

Order Allotriognathi

1862

Head spineless or without serrations. Mouth typically protruding, cleft very oblique. Maxillary with outer blade and with inner hind projection, which connected with its fellow below premaxillary spines; no supplemental maxillary. Teeth usually feeble or absent, never strong. Gills 4, pectinate. Pseudobranchiae well developed or absent. Branchiostegals 6. Air bladder without pneumatic duct (physoclistic). Supraoccipital developed, separating parietals; no opisthotic; an orbitosphenoid, anteriorly in contact with mesethmoid, which wholly or in part behind prefrontals. Pectoral arch suspended

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these arise at extreme lower part of vertical edge, thence curving to base through middle of interval; short similar row between fifth and sixth stripes on fin. Anal very similar to Bleeker's figure, broad band through outer half of fin brown and not red, interval between black stripes bright cadmium yellow, spines pale yellow. Caudal tip hyaline, black much as shown by Bleeker except median band slightly broader than terminal band, interval between with narrow orange line; similar but less bright line in interval between medial bar of tail and bar on caudal peduncle and orange spot on caudal peduncle above. Pectoral hyaline orange. Ventral with yellowish membranes.

from skull. Vertebral column of solid centra, which co-ossified with arches. Scales, when present, thin, deciduous or reduced to scattered tubercles. Vertical fins spineless, except sometimes 1 or 2 first dorsal rays. Pectorals with horizontal or subhorizontal base. Ventrals, when present, spineless, little behind pectorals. A single dorsal. Caudal well developed or obsolete.

Widely different fishes, pelagic or bathypelagic, grouped in this order.

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breadth about equal to half black along anal base. Front of dorsal spines orange, membranes yellowish at tips dark brown basally, merging into first stripe and under fourth spine joined by second; interval between last 2 stripes and between second and third some scattered small orange dots, 1 or 2 behind third stripe. Edges of soft dorsal and anal dusky yellowish, adjoining on dorsal continuation of very dark brown on spinous fin, ending about midway on vertical edge, not reddish as shown in Bleeker's plate nor joined by any of other 4 stripes, but with yellow interval between and terminations; on soft fin ground color of interval pale dusky lemon with row of orange spots through median part somewhat as Bleeker shows;

The Atelaxia have  
ventral fins.

See Norman, Discovery  
Repts., vol. 2, p. 342, 1930.

J. S. Myers

Analysis of sub-orders

1964

a<sup>1</sup>: Body deeply oval; eyes normal; vertebral normal.

b<sup>1</sup>: Ventral rays 15 to 17.

Selenichthys.

b<sup>2</sup>: Ventral rays 8 or 9. Histicthys.

a<sup>2</sup>: Body greatly elongated, slender; vertebral in increased order, ribs feeble or absent.

c<sup>1</sup>: Ventral rays 1 to 9. Taeniosomi.

c<sup>2</sup>: ~~No ventrals~~. Atelaxia.

A 685, A 706, A 707, A 722, A 723. Danawan Island. September 26-28, 1909. Length 128 to 175 mm. Side gray, stripes black with slight yellowish shade at edges. Forehead pale slate gray; chin and upper lip black; circumoral ring black with pale or somewhat dusky lemon yellow interval between chin and circumoral ring and ocular band, none of red on side of head and opercle as shown in Bleeker's plate; band across opercle medially yellow, not whitish, width equal to yellow border of ocular band and placed midway between 2 adjacent black stripes. Buccal region slightly washed with yellowish, quite distinct on nape. From pectoral base breast with yellowish ground color and abdominal region above black stripe broadly yellow, continued in

1965

Sub Order Selenichthys

Body deep, compressed. Mouth terminal, toothless. Skeleton well ossified. Preopercle and symplectic distinct. Post temporal forked, free. Pectoral fin rays inserted on scapula and on 3 pterygials, one of which in contact with coracoid. Vertebrae 45 or 46, ribs strong and sessile. Fins without spine, dorsal and anal long. Pelvic bones connected with scapular arch.



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narrow whitish margin, then black  
submarginal line; another blackish  
line nearly median transversely. Paired  
fins brownish.

Known only from the East Indies. It  
is a very striking species, its color  
pattern <sup>somewhat</sup> suggestive of that of Chaetodon  
ornatissimus or Holocentrus imperator.

Family Lamprididae

1886

Body high, oval, compressed. Caudal peduncle short, slender, without keel. Head moderate, rather deep. Eyes moderate, bordered by ~~premaxillary~~ mouth terminal, bordered by premaxillary extent by maxilla also. Jaws short, equal. No teeth in jaws, angle with grooves to permit motion of jaws. Opercular bones entire, well developed. Gill opening large, membranes free from isthmus. Gills 4, pectinated, branchial apparatus fully developed. Pharyngeals with teeth in adult. Skeleton well ossified. Vertebrae 45, of which 25 caudal. Oesophagus without spinous teeth. Air bladder large, bifurcate behind. Pyloric coeca very numerous. Scales minute or small, thin, cycloid, deciduous, somewhat larger in pectoral region. Lateral line present. Dorsal single, very high. No finlets. Anal long,

1967  
uniformly low. Both dorsal and anal  
depressible in groove. Caudal  
moderately forked. Pectorals large,  
falcate. Ventrals thoracic, set  
back of pectoral bases.

1868

Genus Lampris Retzius

Lampris Retzius, Kon. Vet. Ak. Nya  
Handl. Stockholm, vol. 20, p. 91, 1799.  
(Type Zeus guttatus Brünnich,  
monotypic.)

Chrysotomus Lacépède, Hist. nat. Poiss.,  
vol. 4, p. 586, 1803. (Type Zeus luna  
Gmelin, monotypic.)

Echemythes Gistel, Naturges. Thierr.,  
p. VIII, 1848. (Type Zeus luna Gmelin,  
virtually. Echemythes Gistel proposed  
to replace Chrysotomus Lacépède.)

Body elevated, short, deep. Caudal  
peduncle with pit above and one  
below, before caudal base. Snout  
short. Eye little advanced from  
middle of head. Mouth small.  
Premaxillaries protractile. Jaws  
firm, trenchant. Tongue narrow,  
free, smooth. Branchiostegals 6 or 7.  
Lateral line greatly arched in front.

1869

Dorsal with elevated falcate lobe  
in front, without distinct spines.  
Anal without anterior lobe. Caudal  
with 17 branched rays. Pectoral  
rays 23 to 25, base of fin horizontal.  
Ventral rays 14 to 17.

A single species, pelagic, widely  
distributed. Chiefly noted for  
its large size and gorgeous  
coloration, also its rich flesh  
valued as food.

1870

Lampris regius (Bonnaterre)

Zeus regius Bonnaterre, Encycl.  
Ichth., p. 72, pl. 39, fig. 155, 1788  
(type locality: Torbay, England;  
on Pennant).

Lampris regius Goode and Bean,  
Oceanic Ichth., p. 223, pl. , fig. ,  
1895 (off Le Have ridges; Japan). —  
Jordan and Evermann, Bull. U. S.  
Fish Comm., vol. 23, pt. 1, p. 166, 1903  
(1905) (Honolulu). — Jordan, Tanaka,

Snyder, Journ. College Sci., Tokyo, vol.  
33, art. 1, p. 132, 1913 (reference). —  
Jordan and Jordan, Mem. Carnegie Mus.,  
vol. 10, no. 1, p. 29, Dec. 1922 (Honolulu).

— Fowler, Proc. Acad. Nat. Sci. Philadelphia,  
1923, p. 287 (Catalina). — Barnard, Ann.  
South African Mus., vol. 27, pt. 1, p. 351,  
pl. 14, fig. 1, June 1925 (Table Bay;  
False Bay). — Fowler, Mem. Bishop  
Mus., vol. 10, p. 80, fig. 17, 1928 (off

1871

Waianai beach, Oahu [dimension  
line wrong ~~cm~~ 140 cm on figure, should  
be 140 mm]. — Jordan, Evermann,  
Clark, Rep. U. S. Comm. Fisher., pt. 2, p.  
216, 1930 (compiled).

Lampris regia Snyder, Proc. U. S. Nat.  
Mus., vol. 42, p. 412, 1912 (Comori).

Scomber pelagicus (not Linnaeus) Gunner,  
Norsk Vid. Selsk. Skr. Trondjhem,  
vol. 4, p. 92, pl. 12, fig. 1, 1768 (Norway).

