

NEW ZEALAND.  
MARINE DEPARTMENT.

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FISHERIES BULLETIN No. 1.

# BIBLIOGRAPHY OF NEW ZEALAND FISHES.

BY

W. J. PHILLIPPS, F.L.S.,  
Dominion Museum, Wellington.

With a Preface by A. E. HEFFORD, M.Sc., Chief Inspector of Fisheries,  
Marine Department.



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## P R E F A C E.

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THE foundations of fishery science were laid by the work of the old-time naturalists who first identified and established scientific systems of nomenclature for the different species of fishes and to some extent threw light on the broad features of their distribution and habits. In many cases science has advanced no further than that phase in its application to fish-life. But in some parts of the world, notably in Europe and America, fishery research has for many years held a position of recognized importance and utility among applied sciences. It has passed beyond the stage at which it can be served adequately by contributions from amateur or even academic workers. It commands the services of trained specialists who have developed particular technical methods and devised special equipment for fishery research, the methods and results of which are on record in a recognized bibliography. The still unsolved problems of fishery science are numerous; but where systematic work has been carried out considerable progress has been made, with the result that in many directions obscurity and mystery have given place to understanding and enlightenment, enabling questions of fishery administration, conservation, and exploitation to be dealt with in the light of ascertained facts, instead of that juggling with conjectures and the baffling superficialities of ignorance and prejudiced self-interest which in the pre-scientific era inevitably stultified attempts on the part of fishery authorities to guide the industry along rational lines.

However, it is not my object to expatiate here upon the achievements of fishery science, but merely to refer to the phases of its development. Correct identification of species provides the necessary preliminary to subsequent phases of progress which have regard to the elucidation of the life-histories of individual species of fish, their food requirements at different stages of growth, the manner of their reproduction, their natural enemies and competitors, their migrations, and their correlation with the inanimate (physico-chemical) factors of their environment. These are *fish* problems. A further phase is concerned with the biology of fishes as affected by the human factor—the investigation of *fishery* problems; the effects of fishery operations on the natural stocks; the “vital statistics” of fisheries. And in a quite distinct province of applied science come the problems of the economic utilization of fishery products.

In several European countries and in America all these phases have been the subject of research, at least with regard to the more important commercial species. It is recognized that fishery administration cannot be carried on in an enlightened manner nor can fishery developments be

furthered with confidence in the absence of information which such researches seek to provide. Fishery research in New Zealand is at present at the primary stage. Apart from the contributions to the natural history of some of our fishes made by workers at the Portobello Marine Biological Station, our scientific knowledge of fish-life has advanced little further than the naming stage; and even this branch of ichthyology is by no means finally rounded off.

A perusal of the work to which these remarks are prefaced will show that since the days of Forster, Richardson, and other naturalists who studied the antipodean fishes which first became known through the early voyages of discovery, a large number of workers have devoted attention to the fishes of New Zealand, and it will be recognized that the literature of our fishes is in the aggregate very considerable. Unfortunately, it is scattered over a large number of publications, many of which are not easily accessible, even if they were known, to the majority of people who are interested in the study of fish-life. It is undoubtedly the difficulty of obtaining information in compact form which has stood in the way of a more widely spread interest in and understanding of the fish-life of New Zealand waters. Scientific knowledge has not yet reached the stage which would render possible the publication of a technical handbook, or even a popular semi-scientific book, that would be comparable with the works on fishes that have been produced by European, American, and Australian ichthyologists. Pending the appearance of such a publication, the present Bibliography and Index, carefully and laboriously compiled by Mr. W. J. Phillipps, will be of considerable service both to those who desire to increase their own knowledge and to those who are engaged in extending our understanding of the fish fauna of New Zealand. Scientific progress consists in the progressive extension of the fabric of knowledge built up by other workers. Hence the necessity for an organized literature on special branches of scientific research. Hence also the appropriateness of the present work to form Part I of a series of Fisheries Bulletins which it is the intention of the Marine Department to publish as the results of investigation become available; so that in future the scientific literature on New Zealand fishes will be available in a known and uniform series, instead of being scattered over a number of heterogeneous publications and buried among a multitude of other subjects which have little or no interest to the student of fish and fishery matters.

A. E. HEFFORD.

Marine Department, Wellington, 5th April, 1927.

## INTRODUCTION.

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THE object of the present work is to facilitate reference to the literature on New Zealand fishes. It consists of a list, arranged in systematic order, of the fishes of the New Zealand waters, together with their vernacular and Maori names, and certain selected references, and of an index to the generic, specific, vernacular, and Maori names.

The fishes of the subantarctic islands of New Zealand have been included in the list; but those of the subtropical Kermadec Islands have been omitted, since they have little in common with the New Zealand fauna.

The references do not in all cases give the complete synonymy of the species. The principle adopted in their selection has been to give the original reference in which the species was first described, others affecting the nomenclature, and later papers where a fuller description or figures have been published or the economic value of the species has been discussed.

