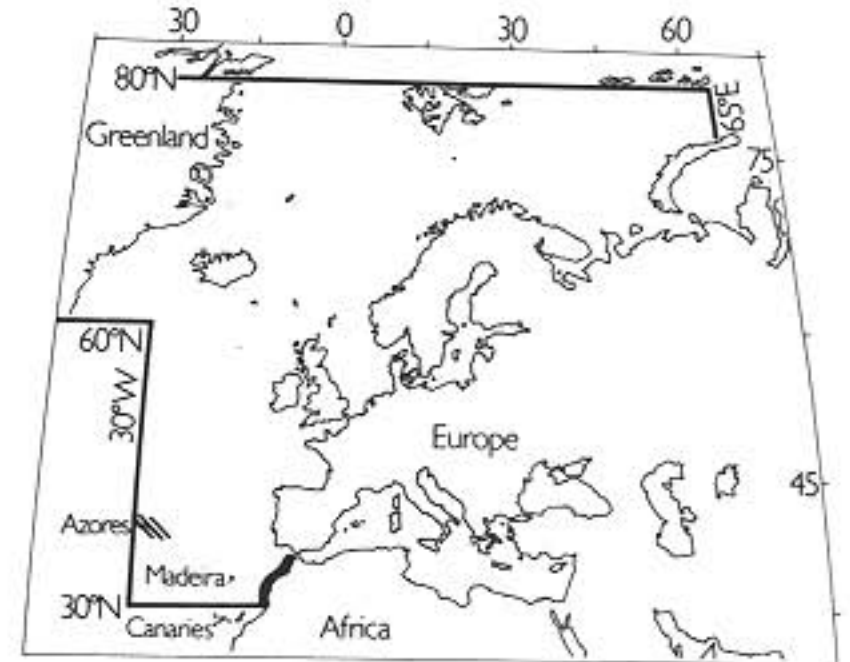


Teeth of upper jaw

dorsal outline almost straight, inter-orbital space narrow, convex. Anterior nostril opening in a pore with a slight rim; posterior nostril an oval pore near anterior margin of eye. Mouth rictus slightly anterior to level of anterior edge of eye; snout high, slightly prominent; labial flange absent in upper jaw; large mucus pores on margin of upper lip and at tip of snout and on chin. In both jaws, teeth long and sharp, in large bands; short and blunt teeth set in a broad and long vomerine oval plate, confluent with premaxillary teeth. Gill openings lateral, crescentiform. Dorsal and anal fins confluent with caudal fin, their finrays segmented; dorsal fin origin posterior to pectoral fin tip. Lateral line: 39 preanal pores, 7 prepectoral; no supra-temporal pore. Vertebrae: total 134–137; abdominal 45–50. *Colour*: sandy grey, ochre, darker dorsally; vertical fins progressively darker posteriorly; lips, mouth cavity, gill cavity, gill openings and peritoneum purple black. *Size*: to 50 cm.

Habitat: benthic on slope on muddy bottoms at 1,000 m and over. *Food*: no data. *Reproduction*: very few data; larva described as *Lep-tocephalus splendens* by Lea, 1913.

Distribution: off Morocco, the Azores and probably Madeira. Elsewhere, western North Atlantic.



TAENIOCONGER Herre, 1923

Clofnam Suppl. 82b.1

Body extremely elongate, scaleless; mouth oblique, rictus at level of anterior edge of eye; snout very short, lower jaw prominent; anterior nostril in a short tube jutting forward from the outer face of upper lip. Gill openings lateral. Dorsal and anal fins low, their finrays segmented; pectoral fins reduced; pelvic fins absent. Usually plain colour patterns.

See family for biology, etc.

Species: see note below; in Clofnam area 1.

Recent revisions: Böhlke (1957), Blache & Bauchot (1976—on a regional basis only).

Note. Considered as a member of *Heteroconger* Bleeker, 1868 by Castle (unpublished).

Taenioconger longissimus (Günther, 1870)

