

Leptodopidae

Benthodesmus philippinus n. sp.

D. $21\frac{2}{3}$ (21) h. $7\frac{4}{5}$ ($6\frac{2}{3}$) w. $5\frac{1}{3}$ (6)

S. $2\frac{1}{6}$ ($2\frac{1}{5}$) in h. f. r. tip; e. $8\frac{4}{5}$

($6\frac{4}{5}$) 4 - (3) in r., $1\frac{2}{5}$ - (9. than i)

max. r. eye, $1\frac{1}{2}$ (2) in eye,

l. $2\frac{1}{5}$ ($2\frac{2}{5}$) in h. f. r. tip; 4 large

upper front canines followed

by 5-6 smaller wide set teeth

each side; 8 or 9 wide set

teeth each side below, first

of which well inclined back

& not enlarged; row of small

slender t. on each palatine;

i. $6\frac{1}{4}$ (9) rather low, level.

Gill r. as 3 + 7 short low

feeble denticles, barely $\frac{1}{4}$ of g. fil.

which $1\frac{3}{4}$ in eye.

~~Appendix~~ No r. l. c.

complete, axial along side

of body. 1937
1909
24

D. 122 - (115) fin height

7 - in total head; A. 74,

lower than D.; C. $6\frac{1}{4}$ (6).
(damaged) - d. d. c. p. $2\frac{1}{2}$ (5) in
eye; P. 3 ($2\frac{2}{5}$) in h., rays 12;

V - small pair of round-scale
like flaps opposite P-origin
on median line of belly -
about $\frac{1}{3}$ of eye -

Gray, or leaden, when
thin rubbed off brown -
Dorsal gray. Faint pale
inside gill of mouth
blackish gray.

~~Atalaya Point U. S. N. M. W. Type -
M. 8687 (632 m) D. 5445 June 3, 1909.~~

~~8684 (622 m)
" D. 5444. June 3, 1909.~~

~~8685 (632)
" D. 5444. June 3, 1909~~

~~4700 (621)
Hambro D. 5411. Jan. 16, 1908~~

~~P. 10115 (472)
D. 5290 July 20, 1908~~

~~Mantocot Pt.~~

Benthodesmus philippinus

~~P. 1790 (348) D. 5270 June 8. 08~~

Exarcho light

~~1789 (310) " "~~

~~453-8 (503) D. 5287 - July 20. 08~~
Samburo J.

~~1687 (260) D. 5408. Mar. 18. 09~~
Capit in cillo light

~~1883 (287) D. 5247 May 18. 08~~
Dumalag J.

~~4321 (418) D. 5563. Sep. 21. 09~~
Lanun J.

~~2869 (293) D. 5551. Sep. 17. 09~~
Jolo light

~~4087 (162) D. 5606. Nov. 17. 09~~
Dodepo J.

D. 19; h. $6\frac{2}{3}$. S. $2\frac{3}{5}$ in h. f. r.
tip; e. $4\frac{1}{4}$, $1\frac{3}{4}$ in r; g. exceeds
i.; max. eye, ex. $2\frac{3}{4}$ in e.,
l. $2\frac{2}{5}$ in h. f. r. tip; i. 7,
concave.

~~2995 (395) D. 5374. Mar. 2. 09~~
Jayabar light

Family Lepidopidae

448

Body greatly elongated, compressed, band like. Head attenuated, compressed. Eye large. Mouth large, lower jaw projecting. Premaxillaries not protractile. Teeth in jaws very strong, lanceolate, anterior more or less enlarged. No teeth on palatines. Gill membranes separate, free from isthmus. Gills 4, slit behind fourth. Air bladder present. Abdominal and caudal vertebral numerous, 100 or more. Pyloric appendages in large number. Body scaleless. Lateral line conspicuous. Dorsal fin long, continuous or subcontinuous, without distinct lobe to soft dorsal. Anal

comparatively short, preceded by rather numerous short detached spines. No finlets. Caudal distinct, small, forked. Pectoral with some of lower rays longest. Ventrals rudimentary or absent. Spine, scute or pair of scutes behind vent.