Lampris pelagicus Smitt, Skandinav.  
Fishes, vol. 1, p. 123, fig. 34, 1892.

Zeus guttatus Brünnich, Dansk.  
Vid. Selsk. Skr., vol. 3, p. 398, pl. A,  
1788 (type locality: Elsinore, Denmark).

Zeus luna Gmelin, Syst. Nat. Linn.,  
vol. 1, p. 1225, 1789 (type locality:  
Normandy). — Schneider, Syst. Ich.  
Bloch, p. 96, 1801 (compiled).

Lampris luna <sup>1872</sup> Günther, Cat. Fishes  
Brit. Mus., vol. 2, p. 416, 1860  
(Devonshire). — Jordan and Snyder,

Annot. Zool. Japon., vol. 3, p. 69, 1901  
(reference). — Chu, Biol. Bull. St.  
John's Univ., Shanghai, no. 1, p. 89, Jan.  
1931 (Bleeker's reference).

Zeus stroemii Walbaum, Artedi Pisc.,  
vol. 3, p. 398, 1792 (on Stroem, Physik  
oek. besk. Soendmoer, vol. 1, p. 323,  
pl. 1, fig. 20, 1762; type locality:  
Norway).

Zeus imperialis Shaw and Hodder,  
Natural. Miscellany, vol. 4, pl. 140,  
1793 (type locality: Europe).

Scomber gunneri Schneider, Syst. Ichth.  
Bloch, p. 38, 1801 (on Gunner).

Zeus opah Shaw, General Zool., vol. 4,  
pt. 2, p. 287, pl. 42, 1803 (type locality:  
Mediterranean; and northern seas).



1873

Lampris lauta Lowe, Trans. Zool.  
Soc. London, vol. 2, p. 183, 1837 (1841)  
(type locality: Madeira); Fishes of  
Madeira, p. 27, pl. 5, 1843 (Madeira).

Lampris immaculata Gilchrist,  
Marine Investig. South Africa, vol. 3,  
p. 4, pl. 22, 1904 (type locality: beach  
at Knizerenberg, in False Bay; Table  
Bay).

Sub Order Histiichthys

Body deep, strongly compressed. Skeleton well ossified, cranium with some cartilage. Large front cranial cavity, walls chiefly formed by frontals, floor by cartilage containing mesethmoid and orbitosphenoid ossifications; mesethmoid entirely posterior to prefrontals; epiotics separated by supraoccipital. Vertebral 33; ribs strong, attached to well developed downwardly directed parapophyses. Post-temporal forked. Pectoral fin rays inserted on scapula and

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extends down separating broadly dusky  
or blackish lower lip. Black line  
extends down from first dorsal spine to-  
ward head; posteriorly continued along  
spinous dorsal and soft dorsal sub-  
marginally to ends of larger posterior  
dorsal rays. Black line usually arches  
forward from second dorsal spine,  
broadening vertically in postocular,  
down along ventral axil and then  
back along anal basally to larger  
posterior rays. Two other parallels from  
posterior dorsal spines, extending to  
pectoral base from axil of which an-  
other lines join <sup>also</sup> obliquely from last  
dorsal spine; below arches little  
down and then up across caudal peduncle  
along caudal base. Two other parallel  
black lines arch from soft dorsal  
posteriorly and slope forward medially  
on sides of body. Slight variations  
in juncture and extension occur in  
black lines, though in general of  
constant general pattern. White vertical  
line between 2 black lines postocular  
on head. Membranes of spinous dorsal  
usually, though not always black.  
Anal fin with pale yellowish or whitish  
edge and broad submarginal deep  
brown band, edged narrowly blackish  
and medially giving place to another  
black line, only posteriorly with yellow-  
median longitudinal streaks. Caudal with

on 4 pterygials, one of which in contact with coracoid, which not expanded. Pelvic bones not articulated to coracoids. Fins with articulated rays, except first two of dorsal, which spinous. Dorsal and anal long. Ventral rays 8 or 9.

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Depth  $1\frac{1}{3}$  to  $1\frac{2}{5}$ ; head  $3\frac{1}{4}$  to  $3\frac{2}{5}$ , width  $1\frac{3}{4}$  to 2. Snout  $2\frac{7}{8}$  to 3 in head; eye  $3\frac{2}{3}$  to 4,  $1\frac{1}{5}$  to  $1\frac{2}{5}$  in snout,  $1\frac{1}{4}$  to  $1\frac{1}{2}$  in interorbital; maxillary  $\frac{3}{5}$  to  $\frac{3}{4}$  in snout,  $3\frac{2}{5}$  to  $3\frac{1}{2}$  in head; interorbital  $2\frac{3}{5}$  to  $2\frac{3}{4}$ , convex. Gill rakers 6 + 20, short weak points, 7 in gill filaments, which  $1\frac{1}{5}$  in eye.

Scales 48 to 50 between gill opening and caudal base; tubes 32 to 38 in lateral line; 10 or 11 scales above lateral line, 27 or 28 below. Scales with 7 or 8 basal radiating striae; apical denticles 70 to 107, with 3 to 8 transverse series of basal elements; circuli fine.

D. XII or XIII, 23, I or 24, I, last spine 1 to  $1\frac{4}{5}$  in head, fourteenth ray  $1\frac{2}{5}$  to  $1\frac{1}{2}$ ; A. III, 18, I to 20, I, third spine  $1\frac{7}{8}$  to  $2\frac{1}{8}$ , XIV, twelfth ray  $1\frac{2}{5}$  to  $1\frac{3}{5}$ ; least depth of caudal peduncle  $2\frac{3}{4}$  to 3; caudal  $1\frac{1}{5}$  to  $1\frac{1}{2}$ , hind edge convex; pectoral  $1\frac{1}{10}$  to  $1\frac{1}{5}$ ; ventral  $1\frac{1}{8}$  to  $1\frac{1}{5}$ .

Light brown, with yellowish tints on side of abdomen and vertical fins. Blackish band meets its fellow at occiput, extends through eye, broadens on cheeks and extends down over most of breast; margined in front and behind by yellow line, which former broader and separates another narrower blackish band along upper lip and down over throat; yellow line from upper lip

Family Veliferidae

Body deep, trunk less than head. Caudal peduncle distinct. Head short, deep, compressed. Snout short. Eye little advanced from middle of head. Teeth obsolete or absent. Interorbital high. Scales small. Dorsal and anal elevated anteriorly, gradually shorter to last rays. Caudal forked. Pectorals short. Ventrals little longer than pectorals.

One genus.

Genus Velifer Schlegel

Velifer Schlegel, Fauna Japonica, Poiss., pt. 15, p. 312, 1850. (Atypic. Type Velifer hypselopterus Bleeker, affixed.)

— Bleeker, Verh. Akad. Wet. Amsterdam, vol. 18, p. 16, 1879. (Type Velifer hypselopterus Bleeker, monotypic.)

Caudal part of body greatly longer than trunk. Head small. Eyes moderate. Mouth small, lower jaw longer. Maxillary short. Lateral line axial along side. Caudal and paired fins rather small.

1878

Velifer multiradiatus Regan

Velifer multiradiatus Regan, Proc.  
Zool. Soc. London, 1907 (Oct. 8), p.  
633 (type locality: north west coast  
of Australia). — McCulloch,

Austral. Mus. Mem., no. 5, pt. 1, p. 138,  
June 29, 1929 (reference).



1879

Velifer hypselopterus Bleeker

Velifer hypselopterus Bleeker, Acad.  
Néerl. Sci. Amsterdam, vol. 18, p. 16,  
1879 (on Schlegel). — Regan, Proc. Zool.

Soc. London, 1907, p. 640, text fig. 170  
(protractile mouth). — Jordan, Tanaka,  
Snyder, Journ. College Sci. Tokyo, vol.  
33, art. 1, p. 421, 1913 (compiled).

Velifer Schlegel, Fauna Japonica, Poiss., pt.  
15, p. 312, pl. A, 1850 (type locality:  
seas of Japan).

Sub Order Taeniozomi

1880

Body elongate, strongly compressed, band like. Mouth parts normal, cleft slightly. Dentition feeble. Gill openings wide. Skeleton feebly ossified, bones thin and soft. No occipital crest. Post-temporal simple. Orbitospheroid present. Lower pharyngeals rod-like, parallel with branchial arches or absent. Pectoral fin rays inserted on scapula and on <sup>3</sup> pterygials, 2 or all in contact with coracoid. Pectoral girdle present, not articulated to coracoid. Vertebrae 90 to 93, ribs feeble or absent. Scales absent. Fins of flexible non-articulated rays, sometimes first dorsal ray spinous.