Previous lists of New Zealand fishes have been published by Forster (1801), Richardson (1842 and 1843), Bleeker (1855), Hutton (1872), Sherrin (1886), Hutton (1889), Gill (1893), Hutton (1904), Waite (1907), and Phillipps (1927). The recent works of Regan, Waite, and McCulloch have been closely followed in the preparation of the present list, and much valuable advice has been received from Dr. David Starr Jordan. In addition I have to express my acknowledgments to the following for helpful suggestions: Mr. Gilbert P. Whitley, Australian Museum, Sydney; Hon. Mr. G. M. Thomson, M.L.C., Dunedin; Dr. J. Allan Thomson, Director, Dominion Museum; Mr. W. R. B. Oliver, Dominion Museum; Mr. Gilbert Archey, Curator, and Mr. L. T. Griffin, Assistant Curator, Auckland Museum; and Mr. A. E. Hefford, Marine Department.

# BIBLIOGRAPHY AND INDEX

OF

## NEW ZEALAND FISHES.

### SUBPHYLUM CEPHALOCHORDATA. LANCELETS.

#### Family BRANCHIOSTOMIDAE.

##### **Heteropleuron hectori** Benham. LANCELET.

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1901. *Heteropleuron hectori* Benham, Q.J.M.S., (2), 44, p. 273.  
1901. *Heteropleuron hectori* Benham, Trans. N.Z. Inst., 33, p. 121, pl. 1.

### SUBPHYLUM CRANIATA.

#### CLASS CYCLOSTOMATA. LAMPREYS AND BORERS.

##### Family HETATRETIDAE.

##### **Heptatretus cirrhatus** (Bloch and Schneider). HAGFISH ; TUERE.

1801. *Petromyzon cirrhatus* Forster, in Bloch and Schneider, Syst. Ichth., p. 532.  
1872. *Bdellostoma cirrhatum*. Forster : Hutton, Cat. Fish. N.Z., pp. 87-88.  
1893. *Heptatrema cirrata* : Gill, Mem. Nat. Acad. Sci., 6, p. 110.  
1909. *Eptatretus cirrhatus* Forster : Waite, Rec. Cant. Mus., 1, p. 132, pl. xiii.

##### Family GEOTRIDAE.

##### **Geotria australis** Gray. LAMPREY ; KOROKORO.

1851. *Geotria australis* Gray, Proc. Zool. Soc. Lond., p. 239.  
1873. *Geotria australis*. Gray : Hutton, Trans. N.Z. Inst., 5, p. 272, pl. xii, figs. 139 and 139 a.  
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1922. *Geotria australis* : Phillipps and Hodgkinson, N.Z. Journ. Sci. & Tech., 5, p. 97.  
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#### CLASS PISCES.

##### SUBCLASS ELASMOBRANCHII. SHARKS, RAYS, AND GHOST SHARKS.

##### ORDER SELACHII. SHARKS.

##### Family HEXANCHIDAE.

##### **Notorhynchus pectorosus** (Garman). SEVEN-GILLED SHARK.

1884. *Heptanchias pectorosus* Garman, Bull. Essex Inst., 16, p. 56.  
1872. *Notidanus indicus*. Cuvier : Hutton, Cat. Fish. N.Z., p. 79.  
1880. *Notidanus (Heptanchus) indicus* (Cuv.) : McCoy, Prod. Zool. Vict., 1, pl. xliii.

1921. *Notorhynchus pectorosus* Garman : Waite, Rec. South Aust. Mus., 2, No. 1, p. 10, fig. 5.  
 1924. *Notorhynchus pectorosus* : Phillipps, N.Z. Journ. Sci. & Tech., 6, p. 259, fig. 1.

Family CARCHARINIDAE.

**Galeorhinus australis** Macleay. SOUTHERN TOPE or SCHOOL SHARK.

1872. *Galeus canis* Linn. : Hutton, Cat. Fish. N.Z., p. 78.  
 1881. *Galeus australis* Macleay, Proc. Linn. Soc. N.S.W., 6, p. 354.  
 1882. *Galeus australis* (Macleay) : McCoy, Prod. Zool. Vict., 1, dec. vii, pl. 64, 2.  
 1909. *Galeus australis* Macleay : Waite, Rec. Cant. Mus., 1, p. 139, pl. xv.  
 1921. *Galeorhinus australis* : McCulloch, Check-list Fish. N.S.W., p. 6, fig. 1.  
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**Carcharinus macrurus** (Ramsay and Ogilby).

1888. *Carcharias macrurus* Rams. & Ogil., Proc. Linn. Soc. N.S.W. (2), ii, p. 163.  
 1924. *Carcharinus lamia* : Phillipps, N.Z. Journ. Sci. & Tech., 6, p. 260, with fig.  
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 1921. *Carcharinus brachyurus* Guenther : Waite, Rec. South Aust. Mus., 2, No. 1, p. 12, fig. 8.  
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1758. *Squalus glaucus* Linnaeus, Syst. Nat., ed. 10, p. 235.  
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Family SPHYRNIDAE.

**Sphyrna zygaena** (Linnaeus). HAMMER-HEADED SHARK ; MANGOPARE.

1758. *Squalus zygaena* Linnaeus, Syst. Nat., ed. 10, p. 234.  
 1873. *Zygaena malleus* Risso : Hutton, Trans. N.Z. Inst., 5, p. 271.  
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 1924. *Sphyrna zygaena* : Phillipps, N.Z. Journ. Sci. & Tech., 6, p. 262, figs. 6 and 6A.



