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Catalogue of fish species of the Netherlands

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ABSTRACT

A catalogue of 179 fish species occurring in the fresh and coastal waters of the Netherlands is published. Scientific, Dutch and English names are given for each species as well as information on their abundance in the fresh waters of Holland and in the Dutch coastal waters within the twelve mile boundary, together with records on rare and extremely rare species.

INTRODUCTION

A catalogue of fish species occurring in the fresh and coastal waters of the Netherlands was hitherto never published in English. Several lists were, however, published in the Dutch language, starting with "Naamlijst van Nederlandsche Visschen" by Bennet & van Olivier (1825). Subsequent lists of importance were published by van Bemmelen (1866), Hoek (1895), Redeke (1915), and Popta (1924).

The first scientific review of Dutch fishes accompanied by illustrations was "Visschen" by Schlegel (1862). The most recent and most complete review of fish species occurring in the fresh and coastal waters of the Netherlands was given by Redeke (1941), simultaneously published as volume 10 of the series "Fauna van Nederland". Redeke's book contains a historical review of the Dutch literature, keys to genera and species, descriptions of 149 species, data on their distribution, an ecological review, and references to literature. The majority of the species are figured, partly after Nitsche, "Faune ichthyologique", and Schlegel.

Since 1941 some field guides have appeared in Dutch, concerning either marine or fresh water fish species. A systematic review of western and central European fresh water fishes together with original information on the

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[173]

Dutch species was published by Ruting (1958). Nijssen (1966) published an illustrated guide of 122 marine species occurring within the twelve mile boundary along the Dutch coast. Muus' guides on European marine and fresh water fishes were translated into Dutch by de Graaf (1966) and by Boddeke (1968) respectively.

The present writers think that the time has now come for a new complete list of fish species occurring in Dutch fresh and coastal waters. In the first place a considerable amount of new information has been published in late years relative to species formerly believed to be rare or extremely rare in Dutch waters. When we study Redeke's lists of 1941 we find that some species have disappeared from inland waters, whereas a good many marine species not recorded by Redeke have been recently reported on as occurring in Dutch waters. In the second place it would seem desirable to incorporate scientific names more in keeping with the modern literature. We have used the classification system of Greenwood and others (1966).

We decided to give a list of fish species occurring in the fresh waters of Holland and in the Dutch coastal waters within the twelve mile boundary, together with records on rare and extremely rare species, and to add a number of photographic illustrations. The arrangement adopted in this list is as follows. We first give the scientific name of the species. Then follows the name of its author and the year of description. Synonyms are given only when the scientific names in this catalogue differ from those commonly used in recent literature. The symbol M is used for marine species, B for species occurring also in brackish waters, while F is used for fresh water species. An indication of their abundance within the twelve mile boundary along the Dutch coast or in fresh water is given by the terms common, fairly common, scarce, rare, and extremely rare. The term rare is used when a species has not been recorded on more than twelve occasions since 1941, the term extremely rare for species of which fewer than five specimens are known, and for species not caught since 1941, but having been recorded earlier from Dutch waters. The term scarce is used for any species which, although recorded on more than twelve occasions, is not captured with any degree of regularity. The term fairly common is applied to those species, which are regularly caught, although not in large numbers. Dutch (= D) names are given for each species. When there exist different vernaculaire Dutch names for the same species, we have chosen the most general name, in this often following Redeke. Some exceptions have been made on consultation with colleagues working in the same field. With English (= E) names we have mainly followed Wheeler (1969). Of species introduced from the United States of America, American (= Am) names have been given. A list of references to the literature is given together with the literature cited. An index on generic and specific names is added.

We thank our colleagues of the Rijksinstituut voor Visserijonderzoek (RIVO), IJmuiden, of the Nederlands Instituut voor Onderzoek der Zee (NIOZ), Texel, of the Hydrobiologisch Instituut, afdeling Delta-Onderzoek, Yerseke, and of the Rijksmuseum van Natuurlijke Historie (RMNH), Leiden

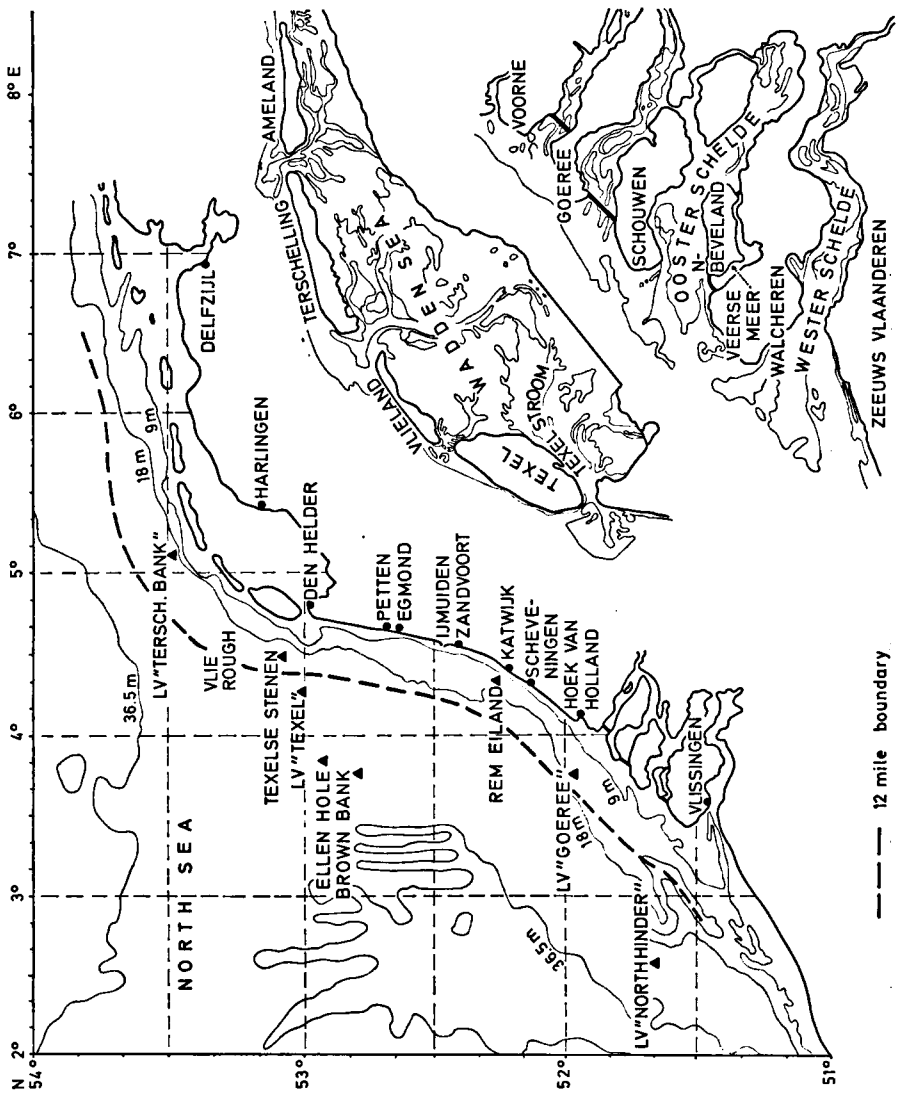


Fig. 1. Map showing coastal waters of the Netherlands (details of Wadden Sea and Zeeland enlarged).

for information given. The specimens preserved in the Leiden Museum, most of which have been identified by Dr. M. Boeseman, have not been re-examined. Only the information on the card-index was available. We also thank Mr. L. A. van der Laan, Instituut voor Taxonomische Zoölogie (Zoölogisch Museum) (ZMA), Amsterdam, for the photographic illustrations.

ACCOUNT OF THE SPECIES

PETROMYZONIFORMES

Petromyzonidae

Lampetra fluviatilis (Linnaeus, 1758)

F, M, anadromous, common. D: Rivierprik; E: Lampern.

Lampetra planeri (Bloch, 1784)

F, in unpolluted brooks, scarce. D: Beekprik; E: Brook Lamprey.
Protected species.

Petromyzon marinus Linnaeus, 1758

F, M, anadromous, scarce in F. D: Zeeprik; E: Sea Lamprey.

LAMNIFORMES

Isuridae

Lamna nasus (Bonnaterre, 1788)

M, off shore, scarce. D: Neushaai; E: Porbeagle.

Cetorhinidae

Cetorhinus maximus (Gunnerus, 1765)

M, off shore, scarce. D: Reuzehaai; E: Basking Shark.

Alopiidae

Alopias vulpinus (Bonnaterre, 1788) (fig. 2).

M, off shore, extremely rare. D: Voshaai; E: Tresher.

1 spec., 7 miles off Noordwijk, coll. Sch. 112, 23-VII-1951 (RMNH 18564).

1 spec., 400 cm, off IJmuiden (52°40'N. 04°08'E), coll. IJM. 29/210, 23-X-1968 (not preserved).

1 spec., 350 cm, 12 miles N.W. of IJmuiden, coll. TX 33/42, 25-X-1968 (not preserved).

1 spec., 140 cm, 4 miles W. of Scheveningen (52°16'N, 04°20'E), coll. UK 142/236, 21-IX-1971 (ZMA 111.198).

Lit.: Boeseman (1951); de Groot (1972a).

Scyliorhinidae

Scyliorhinus caniculus (Linnaeus, 1758)

M, common. D: Hondshaai; E: Dogfish.

Scyliorhinus stellaris (Linnaeus, 1758)

M, extremely rare. D: Kathaai; E: Nurse Hound.

juvenile specimens are known to have been caught W. of Texel (specimens not preserved).

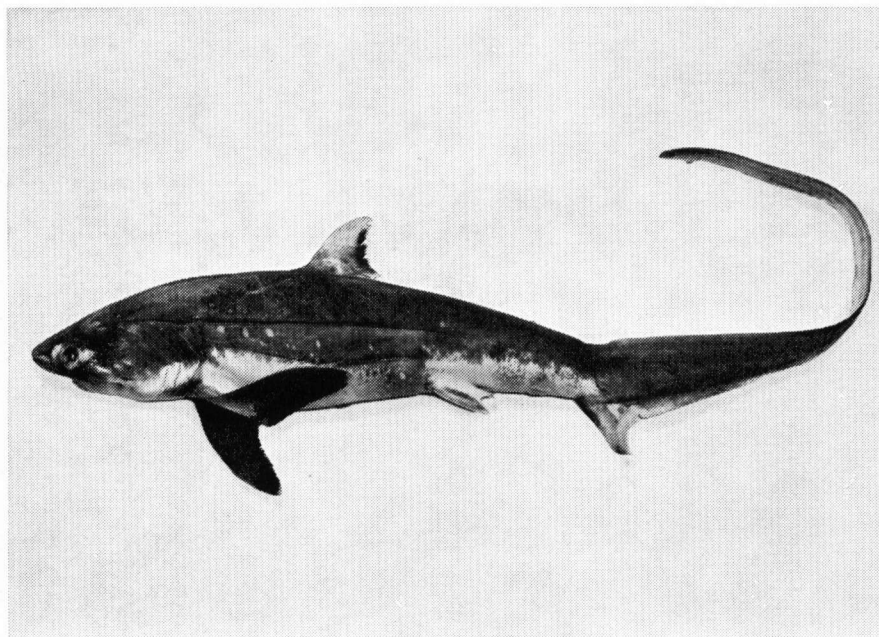


FIG. 2. *Alopias vulpinus*, off Scheveningen (ZMA 110.198).