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Tetragonopterus (Citharoedus) meyeri  
Bleeker, Nithas Ichth. Ind. Neerl., vol.  
9, 1877, p. 32, plate (14) 378, fig. 5 (Java,  
Celebes, Amboina, Ceram, New Guinea).

Holacanthus flavo-niger Lacépède, Hist. nat.  
Pois., vol. 4, 1802, pp. 529, 535, plate 13, fig. 2.  
no locality.

Dorsal very long. Anal short or absent. Caudal, when present rudimentary, or not in longitudinal axis of body.

Analysis of Families

a. no anal fin; vent median in very elongate body.

Trachipteridae.

a.<sup>2</sup> Anal very short; vent postmedian, far back.

Lophotidae.

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Chaetodon meyeri Schneider.

- Chaetodon meyeri Schneider, Syst. Ichth. Bloch,  
1801, p. 223. Moluccas. — Cuvier, Hist. Nat.  
Pois., vol. 7, 1831, p. 15 (Moluccas). —  
Valenciennes, Règne Animal, Poiss., Ill., 1839,  
p. 106, plate 37, fig. 2 ~~(Moluccas)~~. — Günther,  
Cat. Fish. Brit. Mus., vol. 2, 1860, p. 13 (Celebes,  
Amboina, Java, Moluccas). — Elera, Cat.  
Faun. Filip., vol. 1, 1895, p. 485 (Luzon, Iloilo,  
Cavite). — Steindachner, Abhandl. Senckenberg.  
Gesell., band 25, 1900, p. 420 (Ternate). —  
Weber, Siboga Exped., band 65, 1913, p. 305  
(Banda; Timor). — Ahl, Arch. Naturges.,  
band 89, abth. A, heft 5, 1923, p. 49 (Palau,  
Jaluit; East Indies; Mikindani, East  
Africa). — Fowler, Proc. Acad. Nat. Sci.  
Phila., 1923, p. 42 (Madagascar).  
Citharoedus meyeri Kaup, Arch. Naturges.,  
band 26, abth. 1, 1860, p. 141 (Moluccas).

Family Trachipteridae

1882

Body greatly elongated, band like. Head short. Eye large, lateral. Mouth rather small, terminal, very protractile. Teeth weak, simple. Opercles unarmed. Gill membranes separate, free from isthmus. Gills 4, slit behind fourth. Pseudobranchiae well developed, in pouch formed by fold of mucous membrane.

Branchiostegals 6. Lower pharyngeals toothless. No air bladder. Pyloric coeca very numerous. Bones soft, muscles little coherent. Vertebral numerous. Body naked, skin smooth or prickly. Lateral line present, axial on side. Dorsal single, extends from head to tail, rays all simple, not articulated or branched, though soft, fragile or flexible. No anal. Caudal rudimentary or in two parts, upper larger and fan like, directed obliquely upward from slender tip of tail. Pectorals short.

Ventrals thoracic, rays elongate, never over 7 to 9, often reduced or absent with age. Vent median.

Fishes, frequently of large size, bathypelagic in most warm seas. Owing to their extreme fragility specimens are rare in collections. Called King of the Herrings.

### Analysis of Genera

a<sup>1</sup>. Caudal present; ventral rays 6 to 9. Trachipterus.

a<sup>2</sup>. Caudal absent; ventral reduced to single elongated ray. Regalecus.

1884

Genus Trachipterus Gouan

Trachipterus Gouan, Hist. Pisc.,  
pp. 104, 153, 1770. (Type Trachipterus  
gouani Gouan = Cepola trachiptera  
Gmelin, virtually tautotypic.)

Trachipterus Schneider, Syst. Ichth.  
Bloch, p. 480, 1801. (Type Cepola  
trachiptera Gmelin.)

Trachipterus Cuvier, Règne Animal,  
vol. 2, p. 245, 1816. (Type Cepola  
trachiptera Gmelin.)

Gymnogaster Brünnich, Kon. Dansk.  
Selsk. Skrift. Kjöbenhavn, vol. 3, p. 408,  
1788. (Type Gymnogaster arcticus  
Brünnich, monotypic.)

Bogmarus Schneider, Syst. Ichth. Bloch,  
p. 518, 1801. (Type Bogmarus  
islandicus Schneider, monotypic.)



1885

Argycteus Rafinesque, Car. Inov. Anim.  
Sicil., p. 55, 1810. (Type Argycteus  
quadrimaculatus Rafinesque = Cepola  
trachyptera Gmelin, monotypic.)

Hemochirus Rafinesque, Specchio  
delle scienze, vol. 2, pp. 100, 105, 1815.  
(Type Hemochirus erythropterus  
Rafinesque, monotypic.)

Epidesmus Ranzani, Opusc. Sci.,  
Bologna, vol. 2, p. 137, 1818. (Type  
Epidesmus maculatus = Cepola  
iris Walbaum, monotypic.)

Bogmarus Reinhardt, Overs. Kon. danske  
Vild. Selsk., Kjöbenhavn, p. XVIII, 1828-  
32 (1832). (Type Bogmarus islandicus  
Schneider = Gymnogaster arcticus  
Brünnich, monotypic.)

Hemotherus Risso, in Costa, Cenni Zool.  
Napoli, fig. 9, 1834. (Type Hemotherus  
erythropterus Rafinesque, monotypic.)

Body band like. Mouth greatly protractile. Branchiostegals 6. Row of asperities along dorsal base of lateral line. Dorsal extends entire length of back, rays less than 200. Caudal mostly above longitudinal axis of body, erected fan like. Ventrals sometimes absent, very long in young, rays 6 to 9. Young sometimes with fin rays several times longer than body and with lappet like terminal expansions.

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base, not reaching anal base; lunar  
black preorbital blotch. oxycephalus

dd. Back with 2 broad black blotches,  
sometimes united on spinous dorsal posteriorly;  
black blotch on caudal peduncle sometimes  
complete; about 20 black vertical lateral  
lines.

faucula  
aa. Front half of body white, posterior  
half dark brown, with fine vertical dark  
lines on scale rows; ocular band narrower  
than eye, not extending below cheek; caudal  
with dark crescent. mesoleucus

II. Gonochaetodon. Scales of irregular form,  
rows with angle in middle of body depth;  
soft dorsal with angular point and hind  
edge vertical; snout short. triangulum

III. Megaprotodon. Body oval; scales obliquely  
rounded and rows form obtuse angle, 25°;  
outer row of teeth larger; dorsal spines double  
length of soft rays; anal spines 4, rarely 5.  
trifasciata

1887

Trachipterus ativelei Kner

Trachipterus ativelei Kner, Sitzs.  
Ber. Akad. Wiss. Wien, Math.-Nat.  
Kl., vol. 34, p. 437, pl. 1, 1859 (type  
locality: west coast America,  
Valparaiso). — Günther, Cat. Fishes

Brit. Mus., vol. 2, p. 303, 1861 (compiled);  
Rep. Voy. Challenger, vol. 22, p. 72, 1887  
(name). — Delfin, Cat. Peces de  
Chile, p. 96, 1901 (reference).

Trachipterus ativelei Delfin, Cat. Peces  
de Chile, p. 132, 1901 (name in index). —  
Waite, Rec. Canterbury Mus., vol. 1, no.  
1, p. 33, Sep. 25, 1907 (reference).

? Trachipterus weychardti Philippi,  
Archiv Naturges., vol. 40, pt. 1, p. 117,  
pl., 1874 (type locality:  
— Günther, Rep. Voy. Challenger, vol.  
22, p. 72, 1887 (name)).

Trachypterus arcticus

Meeke, Stud. Mus. Zool.

Univ. Coll. Dundee, vol.

1, no. 6, p. 1, fig. 1-9, pl.

1, 2, 1890 (structure).

1888

Trachipterus arcticus (Brünnich)

Gymnogaster arcticus Brünnich, Nye  
Saml. Kon. Dansk. Vidensk. Selsk.  
Skr. Kjöbenhavn, vol. 3, p. 408, pl.  
B, figs. 1-3, 1788 (type locality:

— Schneider, Syst. Nat. Bloch, p.  
518, pl. 101, 1801 (northern Iceland;  
Iceland). — Cuvier, Règne Animal,  
vol. 2, p. 246, 1817 (reference).