## Family MUSTELIDAE.

### **Mustelus antarcticus** Guenther. GUMMY; MANGA.

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1909. *Mustelus antarcticus*, Guenther : McCulloch, Rec. Aust. Mus., 7, p. 315, pl. xc, fig. 3.  
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## Family SCYLIORHINIDAE.

### **Cephaloscyllium sabella** (Broussonet). CARPET-SHARK.

1780. *Squalus sabella* (Broussonet) Gmelin, Syst. Nat., p. 648.  
1867. *Scyllium laticeps* Dumeril : Hutton, Trans. N.Z. Inst., 8, p. 216.  
1909. *Cephaloscyllium laticeps* Dumeril : Waite, Rec. Cant. Mus., 1, p. 136, pl. xiv, fig. 1, and pl. xxi, fig. 1.  
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## Family ALOPIIDAE.

### **Alopias vulpinus** (Bonnaterre). THRESHER-SHARK.

1788. *Squalus vulpinus* Bonnaterre, Encycl. Meth., Ichth., p. 9.  
1872. *Alopias vulpes* Gmelin : Hutton, Cat. Fish. N.Z., p. 78 (not of Gmelin).  
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## Family CETORHINIDAE.

### **Cetorhinus maximus** (Gunner). BASKING-SHARK ; REREMAI.

1765. *Squalus maximus* Gunner, Trondhj. Selskabs., 3, p. 33.  
1891. *Selache maxima* Linnaeus : Cheeseman, Trans. N.Z. Inst., 23, p. 126.  
1895. *Cetorhinus maximus* Gunner : Goode and Bean, Ocean. Ichth., p. 21, pl. v, fig. 19.  
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## Family ISURIDAE.

### **Lamna nasus** (Bonnaterre). PORBEAGLE-SHARK.

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1875. *Lamna cornubica* Gmelin : Haast, Trans. N.Z. Inst., 7, p. 237.  
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Family SQUALIDAE.

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**Oxynotus bruniensis** (Ogilby). SPINY DOGFISH.

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**Squalus fernandinus** Molina. SPINED DOGFISH; OKEOKE or KOINGA.

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 1872. *Acanthias vulgaris*. Risso: Hutton, Cat. Fish. N.Z., p. 76 (not of Risso).  
 1883. *Acanthias vulgaris* (Linn. sp.): McCoy, Prod. Zool. Vict., 1, pl. lxxv.  
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1882. *Acanthias megalops* Macleay, Proc. Linn. Soc. N.S.W., 6, p. 367.  
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Family SCYMNORHINIDAE.

**Scymnorhinus licha** (Bonnaterre). BLACK SHARK.

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1824. *Scymnus bispinatus* Quoy & Gaim., Voy. Uranie, Zool., p. 197.  
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p. 8.  
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p. 316.

Family SPINACIDAE.

**Centrophorus plunketi** Waite.

1910. *Centrophorus plunketi* Waite, Trans. N.Z. Inst., 42, p. 384, pl. xxxvii.  
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pl. iii.

**Scymnodon sherwoodi** Archey.

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ORDER BATOIDEI. RAYS.

Family NARCOBATIDAE.

**Narcobatus fairchildi** (Hutton). ELECTRIC RAY ; WHAI REPO.

1872. *Torpedo fairchildi* Hutton, Cat. Fish. N.Z., p. 83, pl. xii, fig. 134.  
1884. *Torpedo fusca* (?) : Parker, Trans. N.Z. Inst., 16, p. 281, pl. xxii.  
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pl. xvii.  
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pl. xxv.

**Typhlonarke aysoni** (Hamilton). TORPEDO-RAY.

1902. *Astrape aysoni* Hamilton, Trans. N.Z. Inst., 34, p. 224, pls. x-xii.  
1912. *Typhlonarke aysoni* Hamilton : Waite, Rec. Cant. Mus., 1, p. 316.

Family RAJIDAE.

**Raja nasuta** Mueller and Henle. SKATE ; WHAI.

1838. *Raja nasuta* Mueller and Henle, Plagiostomen, p. 150.  
1872. *Raja nasuta*. Solander : Hutton, Cat. Fish. N.Z., p. 84 (not of  
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4, p. 123.  
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Fish-hatch., p. 69.

**Arhynchobatis asperrimus** Waite. LONG-TAILED SKATE.

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## Family DASYATIDAE.

**Dasyatis breviceaudatus** (Hutton). SMOOTH STINGAREE OR STING-RAY.

1875. *Trygon breviceaudatus* Hutton, A.M.N.H., (4), xvi, p. 137.  
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**Aetobatis tenuicaudatus** (Hector). EAGLE-RAY.

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## SUBCLASS HOLOCEPHALI. ELEPHANT-FISHES.

## Family CHIMAERIDAE.

**Chimaera novae-zelandiae** Fowler. CHIMAERA.

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## SUBCLASS TELEOSTOMI. BONY FISHES.

## ORDER ISOSPONDYLI.

## Family ENGRAULIDAE.

**Engraulis australis** (Shaw). ANCHOVY; KOROWHAWHA.

1790. *Atherina australis* Shaw, White's Voyage N.S.W., p. 296, pl. lxiv, fig. 1.  
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Family CLUPEIDAE.