Triakidae

Mustelus asterias Cloquet, 1819

M, fairly common. D: Gladde haai; E: Smooth Hound.

Mustelus mustelus (Linnaeus, 1758)

M, scarce. D: Gladde haai; E: Smooth Hound.

Carcharinidae

Galeorhinus galeus (Linnaeus, 1758)

M, fairly common. D: Ruwe Haai; E: Tope.

SQUALIFORMES

Squalidae

Squalus acanthias (Linnaeus, 1758)

M, fairly common. D: Doornhaai; E: Spur-dog.

Dalatiidae

Somniosus microcephalus (Bloch & Schneider, 1801)

M, extremely rare. D: Groenlandse Haai; E: Greenland Shark.
known only from specimens washed ashore:

1 spec., beach of Scheveningen, VI-1894 (after Redeke).

1 spec., 220 cm., beach of Texel, 27-IV-1935 (RMNH) (after Redeke).

1 spec., Engels vaarwater, Zeeland, 18-II-1952 (RMNH 18579).

1 spec., Ellewoutsdijk, Zeeland, 30-IV-1958 (RMNH 21562).

Squatinidae

Squatina squatina (Linnaeus, 1758)

M, fairly common. D: Zeeëngel; E: Monkfish.

TORPEDINIFORMES

Torpedinidae

Torpedo marmorata Risso, 1810 (fig. 3).

M, extremely rare. D: Gemarmerde sidderrog; E: Marbled Electric Ray.

1 spec., off Camperduin, 6-VIII-1959 (RMNH 23211).

Torpedo nobiliana Bonaparte, 1835

M, extremely rare. D: Sidderrog; E: Electric Ray.

1 spec., Texelse stenen (53°05'N, 04°29'E), 18-X-1964 (RMNH 24906).

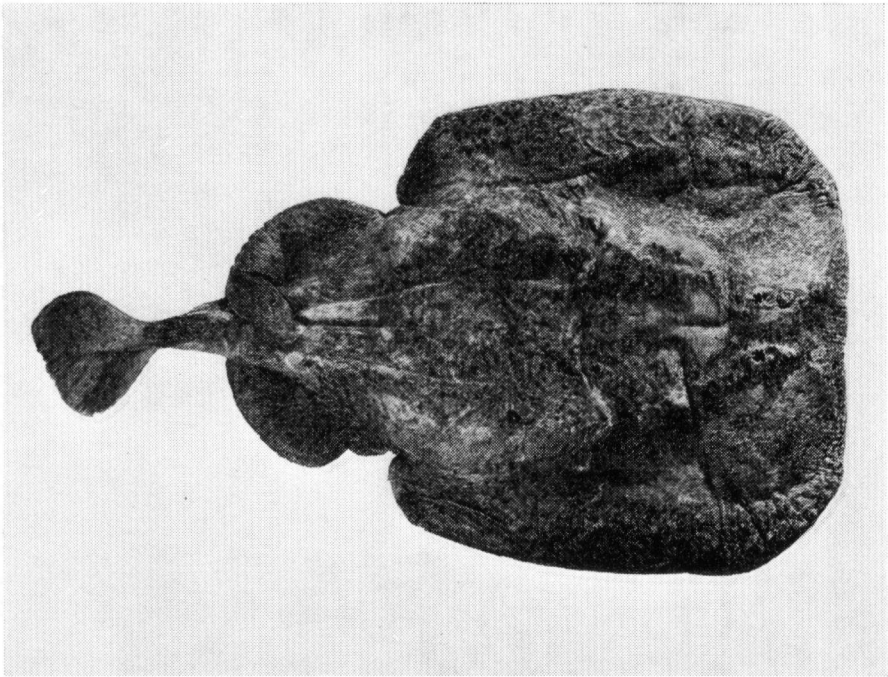


FIG. 3. *Torpedo marmorata*, North Sea: 54°10' N, 07°20' E (ZMA 110.189).

RAJIFORMES

Rajidae

Raja batis Linnaeus, 1758

M, fairly common, off shore. D: Vleet; E: Skate.

Raja brachyura Lafont, 1873

M, extremely rare. D: Blonde rog; E: Blonde Ray.

1 spec., off Texel, 12-V-1948, coll. Pronk (ZMA 109.057).

1 spec., off Texel, 1949 (RMNH 18575).

Raja clavata Linnaeus, 1758

M, fairly common. D: Stekelrog; E: Roker or Thornback Ray.

Raja microocellata Montagu, 1815

M, extremely rare. D: Kleinoogrog; E: Painted Ray.

1 spec., off Texel, 24-V-1946 (ZMA 108.280).

1 spec., off Den Helder, 19-IV-1947 (RMNH 25914).

Raja montagui Fowler, 1910

M, fairly common. D: Gevlekte rog; E: Spotted Ray.

Raja naevus Müller & Henle, 1841

M, extremely rare. D: Grootoogrog; E: Cuckoo Ray.

1 spec., 7.5 miles off Scheveningen, 3-VI-1947 (RMNH 17954).

1 spec., off Terschelling, 5-VI-1954 (ZMA 108.282).

1 spec., Texelse Stenen off Texel, coll. NIOZ, 6-X-1966 (not preserved).

Raja radiata Donovan, 1806

M, extremely rare. D: Sterrog; E: Starry Ray.

1 spec., off Terschelling, 20-XII-1947 (after NIOZ).

Raja undulata Lacépède, 1802

M, extremely rare. D: Golfrog; E: Undulate Ray.

1 spec., off Texel, 16-II-1951 (ZMA 108.279).

Dasyatidae

Dasyatis pastinaca (Linnaeus, 1758)

M, fairly common. D: Pijlstaartrog; E: Sting Ray.

ACIPENSERIFORMES

Acipenseridae

Acipenser sturio Linnaeus, 1758

F, M, anadromous, extinct in F, rare in M. D: Steur; E: Sturgeon.

1 spec., 245 cm, beach Vliehors, Vlieland, IX-1956 (not preserved).

1 spec., 275 cm, off Terschelling, 7-VI-1967 (not preserved).

2 spec., off Callantsoog, 19-VII-1966 and 23-XII-1966 (after NIOZ).

1 spec., off IJmuiden, coll. KW 96, 26-IV-1968 (RMNH 25927).

1 spec., 18 km off Walcheren, coll. VL 19, 13-VIII-1968 (RMNH 25978).

ANGUILLIFORMES

Anguillidae

Anguilla anguilla (Linnaeus, 1758)

F, M, catadromous, common. D: Paling or Aal; E: Eel.

Congridae

Conger conger (Linnaeus, 1758)

M, locally (Vlie Rough) fairly common. D: Zeepaling; E: Conger Eel.

CLUPEIFORMES

Clupeidae

Alosa alosa (Linnaeus, 1758)

F, M, anadromous, extinct in F, extremely rare in M. D: Elft; E: Allis Shad.

common in F. till about 1900 (after Redeke).

1 spec. North Sea (said to be caught near Dutch coast), XII-1960 (RMNH 23694).

Alosa fallax (Lacépède, 1803)

F, M, anadromous, fairly common. D: Fint; E: Twaite Shad.

Clupea harengus Linnaeus, 1758

M, common. D: Haring; E: Herring.

Sardina pilchardus (Walbaum, 1792)

M, fairly common. D: Pelser or Sardien; E: Pilchard.

Sprattus sprattus (Linnaeus, 1758)

M, common. D: Sprot; E: Sprat.

Engraulidae

Engraulis encrasicolus (Linnaeus, 1758)

B, M, common. D: Ansjovis; E: Anchovy.

SALMONIFORMES

Salmonidae

Coregonus oxyrhynchus (Linnaeus, 1758)

F, M, anadromous, extinct in F, extremely rare in M. D: Houting; E: Houting.

abundant in F. till about 1910 (after Redeke).

Coregonus lavaretus (Linnaeus, 1758) (fig. 4).

F, extremely rare. D: Grote maraene; E: Houting.

1 spec., IJsselmeer, coll. J. H. Reuter, 16-VIII-1968 (RMNH 25611).

1 spec., Lek River near Bergambacht, XII-1967 (ZMA 112.784).

Lit.: Reuter (1966).

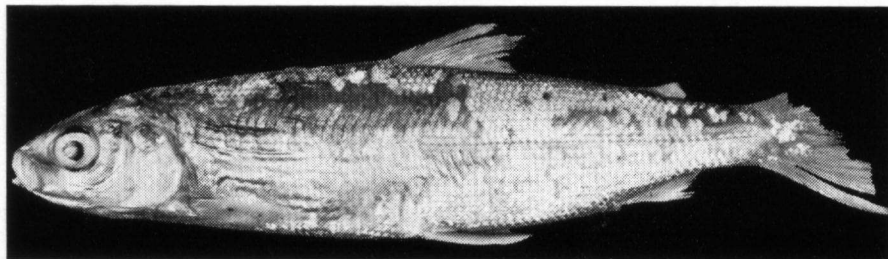


FIG. 4. *Coregonus lavaretus*, Lek River (ZMA 112.784).

Salmo gairdneri Richardson, 1836

F, B, imported from N-America, locally common (non-breeding stocks in lakes). D: Regenboogforel; E: Rainbow Trout. Lit.: Steinmetz (1969).

Salmo salar Linnaeus, 1758

F, M, anadromous, extremely rare in F, rare in M. D: Zalm; E: Salmon.

common in F. till about 1900 (after Redeke).

1 spec., Bergummermeer, Friesland, coll. Storm, 18-XII-1961 (RMNH 24091).

Salmo trutta trutta Linnaeus, 1758

F, M, anadromous, rare in F, fairly common in M. D: Zeeforel; E: Sea Trout.

Salmo trutta fario Linnaeus, 1758

F, extinct. D: Beekforel; E: Brown Trout. fairly common in F till about 1945.