Trachipterus arcticus Günther, Cat.  
Fishes Brit. Mus., vol. 2, p. 305, 1861  
(no locality); Rep. Voy. Challenger,  
vol. 22, p. 72, 1887 (name). — Day,

Fishes of Great Brit. Ireland, vol. 1, p.  
216, pl. 63, 18 — (British Isles). —  
Smitt, Scandinav. Fishes, pt. 1, p. 315,  
fig. 83, 1892. — Goode and Bean,  
Oceanic Ichth., p. 479, pl. 96, fig. 392,  
1895 (compiled). — Barnard, Ann. South  
African Mus., vol. 21, pt. 1, p. 353, pl. 14,  
fig. 3, June 1925 (Cape Sea).

1889

Trachipterus arcticus Jordan, Evermann,  
Clark, Rep. U. S. Comm. Fisher., pt. 2,  
p. 216, 1930 (compiled).

Cepola iris Walbaum, Artedi Pisc.,  
vol. 3, p. 617, 1788 (on Aldrovandi,  
Libri 3, cap. 30; de Piscibus, pl. 17,  
fig. 13, 1613). — Donndorff, Zool.  
Bezt., vol. 3, p. 317, 1798.

Trachipterus iris Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 297, Sep. 1835  
(Messina; Corsica). — Günther, Cat.

Fishes Brit. Mus., vol. 3, p. 303, 1861  
(compiled); Rep. Voy. Challenger, vol.  
22, p. 72, 1887 (name). — Moreau,  
Poiss. France, vol. 2, p. 560, 18  
( ). — Goode and Bean,  
Oceanic Ichth., p. 477, pl. 95, fig. 391,  
1895 (compiled). — Barnard, Ann.  
South African Mus., vol. 21, pt. 1,  
p. 353, June 1925 (Table Bay).

1890

Trachipterus taenia Schneider,  
Syst. Ichth. Bloch, p. 481, 1801  
(Type locality: Adriatic Sea). —

Günther, Cat. Fishes Brit. Mus., p.  
302, 1861 (no locality). — Canestrini,  
Fauna Italica, Pesci, p. 113, 1875.

Bogmarus islandicus Schneider,  
Syst. Ichth. Bloch, pl. 101, 1801.

Bogmarus islandicus Schneider, Syst.  
Ichth. Bloch, p. 518, 1801 (type  
locality: North Sea, Iceland).

Trachipterus bogmarus Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 346, Sep.  
1835 (type locality: Iceland; on  
Schneider; on Brünnich).

Trachipterus bogmarus Reinhardt,  
Overs. Kon. danske Vid. Selsk.,  
Kjöbenhavn, vol. 7, p. 71, with fig., 1838.



1891

Gymnetrus cepedianus Risso, Ichth.  
Nice, p. 146, pl. 5, fig. 17, 1810 (type  
locality: Nice). — Cuvier, Règne  
Animal, vol. 2, p. 245, 1817 (reference).  
— Risso, Hist. Nat. Eur. Mérid.,  
vol. 3, p. 295, 1826.

Epidemus maculatus Ranzani, Opusc.  
Scient., Bologna, vol. 2, p. 133, 1818  
(type locality: )

Regalecus maculatus hardo, Giorn.  
di Fisica, ser. 2, vol. 7, p. 122, pl.  
1, fig. 1, 1824.

Trachypterus costae Cocco, (Desc.  
pesci Messina) Il Faro, vol. 4, p.  
4, 1838 (type locality: Messina).

Trachipterus arawatae Clark <sup>1892</sup>

Trachipterus arawatae Clark, Trans.  
New Zealand Inst., vol. 13, p. 197,  
fig., 1880 (1881) (type locality: Jackson's  
Bay). — Günther, Rep. Voy. Challenger,  
vol. 22, p. 72, 1887 (name).

Trachipterus arawatae Waite, Rec.  
Canterbury Mus., vol. 7, no. 1, p. 18,  
April 25, 1907 (reference).

Trachypterus ijimae

Bolin, Copeia, 1933,

no. 1, p. 35 (Newport

Beach, Calif.).

1893

Trachipterus ijimal Jordan and Snyder,  
Trachipterus ijimal Jordan and Snyder,

Journ. College Sci., Tokyo, vol. 15, p.  
311, pl. 17, fig. 9, 1901 (type  
locality: between Misaki and Boshu,  
off mouth Tokyo Bay). — Jordan,

Tanaka, Snyder, Journ. College Sci.,  
Tokyo, vol. 33, art. 3, p. 1422, 1913  
(reference).

1894

Trachipterus ishikawae Jordan and Snyder

Trachipterus ishikawae Jordan and Snyder,  
Journ. College Sci., Tokyo, vol. 15,  
p. 310, pl. 17, fig. 10, 1901 (type locality:  
~~Hisaki and Boshu.~~ off mouth of  
Tokyo Bay between Hisaki and  
Boshu. Jordan, Tanaka, Snyder,  
Journ. College Sci., Tokyo, vol. 33,  
art. 1, p. 421, 1913 (reference).

1895

Trachipterus jacksonensis (Ramsay)

Regalecus jacksonensis Ramsay, Proc.  
Linn. Soc. New South Wales, vol. 5, pt.  
4, p. 631, pl. 20, May 20, 1881 (type  
locality: Manly Beach, Port Jackson,  
New South Wales).

<sup>10</sup>Trachipterus jacksonensis var. polypticus  
Ogilby, Proc. Linn. Soc. New South  
Wales, vol. 22, pt. 3, p. 649, <sup>1897</sup> (Feb. 1898)  
(type locality: coast of New South Wales  
[= Newcastle]).

1896

Trachipterus leiopterus Valenciennes

Trachipterus leiopterus Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 342, Sep.  
1835 (type locality: Naples; Nice;  
Toulon; Florence).

Trachipterus leiopterus Günther, Cat.  
Fishes Brit. Mus., vol. 2, p. 304, 1861  
(Mediterranean); Rep. Voy. Challenger,  
vol. 22, p. 72, 1887 (name). — Goode

and Bean, Oceanic Ichth., p. 479, 1895  
(compiled).

? Boymarus aristotelis Risso, Hist. Nat.  
Éur. Mérid., vol. 3, p. 297, 1826 (type  
locality: Nice).

1897

Trachipterus misakiensis Tanaka

Trachipterus misakiensis Tanaka,  
Journ. College Sci., Tokyo, vol. 23,  
p. 52, pl. 4, fig. 2, 1908 (type locality:  
Misaki, Sagami). — Jordan, Tanaka,  
Snyder, Journ. College Sci., Tokyo,  
vol. 32, p. 422, 1913 (reference).



1898

Trachipterus rapandus Costa

Trachipterus rapandus Costa, Fauna  
Napoli, Pesc., pl. 9, 1844 (type  
locality: Naples). — Canestrini, Fauna

Italia, Pesci, p. 194, 1874. — Günther,  
Rep. Voy. Challenger, vol. 22, p. 72,  
1887 (name). — Goode and Bean,  
Oceanic Ichth., p. 480, 1895 (compiled).

? Gymnetrus rapandus Metaxa,  
Ann. Med. Chirurg., Roma, fasc. 1,  
p. 35, 1839.

Trachypileurus rex-salmonorum

Hubbs, Pap. Mich. Acad.

Sci. Art. Lett., vol. 5, p.

469, 1925 (La Jolla, Catalina

Isl., Calif., notes on types of selenis

+ rex-salmonorum) over

Hubbs gives an extensive  
synonymy, including in  
it Jordan's erroneous reference  
to this species as Regalium  
russelli!

1899

Trachipterus rex-salmonorum Jordan and Gilbert

Trachipterus rex-salmonorum Jordan  
and Gilbert, Proc. Cal. Acad. Sci.,  
ser. 2, vol. 4, p. 144, pl. 9, 1894  
(type locality: open sea, outside  
Bay of San Francisco). — Jordan

and Evermann, Bull. U. S. Nat. Mus.,  
no. 47, pt. 3, p. 2599, 1898 (California;  
Washington).

Trachipterus rex-salmonorum Jordan,  
Evermann, Clark, Rep. U. S. Comm.  
Fishes, pt. 2, p. 216, 1930 (compiled).

Trachipterus altivelis (not Kner)  
Jordan and Gilbert, Proc. U. S. Nat.  
Mus., vol. , p. 52, 1881 (Santa Cruz,  
California).