**Sardinia neopilcharda** Steindachner. PILCHARD; MOHIMOHI.

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 1883. *Clupea sagax* Jenyns : Arthur, Trans. N.Z. Inst., 15, p. 208, pl. xxxiv (not of Jenyns).  
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 1918. *Sardinia* : J. A. Thomson, N.Z. Journ. Sci. & Tech., 1, p. 7.  
 1919. *Sardinia neopilchardus* : McCulloch, Rec. Aust. Mus., xii, 8, p. 172, pl. 26, fig. 1.  
 1921. *Sardinia neopilcharda* Steindachner : Waite, Rec. South Aust. Mus., 2, No. 1, p. 37, fig. 53.  
 1921. *Sardinia neopilchardus* (Steindachner) : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 118, No. 38.  
 1922. *Sardinia neopilchardus* : Phillipps and Hodgkinson, N.Z. Journ. Sci. & Tech., 5, p. 94, No. 38.  
 1924. *Sardinia neopilchardus* : Phillipps, N.Z. Journ. Sci. & Tech. 7, p. 191, with fig.  
 1927. *Sardinia neopilchardus* : Young and Thomson, Trans. N.Z. Inst., 57, p. 314.

**Clupea antipodum** (Hector). SPRAT; KUPAE.

1872. *Clupea sprattus* var. *antipodum* Hector, in Hutton, Cat. Fish. N.Z., p. 133.  
 1881. *Clupea sprattus* : Arthur, Trans. N.Z. Inst., 15, p. 203, pl. xxxiv.  
 1893. *Clupea antipodum* : Gill, Mem. Nat. Acad. Sci., 6, p. 112.  
 1916. *Clupea holodon* : Regan, A.M.N.H., ser. 8, 18, p. 5.  
 1921. *Clupea antipoda* : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 118.  
 1921. *Amblygaster antipodus* Hector : Thomson, Hist. Portobello Fish-hatch., p. 70.  
 1927. *Harengula antipoda* : Young and Thomson, Trans. N.Z. Inst., 57, p. 314.

**Clupea muelleri** Klunzinger.

1880. *Clupea muelleri* Klunzinger, Sitzungsber. Akad. Wien, 80, p. 416.  
 1917. *Clupea muelleri* Klunzinger : Regan, A.M.N.H., ser. 8, 19, p. 228.

Family CHANIDAE.

**Chanos chanos** (Forsk.) SALMON-HERRING or MILK-FISH.

1775. *Mugil chanos* Forskal, Descr. Anim., p. 74.  
 1846. *Lutodeira salmonea* Richardson, Voy. Ereb. & Terr., Ichth., p. 58, pl. xxxvi, figs. 1 and 2.  
 1870. *Chanos salmoneus* : Guenther, Cat. Fish. B.M., 7, p. 473.  
 1922. *Chanos chanos* : McCulloch, Check-list Fish. N.S.W., p. 17, pl. v, fig. 57a.

## Family GONORHYNCHIDAE.

**Gonorhynchus gonorynchus** (Linnaeus). SAND-FISH.

1766. *Cyprinus gonorynchus*, Linnaeus, Syst. Nat., ed. 12, p. 528.  
 1872. *Gonorhynchus greyi*. Richardson : Hutton, Cat. Fish. N.Z., pp. 62 and 119.  
 1904. *Gonorhynchus gonorynchus*, Linnaeus : Waite, Rec. Aust. Mus., 5, p. 146, pl. xvii, fig. 3.

## Family GALAXIIDAE.

**Galaxias alepidotus** (Bloch and Schneider). BLACK KOKOPU.

1801. *Esox alepidotus* Forster, in Bloch and Schneider, Syst. Ichth., p. 395.  
 1872. *Galaxias alepidotus*. Forster : Hutton, Cat. Fish. N.Z., p. 58.  
 1896. *Galaxias alepidotus*, Forster : Hutton, Trans. N.Z. Inst., 28, p. 317.  
 1893. *Galaxias olidus* Gill, Mem. Nat. Acad. Sci., 6, p. 112.

**Galaxias kokopu** Clarke.

1899. *Galaxias kokopu* Clarke, Trans. N.Z. Inst., 31, p. 84, pl. iv.

**Galaxias fasciatus** Gray. KOKOPU or PARA.

1831. *Galaxias fasciatus* Gray, Zool. Misc., p. 73.  
 1866. *Galaxias fasciatus* : Guenther, Cat. Fish. B.M., 6, p. 209.  
 1872. *Galaxias fasciatus*. Gray : Hutton, Cat. Fish. N.Z., p. 59, pl. x, fig. 94.  
 1903. *Galaxias fasciatus* : Best, Trans. N.Z. Inst., 35, p. 72.  
 1899. *Galaxias fasciatus* : Clarke, Trans. N.Z. Inst., 31, p. 84, pl. v, fig. 1.  
 1926. *Galaxias fasciatus* : Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 293, with fig.

**Galaxias brevipinnis** Guenther. GUDGEON ; TAIWHARU or KOKOPU.

1866. *Galaxias brevipinnis* Guenther, Cat. Fish. B.M., 6, p. 213.  
 1873. *Galaxias grandis* Haast, Trans. N.Z. Inst., 5, p. 278.  
 1896. *Galaxias brevipinnis*, Guenther : Hutton, Trans. N.Z. Inst., 28, p. 317.  
 1899. *Galaxias robinsonii* Clarke, Trans. N.Z. Inst., 31, p. 89, pl. 5.  
 1904. *Galaxias brevipinnis* : Boulenger, Camb. Nat. Hist., 7, p. 607, fig. 366.  
 1921. *Galaxias brevipinnis* : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 119.  
 1926. *Galaxias robinsonii* : Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 98, with fig.