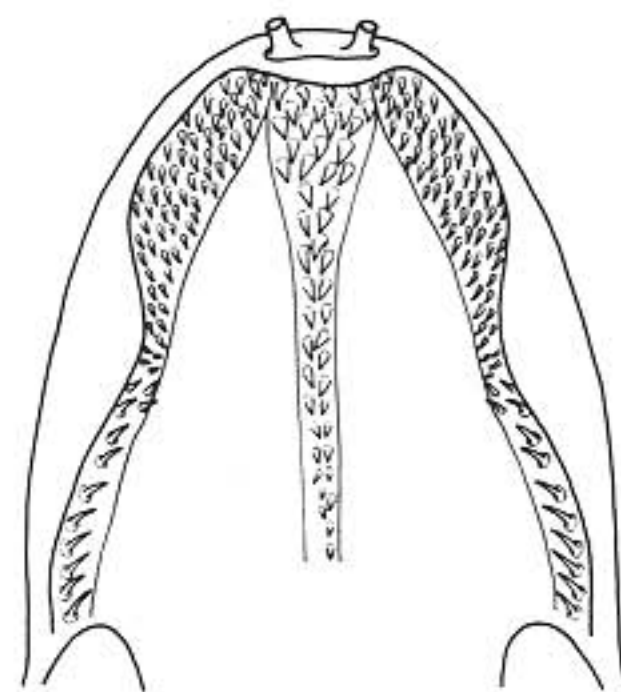
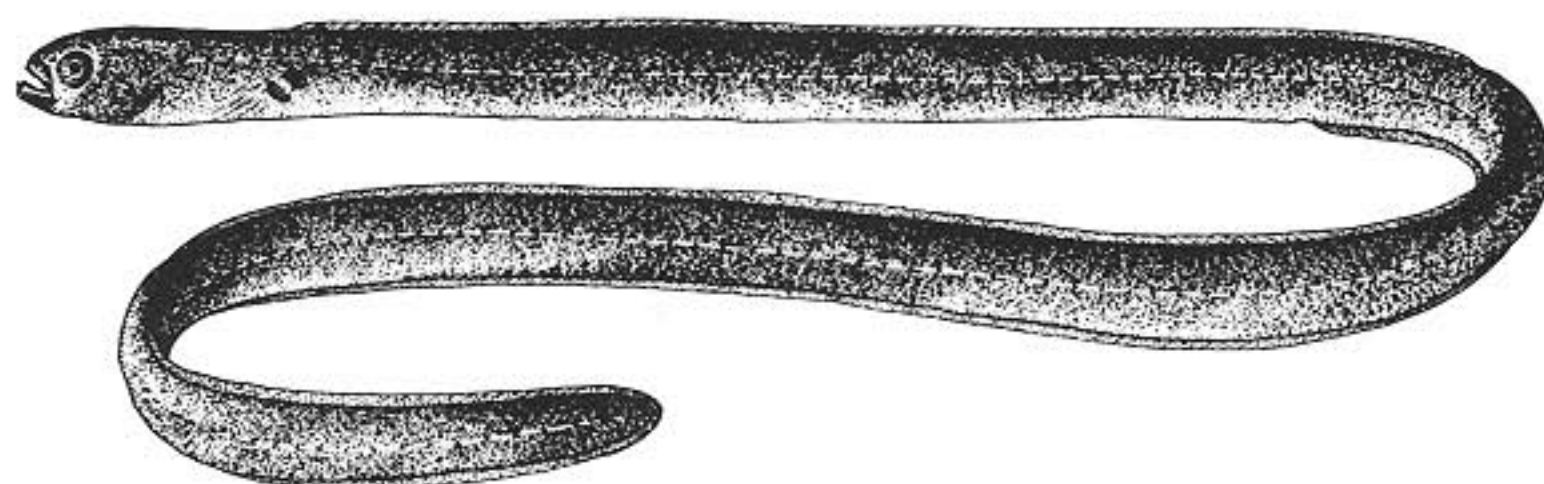
Clofnam Suppl. 82b.1.1

Common synonym: ?*Nystaticthys halis* (Böhlke, 1957).

Common name: Garden conger (En).

Diagnosis: body extremely elongate, scaleless, compressed in caudal portion (posterior two-thirds of body). Eye large. Anterior nostril at bottom of a depression of upper lip flange, close to median line at tip of snout; posterior nostril a small oval pore between anterior nostril and upper edge of eye. Mouth short, oblique; rictus at level of anterior edge of eye; lips broad, lower jaw prominent. Teeth conical and sharp, straight or slightly curved; in both jaws in bands anteriorly, a single row posteriorly; on vomer, more or less cardiform anteriorly, biserial

posteriorly. Gill openings lateral. Dorsal and anal fins very low, their finrays segmented; pectoral fins minute, pelvic fins absent. Lateral line: 50–54 preanal pores; no supra-temporal pore. Vertebrae: total 166–167. *Colour*: dark greyish-brown. *Size*: to 60 cm.



Teeth of upper jaw

Habitat: benthic on the shelf, burrowing in littoral sandy bottoms at 15–17 m, forming dense colonies (2–11 individuals per m²) covering large areas; when not disturbed, animals keep about one-third of body vertically out of their burrows and curved smoothly against the current, but quickly withdraw when disturbed; retreat into their burrows during the night. *Food*: pelagic prey and small benthic fauna (prosobranch molluscs, crustaceans, decapod macrurans, copepods), also eggs. *Reproduction*: spawning probably in warm season; leptocephali described in the Gulf of Guinea, hatching during warm hydrological season, their growth fast, larval life 6–8 months.

Distribution: Madeira and tropical eastern Atlantic.