Genera and species few, differing from the Trichiuridae chiefly in the presence of the small caudal fin.

Johnius soldado (Lacépède) ← 1129

134789

717

Holocentrus soldado LACÉPÈDE, Hist. Nat. Poiss., vol. 4, 1802, pp.344, 389, ¹⁸⁰² "Cayenne".Corvina soldado CANTOR, Journ. Asiat. Soc. Bengal, vol. 18, pt. 2, 1849,

p. 1052 (Pinang).

Corvina solada MASON, Burmah Nat. Resources, 1860, p. 695 (Error.)Sciaena soldado OGILBY, Mem. Queensland Mus., vol. 6, Dec. 19, 1918, p.81, pl. 24 (Dunk Island; type of Corvina argentea MACLEAY). - BARNARD,

Ann. South Afric. Mus., vol. 21, pt. 2, Oct. 1927, p. 570 (Quilimane,

Portuguese East Africa).

Corvina miles CUVIER, Règne Animal, ed. 2, vol. 2, 1829, p. 173 (onTella katchek RUSSELL, Fishes of Coromandel, vol. 2, 1803, p. 13,pl. 117, ¹⁸⁰³ Vizagapatam). - JERDON, Madras Journ. Literat. Sci., 1851,

p. 131. - GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 300 (Ceylon

and Malay Peninsula). - PÜHL, Cat. Mus. Godeffroy, No. 8, 1881, p. 5

(Indian Ocean). - MACLEAY, Linn. Soc. New South Wales, vol. 9,

1884, p. 23 (copied Klunzinger). - PÜHL, Cat. Mus. Godeffroy, No. 9,

1885, p. 30 (Indian Ocean). - ELERA, Cat. Fauna Filip., vol. 1, 1895,

p. 502 (Luzon; Manila Bay). ✓

Sciaena miles CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 94 (Pondichery;

Java). - VALENCIENNES, Hist. Nat. Poiss., vol. 9, 1833, p. 479 (note).

- JOUAN, Mém. Soc. Hist. Nat. Cherbourg, ser. 2, vol. 3, 1868, p. 254

(Hong Kong). - DAY, Fishes of India, pt. 2, 1876, p. 185, pl. 43, fig.

5 (Bombay); Fauna Brit. India, Fishes, vol. 2, 1889, p. 113. - PELLE-

GRIN, Bull. Soc. Zool. France, vol. 30, 1905, p. 84 (Baie d'Along,

Tonkin). - LLOYD, Rec. Indian Mus., vol. 1, 1907, p. 226 (Akyab).

- TIRANT, Service Océanogr. Pêch. Indo-Chine, 1929, Note 6^e, p. 169

(Saigon).

type locality:

Analysis of Genera

a. Lepidopinae: Dorsals continuous; teeth on palatines; no postanal spine; ventrals scale like rudiments.

b. Body deeper; dorsal rays less than 100; 2 distinct postanal scutes; ventrals behind pectoral bases.

c. Head short, high, compressed above to trenchant edge; jaws equal. Euxymetopon.

c. Head longer, with lateral occipital crests converging anteriorly; lower jaw protrudes. Lepidopus.

b. Body low, slender; dorsal rays about 150; 1 postanal scute; ventrals below pectoral bases. Benthodesmus.

a. Aphanopinae. Dorsal in 2 sections; no teeth on palatines; dagger like spine behind vent; ventrals absent. Aphanopus.

Genus Eoxymetopon Gill

Eoxymetopon (Poey) Gill, Proc. Acad. Nat. Sci. Philadelphia, (1863, p. 228) (Type Eoxymetopon taeniatus (Poey) Gill, monotypic.)

Eoxymetopon Günther, Rep. Voy. Challenger, vol. 22, (1887, p. 39.) (Type Eoxymetopon taeniatus (Poey) Gill.) (Emendation.)

Assinger Whitley, Rec. Austral. Mus., vol. 19, no. 1, p. 84, Aug. 3, 1933. (Type Eoxymetopon anzac Alexander, orthotypic.)