**Galaxias lynx** Hutton.

1896. *Galaxias lynx* Hutton, Trans. N.Z. Inst., 28, p. 317.

**Galaxias attenuatus** (Jenyns). MINNOW ; HIWI or INANGA.

1842. *Mesites attenuatus* Jenyns, Voy. Beagle, p. 121.  
 1899. *Galaxias attenuatus* : Clarke, Trans. N.Z. Inst., 31, p. 78.  
 1906. *Galaxias attenuatus* Jenyns : Regan, Proc. Zool. Soc. Lond., 2, pt. 2, p. 368, pl. xii, fig. 1, and pl. xiii, fig. 2.  
 1919. *Galaxias attenuatus* : Phillipps, Aust. Zoologist, 1, pt. 7, p. 211.  
 1921. *Galaxias attenuatus* (Jenyns) : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 119, No. 46.  
 1922. *Galaxias attenuatus* : Phillipps, N.Z. Journ. Sci. & Tech., 5, p. 94, No. 46.

1924. *Galaxias attenuatus* : Phillipps, N.Z. Journ. Sci. & Tech., 7, p. 117, with fig.  
 1926. *Galaxias attenuatus* : Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 292, with fig.  
 1926. *Galaxias attenuatus* : Phillipps, Nature, April, 1926, p. 485.

**Galaxias huttoni** Regan. KOARO.

1906. *Galaxias huttoni* Regan, Proc. Zool. Soc., 1905, 2, p. 373, with fig.  
 1921. *Galaxias huttoni* Regan : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 119.  
 1924. *Galaxias huttoni* : Phillipps, N.Z. Journ. Sci. & Tech., 7, p. 190, with fig.

**Galaxias burrowsii** Phillipps. CANTERBURY MUDDFISH.

1926. *Galaxias burrowsii* Phillipps, Trans. N.Z. Inst., 56, p. 531, pl. 88.  
 1927. *Galaxias burrowsii* Phillipps : Phillipps, Journ. Pan-Pacific Res. Inst., 2, No. 1, p. 11.

**Neochanna apoda** Guenther. MUDDFISH ; HAUHAU OF WAIKAKA.

1867. *Neochanna apoda* Guenther, A.M.N.H. (3), 20, p. 306.  
 1872. *Neochanna apoda*. Guenther : Hutton, Cat. Fish. N.Z., pp. 61 and 130.  
 1906. *Neochanna apoda* Guenther : Regan, Proc. Zool. Soc. Lond., 2, pt. 2, p. 383.  
 1923. *Neochanna apoda* : Phillipps, N.Z. Journ. Sci. & Tech., 6, p. 62, with fig.  
 1926. *Neochanna apoda* : Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 297.

Family ARGENTINIDAE.

**Argentina elongata** Hutton. SILVERSIDE.

1879. *Argentina elongata* Hutton, A.M.N.H., (5), 3, p. 53.  
 1879. *Argentina decagon* Clarke, Trans. N.Z. Inst., 11, p. 296, pl. xiv.  
 1895. *Argentina elongata* Hutton : Goode and Bean, Ocean. Ichth., p. 52.  
 1911. *Argentina elongata* Hutton : Waite, Rec. Cant. Mus., 1, No. 3, p. 161, pl. xxiv.

Family APLOCHITONIDAE.

**Prototroctes oxyrhynchus** Guenther. GRAYLING ; UPOKORORO.

1870. *Prototroctes oxyrhynchus* Guenther, Proc. Zool. Soc., p. 152.  
 1871. *Retropinna upokororo* Hector, Trans. N.Z. Inst., 3, p. 134, pl. xix.  
 1877. *Prototroctes oxyrhynchus* : Rutland, Trans. N.Z. Inst., 10, p. 250.  
 1884. *Prototroctes oxyrhynchus* : Arthur, Trans. N.Z. Inst., 17, p. 171.  
 1921. *Prototroctes oxyrhynchus* Guenther : Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 119, No. 48.  
 1923. *Prototroctes oxyrhynchus* : Phillipps, N.Z. Journ. Sci. & Tech., 6, p. 115, with fig.

Family RETROPINNIDAE.

**Retropinna retropinna** (Richardson). SMELT ; PARAKI.

1848. *Argentina retropinna* Richardson, Voy. Ereb. & Terr., Ichth., p. 121, pl. lii, figs. 1-3.

1871. *Retropinna osmeroides* Hector, Trans. N.Z. Inst., 3, p. 134, pl. xix, fig. 1.
1893. *Retropinna richardsonii*: Gill, Mem. Acad. Sci., 6, p. 112.
1920. *Retropinna retropinna*, Richardson: McCulloch, Rec. Aust. Mus., 13, p. 48, figs. 1-2.
1921. *Retropinna retropinna* (Richardson): Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 119.
1922. *Retropinna retropinna*: Phillipps, N.Z. Journ. Sci. & Tech., 5, p. 94.
1926. *Retropinna retropinna*: Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 289, 3 figs.
1926. *Retropinna retropinna*: Phillipps, Nature, April, p. 486.