Thymallus thymallus (Linnaeus, 1758)

B, F, extinct. D: Vlagzalm; E: Grayling. fairly common in F (Geul Creek) till about 1885 (after Redeke).

1 specimen was caught near Winterswijk, coll. ter Haar, date before III-1967 (RMNH 25913). Probably escaped from German hatcheries.

Osmeridae

Osmerus eperlanus (Linnaeus, 1758)

F, M, common. D: Spiering; E: Smelt.

Esocidae

Esox lucius Linnaeus, 1758

F, common. D: Snoek; E: Pike.

Umbridae

Umbra pygmaea (de Kay, 1842) (fig. 5).

F, imported from N. America, locally fairly common (S.E. Netherlands). D: Amerikaanse hondsviis; Am: Eastern or Striped Mud Minnow. Lit.: Kleijn (1968).

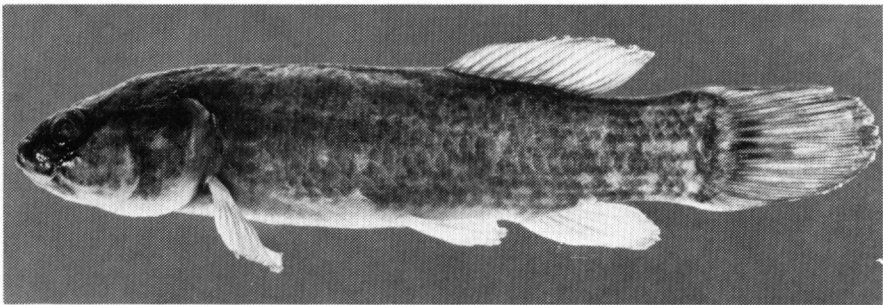


FIG. 5. *Umbra pygmaea*, ditch at Valkenswaard (ZMA 104.617).

Gonostomatidae

Maurolucus muelleri (Gmelin, 1789)

M, scarce. D: Lichtend sprotje; E: Pearl-Side. Lit.: Vader (1968).

Myctophidae

Hygophum benoiti (Cocco, 1838)

M, extremely rare. D: Benoit's lantaarnvisje; E: Benoit's Lanternfish.

1 spec. washed ashore, beach of Zandvoort, coll. M. Stock, 3-VI-1971 (ZMA 111.360). Lit.: Nijssen (1972).

CYPRINIFORMES

Cyprinidae

Abramis brama (Linnaeus, 1758)

F, common. D: Brasem; E: Bream.

Alburnoides bipunctatus (Bloch, 1782)

F, extinct. D: Gestippelde alver; E: —. already extremely rare before 1941 (after Redeke). Protected species.

1 spec., Roer Rivulet at Roermond, V-1931, coll. Comes (ZMA 108.133)

Alburnus alburnus (Linnaeus, 1758)

F, common. D: Alver; E: Bleak.

Barbus barbus (Linnaeus, 1758)

F, locally fairly common (Maas River, Limburg). D: Barbeel; E: Barbel.

Blicca bjoerkna (Linnaeus, 1758)

F, common. D: Blei; E: Silver Bream.

Carassius auratus (Linnaeus, 1758)

F, common (in ponds). D: Goudvis; E: Goldfish.

Carassius carassius (Linnaeus, 1758)

F, common. D: Kroeskarper; E: Crucian Carp.

Chondrostoma nasus (Linnaeus, 1758)

F, locally fairly common (Maas River, Limburg). D: Sneep; E: —.

Ctenopharyngodon idella (Valenciennes, 1844)

F, imported from E. Asia (in hatcheries only). D: Chinese gras-karper; E: Grass Carp. Lit.: Willemsen (1965); Vooren (1972).

Cyprinus carpio Linnaeus, 1758

F, common. D: Karper; E: Carp.

Gobio gobio (Linnaeus, 1758)

F, common. D: Grondel; E: Gudgeon.

Hypophthalmichthys molitrix (Valenciennes, 1844)

F, imported from E. Asia (in hatcheries only). D: Zilverkarper; E: Silver Carp.

Leucaspis delineatus (Heckel, 1843)

F, locally fairly common. D: Vetje; E: —. Lit.: Clerx (1972).

Leuciscus cephalus (Linnaeus, 1758)

F, scarce. D: Kopvoorn; E: Chub.

Leuciscus idus (Linnaeus, 1758)

F, fairly common. D: Winde; E: Ide or Orfe.

Leuciscus leuciscus (Linnaeus, 1758)

F, fairly common. D: Serpeling; E: Dace.

Phoxinus phoxinus (Linnaeus, 1758)

F, locally fairly common (unpolluted creeks). D: Elrits; E: Minnow. Protected species.

Rhodeus sericeus amarus (Bloch, 1782)

F, locally fairly common. D: Bittervoorn; E: Bitterling. Protected species.

Rutilus rutilus (Linnaeus, 1758)

F, common. D: Blankvoorn; E: Roach.

Scardinius erythrophthalmus (Linnaeus, 1758)

F, common. D: Rietvoorn; E: Rudd.

Tinca tinca (Linnaeus, 1758)

F, common. D: Zeelt; E: Tench.

Cobitidae

Cobitis taenia Linnaeus, 1758

F, common. D: Kleine modderkruiper; E: Spined Loach. Protected species.

Misgurnus fossilis (Linnaeus, 1758)

F, fairly common. D: Grote modderkruiper; E: Weatherfish. Protected species.

Noemacheilus barbatulus (Linnaeus, 1758)

syn.: *Nemachilus barbatula*

F, locally common (creeks in E. and S. Netherlands). D: BERPPIE; E: Stone Loach. Protected species.

SILURIFORMES

Siluridae

Silurus glanis Linnaeus, 1758

F, locally scarce (S.W. of Amsterdam). D: Meerval; E: Welsh or Catfish. Protected species.

Ictaluridae

Ictalurus nebulosus (Le Sueur, 1819)

syn.: *Ameiurus nebulosus*

F, imported from N. America, locally fairly common (S.E. Nether-

lands). D: Bruine amerikaanse dwergmeerval; E: Horned Pout; Am: Brown Bullhead.

Ictalurus melas (Rafinesque-Schmaltz, 1820)

syn.: *Ameiurus melas*

F, imported from N. America, extremely rare. D: Zwarte amerikaanse dwergmeerval; Am: Black Bullhead.

1 spec., Waal River, VIII-1934 (ZMA 111.516).

1 spec., Leidse Vaart, Noordwijk/Voorhout, coll. Bonfrer, 27-VII-1965 (RMNH 25059).

1 spec., Ringvaart near Leimuiden, 27-X-1966 (RMNH 25640).

LOPHIIFORMES

Lophiidae

Lophius piscatorius Linnaeus, 1758

M, fairly common. D: Zeeduivel; E: Angler.

GADIFORMES

Gadidae

Micromesistius poutassou (Risso, 1826)

syn.: *Gadus poutassou*

M, scarce. D: Blauwe Wijting; E: Blue Whiting.

Merlangius merlangus (Linnaeus, 1758)

syn.: *Odontogadus merlangus*; *Gadus merlangus*

M, common. D: Wijting; E: Whiting.

Trisopterus luscus (Linnaeus, 1758)

syn.: *Gadus luscus*

M, common. D: Steenbolk; E: Bib.

Trisopterus minutus (Linnaeus, 1758)

syn.: *Gadus minutus*

M, fairly common. D: Dwergbolk; E: Poor-cod. Lit.: Boer (1967b).

Pollachius pollachius (Linnaeus, 1758)

syn.: *Gadus pollachius*

M, fairly common. D: Pollak; E: Pollack.

Pollachius virens (Linnaeus, 1758)

syn.: *Gadus virens*

M, common. D: (Zwarte) Koolvis; E: Saithe.

Gadus morhua Linnaeus, 1758

M, common. D: Kabeljauw; E: Cod.

Melanogrammus aeglefinus (Linnaeus, 1758)

syn.: *Gadus aeglefinus*

M, fairly common, off shore. D: Schelvis; E: Haddock.

Lota lota (Linnaeus, 1758)

F, fairly common. D: Kwabaal; E: Burbot.

Molva molva (Linnaeus, 1758)

M, fairly common. D: Leng; E: Ling.

Raniceps raninus (Linnaeus, 1758) (fig. 6).

M, scarce. D: Vorskwab; E: Tadpole-fish. Lit.: de Groot (1971a).

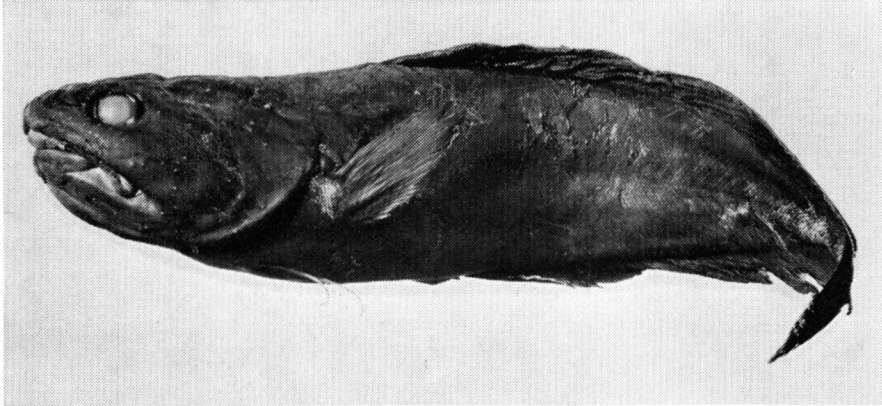


FIG. 6. *Raniceps raninus*, off IJmuiden (ZMA 111.506).

Gaidropsarus vulgaris (Cloquet, 1824)

syn.: *Onos vulgaris*

M, scarce. D: Driedradige meun; E: Three-bearded Rockling.

Rhinonemus cimbrius (Linnaeus, 1766)

syn.: *Enchelyopus cimbrius*; *Onos cimbrius*

M, scarce. D: Vierdradige meun; E: Four-bearded Rockling.

Ciliata septentrionalis (Collett, 1875)

syn.: *Onos septentrionalis*

M, scarce. D: Noorse meun; E: Northern Rockling. Lit.: Fonds (1964).

Ciliata mustela (Linnaeus, 1758)

syn.: *Onos mustelus*

M, common D: Vijfdradige meun; E: Five-bearded Rockling.

Merlucciidae

Merluccius merluccius (Linnaeus, 1758)

M, scarce. D: Heek; E: Hake.

Zoarcidae

Zoarces viviparus (Linnaeus, 1758)

M, common. D: Puitaal; E: Eelpout.