Trachipterus seleniris Snyder, Proc.  
Acad. Nat. Sci. Philadelphia, vol.  
60, p. 318, 1908 (type locality: Monterey,  
California).

Trachipterus rüppellii Günther <sup>1900</sup>

Trachipterus rüppellii Günther, Cat.  
Fishes Brit. Mus., vol. 2, p. 304, 1861  
(type locality: Mediterranean); Rep.  
Voy. Challenger, vol. 22, p. 72, 1887  
(name). — Goode and Bean, Oceanic  
Ichth., p. 479, 1895 (compiled).

1901

Trachipterus semiophorus Bleeker

Trachipterus semiophorus Bleeker,  
Arch. Néerl. Sci. Nat., vol. 3, p. 271,  
pl. 12, 1868 (type locality: Amboina).

— Günther, Rep. Voy. Challenger, vol.  
22, p. 72, 1887 (name). — Weber and  
Beaufort, Fishes Indo Austral.  
Archip., vol. 5, p. 89, fig. 21, 1930  
(compiled).

1902

Trachipterus spinolae Valenciennes

Trachipterus spinolae Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 328, pl.  
296, Sep. 1835 (type locality: Nice).

— Günther, Cat. Fishes Brit. Mus.,  
vol. 2, p. 300, 1861 (Atlantic Ocean);  
Rep. Voy. Challenger, vol. 22, p. 72,  
1887 (name).

Trachipterus gryphus Lowe, Proc.  
Zool. Soc. London, 1850, p. 248 (type  
locality: Madeira). — Günther, Cat.

Fishes Brit. Mus., vol. 3, p. 301, 1861  
(copied); Rep. Voy. Challenger, vol.  
22, p. 72, 1887 (name). — Goode

and Bean, Oceanic Ichth., p. 478, 1895 (compiled).

Trachipterus filicauda Costa, Annuar.  
Mus. Zool. Napoli, vol. 1, p. 51, pl. 1, fig. 3,  
1862 (type locality: Mediterranean). —  
Günther, Rep. Voy. Challenger, vol. 22, p. 72,  
1887 (name).

1903

Trachipterus trachipterus (Gmelin)

Cepola trachiptera Gmelin, Syst. Nat.  
Lin., vol. 1, p. 1187, 1789 (type locality:  
Adriatic Sea). — Walbaum, Artedi

Pisc., vol. 3, p. 616, 1792 (on Gmelin).  
— Lacépède, Hist. Nat. Poiss., vol. 2,  
pp. 525, 531, 1800 (compiled).

Argyctus quadrimaculatus Rafinesque,  
Car. nuov. Anim. Sicil., p. 55, 1810  
(type locality: Sicily).

Trachipterus cristatus Bonelli,  
Mém. Acad. Torino, vol. 24, p. 485,  
pl. 9, 1819 (type locality:

— Günther, Cat. Fishes Brit. Mus.,  
vol. 2, p. 301, 1861 (note). — Moreau,  
Poiss. France, vol. 2, p. 567,

— Günther, Rep. Voy. Challenger, vol.  
22, p. 72, 1887 (name). — Goode and  
Bean, Oceanic Ichth., p. 479, 1895  
(compiled).



1904

Trachipterus bonnellii Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 331,  
Sep. 1835 (non Bonelli).

Trachipterus faly Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 333, Sep. 1835  
(type locality: Bay of Algeciras;  
Messina).

Gymnetrus müllerianus Risso,  
Archiv Naturges., vol. , pt. , p.  
13, 1840.

1905

Trachipterus trachyurus Poey

Trachipterus trachyurus Poey, Mem.  
Hist. Nat. Cuba, vol. 2, p. 420, 1861  
(type locality: Cuba). — Günther,

Rep. Voy. Challenger, vol. 22, p. 72, 1887  
(name). — Jordan and Evermann,  
Bull. U. S. Nat. Mus., no. 47, pt. 3,  
p. 2600, 1898 (compiled).

Trachipterus trachyurus Jordan,  
Evermann, Clark, Rep. U. S. Comm.  
Fishes, pt. 2, p. 216, 1930 (reference).

Genus Regalecus Ascanius

1906

Regalecus Ascanius, Icon. Rerum.  
Nat., vol. 2, p. 5, 1772. (Type  
Regalecus glesne Ascanius, monotypic.)

Gymnetrus Bloch, Naturges. Ausl.  
Fische, vol. 9, p. 95, 1795. (Type  
Gymnetrus hawkenii Bloch,  
monotypic.)

Cephalopis Rafinesque, Indice Itt.  
Sicil., pp. 39, 54, 1810. (Type  
Cephalopis octomaculatus Rafinesque,  
monotypic.)

Xypterus Rafinesque, Indice Itt.  
Sicil., pp. 43, 59, 1810. (Type  
Xypterus imperati Rafinesque, monotypic.)

Xiphichthys Swainson, Nat. Hist. Animals,  
vol. 2, p. 259, 1839. (Type Xiphichthys  
russellii Swainson, monotypic.)

1907

Body greatly elongated, exceedingly compressed, ribbon like, trunk shorter than tail, which tapers to slender point. Head small, compressed. Snout truncated. Eye nearly median, high, small. Mouth cleft nearly or quite vertical, greatly protractile. No teeth. No air bladder. Pyloric coeca numerous. Five rows of tubercles on side. Lateral line not spiny. Dorsal with 100 to 400 or more rays, front 8 to 15 rays strong and elongated. Caudal absent, except in young. Pectoral rays 11 to 13. Ventral reduced to single elongate ray, dilated at end.

and dark posteriorly.

b. All posterior half of head black; head above and anteriorly yellow; no dark posterior bands; caudal with black submarginal band. semilarvatus

bb. Head not all black posteriorly.

c. Broad white band parallel behind black ocular band, which crosses interorbital, but reaches gill opening below; dark dorsal band not crossing caudal peduncle. fasciatus

cc. no white band posteriorly parallel with dark ocular band.

d. Back without 2 broad black blotches.

e. Dark crescentic band along soft dorsal base extends down to anal base, with 18 or 19 black lines little inclined from vertical; no lunar black presorsal blotch. lineolatus

ee. Dark crescentic band along soft dorsal

1908

Large, singular fishes, little known and usually found washed ashore after storms. They apparently dwell in deep water. The extreme delicacy of the flesh, as well as the feeble skeleton, account for most all of these fishes found greatly damaged or mutilated. From such examples many nominal species have been erected. Quite likely all are really to be referred to a single species, as here admitted.

Great changes take place with age, as the young may have the front dorsal, ventral and the caudal rays, greatly elongated or filamentous.

slightly inclined lateral bands. 250  
assarius

ad. no dorsal ocellus; large diffuse dark blotch at front of back; body scales all slightly edged darker, forming somewhat reticulated pattern.

rafflesii  
ad. Black ocular bar incomplete on head, not to gill opening below and with blotch above close before spinous dorsal; no other bands; scale edges dark, form reticulating pattern.

mertensii  
bb. Back with 3 broad black blotches; narrow black bar above eye only - or broken as 2 spots.

argentatus  
aaa. Dyachastodon. Large irregular scales all over body, become small and regular only on breast; muzzle very pointed; scales not over 35.

a. Body not contrasted white anteriorly

1909

Thus the caudal is symmetrical in the young, becomes divided with growth and as its lower rays may finally break off the upper section of the fin results eventually in an upturned fan-like fin.

Smith says "The King of the Herrings lives in very deep water, its species being perhaps identical in all the oceans; but of its usual manner of life we know nothing. Occasionally it appears at the surface, and in the imagination of the sailor takes the form of the great Sea-serpent. The tales of the great Sea serpent may probably be explained by a variety of



bb. Black ocular band extends on chest; dark band from front of dorsal spines to ventral, which dark; tail dark; fins otherwise pale. kleini

aa. Linophora. Large irregular scales only on anterior and median part of body; snout pointed.

b. no black bands on back.

c. Soft dorsal with long, pointed filament; black ocular band from predorsal to gill opening. auriga

cc. Soft dorsal without filament.

d. Black ocular bar complete on head.

e. Dark band on soft dorsal and down over posterior part of anal.

cc. no dark band on soft dorsal or anal. vagabundus

d. Soft dorsal with black ocellus little larger than eye at angle; 4 narrow dark

different causes — tumbling dolphins, enormous cuttle fish, specimens of Selache (basking sharks) floating and resting at the surface, or even floating wreckage. But in the cases where the sea-serpent appears with crest erect, the explanation seems to lie in the appearance and death struggles of the King of the Herrings at the surface of the ocean."

aaa. Body rhomboid; rather large section of body defined by <sup>enlarged</sup> scale formation; hind scale edges obliquely rounded, their longitudinal rows little defined but transverse rows pronounced; not over 45 scale rows between head and caudal base.

a. Lepidochactodon. Large irregular scales only anterior on body, medially and posteriorly regularly rounded scales in regular longitudinal rows.

b. Black ocular band not extending on chest.

c. Dark spot on soft dorsal; no black blotch on back below last dorsal spines.

cc. No dark blotch on dorsal. dahli

d. Sides with vertical dark lines; round black spot on back below last dorsal spine. unimaculatus

dd. Dark vertical lines follow courses of larger median lateral scales; no black spot on back. melanopoma

1911

Regalecus glesne Ascanius

Regalecus glesne Ascanius, Icon. Pervm,  
vol. 2, p. 5, pl. 11, 1772 (type locality:  
Glesvaer, Norway). — Müller, Zool.