ORDER **INIOMI**. LANTERN-FISHES AND ALLIES.

Family STOMIATIDAE.

**Phosichthys argenteus** Hutton. LIGHT-FISH.

1872. *Phosichthys argenteus* Hutton, Cat. Fish. N.Z., p. 56.
1873. *Phosichthys argenteus*, Hutton: Hutton, Trans. N.Z. Inst., 5, p. 269.
1887. *Photichthys argenteus*: Guenther, Voy. Chall., Zool., 22, p. 178, pl. xlv, fig. A.
1895. *Phosichthys argenteus* Hutton: Goode and Bean, Ocean. Ichth., p. 104, pl. xxxii, fig. 122.

**Maurolicus pennanti australis** (Hector). SOUTHERN PEARLSIDE.

1875. *Maurolicus australis* Hector, Trans. N.Z. Inst., 7, p. 250, pl. ii, fig. 90 d.
1876. *Gonostoma australis*: Hutton, Trans. N.Z. Inst., 8, p. 215.
1879. *Maurolicus amethystino-punctatus* (Cocco): Guenther, Trans. N.Z. Inst., 11, p. 472.
1910. *Triarcus australis* Hutton: Waite, Trans. N.Z. Inst., 42, p. 386, pl. 38, fig. 1.
1921. *Maurolicus pennanti australis* Hector: McCulloch, Rec. Aust. Mus., 14, No. 2, p. 114, pl. 14, fig. 1.

**Argyropelecus intermedius** Clarke.

1878. *Argyropelecus intermedius* Clarke, Trans. N.Z. Inst., 10, p. 244, pl. vi.

**Idiacanthus niger** Regan.

1914. *Idiacanthus niger* Regan, A.M.N.H., (8), xiii, p. 14.
1914. *Idiacanthus niger* Regan: Regan, Voy. Terra Nova, 1, No. 1, p. 14, pl. x, fig. 2.
1916. *Idiacanthus aurora* Waite, Aust. Antarctic Exped. Fishes, p. 53, pl. 5, fig. 1.
1922. *Idiacanthus niger* Regan: Archey, N.Z. Journ. Sci. & Tech., 5, p. 295.

Family SUDIDAE.

**Chlorophthalmus nigripinnis** Guenther. CUCUMBER-FISH.

1878. *Chlorophthalmus nigripinnis* Guenther, A.M.N.H., (5), 21, p. 182.
1887. *Chlorophthalmus nigripinnis*: Guenther, Chall. Zool. Repts., 22, p. 193, pl. li, fig. A.
1911. *Chlorophthalmus nigripinnis* Guenther: Waite, Rec. Cant. Mus., 1, p. 164, pl. xxv.



## Family ALEPISAURIDAE

**Alepisaurus ferox** Lowe. LANCET-FISH.

1833. *Alepisaurus ferox* Lowe, Proc. Zool. Soc. Lond., p. 104.  
 1845. *Alepisauris ferox*: Richardson, Voy. Ereb. & Terr., Zool., p. 34,  
 pl. xxii, figs. 1-4.  
 1895. *Alepisaurus ferox*, Lowe: Goode and Bean, Ocean. Ichth., p. 117,  
 pl. xxxviii, fig. 142.

## Family MYCTOPHIDAE.

**Bathysaurus ferox** Guenther.

1878. *Bathysaurus ferox* Guenther, A.M.N.H., (5), 2, p. 182.  
 1895. *Bathysaurus ferox*, Guenther: Goode and Bean, Ocean. Ichth.,  
 pp. 58 and 510, pl. xviii, figs. 65 and 66.

**Bathysauropis graeilis** (Guenther).

1878. *Chlorophthalmus gracilis* Guenther, A.M.N.H., (5), 2, p. 182.  
 1887. *Chlorophthalmus gracilis*: Guenther, Voy. Chall., Zool., 22, p. 194,  
 pl. xlix, fig. A.

**Myctophum hectoris** (Guenther).

1876. *Scopelus hectoris* Guenther, A.M.N.H., (4), 17, p. 399.  
 1877. *Scopelus hectoris*: Guenther, Trans. N.Z. Inst., 9, p. 471.

**Myctophum humboldti** (Risso). LANTERN-FISH.

1810. *Gasteropelecus humboldti* Risso, Ichth. Nice, p. 358.  
 1873. *Scopelus boops*. Richardson: Hutton, Trans. N.Z. Inst., 5, p. 269.  
 1895. *Myctophum humboldti* Risso: Goode and Bean, Ocean. Ichth., p. 73,  
 pl. xxii, fig. 82.  
 1911. *Myctophum humboldti* Risso: Waite, Rec. Cant. Mus., 1, p. 166,  
 pl. xxvii, fig. 3.

**Myctophum coccoi** Cocco.

1916. *Myctophum coccoi* Cocco: Regan, Voy. Terra Nova, Zool., 1, No. 4,  
 p. 139.

**Rhinoscopelus coruscans** (Richardson).

1845. *Myctophum coruscans* Richardson, Voy. Ereb. & Terr., Zool., p. 40,  
 pl. xxvii, figs. 1-5.  
 1873. *Scopelus coruscans*: Hutton, Trans. N.Z. Inst., 5, p. 270.  
 1893. *Stenobrachius coruscans*: Gill, Mem. Nat. Acad. Sci., 6, p. 113, No. 49.