Body greatly elongate and compressed, band like, trunk and tail tapering gradually back to slender and narrowly constricted caudal peduncle. Head deep, with elevated supraoccipital, whole upper edge trenchant to dorsal origin. Snout and muzzle deep and compressed. Eye moderate, median

452

in head length, little below middle in head depth. Mouth moderate. Maxillary not reaching below eye. Teeth rather small in jaws, compressed, rather close set and anterior canines moderate. Row of small teeth on palate, none on tongue. Interorbital greatly elevated. Gill rakers fine, slender and somewhat irregular denticles, in moderate number. No scales. Lateral line distinct, complete. Dorsal begins over middle of eye, first spines longest. Anal scarcely evident after flat, short, depressible, scale like flap behind vent until last third in tail where formed as few, short, weak, feeble rays. Caudal small, well forked, lobes pointed.

Silvery, shot with gold and purple. First dorsal with upper half black. Soft dorsal, caudal and anal dark externally and last fin with dark basal band. (Day.)

134789 744

India, Burma, Malacca, Indo China, China. Also reported from the Philippines by Elera. Quite likely Corvina grypota Richardson may be a synonym. It is incompletely noticed as follows:

Maxillary slips below preorbital its entire length; upper teeth villiform, with stronger, subulate outer even row; lower teeth villiform; minute pores on snout, 5 large pores at end of mandible; preopercle with wide set slender denticles.

Scales tender, nacry, very deciduous; cheek and mandible scaly. Lateral line of simple tubes, boldly arched anteriorly.

D. X, I, 29; A. II, 7 or 8, second spine not strong, little shorter than soft rays; caudal partly rhomboidal; ventral with short filamentous tip.

Mostly silvery, some yellow tinge on fore part of anal and paired fins. Length, 175 mm.

Johnius trachycephalus (Bleeker)

100
129

H Corvina trachycephalus BLEEKER, Nat. Tijds. Nederland. Indië, vol. 1, 1850, p. 269, [Bandjermassing, in rivers (Borneo)].

Q/ Sciaena trachycephalus GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 293 (compiled). SCHMELTZ, Cat. Mus. Godeffroy, vol. 4, 1869, p. 16 (Saigon).

Q/ Johnius trachycephalus BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, vol. 14, ser. 3, 1874, p. 41 (Sumatra; Borneo); Atlas Ichth. Ind. Néerland, vol. 9, 1877, pl. (3)386, fig. 1.

type locality

Pectoral moderate, lower rays longest. Ventrals as pair of short, small, scale like flaps on median ventral line of trunk, about last third in abdomen.

~~Coopermetopon~~
depth

Analysis of Species

a. $11\frac{2}{3}$ to $13\frac{7}{8}$; D. 87 to 93.

b. ¹ First dorsal spine short, greatly less than head. taeniatus.

b. ² First dorsal spine nearly long as head. poeyi.

~~Amargosa~~

a. ² depth 28; D. 120.

anzac.

Follow Incl Caps
headed

134789

713

745

hol. p. 1

Depth 4 to $4\frac{1}{3}$; head $3\frac{1}{2}$ to 4, width 2. Snout $3\frac{2}{3}$ in head; eye $4\frac{1}{3}$ to 5, $1\frac{1}{3}$ in snout, $1\frac{1}{3}$ in interorbital; maxillary reaches $\frac{2}{3}$ in eye, length $2\frac{1}{2}$ in head; lower jaw little shorter than upper; teeth villiform, outer upper row but little enlarged, mandibular subequal; interorbital rather low; preopercle edge denticulate.

Scales 75 to 80 along above lateral line, 65 to 70 along below; 8 or 9 above, figure shows 10 above anal origin; vertical fins all largely with fine scales basally.

hol
D. VIII, 1, 24 to 28 (IX spines on figure), third spine $2\frac{1}{10}$ in head, fourth ray $2\frac{1}{3}$; A. II, 6 or 7, second spine moderate, $3\frac{1}{5}$ in head or $1\frac{3}{4}$ in postocular, third ray $2\frac{1}{4}$ in head; caudal 1, cuneate; least depth of caudal peduncle 4; pectoral $1\frac{1}{3}$; ventral $1\frac{1}{2}$, first ray ending in filament.