Danicae, Prodr., pp. xx, 40, 1776  
(Norway). — Bonnaterre, Tabl. Ichth.,  
p. 40, pl. 86, fig. 358, 1788 (copied).  
— Lacépède, Hist. Nat. Poiss., vol. 2,  
pp. 214, 216, 1800 (Norway). — Shaw,  
General Zool., vol. 4, pt. 2, p. 193, pl.  
27, 1803 (copied). — Cuvier, Règne  
Animal, vol. 2, p. 244, 1817 (reference);  
ed. 2, vol. 2, p. 220, 1829 (reference).  
— Gray, Proc. Zool. Soc. London,  
1849, p. 52 (Redcar); Ann. Mag. Nat.  
Hist., vol. 5, p. 501, 1849. — Günther,

Cat. Fishes Brit. Mus., vol. 3, p. 310,  
1861 (reference) [Rep. Voy. Challenger,  
vol. 22, p. 74, 1887 (records of all  
nominal forms)]. — Smith, Scandinavian  
Fishes, vol. 1, p. 322, fig. 87, 1892. —  
Goode and Bean, Oceanic Ichth., p.

480, pl. , fig. 395, 1895 (compiled). <sup>1912</sup>

— Jordan and Evermann, Bull. U. S. Nat. Mus., no. 47, pt. 3, p. 3596, 1898 (compiled). — Waite, Rec. Canterbury Mus., vol. 1, no. 1, p. , April 25, 1907 (reference). — Barnard,

Ann. South African Mus., vol. 21, pt. 1, p. 354, pl. 14, fig. 2, June 1925 (Table Bay, Atlantic coast Cape Peninsula, False Bay, Mossel Bay, Knysna). — McCulloch, Austral. Mus. Mem., no. 5, pt. 1, p. 138, June 29, 1929 (Queensland, New South Wales, Tasmania, Victoria, New Zealand).

Ophidium glesne Ascanius, Nye Sam. Kon. Danske Vid. Selsk. Skrift., vol. 3, p. 421, 1788.

Regalecus remipes Brünnich, Nye Sam. Kon. Danske Vid. Selsk. Skrift., vol. 3, p. 414, pl. B, figs. 4-5, 1788 (type locality: Norway).

1913

Gymnetrus remipes Schneider, Syst.  
Ichth. Bloch, p. 482, 1801 (copied).  
— Valenciennes, Hist. Nat. Poiss., vol.  
10, p. 366, Sep. 1835 (compiled).

Cepola gladius Walbaum, Artedi Pisc.,  
vol. 3, p. 617, 1792 (on Spada marina  
Imperato, Hist. Nat., pp. 899, 908,  
1695; type locality: Naples). —

Bowdorch, Zool. Beytr., vol. 3, p.  
317, 1798.

Gymnetrus gladius Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 352, pl. 298,  
Sep. 1835 (compiled).

Regalecus gladius Günther, Cat. Fishes  
Brit. Mus., vol. 3, p. 308, 1861  
(Bermudas). — Canestrini, Fauna  
Italia, Pesci, p. 195, 1875 (Nico).  
— Thompson, Mar. Biol. Rep. South  
Africa, vol. 4, p. 153, 1918 (compiled).

1914

Gymnetrus hawkenii Bloch, Naturg.

Ausl. Fische, vol. 9, p. 95, pl. 423, 1795  
(type locality: Goa). — Lacépède,  
Hist. Nat. Poiss., vol. 3, pp. 379,  
380, 1802 (Goa). — Shaw, General  
Zool., vol. 4, pt. 2, p. 197, 1803 (on  
Bloch). — Valenciennes, Hist. Nat.  
Poiss., vol. 10, p. 372, Sep. 1835  
(copied).

Gymnetrus hawkinsii Schneider, Syst.  
Ichth. Ind. Bloch, p. 481, 1801  
(copied).

Gymnetrus ascanii Lindroth, Kon. Vet.  
Akad. Nya Handl. Stockholm, vol.  
19, p. 288, 1798 (type locality: Norway).

Gymnetrus grillii Lindroth, Kon. Vet.  
Akad. Nya Handl. Stockholm, vol.  
19, p. 291<sup>pl. 8</sup>, 1798 (type locality: Norway).  
— Schneider, Syst. Ichth. Bloch,  
p. 422, 1801 (copied). — Cuvier,  
Règne Animal, vol. 2, p. 220, 1817

1915

(reference). — Valenciennes, Hist. Nat.  
Poiss., vol. 10, p. 370, Sep. 1835  
(compiled).

Regalecus gribbii Günther, Cat. Fishes  
Brit. Mus., vol. 3, p. 311, 1861  
(copied).

Cephalopis octomaculatus Rafinesque,  
Indice Ittiol. Sicil., pp. 31, 54, 1810  
(type locality: Sicily).

Xypterus imperati Rafinesque, Indice  
Ittiol. Sicil., pp. 43, 59, 1810 (type  
locality: Sicily).

Regalecus rex halecum Cuvier, Règne  
Animal, vol. 2, p. 244, 1817 (type  
locality: "du nord par les pêcheurs  
norvégiens" [= Norway]).

Gymnetrus russelii Cuvier, Règne  
Animal, vol. 2, p. 244, 1817 (on  
Russelian-gymnetrus Shaw, General  
Zool., vol. 4, pt. 2, p. 195, pl. 28,



1803 = \_\_\_\_\_ Russell,<sup>1916</sup>  
Fishes of Coromandel, vol. \_\_\_\_\_, p. \_\_\_\_\_, pl. \_\_\_\_\_,  
18\_\_\_\_; type locality: Vizagapatam);  
ed. 2, vol. 2, p. 220, 1829 (on Shaw).  
— Valenciennes, Hist. Nat. Poiss.,  
vol. 10, p. 377, Sep. 1835 (copied).  
— Goode and Bean, Oceanic Ichth.,  
p. 480, 1895 (name).

Regalecus russellii Günther, Cat. Fishes  
Brit. Mus., vol. 3, p. 311, 1861 (compiled).  
— Jordan, Tanaka, Snyder, Journ.  
College Sci., Tokyo, vol. 33, art. 1,  
p. 422, 1913 (reference).

Gymnetrus longiradiatus Risso, Hist.  
Nat. Europ. Mérid., vol. 3, p. 296,  
pl. 14, fig. 43, 1826 (type locality:  
Nice).

Gymnetrus telum Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 361, pl. 299, Sep.  
1835 (type locality: Mediterranean).

1917

Regalecus telum Günther, Cat. Fishes  
Brit. Mus., vol. 3, p. 309, 1861  
(copied).

Gymnetrus banksii Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 365, Sep. 1835  
(type locality: Filey Bay, Yorkshire).

Regalecus banksii Günther, Cat. Fishes  
Brit. Mus., vol. 3, p. 309, 1861  
(British records). — Day, Fishes of  
Great Brit. Ireland, vol. 1, p. 220,  
pl. 64, 1880-84 (British Islands). —  
McCoy, Prodr. Zool. Victoria, dec.  
15, p. 169, pl. 145, 18

Gymnetrus capensis Valenciennes, Hist.  
Nat. Poiss., vol. 10, p. 376, Sep. 1835  
(type locality: Cape of Good Hope). —  
Günther, Cat. Fishes Brit. Mus.,  
vol. 3, p. 308, 1861 (reference). —  
Layard, Proc. Zool. Soc. London, 1868,  
p. 319, fig.

Regalecus argenteus

Parker, Trans. Zool. Soc.