ATHERINIFORMES

Exocoetidae

Hirundichthys speculiger (Valenciennes, 1847)

M, extremely rare. D: Vliegende vis; E: Flying Fish.

1 spec., 53°23'N, 04°07'E., 31-III-1971, coll. TX 24 (ZMA 111.199). Lit.: Boer & Nijssen (1972).

Belonidae

Belone belone (Linnaeus, 1758)

M, common. D: Geep; E: Garfish.

Scomberesocidae

Scomberesox saurus (Walbaum, 1792)

M, scarce. D: Makreelgeep; E: Skipper.

Poeciliidae

Lebistes reticulatus (Peters, 1859)

syn.: *Poecilia reticulata*

F, imported from N. South America, locally common (in thermo-polluted waters). D: Gup; E: Guppy.

Atherinidae

Atherina boyeri Risso, 1810

syn.: *Atherina mochon* Valenciennes, 1835

B, M, locally common (Veerse Meer). D: Kleine koornaarvis; E: Sand-smelt. Lit.: Schrieken & Swennen (1969); van der Velde & Polderman (1972).

Atherina presbyter Valenciennes, 1835

M, common. D: Koornaarvis; E: Sand-smelt.

ZEIFORMES

Zeidae

Zeus faber Linnaeus, 1758

M, fairly common. D: Zonnevis; E: Dory.

Caproidae

Capros aper (Linnaeus, 1758)

M, extremely rare. D: Evervis; E: Boar-fish.

1 spec., beach at Schoorl (washed ashore), 21-XI-1963 (RMNH 23753).

1 spec., Brouwershavense Gat, coll. BH1, 8-X-1965 (RMNH 26154). Lit.: Jansen & Heerebout (1969).

LAMPRIDIFORMES

Lampridae

Lampris guttatus (Brünnich, 1788) (fig. 7).

syn.: *Lampris luna* (Gmelin, 1789)

M, extremely rare. D: Koningsvis; E: Opah.

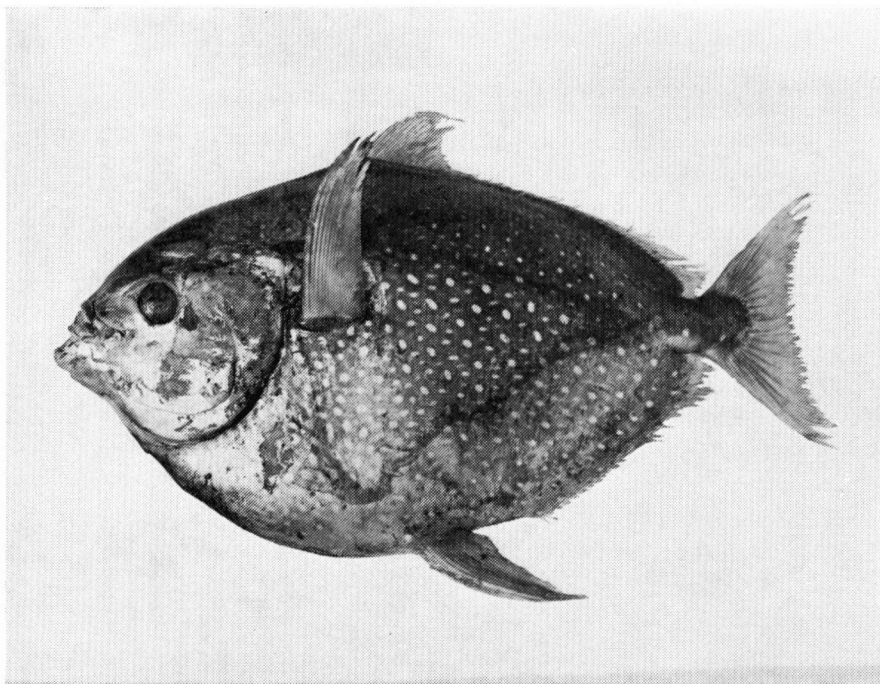


FIG. 7. *Lampris guttatus*, North Sea: 59°15' N, 01°05' W (ZMA 111.582).

1 spec., beach at Scheveningen (washed ashore alive), coll. van der Toorn, 9-VIII-1927 (RMNH 21662).

1 spec., beach at Katwijk aan Zee (washed ashore alive), 4-VIII-1931 (RMNH 21663).

1 spec., off Wassenaarse Slag, 4-IX-1946 (RMNH 17953).

GASTEROSTEIFORMES

Gasterosteidae

Gasterosteus aculeatus Linnaeus, 1758

F, M, common. D: Driedoornige stekelbaars; E: Stickleback.

Pungitius pungitius (Linnaeus, 1758)

F, common. D: Tiendoornige stekelbaars; E: Ten-spined Stickleback.

Spinachia spinachia (Linnaeus, 1758)

M, extremely rare. D: Zeestekelbaars; E: Sea Stickleback.

1 spec., Harbour of Den Helder, 28-X-1956, coll. NIOZ (ZMA 108.164).

1 spec., 't Kuiltje, S.E. of Den Helder, 8-XI-1966, coll. NIOZ (ZMA 108.165).

1 spec., Huisduinen near Den Helder, coll. NIOZ, 21-X-1965 (not preserved).

Macrorhamphosidae

Macrorhamphosus scolopax (Linnaeus, 1758)

M, extremely rare. D: Snipvis; E: Snipe Fish.

1 spec., off Texel, VIII-1950 (RMNH D 2926, dried specimen). Whether this specimen is caught within the 12 mile boundary is doubtful. Exact locality, date, and collector are unknown. Lit.: Boeseman (1951).

Syngnathidae

Hippocampus hippocampus Linnaeus, 1758 (fig. 8).

syn.: *Hippocampus europeus* Ginsburg, 1933

M, rare. D: Zeepaardje; E: Sea-horse.

1 spec., Wadden Sea, Malzwin, N.E. of Den Helder, 13-VII-1948, coll. NIOZ (ZMA 111.013).

1 spec., Wadden Sea, De Cocksdorp, Texel, 12-VII-1949, coll. NIOZ (ZMA 108.166).

1 spec., Wadden Sea, East of Texel, 8-VIII-1960, coll. WR 107, (ZMA 111.014).

2 spec., Wadden Sea, VIII-1959, coll. NIOZ (not preserved).

1 spec., Wadden Sea, Texelstroom, VII-1962, coll. NIOZ (not preserved).

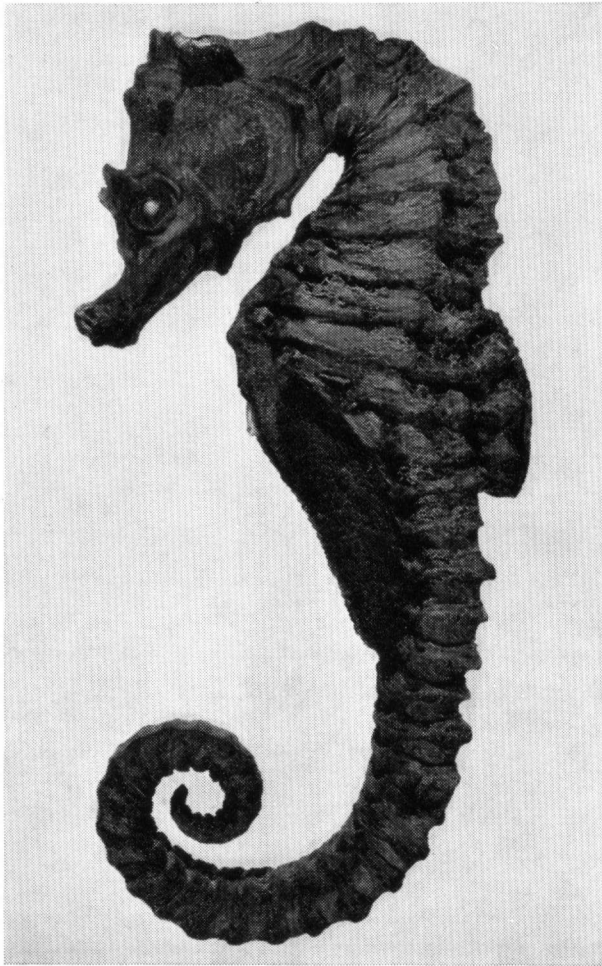


FIG. 8. *Hippocampus hippocampus*, Wadden Sea: Malzwin (ZMA 111.013).

Syngnathus acus Linnaeus, 1758

M, common. D: Grote zeenaald; E: Great Pipefish.

Syngnathus rostellatus Nilsson, 1885

M, fairly common. D: Kleine zeenaald; E: Nilsson's Pipefish.

Entelurus aequoreus (Linnaeus, 1758)

M, fairly common. D: Adderzeenaald; E: Snake Pipefish.

SCORPAENIFORMES

Scorpaenidae

Helicolenus dactylopterus (Delaroche, 1809)

M, extremely rare. D: Blauwkeeltje; E: Blue-mouth.

some juvenile specimens, off Texel, 1953 and 1957, coll. NIOZ (not preserved).

1 spec., Diepe Gat off Texel, coll. NIOZ, 9-VII-1938 (RMNH 17780).

Triglidae

Aspitrigla cuculus (Linnaeus, 1758)

syn.: *Trigla cuculus*

M, scarce. D: Engelse poon; E: Red Gurnard.

Eutrigla gurnardus (Linnaeus, 1758)

syn.: *Trigla gurnardus*

M, common. D: Grauwe poon; E: Grey Gurnard.

Trigloporus lastoviza (Bonnaterre, 1788)

syn.: *Trigla lineata* Gmelin, 1789

M, common. D: Gestreepte poon; E: Streaked Gurnard.

Trigla lucerna Linnaeus, 1758

M, common. D: Rode poon; E: Tub Gurnard.

Cottidae

Myoxocephalus scorpius (Linnaeus, 1758)

syn.: *Cottus scorpius*

M, fairly common. D: Zeedonderpad; E: Bull Rout.

Taurulus bubalis (Euphrasen, 1786)

syn.: *Cottus bubalis*

M, extremely rare. D: Groene zeedonderpad; E: Sea Scorpion.

1 spec., Noordwijk, coll. exc. L.B.C., 8-II-1924 (RMNH 10825).

1 spec., Zeeland, Zandkreek, 8-XII-1960 (ZMA 104.801).

Cottus gobio Linnaeus, 1758

F, common. D: Rivierdonderpad; E: Bullhead. Protected species.

Agonidae

Agonus cataphractus (Linnaeus, 1758)

M, common. D: Harnasmannetje; E: Hook-nose.