Above bluish or yellowish gray, sides and below yellowish silvery. Iris yellowish. Fins yellowish with more or less gray-brown tint. Length, 105 to 130 mm. (Bleeker.)

East Indies, Indo China.

Johnius microlepis Bleeker *139*

H Johnius microlepis BLEEKER, Act. Soc. Sci. Ind. Néerland. (Sumatra), vol. 5, 1858-1859, p. 11, *type locality:* (Palembang, Mussi River mouth, Sumatra).

Q Pseudosciaena microlepis BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, ser. 3, vol. 14, 1874, p. 23 (Sumatra; Singapore); Atlas Ichth. Ind. Néerland., vol. 9, 1877, pl. (4) 387, fig. 3.

Evoxymetopon taeniatus Gill

Evoxymetopon taeniatus (Poey) Gill,
Proc. Acad. Nat. Sci. Philadelphia,
(1863) p. 228 (type locality, Cuba);

1864, p. 206 (name only). — Poey,

Anal. Soc. Españ. Hist. Nat.

Madrid, vol. 2, (1873) p. 77, pl. 5,

(Havana). — Goode and Bean,

Oceanic Ichth., (1895) p. 204, pl.

fig. 214, (Havana). — Jordan and

Evermann, Bull. U. S. Nat. Mus.,

No. 47, pt. 1, (1896) p. 886 (copied).

— Garman, Mem. Mus. Comp. Zool., vol. Ribeiro, Archiv.

24, p. 384, 1899 (reference) (Rio Janeiro).
Mus. Nat. Rio Janeiro, vol. 17, (Trichuridae) p. 5, 1915 (Rio Janeiro).
Evoxymetopon taeniatus Günther,

Rep. Voy. Challenger, vol. 22, (1887)

p. 39 (compiled).

Trichurus lepturus (not Linnaeus)

Hoy, Trans. Zool. Soc. London,

(1812) p. 210, (Moray Firth).

Depth $11\frac{2}{3}$; head $8\frac{1}{6}$, 4 to vent,
 width $4\frac{1}{8}$ in its length, trunk
 $1\frac{1}{4}$ in tail. Snout $2\frac{3}{5}$ in head
 from snout tip; eye 6, $2\frac{1}{5}$ in snout,
 maxillary reaches eye, expansion
 $2\frac{1}{5}$ in eye, length $2\frac{3}{4}$ in head
 from snout tip; 5 upper front
 canines, moderate, followed
 each side by 14 or 15 smaller
 uniform, compressed, pointed
 teeth; 21 to 23 rather low
 uniform teeth along each side
 of lower jaw; no teeth on
 palate or tongue; interorbital
 $5\frac{3}{5}$, with high elevated median
 trenchant keel; mandible
 $1\frac{7}{8}$ in rest of head. Gill
 rakers about 13 + 25 slender,
 pointed, denticles, irregular,
 about $\frac{3}{5}$ of gill filaments.

no dips

Loaded

Follow - Incl Caps

134789

746

col. pure

Depth $3\frac{4}{5}$ to 4; head $3\frac{1}{2}$ to $3\frac{2}{3}$, width $2\frac{1}{4}$ to $2\frac{1}{3}$. Snout $3\frac{2}{3}$ in head from snout tip; eye $3\frac{2}{3}$ to $4\frac{1}{2}$, $1\frac{3}{5}$ in snout, greater than interorbital; maxillary reaches opposite eye center, length $2\frac{3}{5}$ in head; teeth villiform, outer row enlarged above, inner row enlarged below; interorbital low; preopercle edge entire.

Scales 90 along above lateral line to caudal base, 75 along below; 9 to 10 above (10 above anal origin to lateral line on figure).

col lit

D. X, I, 27 to 32, fourth spine 2 in total head length, first ray $2\frac{3}{4}$; A. II, 6 to 8, second spine strong, $1\frac{9}{10}$ in head or equals postocular; caudal $1\frac{1}{4}$ in head, cuneate; least depth of caudal peduncle $4\frac{1}{4}$; pectoral $1\frac{2}{5}$; ventral $1\frac{1}{3}$, first ray ends in short filament.