**Lampanyctus longipinnis** Regan.

1916. *Lampanyctus longipinnis* Regan, Voy. Terra Nova, 1, No. 4, p. 140,  
 pl. vi, fig. 9.

**Lampanyctus macropterus** Brauer.

1916. *Lampanyctus macropterus* Brauer: Regan, Voy. Terra Nova, 1,  
 No. 4, p. 140, pl. vi, fig. 5.

**Lampanyctus parvimanus** (Guenther). LAMP-FISH.

1864. *Scopelus parvimanus* Guenther, Cat. Fish. B.M., 5, p. 406.

## ORDER APODES. EELS.

## Family ANGUILLIDAE.

**Anguilla aucklandii** Richardson. EEL; TUNA.

1848. *Anguilla aucklandii* Richardson, Voy. Ereb. & Terr., Zool., p. 113, pl. xlv, figs. 7-13.  
 1870. *Anguilla aucklandii*: Guenther, Cat. Fish. B.M., 8, p. 33.  
 1872. *Anguilla aucklandii*. Rich.: Hutton, Cat. Fish. N.Z., pp. 64 and 131, pl. xi, fig. 102.  
 1925. *Anguilla aucklandii* Rich.: Phillipps, N.Z. Journ. Sci. & Tech., 8, p. 30, fig. 3.

**Anguilla australis** Richardson. SHORT-FINNED EEL; TUNA HEKE.

1841. *Anguilla australis* Richardson, Proc. Zool. Soc. Lond., p. 22.  
 1870. *Anguilla australis*: Guenther, Cat. Fish. B.M., 8, p. 36.  
 1872. *Anguilla australis*. Richardson: Hutton, Cat. Fish. N.Z., p. 65, pl. xi, fig. 104.  
 1921. *Anguilla australis* Richardson: G. M. Thomson, Hist. Portobello Fish-hatch., p. 70.  
 1921. *Anguilla australis* Richardson: Waite, Rec. South Aust. Mus., 2, No. 1, p. 48, fig. 72.

## Family LEPTOCEPHALIDAE.

**Gnathophis habenata** (Richardson). SILVER EEL.

1848. *Congrus habenatus* Richardson, Voy. Ereb. & Terr., Fish., p. 109, pl. I, figs. 1-5.  
 1872. *Congermuraena habenata*. Richardson: Hutton, Cat. Fish. N.Z., p. 66.  
 1922. *Congermuraena habenata*: McCulloch, Check-list Fish. N.S.W., p. 23, pl. viii, fig. 80 a.

**Leptocephalus conger** (Linnaeus). CONGER-EEL; KOIRO.

1758. *Muraena conger* Linnaeus, Syst. Nat., ed. 10, p. 245.  
 1872. *Conger vulgaris*. Cuvier: Hutton, Cat. Fish. N.Z., pp. 66 and 132, pl. xi, fig. 105.  
 1892. *Conger vulgaris*: G. M. Thomson, Trans. N.Z. Inst., 24, p. 214.  
 1911. *Leptocephalus conger* Linnaeus: Waite, Rec. Cant. Mus., 1, p. 164.  
 1921. *Leptocephalus conger* (Linnaeus): Phillipps, N.Z. Journ. Sci. & Tech., 4, pp. 119 and 125.  
 1921. *Leptocephalus conger* Linnaeus: G. M. Thomson, Hist. Portobello Fish-hatch., p. 71.  
 1922. *Leptocephalus conger*: Phillipps, N.Z. Journ. Sci. & Tech., 5, p. 94, No. 42.

## Family MURAENIDAE.

**Muraena nubilia** Richardson.

1845. *Muraena nubilia* Richardson, Voy. Ereb. & Terr., Fish., p. 81, pl. xlvi, figs. 6-10.  
 1914. *Muraena nubilia*, Richardson: Regan, Voy. Terra Nova, Zool., 1, No. 1, p. 14.

**Syngnathus blainvillianus** Eydoux and Gervais. SHORT-SNOUDED PIPE-FISH.

1837. *Syngnathus blainvillianus* Eydoux and Gervais, in Guerin, Mag. Zool., 7, pl. xvii.  
 1870. *Syngnathus blainvillianus* : Guenther, Cat. Fish. B.M., 8, p. 162.  
 1909. *Syngnathus blainvillianus*, Eydoux and Gervais : Waite, in Subantarctic Islands, N.Z., 2, p. 588.  
 1911. *Syngnathus blainvillianus* Eydoux and Gervais, Waite, Rec. Cant. Mus., 1, No. 3, p. 174, pl. xxvii, fig. 2.

**Syngnathus norae** Waite. LONG-SNOUDED PIPE-FISH.

1910. *Syngnathus norae* Waite, Proc. N.Z. Inst., p. 25.  
 1911. *Syngnathus norae* Waite : Waite, Rec. Cant. Mus., 1, No. 3, p. 173, pl. xxvii, fig. 1.