Cyclopteridae

Cyclopterus lumpus Linnaeus, 1758

M, common. D: Snotolf; E: Lump sucker.

Liparis liparis (Linnaeus, 1766)

M, fairly common. D: Slakdolf; E: Sea Snail.

Liparis montagui (Donovan, 1805)

M, extremely rare. D: Montagu's slakdolf; E: Montagu's Sea Snail.
1 spec., Callantsoog-Schulpengat, 22-III-1934 (RMNH 26476). Lit.: Boer 1971a).

PERCIFORMES

Serranidae

Dicentrarchus labrax (Linnaeus, 1758)

syn.: *Morone labrax*

M, fairly common. D: Zeebaars; E: Bass.

Centrarchidae

Lepomis gibbosus (Linnaeus, 1758)

F, imported from N-America, locally fairly common (S.E. Netherlands). D: Zonnebaars; Am: Pumpkinseed Sunfish. Lit.: Ruting (1958).

Micropterus salmoides (Lacépède, 1802)

F, imported from N-America (in hatcheries only). D: Forelbaars; E: Large-mouth Bass.

Percidae

Gymnocephalus cernua (Linnaeus, 1758)

syn.: *Acerina cernua*

F, common. D: Pos; E: Ruffe.

Perca fluviatilis Linnaeus, 1758

F, common. D: Baars; E: Perch.

Stizostedion lucioperca (Linnaeus, 1758)

syn.: *Lucioperca lucioperca*

F, common. D: Snoekbaars; E: Zander.

Carangidae

Trachurus trachurus (Linnaeus, 1758)

syn.: *Caranx trachurus*

M, common. D: Horsmakreel; E: Scad.

Bramidae

Brama brama (Bonnaterre, 1788) (fig. 9).

syn.: *Brama raii* (Bloch, 1791)

M, scarce (often washed ashore from October through December).
D: Braam; E: Ray's Bream. Lit.: de Groot (1971b).

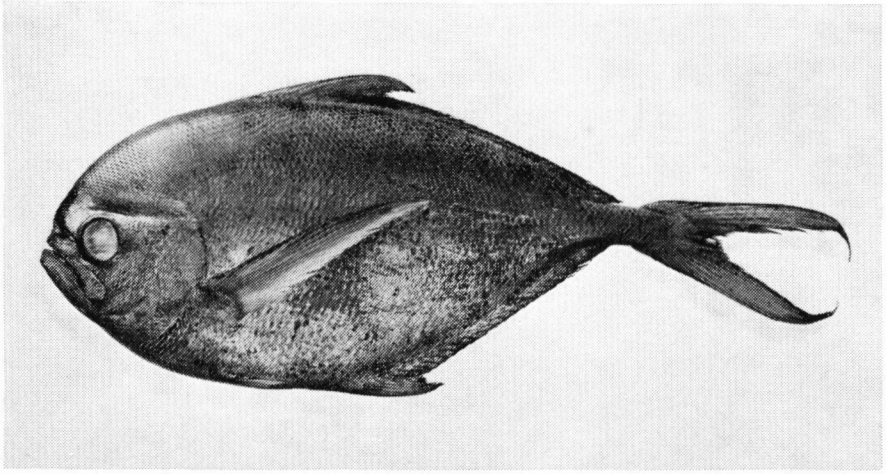


FIG. 9. *Brama brama*, Wassenaarse Slag (ZMA 109.994).

Sparidae

Boops boops (Linnaeus, 1758)

syn.: *Box boops*

M, extremely rare. D: Bokvis; E: Bogue.

1 spec., Kerkbuurt at Huisduinen, 31-V-1912 (after Redeke).

3 spec., Den Helder and Wieringen, 1934—1936 (after Redeke).

1 spec., off Texel (53°07'N, 04°40'E), 24-VI-1972 (RMNH 26228).

Pagellus bogaraveo (Brünnich, 1768)

syn.: *Pagellus centrodontus* (Delaroche, 1809)

M, extremely rare. D: Zeebrasem; E: Red Sea Bream

1 spec., Den Helder, XII-1893 (ZMA 109.202).

1 spec., off Petten, no date (ZMA 112.783).

Pagellus acarne (Risso, 1826) (fig. 10).

M, extremely rare. D: Spaanse brasem; E: Spanish Sea Bream.

1 spec., 3 miles off IJmuiden, coll. KW 11, 9-V-1969 (ZMA 109.639). A second specimen (ZMA 111.430) was caught at Ellen Hole (52°55'N, 03°55'E). Lit.: de Groot (1972d).

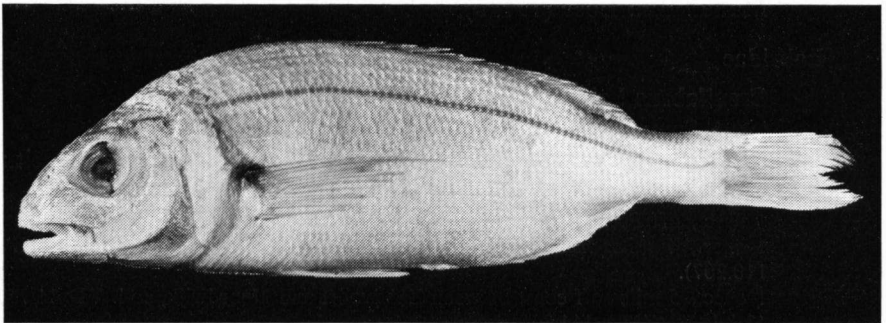


FIG. 10. *Pagellus acarne*, off Texel (ZMA 111.430).

Spondyliosoma cantharus (Linnaeus, 1758)

M, fairly common. D: Zeekarper; E: Black Sea Bream.

Sciaenidae

Argyrosomus regium (Asso, 1801) (fig. 11).

syn.: *Sciaena aquila* Risso, 1826

M, extremely rare. D: Ombervis; E: Meagre.

1 spec., off Petten, coll. HD 135, 7-IX-1966 (RMNH 25460).

1 spec., 3 miles off Petten, coll. UK 234, 19-VIII-1970 (ZMA 109.942).

Lit.: Boer (1967a); de Groot (1970b).

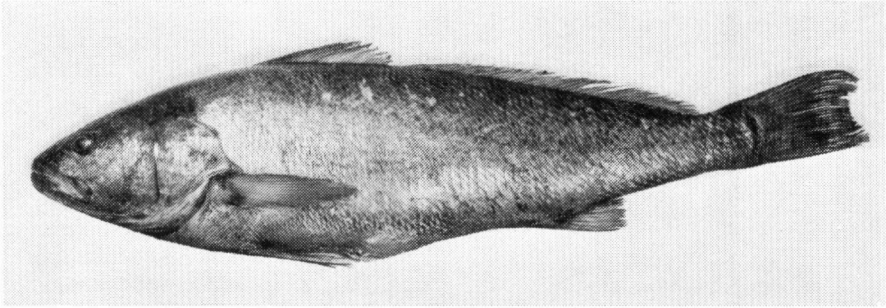


FIG. 11. *Argyrosomus regium*, off Petten (ZMA 109.942).

Mullidae

Mullus surmuletus Linnaeus, 1758

M, scarce. D: Mul; E: Red Mullet.

Mugilidae

Crenimugil labrosus (Risso, 1826)

syn.: *Mugil labrosus*; *Chelon labrosus*

B, M, common. D: Diklippige harder; E: Thick-lipped Mullet.

Liza ramada (Risso, 1826)

syn.: *Mugil ramada*

F, M, fairly common. D: Dunlippige harder; E: Thin-lipped Mullet. Lit.: Boer (1971b).

Labridae

Crenilabrus bailloni Valenciennes, 1839 (fig. 12)

syn.: *Symphodus bailloni*

M, extremely rare. D: Bailloni's lipvis; E: Bailloni's Wrasse. Lit.: Reuter (1967); de Groot (1970a).

1 spec., off Petten, coll. NIOZ, 14-VI-1967 (ZMA 108.160).

1 spec., 4 miles East of LV "Texel", coll. TX 34, 12-XII-1968 (ZMA 110.207).

1 spec., 5 miles off coast between Zandvoort and Noordwijk, coll. VD 44/75, 13-I-1972 (ZMA 111.350).

1 spec., 8 miles off IJmuiden, coll. IJM 15, 18-VI-1973 (ZMA 112.751).

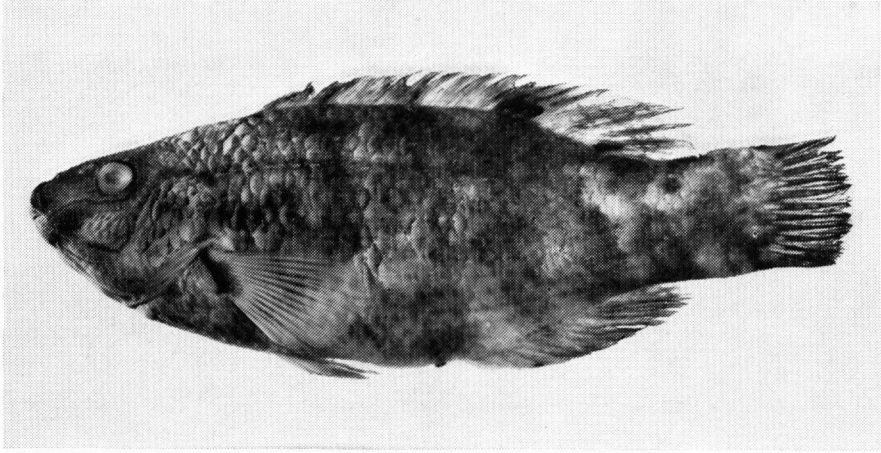


FIG. 12. *Crenilabrus bailloni*, off Texel (ZMA 110.207).

Crenilabrus melops (Linnaeus, 1758)

syn.: *Symphodus melops*

M, scarce. D: Zwartooglipvis; E: Corkwing.

Ctenolabrus rupestris (Linnaeus, 1758)

M, extremely rare. D: Kliplipvis; E: Goldsinny.

1 spec., Texel Grounds, autumn 1909 (after Redeke).

1 spec., Haaksgronden, Nieuwediep, II-1911 (ZMA 108.128).

1 spec., Den Helder, 1936—1937 (after Redeke).

1 spec., Brouwershavense Gat, 1938 (after Redeke).

Labrus bergylta Ascanius, 1767

syn.: *Labrus berggylta*

M, fairly common. D: Gevlekte lipvis; E: Ballan Wrasse.

Trachinidae

Trachinus draco Linnaeus, 1758

M, scarce. D: Grote pieterman; E: Greater Weever.