Above dilute blue-gray, sides and below silvery. Iris yellow, brown above. Opercle with diffuse bluish purple blotch above. Fins yellowish. Dorsal and caudal dusted with brown. Length, 282 mm. (Bleeker.)

Known only from Sumatra and Singapore.

Genus Sciaena Linnaeus ← 1130

Sciaena LINNAEUS, Syst. Nat., ed. 10, vol. 1, (1758, p. 288. (Type Sciaena cirrosa LINNAEUS, designated by Bleeker, Arch. Néerland. Sci. Nat. Harlem, vol. 11, (1876, p. 326.)

Sciæna BONNATERRE, Tabl. Ichth., (1788, p. LIV(119). (Type Sciaena cirrosa LINNAEUS.) (Error.)

Umbrina CUVIER, Règne Animal, vol. 2, (1817, p. 297. (Type Sciaena cirrosa LINNAEUS, designated by GILL, Proc. Acad. Nat. Sci. Philadelphia, 1861, p. 86.)

Attilus GISTEL, Naturg. Thierwelt, 1848, p. 109. (Type Sciaena cirrosa LINNAEUS, monotypic.)

which $2\frac{1}{5}$ in eye.

No scales. Lateral line axial along side of body, distinct.

D. 87, fourth spine $3\frac{1}{8}$ in head; A. with first spine broad, scale like, followed by about 71 haemal articulations and finally 18 feeble short rays; caudal (damaged) $3\frac{1}{4}$?, forked; least depth of caudal peduncle about 4 in eye; pectoral 2 in head, rays I, 11; ventral with flat, scaly flap opposite middle of depressed pectoral and about $\frac{1}{3}$ of eye.

Uniform light brownish. Front of dorsal dark grayish. Iris pale. Inside gill opening

no diphs

Follow—Incl Caps
Leaded

134789 747 715

art. 19, p. 15

Ctenosciaena FOWLER and BEAN, Proc. U.S. Nat. Mus., vol. 63, 1923, p. 15

15. (Type, Sciaena dubia FOWLER and BEAN, orthotypic.)

Body ovate, oblong. Snout prominent, with conspicuous pores. Chin with similar pores. Rather thick, short, single barbel on chin. Lower jaw little shorter than upper. Teeth in villiform bands in jaws, outer series above enlarged and no canines. Gill rakers few, short, often several below rudimentary. Pseudobranchiae present. Air bladder present. Lateral line with tubes more or less branched. Dorsal deeply notched or divided nearly as two fins, first spine very short. Anal spines strong, first short. Caudal rounded, truncate or emarginate.

Warm seas, sometimes running into rivers. Among Indo Pacific genera known chiefly by the presence of a distinct barbel at the chin. The restriction by Gill in 1861 of Cheilodipterus aquila Lacépède as the type of Sciaena is not acceptable, as this species is not listed separately or as a distinct component in the Linnean genus Sciaena.

Analysis of species

A a¹. Sciaena. Lower gill rakers 5 to 10.

b¹. Scales ctenoid.

c¹. Dorsal rays 24 to 26.

d¹. Numerous oblique dark stripes, with 17 to 20 dark oblique somewhat wavy streaks, narrower than interspaces

d². Numerous oblique pale streaks

c². Dorsal rays 27 to 31.

e¹. Body with dark bands.

capensis

robinsoni

457
and mouth more or less dark
brown.

Cuba.

U. S. N. M., No. 5735. Havana.
Prof. Filipe Poey. Length 1370
mm.

no dips

8 pt. Leaded
Follow - Incl Caps

134789

748

III

f¹. Third or fourth dorsal spines $2\frac{1}{3}$
to $2\frac{1}{2}$ in head; 9 wide oblique sinuous
dark bands, wider than interspaces, one
from pectoral reaches middle of soft dor-
sal

#sinuata

III

f². Fourth dorsal spine $2\frac{1}{8}$ in head; 9 broad
neutral dusky oblique bands, posterior
broader, one from pectoral reaches last
dorsal rays or upper part of caudal ped-
uncle

#striata

III

e². No dark bands.