London, vol. 12, p. 5,

pl. 2-6, 1886 (morphology).

1918

Regalecus argenteus Parker, Trans.  
New Zealand Inst., vol. 16, p. 284,  
1884 (type locality: ).

— Waite, Rec. Canterbury Mus., vol. 1, no.  
1, p. 33, April 35, 1907 (reference).

Regalecus pacificus Haast, Trans. New  
Zealand Inst., vol. 10, p. 247, 1878  
(type locality: ).

— Waite, Rec. Canterbury Mus., vol. 1,  
no. 1, p. 33, April 25, 1907 (reference).

Regalecus glesne pacificus Wood Jones,  
in Weber and Beaufort, Fishes  
Indo Austral. Archip., vol. 5, p. 92,  
fig. 23 (portion of photograph), 1930  
(lat.  $9^{\circ} 16' S.$ , long.  $116^{\circ} 8' 35'' E.$ , south  
of Sumbawa, 1200 fathoms).

Family Lophotidae

1919

Body elongated, ribbon like.  
Mouth feebly protractile. Teeth  
numerous, very small. Skeleton  
moderately well ossified. Post  
temporal simple. Ribs small,  
slender or absent. Pseudobranchiae  
present. Lower pharyngeals toothless.  
Air bladder present. Scales absent.  
Dorsal extends from head to end  
of tail, front rays prolonged.  
Anal very short. Caudal small,  
undivided. Ventrals very small,  
with 4 or 5 rays, or absent. Vent  
far postmedian.

Ribbon fishes apparently live  
in lesser depths than the  
Trachipteridae. They have a  
more firmly ossified skeleton

g. Longitudinal dark lines on general pale coloration; dark ocular band not on chest; ventral pale.

collare

gg. Each scale on body with pale or yellow spot on general dark coloration; dark ocular band extends on chest; ventral black. reticulatus

ff. No white band posterior and parallel with ocular band; broad dark band along dorsal bases curves down and forward along anal base; ocular band not on breast; ventral pale. selene

ddd. Large black white edged spot each side of tail, occupies its whole length; black ocular band extends on chest. ocellicauda

aa. No ocular bar or dark markings on body; each scale with dark spot.

nigropunctatus

and their flesh is more solid. <sup>1920</sup>

Analysis of Genera

a<sup>1</sup>. Front profile of head nearly vertical, straight. Lophotus.

a<sup>2</sup>. Front of head extended far forwards in advance of snout. Eumecichthys.

or only as small blotch above eye.

c. Broad white band posterior to ocular band and broad black band from shoulder toward last dorsal spines. lunula

cc. White band posterior to ocular band and black shoulder blotch absent.

adiergaster

bb. Ocular band extends over predorsal nearly to spinous dorsal.

d. Two dark spots, one above other, on caudal peduncle.

e. Ventral black; dorsal and anal edges black, other fins yellowish. reinwardti

ee. Ventral yellow; dorsal and anal yellow, soft fins each with submarginal dark line.

dd. Caudal peduncle without dark blotches. melanotus  
~~inmaculate or pale~~

f. Broad white band parallel posteriorly next to dark ocular band, ~~ocular band~~  
~~not extending on chest.~~



Genus Eumecichthys Regan 1924

Eumecichthys Regan, Proc. Zool. Soc. London, 1907, p. 638. (Type Lophotes fiskii: Günther, monotypic.)

Lophotopsis Barnard, Ann. South African Mus., vol. 21, pt. 1, p. 357, June 1925. (Type Lophotes fiskii: Günther, monotypic.)

Body very elongate, depth 28. Head length 17, without front projection greater than body depth. Mouth not protractile, hind extensions of premaxillaries with ends attached to front face of vomer. Anal probably absent (end of tail mutilated). Ventral absent.

One species. The unnecessary and exact synonym Lophotopsis Barnard proposed eighteen years after the genus was founded.

Eumecichthys fiski (Günther) <sup>1922</sup>

Lophotes fiski Günther, Proc. Zool. Soc. London, 1890, p. 244, pls. 19-20 (type locality: Cape of Good Hope [Kalk Bay]). — Waite, Records Canterbury Mus., vol. 1, no. 1, p. , April 25, 1907 (reference).

Lophotopsis fiskii Barnard, Ann. South African Mus., vol. 21, pt. 1, p. 357, pl. 14, fig. 5, June 1925 (compiled).

1823

Genus Lophotus Giorna

Lophotus Giorna, Mém. Acad. Sci.  
Turin, vol. 16, p. 176, pl. 2, fig. 1,  
1805. (Atypic. Type Lophotes cephedi  
Goldfuss = Leptopus peregrinus  
Rafinesque, affixed). — Oken, Isis,  
p. 1182, 1817 (on Les Lophotes Cuvier,  
Règne Animal, vol. 2, p. 243, 1817,  
type Le Lophote Lacépède Cuvier =  
Leptopus peregrinus Rafinesque,  
monotypic).

Lophotes Bosc, Nouv. Dict. Hist. Nat.,  
Paris, vol. 18, p. 183, 1817. (Type  
le Lophote cépédien Cuvier = Leptopus  
peregrinus Rafinesque, monotypic.)

Leptopus Rafinesque, Giorn. Enciclop.  
Sicilia, vol. 11, p. 16, 1814. (Type  
Leptopus peregrinus Rafinesque,  
monotypic.)

Podoleptus Rafinesque, Analyse de la  
nature, p. 93, 1815. (Type Leptopus

1924

peregrinus Rafinesque, virtually.  
Podobleptus Rafinesque proposed to  
replace Leptopus Rafinesque.)

Body moderately long, depth  $6\frac{1}{5}$   
to  $6\frac{1}{2}$ . Front profile of head  
truncate, rises nearly vertically  
from snout, straight or sometimes  
sinuous. Head 8, less than body  
depth. Hind extensions of  
premaxillaries with their ends  
free, sliding backwards and  
forwards on each side of median  
longitudinal keel. Anal present.  
Ventral present, not on lower  
body profile but below and behind  
pectoral bases.

Lophotus peregrinus (Rafinesque) <sup>1825</sup>

Leptopus peregrinus Rafinesque,  
Giorn. Enciclop. Sicilia, vol. 1,  
p. 16, 1814 (type locality: Sicily).

Lophotes cepedii Goldfuss, Handb. Zool.,  
vol. 3, pt. 2, p. 72, 1820 (type  
locality: Mediterranean; in Giorna).

Lophotus lacepede Risso, Hist. Nat.  
Eur. Merid., vol. 3, p. 293, 1826  
(type locality: Nice).

Lophotes cepedianus Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 405, pl.  
301, Sep. 1835 (type locality: ).

— Günther, Cat. Fishes Brit. Mus.,  
vol. 2, p. 312, 1861 (no locality). —  
Canestrini, Fauna Italia, Pesci,  
p. 195, 1875. — Moreau, Poiss. France,  
vol. 2, p. 549, 1881 (Nice). — Truinen,

1826

Proc. Zool. Soc. London, 1891, p. 483  
(Muiszenberg, False Bay). —  
Boulenger, Marine Investig. South  
Africa, vol. 1, p. 13, pl. 4, 1900  
(Hosel Bay). — Thompson, Marine  
Biol. Rep. South Africa, vol. 4,  
p. 153, 1918 (reference). — Barnard,  
Ann. South African Mus., vol. 21,  
pt. 1, p. 357, pl. 14, fig. 4, June  
1925 (Hermanus, South Africa).

— Jordan, Evermann, Clark, Rep. U.S.  
Comm. Fisher., pt. 2, p. 215, 1930  
(compiled).

Lophotes capellei Schlegel

1927

Lophotes capellei Schlegel, Fauna  
Japonica, Poiss., pts. 7-9, p. 132,  
pl. 71, fig. 2, 1845 (type locality:  
Japan). — Gunther, Cat. Fishes

Brit. Mus., vol. 2, p. 312, 1861 (name).  
— Fowler, Occas. Pap. Bishop Mus.,  
vol. 8, no. 7, p. 392, 1923 (Laysan);  
Mem. Bishop Mus., vol. 10, p. 88,  
1928 (Laysan example).

Lophotes cepedianus (not Valenciennes)  
Günther, Rep. Voy. Challenger, vol.  
31, pt. 2, p. 19, pl. 2, figs. b-b', 1888  
(1889) (Admiralty Islands to  
Japan).