Trachinus vipera Cuvier, 1829

M, common. D: Kleine pieterman; E: Lesser Weever.

Bleniidae

Blennius gattorugine Linnaeus, 1758

M, extremely rare. D: Gehoornde slijmvis; E: Tompot Blenny.

1 spec., Helsdeur, near Den Helder, 23-I-1900 (ZMA 108.122).

1 spec., Nieuwediep, 31-X-1916 (ZMA 108.127).

1 spec., Den Helder, X/XI-1933 (after Redeke).

3 spec., Den Helder, 1936 (after Redeke).

3 spec., Den Helder, 1937 (after Redeke).

several spec., Den Helder, 1938 (after Redeke).

1 spec., Goereesche Gat (51°48'N, 03°50'E), coll. ter Pelkwijk, 4-III-1937 (RMNH 16521).

- 1 spec., Marsdiep near Den Helder, coll. NIOZ, I-1959 (not preserved).
2 spec., Molengat, S.W. Texel, coll. NIOZ, 1959 (not preserved).

Blennius pholis Linnaeus, 1758

M, scarce. D: Slijmvis; E: Shanny.

Anarhichadidae

Anarhichas lupus Linnaeus, 1758

M, extremely rare. D: Zeewolf; E: Catfish or Wolf-fish.

1 spec., off Den Helder, 13-VI-1907 (after Redeke).

1 spec., off Den Helder, summer 1921 (after Redeke).

1 spec., off Texel, coll. NIOZ, 15-V-1948 (ZMA 110.803).

4 spec., beach of Terschelling (washed ashore), coll. Tanis, 2-II-1960, 20-III-1962, 25-I-1963, and 27-II-1963 (not preserved). Lit.: Tanis (1968).

Anarhichas denticulatus Krøyer, 1844

syn.: *Anarhichas latifrons* Steenstrup, 1842 (nomen nudum).

M, extremely rare. D: Blauwe zeewolf; E: Jelly Cat.

1 spec., beach of Terschelling (washed ashore), coll. Tanis, 22-VI-1964 (not preserved). Lit.: Tanis (1968).

Pholididae

Pholis gunnellus (Linnaeus, 1758)

M, common. D: Botervis; E: Butterfish.

Ammodytidae

Ammodytes marinus Raitt, 1934

M, common. D: Noorse zandspiering; E: Sand Eel.

Ammodytes tobianus Linnaeus, 1758

Ammodytes lancea Cuvier, 1829

M, common. D: Zandspiering; E: Sand Eel.

Hyperoplus lanceolatus (Le Sauvage, 1824)

M, common. D: Smelt; E: Greater Sand Eel.

Callionymidae

Callionymus lyra Linnaeus, 1758

M, common. D: Pitvis; E: Dragonet.

Callionymus reticulatus Valenciennes, 1837

M, fairly common. D: Rasterpitvis; E: Reticulated Dragonet. Lit.: Boer (1966, 1971c).

Gobiidae

Aphia minuta (Risso, 1810)

M, fairly common. D: Glasgrondel; E: Transparent Goby.

Gobius niger Linnaeus, 1758

B, M, locally common (in Veerse Meer abundant since 1971), extremely rare along the coast. D: Zwarte grondel; E: Black Goby.

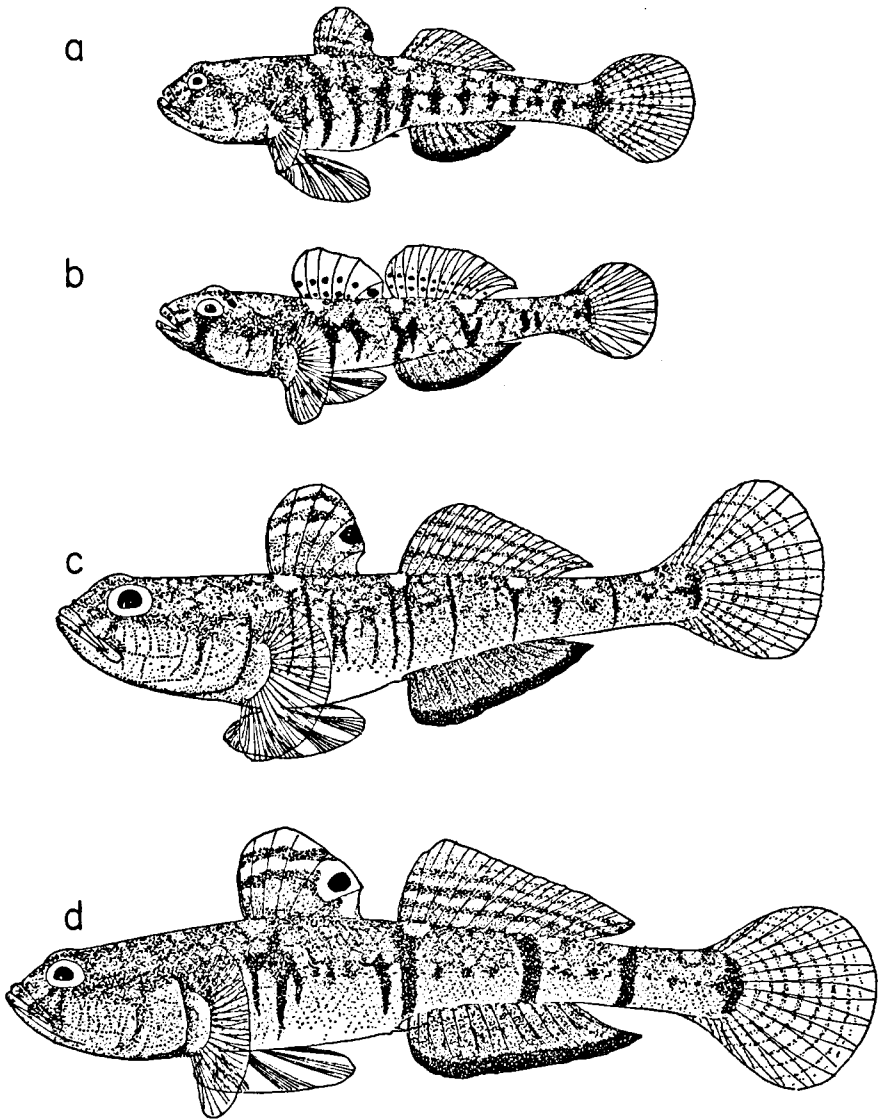


FIG. 13. The males of *Pomatoschistus microps* (a), *P. pictus* (b), *P. lozanoi* (c), and *P. minutus* (d) from the Wadden Sea, showing nuptial specimens (after Fonds, 1973).

Lit.: Vaas (1964); de Groot (1972c).

Pomatoschistus microps (Krøyer, 1840) (fig. 13a).

syn.: *Gobius microps*

B, M, common. D: Brakwatergrondel; E: Common Goby.

Pomatoschistus pictus (Malm, 1863) (fig. 13b)

syn.: *Gobius pictus*

M, scarce. D: Kleurige grondel; E: Painted Goby. Lit.: Fonds (1964).

Pomatoschistus lozanoi de Buen, 1923 (fig. 13c).

M, fairly common. D: Lozano's grondel; E: Lozano's Goby. Lit.: Fonds (1973).

Pomatoschistus minutus (Pallas, 1770) (fig. 13d).

syn.: *Gobius minutus*

M, common. D: Dikkopje; E: Common Goby.

Scombridae

Scomber colias Gmelin, 1789

M, extremely rare. D: Spaanse makreel; E: Spanish Mackerel.

1 spec., Texelse Stenen off Texel, coll. VL 90, 29-V-1968 (not preserved); this species is often confused with *Scomber scombrus* and is occasionally found in catches of the latter species.

Scomber scombrus Linnaeus, 1758

M, common. D: Makreel; E: Mackerel.

Thunnus thynnus (Linnaeus, 1758)

M, extremely rare. D: Tonijn; E: Tunny.

several specimens washed ashore: Den Helder, I-1962; Scheveningen, 8-I-1956; Ameland, XII-1956.

Centrolophidae

Centrolophus niger (Gmelin, 1789) (fig. 14).

M, extremely rare. D: Zwarte Vis; E: Black-fish.

1 spec., Middeldiep (51°42'N, 03°23'E), coll. KG 5, 10-IV-1967 (ZMA 108.259).



FIG. 14. *Centrolophus niger*, off Zandvoort (ZMA 111.414).

1 spec., 2 miles off Zandvoort (52°22'N, 04°30'E), coll. UK 23/107, 26-IV-1972 (ZMA 111.414).

1 spec., Westerschelde, Sloe, coll. Th 13, 11-XII-1969 (RMNH 26176). Lit.: de Groot (1972 b).

PLEURONECTIFORMES

Bothidae

Arnoglossus laterna (Walbaum, 1792)

M, fairly common. D: Schurftvis; E: Scaldfish.

Scophthalmidae

Psetta maxima (Linnaeus, 1758)

syn.: *Scophthalmus maximus*

M, common. D: Tarbot; E: Turbot.

Scophthalmus rhombus (Linnaeus, 1758)

M, common. D: Griet; E: Brill.

Lepidorhombus whiffiagonis (Walbaum, 1792)

M, extremely rare. D: Scharretong; E: Megrim.

1 spec., LV "Texel", coll. NIOZ, 21-VI-1953 (not preserved).

Zeugopterus punctatus (Bloch, 1787). (fig. 15).

M, extremely rare. D: Gevlekte Griet; E: Topknot.

1 spec., off Texel, coll. NIOZ, 8-III-1916 (ZMA 108.152).

1 spec., near LV "Haaks", 31-VII-1937 (after Redeke).

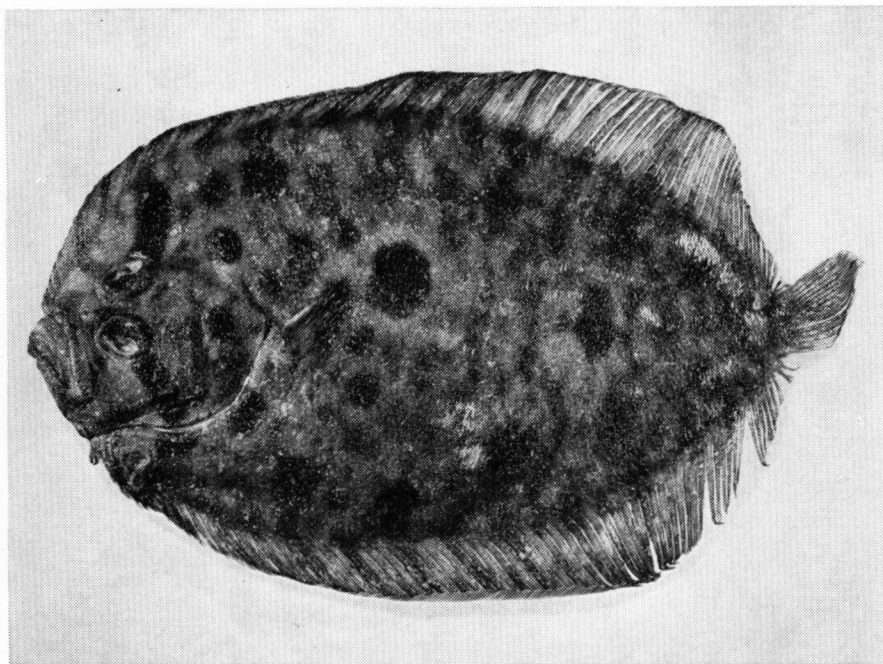


FIG. 15. *Zeugopterus punctatus*, North Sea: 52°45' N, 03°15' E (ZMA 109.520).