6ans

g¹. Dorsal rays 24 to 27; barbel nearly
equals eye

#russellii

6ans

g². Dorsal rays 28 to 30; barbel $\frac{1}{2}$ of
eye

#macroptera

b². Scales cycloid; second dorsal spine equals or nearly
equals body depth

#dussumieri

a². Ctenosciaena. Lower gill rakers 14

#dubia

Sciaena capensis (Pappe) ← 129

Umbrina capensis PAPPE, Synops. Edible Fishes Cape, ed. 1, 1853, p. 16
 (False Bay). - CASTELNAU, Mém. Poiss. Afrique Australe, 1861, p. 10
 (Simon's Bay). - PAPPE, Synops. Edible Fishes Cape, ed. 2, 1866, p. 11
 (False Bay). - REGAN, Ann. Natal Mus., 1908, p. 245 (Bird Island).
 GILCHRIST and THOMPSON, Ann. Durban Mus., vol. 1, pt. 4, 1917, p. 351
 (compiled). - THOMPSON, Marine Biol. Rep. South Africa, vol. 4, 1918,
 p. 78. - BARNARD, Ann. South Afric. Mus., vol. 21, pt. 2, 1927, p. 578
 (False Bay, Agulhas Bank, Algoa Bay, 50 fathoms).

type locality

Evoxymetopon poeyi Günther

Evoxymetopon poeyi Günther,
Rep. Voy. Challenger, vol. 22,
(1887) p. 39, pl. 43, (type locality,
Mauritius). ~~redrawn~~

Evoxymetopon poeyi Goode and
Bean, Oceanic Ichth., (1895) p. 204,
(reference). — Garman, Mem.
Mus. Comp. Zool., vol. 24, p. 384,
1899 (reference).

Depth $13\frac{7}{8}$; head $7\frac{3}{4}$. Snout $2\frac{2}{3}$ in head from snout tip; eye 5, 2 in snout; maxillary reaches $1\frac{1}{8}$ in snout, expansion (exposed) 4 in eye, length $2\frac{4}{5}$ in head from snout tip; each jaw with series of small, flat, triangular teeth, besides 3 large upper, compressed fangs inside outer series of small teeth, of which 2 posterior closer and larger; lower foremost teeth very little larger than others; interorbital high.

Lateral line complete, distinct, axial at first, apparently little low (on figure) along side of tail posteriorly.

D. 93, first spine large, compressed, sword shaped, finely

~~Spondylion ^{Canis 207} microlepis (Gilchrist and Thompson)~~

~~Cantharus microlepis Gilchrist and Thompson,
Ann. South African Mus., vol. 6, 1908-10,
p. 231. Natal; Ann. Durban Mus., vol. 1,
pt. 4, 1917, p. 357 (reference).~~

~~Pagellus microlepis Regan, Ann. Mag. Nat.
Hist., series 9, vol. 7, 1921, p. 419. Natal, 25 fathoms.~~

~~Caranthus microlepis Barnard, Ann. South
African Mus., vol. 21, pt. 2, 1927, p. 723
(Natal coast, 30 fathoms).~~

Depth $2\frac{1}{2}$ to $2\frac{2}{3}$; head 3 to $3\frac{1}{2}$, profile
sloping, gently and nearly evenly convex,
but slight bulge before eyes. Eye 3 to $3\frac{1}{2}$
in head, equals or little greater than
snout, equals or slightly less than
interorbital, $2\frac{1}{2}$ times preorbital depth;
teeth moderate, outer row distinctly
larger than inner rows; preorbital with
lower edge notched and except for very
small part at notch entirely concealed

ribbed and (mutilated) shorter than head; A. 20, fin origin at last tenth of fish without caudal, preceded by a large scale, rays free in posterior third of fin; hind part of tail very slender; caudal 4 in total head length, deeply forked; pectoral $2\frac{1}{5}$, lower rays twice upper, fin rays $1\frac{1}{2}$; ventral scaly flap $2\frac{1}{3}$ in eye, placed opposite middle of pectoral.