Lophotes cristatus Johnson

1928

Lophotes cristatus Johnson, Proc. Zool.  
Soc. London, 1863 (April 29), p. 38  
(type locality: Madeira). — Mc

Culloch, Austral. Mus. Mem., no. 5,  
pt. 1, p. 139, June 29, 1929 (Victoria  
record).



Lophotus guntheri Johnston

1929

Lophotes guntheri Johnston, Proc. Roy. Soc. Tasmania, 1882 (1883), pp. 142, 177 (type locality: north west coast near Emu Bay, Tasmania). — Mc

Culloch, Austral. Mus. Mem., no. 5, pt. 1, p. 139, June 29, 1929 (reference).

Sub Order Atelestia

Body elongated, compressed.  
Branchiostegal rays at upper  
edge of ceratohyal and inclined  
upward. Opposing halves of  
hyoid connected and remote  
from each other. Lower  
pharyngeals concealed by skin,  
much reduced. Palato-quadrate  
bar atrophied. No orbitosphenoid.  
Vertebrae of centra only,  
without neural or haemal  
spines or other processes.  
Caudal divided and part of rays  
turned upward, lower 3 enlarged  
and extended backward into  
long projections.

tt. Ocular band as short yellow bar above and below eye, latter section with broad dark border; black predorsal spot; 7 broad dark oblique bands on side, anteriorly all giving place to dark spots.

pelewensis

bb. Paracoradion. Scales small, somewhat in ~~oblique rows~~ ~~posteriorly~~ rows inclined posteriorly; scales about 50; spinous dorsal shorter than soft; soft dorsal and anal strongly rounded; caudal truncated.

ocellipinnis

bb. Chaetodontops. Body scales all in rows curved very obliquely upward; body more oval than rhomboid; spinous dorsal little more than half longer than soft fin; soft dorsal and anal obtusely rounded.

a. A black ocular band present, at least on cheek.

b. Ocular band extends across interorbital

Family Giganturidae

1931

Body elongate, slender, cylindrical. Snout small. Eye moderate, telescopic. Mouth cleft very broad. Under jaw not protruding in front, extending backward below pectoral base. Strong teeth in jaws and on palatines, none on vomer. Greater part of gill covers posteriorly ventral. Gill opening before and under dorsal. Pseudobranchiae present. No air bladder. No scales. Dorsal rays simple, fin at last third in body. Caudal with lower lobe greatly elongated. Pectoral fan like, dorsal, high, behind and above gill opening.

Deep sea fishes of the Eastern Atlantic.

oblique lines on sides, but extremely fine and numerous all around body edges.

(vv. Similar to C. aureofasciatus with the addition of 3 dark, broad, transverse bands on breast of body. rainfordi.)

hh. Cross bands brown, second on body from oval bluish ocellus which includes last dorsal spine and first 3 soft rays. marleyi

guttatissimus

ff. Body with 8 dark transverse bands, of which ocular and caudal black; pale interspaces all spotted brown. punctatofasciatus

yy. Body with 3 broad dark to black vertical bands.

h. Cross bands brown; each scale on under half of body with white spot. not ophthalmus

hh. Cross bands black, sharply defined; no white spots on lower half of body. tricinatus

vv. A second dark band parallel with ocular band from upper end of gill opening to pectoral base and belly. aureofasciatus

uu. Body with 8 black narrow transverse bands.

octofasciatus

1932  
Genus Gigantura Brauer

Gigantura Brauer, Sitzs. Ber. Gesell.  
Nat. Marburg, vol. 8, p. 128, 1901.  
(Type Gigantura chuni Brauer,  
monotypic.)

Gigantura vorax Regan

Ann. Mag. Nat. Hist., Ser. 9, vol.  
15, p. 54, 1925 (atlantic).

Gigantura indica Brauer Regan  
loc. cit.

Gigantura gracilis Regan loc. cit.

Gigantura chuni Brauer

1933

Gigantura chuni Brauer, Sitzs. Ber.  
Gesell. nat. Marburg, vol. 8, p. 128,  
1901 (type locality: Gulf of Guinea);  
Deutsch. Tiefsee Exped. Valdivia,  
vol. 15, p. 340; pl. 1, figs. 1-3, 1906  
(lat.  $2^{\circ}36'5''N.$ , long.  $3^{\circ}27'5''E.$ ,  
Gulf of Guinea, 3513 meters).



Family Stylophoridae

1934

Body elongate, compressed. Maxillaries largely close and open mouth. Maxillaries and premaxillaries with long extensions over top of cranium. Mouth small, tube like. Mandible enormous, with little movement. Short slit behind fourth gill arch. Skeleton but little ossified. Four pairs of superior pharyngeals, all but first pair with teeth. Greatly enlarged, pen-shaped basibranchials present, almost long as cranium. Post clavicle of single piece, extends far back. Post temporal simple unforbed bone. Dorsal extends from head nearly to

bb<sup>v</sup>. Black ocular band not extending below head, not on chest or breast.

id<sup>v</sup>. Back not especially darker and without 2 large white blotches each side.

e<sup>v</sup>. Ten narrow vertical dark lines, each made up of row of blackish spots. miliaris

ee<sup>v</sup>. Each scale with dark spot, forming inclined longitudinal rows. citrinellus

dd<sup>v</sup>. Back dark olive, with 2 large white blotches each side; blue line along dorsal and anal medially. quadrimaculatus

ad<sup>v</sup>. Caudal with black transverse band or crescent.

f<sup>v</sup>. Body without transverse brown bands, but marked with small round dark spots.

g<sup>v</sup>. Black spots form 6 longitudinal lines obliquely downward. maculatus

gg<sup>v</sup>. Black spots somewhat as

caudal fin, ~~the~~ rays without cross articulations. no anal. Pectoral base horizontal, fin inclined upward. ~~no ventral.~~

Ventral present  
(see Norman)  
1930

"o" "u" "e"  
?"

Genus Stylophorus Shaw

Stylophorus Shaw, Trans. Linn.

Soc. London, vol. 1, p. 90, 1791. (Type Stylophorus chordatus Shaw, monotypic.)

Stylophorus Schneider, Syst.

Ichth. Bloch, 1801, p. 519. (Type Stylophorus chordatus Shaw.)

292  
xx. Broad oblique brown band from nape  
toward but not quite to soft anal; also  
second parallel brown band along back to  
lower side of tail. mitratus

xxi. no broad dark oblique bands as above.

yy. Body without 3 broad black vertical bands.

zz. Soft dorsal with black white edged ocellus;  
sides with pale brown longitudinal lines.

modestus

zzz. Soft dorsal without ocellus, at least in adult.

aaa. Caudal without black transverse band  
or crescent.

bbb. Black ocular band extends below  
head on breast; ventrals dark or  
blackish.

ccc. Large dark diffuse blotch from juncture  
of dorsals nearly to spinous anal. trichrous

ddd. no large dark median lateral blotch,  
which more or less mottled or blotched  
darker. corallicola

Stylophorus chordatus

Regan, Proc. Roy. Soc., B,  
1924  
vol. 96, p. 193 (several  
loc. in Atlantic). —

Norman, Discovery Repts., vol.  
2, p. 342 (S. Atlantic.) 1930

1936

Stylophorus chordatus Shaw

Stylophorus chordatus Shaw, Trans.  
Linn. Soc. London, vol. 1, p. 90, pl. 6, 1791  
(type locality: between Cuba and  
Martinique).

— Shaw and Hodder, Naturalists  
Miscellany, vol. 8, pl. 274, 1796 (near  
cluster of small islands not far from  
Cuba). — Shaw, General Zool., vol. 4,  
pt. 1, p. 87, <sup>pl. 11,</sup> 1803 (copied). — Blainville,

Journ. Phys. Chim. Hist. Nat. Paris,  
vol. 87, p. 60, pl. 1, fig. 1, 18 (compiled).

— Cuvier, Règne Animal, vol. 2, p. 221,  
1817 (reference). — Valenciennes,  
Hist. Nat. Poiss., vol. 10, p. 381, Sep.  
1835 (compiled). — Günther, Cat.

Fishes Brit. Mus., vol. 2, p. 306, 1861  
(type); Rep. Voy. Challenger, vol. 22,  
p. 73, 1887 (type). — Starks,

Bull. Mus. Comp. Zool., vol. 52, no. 2,  
p. 17, pls. 1-5, 1908 (lat. 2°40.4' S.,  
long. 90°19.3' W., south of Galapagos,  
3000 fathoms).