- 1 spec., N. of LV "Terschellingerbank", 11-II-1938 (after Redeke).
1 spec., Noorderhaaks off Den Helder, coll. NIOZ, 12-III-1965 (not preserved).
1 spec., 2.5 miles off Zandvoort, coll. NIOZ, III-1961 (not preserved).

Pleuronectidae

Hippoglossus hippoglossus (Linnaeus, 1758)

M, extremely rare. D: Heilbot; E: Halibut.

- 1 spec., N. of LV "Terschellingerbank", 23-IV-1936 (after Redeke).
1 spec., Haaksgronden off Den Helder, 26-V-1937 (after Redeke).
several spec., off Den Helder, coll. NIOZ, 1964 (not preserved).

Hippoglossoides platessoides limandoides (Bloch, 1787)

M, extremely rare. D: Lange Schar; E: Long Rough Dab.

- 2 spec., Texelse Stenen off Texel, coll. NIOZ, 20-XI-1948 (ZMA 111.049).
1 spec., N.N.W. of Brandaris, West Terschelling, coll. Lucas, VII-1950 (RMNH 21302).

Limanda limanda (Linnaeus, 1758)

M, common. D: Schar; E: Dab.

Microstomus kitt (Walbaum, 1792)

M, fairly common. D: Tongschar; E: Lemon Sole.

Platichthys flesus (Linnaeus, 1758)

F, M, common. D: Bot; E: Flounder.

Pleuronectes platessa Linnaeus, 1758

M, common. D: Schol; E: Plaice.

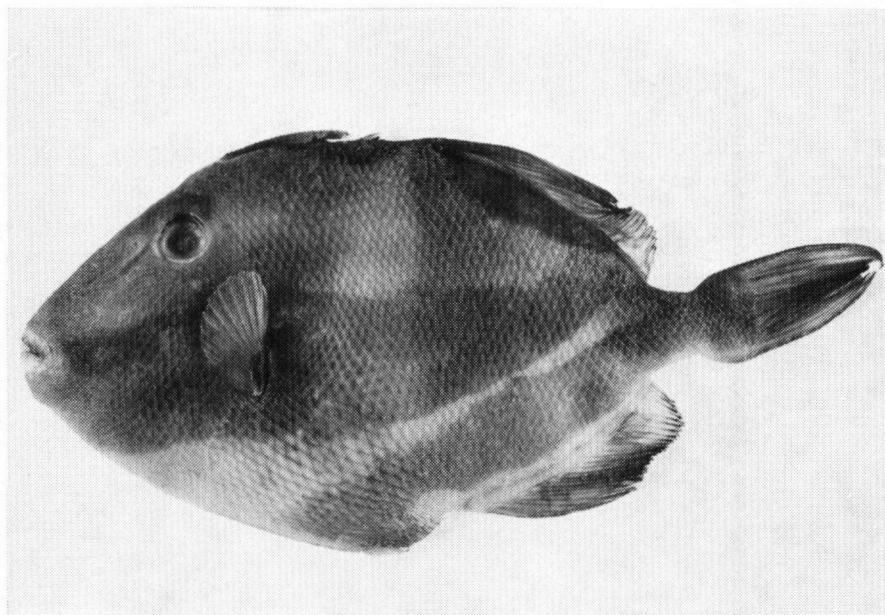


FIG. 16. *Balistes carolinensis*, off Zandvoort (ZMA 109.074).

Soleidae

Buglossidium luteum (Risso, 1810)

M, common. D: Dwergtong; E: Solenette.

Solea lascaris (Risso, 1810)

syn.: *Pegusa lascaris*

M, scarce. D: Franse tong; E: Sand Sole.

Solea solea (Linnaeus, 1758)

syn.: *Solea vulgaris* Quensel, 1806

M, common. D: Tong; E: Sole.

Cynoglossidae

Cynoglossus browni Chabanaud, 1949

M, extremely rare. D: Hondstong; E: Tongue Sole.

15 spec., off Texel, east side of Diepe Gat (53°04'N, 04°06'E), coll. HD 51 and HD 65, 18-V-1973 (ZMA 113.025, 113.077). Probably thrown into the

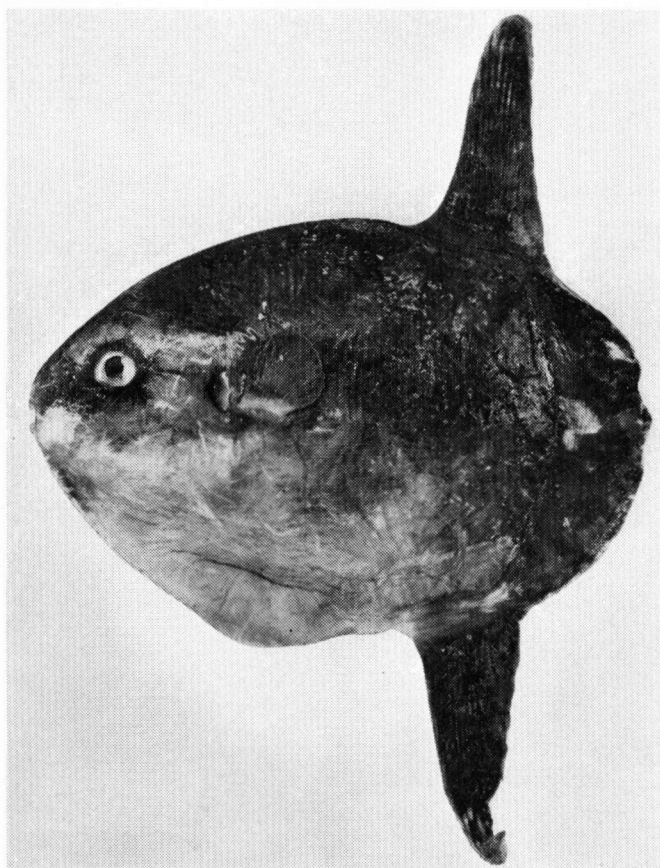


FIG. 17. *Mola mola*, North Sea: 52°40' N, 03°47' W (ZMA 112.744).

sea from a ship before entering a European harbour. The first record of this species in the North Sea is also from May. Four specimens were caught 28 miles N.W. of IJmuiden (52°45'N, 04°00'E) on 7-V-1965 by KW 128 (one specimen in ZMA 104.443). Lit.: Nijssen (1966); Nijssen & Buhre (1973).

TETRAODONTIFORMES

Balistidae

Balistes carolinensis (Gmelin, 1789) (fig. 16).

syn.: *Balistes capriscus* (Gmelin, 1789)

M, extremely rare. D: Trekkervis; E: Trigger-fish.

1 spec., open IJ, Amsterdam, coll. Boogaard, 24-IX-1930 (ZMA 113.066).

1 spec., off Zandvoort, coll. VD 9/19, 19-X-1968 (ZMA 109.074).

1 spec., 2 miles off Zandvoort, coll. RIVO, 23-IX-1970 (ZMA 110.686).

1 spec., off Scheveningen near artificial REM-Island (52°16'N, 04°20'E), coll. SCH 48, 13-IX-1973 (ZMA 113.083).

1 spec., Wadden Sea, coll. HA 39, IX-1973 (not preserved).

1 spec., off Walcheren, West Pit (51°32'N, 03°05'E), 10-X-1973 (ZMA 113.084).

1 spec., Oosterschelde, coll. Th 65, 24-X-1973 (not preserved).

two more specimens were caught recently in the North Sea, one specimen at 52°40'N, 02°50'E (ZMA 111.347) on 9-XII-1971, and one at 52°20'N, 02°30'E (ZMA 113.085) on 5-X-1973. Lit.: Redeke (1941); de Groot (1969).

Molidae

Mola mola (Linnaeus, 1758) (fig. 17).

M, scarce. D: Maanvis; E: Sunfish.

INDEX OF GENERIC AND SPECIFIC NAMES

	Page		Page
<i>Abramis</i>	182	<i>anguilla</i>	179
<i>acanthias</i>	177	<i>aper</i>	186
<i>acarne</i>	191	<i>Aphia</i>	194
<i>Acerina</i>	190	<i>aquila</i>	192
<i>Acipenser</i>	179	<i>Argyrosomus</i>	192
<i>aculeatus</i>	187	<i>Arnoglossus</i>	197
<i>acus</i>	189	<i>Aspitrigla</i>	189
<i>aeglefinus</i>	184	<i>asterias</i>	177
<i>aequoreus</i>	189	<i>Atherina</i>	186
<i>Agonus</i>	189	<i>auratus</i>	182
<i>Alburnoides</i>	182		
<i>Alburnus</i>	182	<i>bailloni</i>	192
<i>alburnus</i>	182	<i>Balistes</i>	200
<i>Alopias</i>	176	<i>barbatula</i>	183
<i>Alosa</i>	179/80	<i>barbatulus</i>	183
<i>alosa</i>	179	<i>Barbus</i>	182
<i>amarus</i>	183	<i>barbus</i>	182
<i>Ameiurus</i>	183/4	<i>batis</i>	178
<i>Ammodytes</i>	194	<i>Belone</i>	186
<i>Anarhichas</i>	194	<i>belone</i>	186
<i>Anguilla</i>	179	<i>benoiti</i>	182