Uniform silvery. Length 1983 mm (6 feet 6 inches) (Günther.)

Mauritius.

Analysis of ~~the~~ species *left side only*

a.¹ Spondylisoma. Snout moderate, conic; preopercle flange scaleless.

b.¹ Lower preorbital edge notched.

cm 130

c.¹ Scales 80 to 85 in lateral line. emarginata.

c.² Scales 90 to 115 in lateral line. microlepis.

b.² Lower preorbital edge not notched; scales 64 to 69 in lateral line. blochii.

a.² Simocantharus new subgenus. Snout short, blunt, pug-nose; preopercle flange scaly; scales 83 to 88 in lateral line.

alnea.

cm 120 *right side only*

Subgenus Spondylisoma Cantor

Snout moderate, conic. Preopercle flange scaleless.

cm 120

461
Evonymetopon anzac Alexander

Evonymetopon anzac Alexander,
Journ. Proc. Roy. Soc. Western
Australia, vol. 2, p. 104, pls.

7 ~~and 8~~, 1917 (type locality, North
Fremantle, Western Australia).

— McCulloch, Austral. Mus.

Mem., no. 5, pt. 2, p. 268,

September 10, 1929 (reference).

Depth $2\frac{1}{2}$ to $2\frac{3}{4}$; head $2\frac{1}{2}$ to $2\frac{3}{5}$, width 2 to $2\frac{1}{4}$. Snout $4\frac{1}{4}$ to $4\frac{1}{2}$ in head from snout tip; eye 3 to 4, greater than snout or interorbital; maxillary reaches $\frac{3}{4}$ to opposite hind eye edge, expansion $1\frac{2}{5}$ to $1\frac{2}{3}$ in eye, length 2 to 2 to in head; teeth villiform, in bands in jaws and on vomer but none on palatines; interorbital $4\frac{1}{5}$ to 6, very slightly convex; preopercle ridge and edge entire. Gill rakers 2 + 11, short tubercles or but few lanceolate, less than gill filaments, which $2\frac{1}{4}$ in eye.

Scales 22 in lateral line to caudal base and 5 more on latter, tubular scales 10 or 11 in lateral line, extend till opposite front of soft dorsal, then consist of obscure

Depth 28; head 12. Snout $2\frac{4}{5}$
in head from snout tip; eye 7,
 $2\frac{1}{2}$ in snout; maxillary reaches
 $\frac{7}{8}$ to eye, length $2\frac{2}{3}$ in head
from snout tip; interorbital
elevated (evidently elevated).

D. 120; A. 14; caudal 17;
pectoral 12. Length 1415 mm.
(Alexander.)

Western Australia.

Genus Ruvettus Cocco

Ruvettus Cocco, Giorn. Sci. Sicilia,
vol. 17, ~~1829~~ ^{1829.} p. 21, (Type Ruvettus
pretiosus Cocco, monotypic.)

Aplurus Lowe, Trans. Zool. Soc.
London, vol. 2, ~~1841~~ ^{1841.} p. 180, (Type
Tetragonurus simplex Lowe,
monotypic.)

Acanthoderma Cantraine, Journ.
Acad. Sci. Bell. Lettres Bruxelles,
vol. 10, ~~1837~~ ^{1837.} pp. 1-19, (Type Acantho-
derma temmincki Cantraine,
monotypic.)

Genus Lepidopus Gouan

Frost Fishes

Lepidopus Gouan, Hist. ~~XXXXXXXXXXXX~~

Pisc., 1770, pp. 107, ¹⁸⁵ Atypic. (Type Lepidopus gouani Schneider = Trichiurus caudatus Euphrasen, designated by Goode and Bean, Oceanic Ichth., p. 203, 1895.)

Vandellius Shaw, General Zool., vol. 4, 1803, p. 199. (Type Vandellius lusitanicus Shaw, monotypic.)

Sarcina Rafinesque, Car. nuov. Anim. Sicilia, 1810, p. 29. (Type Sarcina argyrea Rafinesque, designated by Jordan and Evermann, Genera of Fishes, pt. 1, 1917, p. 79.)