**Ichthyocampus filum** Guenther. PIPE-FISH.

1870. *Ichthyocampus filum*, Guenther, Cat. Fish. B.M., 8, p. 178.  
 1872. *Ichthyocampus filum*, Guenther : Hutton, Cat. Fish. N.Z., p. 68.  
 1909. *Ichthyocampus filum*, Guenther : McCulloch, Rec. Aust. Mus., 7, p. 318, pl. xc, fig. 1.

**Doryrhamphus elevatus** (Hutton).

1872. *Doryichthys elevatus* Hutton, Cat. Fish. N.Z., p. 68.  
 1921. *Doryrhamphus elevatus* Hutton : Thomson, Hist. Portobello Fish-hatch., p. 71.

**Stigmatophora longirostris** Hutton.

1872. *Stigmatophora longirostris* Hutton, Cat. Fish. N.Z., p. 69.  
 1876. *Stigmatophora longirostris* Hutton, Trans. N.Z. Inst., 8, p. 216.  
 1923. *Stigmatophora longirostris* Hutton : McCulloch and Phillipps, Rec. Aust. Mus., 14, No. 1, p. 20, fig. 1.

**Solegnathus spinosissimus** (Guenther). SPINY SEA-HORSE.

1870. *Solenognathus spinosissimus* Guenther, Cat. Fish. B.M., 8, p. 195.  
 1872. *Solenognathus spinosissimus*. Guenther : Hutton, Cat. Fish. N.Z., p. 69.  
 1894. *Solegnathus spinosissimus* Guenther : Waite, Proc. Linn. Soc. N.S.W., (2), 9, p. 222, pl. xvii, figs. 5-8.

**Hippocampus abdominalis** Lesson. SEA-HORSE ; MANAIA.

1818. *Hippocampus abdominalis* Lesson, Mem. Soc. Hist. Nat., iv, p. 411, (Voy. du Duperrey, Zool., p. 125).  
 1872. *Hippocampus abdominalis* Lesson : Hutton, Cat. Fish., N.Z., p. 70.  
 1911. *Hippocampus abdominalis*, Lesson : McCulloch, Res. Endeav., Zool., 1, pt. 1, p. 29, pl. vi, figs. 1 and 2.  
 1921. *Hippocampus abdominalis* Lesson : Waite, Rec. South Aust. Mus., 2, No. 1, p. 60, fig. 92.

## Family SCOMBERESOCIDAE.

**Scombresox forsteri** Cuv. & Val. SKIPPER.

1846. *Scombresox forsteri* Cuv. & Val., Hist. Nat. Poiss., 18, p. 481.  
 1866. *Scombresox forsteri*: Guenther, Cat. Fish. B.M., 6, p. 258.  
 1887. *Scombresox saurus* (Bloch) var. *forsteri* (Cuv. & Val.): McCoy, Prod. Zool. Vict., 2, pl. cxxxv, fig. 2.  
 1921. *Scombresox forsteri*: McCulloch, Check-list Fish. N.S.W., p. 29, pl. ix, fig. 103 a.  
 1921. *Scombresox forsteri* Cuv. & Val.: Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 120.

## Family HEMIRHAMPHIDAE.

**Hemirhamphus intermedius** Cantor. GARFISH OR PIPER; TAKEKE.

1842. *Hemirhamphus intermedius* Cantor, A.M.N.H., 9, p. 485.  
 1877. *Hemirhamphus intermedius* (Cantor): McCoy, Prod. Zool. Vict., 2, pl. 135, fig. 1.  
 1916. *Hemirhamphus intermedius*, Cantor: Roughley, Fishes of Australia, p. 27, pl. iv.  
 1921. *Hemiramphus intermedius* Cantor: Phillipps, N.Z. Journ. Sci. & Tech., 4, p. 120, No. 50.  
 1921. *Hyporhamphus intermedius* Cantor: Thomson, Hist. Portobello Fish-hatch., p. 72.  
 1922. *Hemiramphus intermedius*: Phillipps and Hodgkinson, N.Z. Journ. Sci. & Tech., 5, p. 94, No. 50.

## ORDER SYNENTOGNATHI.

## Family EXOCOETIDAE.

**Evolantia microptera** (Cuv. & Val.). FLYING-FISH; MARORO.

1846. *Exocoetus micropterus* Cuv. & Val., Hist. Nat. Poiss., 19, p. 127.  
 1866. *Exocoetus micropterus*: Guenther, Cat. Fish. B.M., 6, p. 279.  
 1903. *Evolantia microptera* Cuv. & Val.: Jordan and Evermann, Fish. Hawaii, Bull. U.S. Fish. Comm., 23, pt. 1, p. 130, fig. 44.

**Exocoetus spilonotopterus** Bleek.

1914. *Exocoetus spilonotopterus* Bleek.: Regan, Terra Nova, Fishes, 1, No. 1, p. 15.

**Cypselurus speculiger** (Cuv. & Val.).

1846. *Exocoetus speculiger*, Cuv. & Val.: Hist. Nat. Poiss., 19, p. 94.  
 1866. *Exocoetus speculiger*: Guenther, Cat. Fish. B.M., 6, p. 287.  
 1906. *Cypselurus speculiger* Cuv. & Val.: Jordan and Seale, Bull. U.S. Bur. Fish., 25, p. 209, fig. xiii.

**Cypselurus ilma** Clarke.

1899. *Exocoetus ilma* Clarke, Trans. N.Z. Inst., 31, p. 94, pl. vi.