	Page		Page
<i>berggylta</i>	193	<i>dactylopterus</i>	189
<i>bergylta</i>	193	<i>Dasyatis</i>	179
<i>bipunctatus</i>	182	<i>delineatus</i>	182
<i>bjoerkna</i>	182	<i>denticulatus</i>	194
<i>Blennius</i>	193/4	<i>Dicentrarchus</i>	190
<i>Blicca</i>	182	<i>draco</i>	193
<i>bogaraveo</i>	191	<i>Enchelyopus</i>	185
<i>Boops</i>	191	<i>encrasicolus</i>	180
<i>boops</i>	191	<i>Engraulis</i>	180
<i>Box</i>	191	<i>Entelurus</i>	189
<i>boyeri</i>	186	<i>eperlanus</i>	181
<i>brachyura</i>	178	<i>erythrophthalmus</i>	183
<i>Brama</i>	190	<i>Esox</i>	181
<i>brama (Abramis)</i>	182	<i>europaeus</i>	188
<i>brama (Brama)</i>	190	<i>Eutrigla</i>	189
<i>browni</i>	199	<i>faber</i>	186
<i>bubalis</i>	189	<i>fallax</i>	180
<i>Buglossidium</i>	199	<i>fario</i>	181
<i>Callionymus</i>	194	<i>flesus</i>	198
<i>caniculus</i>	176	<i>fluviatilis (Lampetra)</i>	176
<i>cantharus</i>	192	<i>fluviatilis (Perca)</i>	190
<i>capriscus</i>	200	<i>fossilis</i>	183
<i>Capros</i>	186	<i>Gadus</i>	184
<i>Caranx</i>	190	<i>Gaidropsarus</i>	185
<i>Carassius</i>	182	<i>gairdneri</i>	180
<i>carassius</i>	182	<i>Galeorhinus</i>	177
<i>carolinensis</i>	200	<i>galeus</i>	177
<i>carpio</i>	182	<i>Gasterosteus</i>	187
<i>cataphractus</i>	189	<i>gattorugine</i>	193
<i>centrodontus</i>	191	<i>gibbosus</i>	190
<i>Centrolophus</i>	196	<i>glanis</i>	183
<i>cephalus</i>	183	<i>Gobio</i>	182
<i>cernua</i>	190	<i>gobio (Cottus)</i>	189
<i>Cetorhinus</i>	176	<i>gobio (Gobio)</i>	182
<i>Chelon</i>	192	<i>Gobius</i>	194/6
<i>Chondrostoma</i>	182	<i>gunnellus</i>	194
<i>Ciliata</i>	185	<i>gurnardus</i>	189
<i>cimbrius</i>	185	<i>guttatus</i>	186
<i>clavata</i>	179	<i>Gymnocephalus</i>	190
<i>Clupea</i>	180	<i>harengus</i>	180
<i>Cobitis</i>	183	<i>Helicolenus</i>	189
<i>colias</i>	196	<i>Hippocampus</i>	188
<i>Conger</i>	179	<i>hippocampus</i>	188
<i>conger</i>	179	<i>Hippoglossoides</i>	198
<i>Coregonus</i>	180	<i>Hippoglossus</i>	198
<i>Cottus</i>	189	<i>hippoglossus</i>	198
<i>Crenilabrus</i>	192/3	<i>Hirundichthys</i>	186
<i>Crenimugil</i>	192	<i>Hygophum</i>	182
<i>Ctenolabrus</i>	193	<i>Hyperoplus</i>	194
<i>Ctenopharyngodon</i>	182	<i>Hypophthalmichthys</i>	182
<i>cuculus</i>	189		
<i>Cyclopterus</i>	190		
<i>Cynoglossus</i>	199		
<i>Cyprinus</i>	182		

	Page		Page
<i>Ictalurus</i>	183/4	<i>maximus (Scophthalmus)</i>	197
<i>idella</i>	182	<i>Melanogrammus</i>	184
<i>idus</i>	183	<i>melas</i>	184
<i>japonicus</i>	196	<i>melops</i>	193
<i>kiitt</i>	198	<i>Merlangius</i>	184
<i>labrax</i>	190	<i>merlangus</i>	184
<i>labrosus</i>	192	<i>Merluccius</i>	185
<i>Labrus</i>	193	<i>merluccius</i>	185
<i>Lamna</i>	176	<i>microcephalus</i>	177
<i>Lampetra</i>	176	<i>Micromesistius</i>	184
<i>Lampris</i>	186	<i>microcellata</i>	179
<i>lancea</i>	194	<i>microps</i>	195
<i>lanceolatus</i>	194	<i>Micropterus</i>	190
<i>lascaris</i>	199	<i>Microstomus</i>	198
<i>lastoviza</i>	189	<i>minuta</i>	194
<i>laterna</i>	197	<i>minutus (Pomatoschistus)</i>	196
<i>latifrons</i>	194	<i>minutus (Trisopterus)</i>	184
<i>lavaretus</i>	180	<i>Misgurnus</i>	183
<i>Lebistes</i>	186	<i>mochon</i>	186
<i>Lepidorhombus</i>	197	<i>Mola</i>	200
<i>Lepomis</i>	190	<i>mola</i>	200
<i>Leucaspius</i>	182	<i>molitrix</i>	182
<i>Leuciscus</i>	183	<i>Molva</i>	185
<i>leuciscus</i>	183	<i>molva</i>	185
<i>Limanda</i>	198	<i>montagui (Liparis)</i>	190
<i>limanda</i>	198	<i>montagui (Raja)</i>	179
<i>limandoides</i>	198	<i>morhua</i>	184
<i>lineata</i>	189	<i>Morone</i>	190
<i>Liparis</i>	190	<i>muelleri</i>	181
<i>liparis</i>	190	<i>Mugil</i>	192
<i>Liza</i>	192	<i>Mullus</i>	192
<i>Lophius</i>	184	<i>mustela</i>	185
<i>Lota</i>	185	<i>Mustelus</i>	177
<i>lota</i>	185	<i>mustelus (Mustelus)</i>	177
<i>lozanoi</i>	196	<i>mustelus (Onos)</i>	185
<i>lucerna</i>	189	<i>Myoxocephalus</i>	189
<i>Lucioperca</i>	190	<i>naevus</i>	179
<i>luciocerpa</i>	190	<i>nasus (Chondrostoma)</i>	182
<i>lucius</i>	181	<i>nasus (Lamna)</i>	176
<i>lumpus</i>	190	<i>nebulosus</i>	183
<i>luna</i>	186	<i>Nemachilus</i>	183
<i>lupus</i>	194	<i>niger (Centrolophus)</i>	196
<i>luscus</i>	184	<i>niger (Gobius)</i>	194
<i>luteum</i>	199	<i>nobiliana</i>	178
<i>lyra</i>	194	<i>Noemacheilus</i>	183
<i>Macrorhamphosus</i>	187	<i>Odontogadus</i>	184
<i>marinus (Ammodytes)</i>	194	<i>Onos</i>	185
<i>marinus (Petromyzon)</i>	176	<i>Osmerus</i>	181
<i>marmorata</i>	178	<i>oxyrhynchus</i>	180
<i>Maurolicus</i>	181	<i>Pagellus</i>	191
<i>maxima</i>	197	<i>pastinaca</i>	179
<i>maximus (Cetorhinus)</i>	176	<i>Pegusa</i>	199
		<i>Perca</i>	190

	Page		Page
<i>Petromyzon</i>	176	<i>Scyliorhinus</i>	176
<i>Pholis</i>	194	<i>septentrionalis</i>	185
<i>pholis</i>	194	<i>sericeus</i>	183
<i>Phoxinus</i>	183	<i>Silurus</i>	183
<i>phoxinus</i>	183	<i>Solea</i>	199
<i>pictus</i>	196	<i>solea</i>	199
<i>pilchardus</i>	180	<i>Somniosus</i>	177
<i>piscatorius</i>	184	<i>speculiger</i>	186
<i>planeri</i>	176	<i>Spinachia</i>	187
<i>platessa</i>	198	<i>spinachia</i>	187
<i>platessoides</i>	198	<i>Spondyliosoma</i>	192
<i>Platichthys</i>	198	<i>Sprattus</i>	180
<i>Pleuronectes</i>	198	<i>sprattus</i>	180
<i>Poecilia</i>	186	<i>Squalus</i>	177
<i>Pollachius</i>	184	<i>Squatina</i>	178
<i>pollachius</i>	184	<i>squatina</i>	178
<i>Pomatoschistus</i>	195/6	<i>stellaris</i>	176
<i>poutassou</i>	184	<i>Stizostedion</i>	190
<i>presbyter</i>	186	<i>sturio</i>	179
<i>Psetta</i>	197	<i>surmuletus</i>	192
<i>punctatus</i>	197	<i>Symphodus</i>	192/3
<i>Pungitius</i>	187	<i>Syngnathus</i>	189
<i>pungitius</i>	187		
<i>pygmaea</i>	181	<i>taenia</i>	183
		<i>Taurulus</i>	189
<i>radiata</i>	179	<i>Thunnus</i>	196
<i>raii</i>	190	<i>thynnus</i>	196
<i>Raja</i>	178/9	<i>Thymallus</i>	181
<i>ramada</i>	192	<i>thymallus</i>	181
<i>Raniceps</i>	185	<i>Tinca</i>	183
<i>raninus</i>	185	<i>tinca</i>	183
<i>regium</i>	192	<i>tobianus</i>	194
<i>reticulata</i>	186	<i>Torpedo</i>	178
<i>reticulatus (Callionymus)</i>	194	<i>Trachinus</i>	193
<i>reticulatus (Lebistes)</i>	186	<i>Trachurus</i>	190
<i>Rhinonemus</i>	185	<i>trachurus</i>	190
<i>Rhodeus</i>	183	<i>Trigla</i>	189
<i>rhombus</i>	197	<i>Trigloporus</i>	189
<i>rostellatus</i>	189	<i>Trisopterus</i>	184
<i>rupestris</i>	193	<i>trutta</i>	181
<i>Rutilus</i>	183		
<i>rutilus</i>	183	<i>Umbra</i>	181
		<i>undulata</i>	179
<i>salar</i>	180		
<i>Salmo</i>	180/81	<i>vipera</i>	193
<i>salmoides</i>	190	<i>virens</i>	184
<i>Sardina</i>	180	<i>viviparus</i>	185
<i>saurus</i>	186	<i>vulgaris (Gaidropsarus)</i>	185
<i>Scardinius</i>	183	<i>vulgaris (Onos)</i>	185
<i>Sciaena</i>	192	<i>vulgaris (Solea)</i>	199
<i>scolopax</i>	187	<i>vulpinus</i>	176
<i>Scomber</i>	196		
<i>Scomberesox</i>	186	<i>whiffiagonis</i>	197
<i>scombrus</i>	196		
<i>Scophthalmus</i>	197	<i>Zeugopterus</i>	197
<i>scorpius</i>	189	<i>Zeus</i>	186
		<i>Zoarces</i>	185

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