Ziphotheca Montagu, Vern. Mem., vol. 1, 1811, p. 82. (Type Ziphotheca tetradens Montagu = Trichiurus caudatus Euphrasen, monotypic.)

4 examples. Babayan Bay, Luzon.
January 19, 1908. Length 87 to 97 mm.

2 examples. Manila Bay. December 9,
1907. Length 61 to 68 mm.

76616 U. S. N. M. Formosa. Dr. F.
Baker. Length 128 mm.

27536 and 27537. A. N. S. P. Padang, Sumatra.
~~From~~ A. C. Harrison and H. L. Miller. Length
131 mm. When fresh in ~~the~~ arrack more or
less pale brownish, head and scales mostly
silvery white. Inside gill opening blackish.
Iris dull yellowish white. Fins very pale
brownish.

469

Body very elongate, compressed to band like, long tail tapering to very slender caudal peduncle and small caudal fin. Head rather large, compressed, pointed. Eye slightly premedian, high. Mouth large, lower jaw protruding, with point in front. Mandible little less than rest of head. Row of compressed, close set, pointed teeth in each jaw with several forward little larger canines; palatines with teeth. Gill rakers small, slender, numerous, unequal. Branchiostegals 8. Scales absent. Lateral line present. Air bladder present. Pyloric coeca 23. Vertebrae 41 + 71. Dorsal whole length of back, - of

no dips

Loaded

Follow—Incl Caps

134789

749

H Umbrina cirrhosa (not LINNAEUS) GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 274 (Algoa Bay). — STEINDACHNER, Sitz. Ber. Akad. Wiss. Wien, Math.-nat. Kl., vol. 86, pt. 1, 1882, p. 61, pl. 1 (Red Sea at Suez); Anz. Akad. Wiss. Wien, vol. 32, No. 24-25, Nov. 21, 1895, p. 259 (Suez).

fulgur

Depth $2\frac{1}{2}$ to 3; head 3 to $3\frac{1}{2}$. Eye 4 to $4\frac{3}{4}$, $1\frac{1}{3}$ in snout, $1\frac{1}{4}$ in interorbital; maxillary reaches eye center, length $2\frac{4}{5}$ in head; barbel 4 in eye; preorbital depth not quite equal to eye. Gill rakers 8 or 9 on lower front arch, lower ones mere knobs.

Scales 52 to 55 in lateral line; 9 to 11 above, 16 to 18 below; scales ctenoid, also same on head and breast. Lateral line 3 to 5 branched in tubes.

to list

D. X, I, 24 or 25, third spine or third and fourth longest, about 2 in head or $2\frac{1}{2}$ in body depth; A. II, 7, second spine stout, 3 in head or $3\frac{1}{2}$ in body depth and $1\frac{1}{2}$ to $\frac{2}{3}$ longest ray; caudal subtruncate in adult.

Grayish above, whitish below, with silvery sheen, with 17 to 20 more or less distinct, dark, oblique, somewhat wavy streaks, narrower than intervals. Pectoral axil dark. Spinous dorsal and ventral blackish, other fins grayish, soft dorsal with dark edge. Length to 700 mm. (Barnard.)

South Africa. Barnard distinguishes this species from Sciaena cirrhosa by 2 or 3 more dorsal rays, lower spinous dorsal, less distinct stripes and not blue bordered with black in lateral line.

rather feeble low rays. Anal
spines imperfect, minute or
concealed in integument.
Caudal small, forked. Pectoral
low, moderate. Coloration silvery
white.

Fishes living near the surface
in the open sea. As they are
easily numbed by cold weather
they are known as frost fishes.

no diphs

Follow—Incl Caps
Loaded

718

134789

750

Sciaena robinsoni (Gilchrist and Thompson) ← 1129er

Umbrina robinsoni GILCHRIST and THOMPSON, Ann. South Afric. Mus., vol.

6, (1908-1911, p. 182 (Natal); Ann. Durban Mus., vol. 1, pt. 4, 1917, p. 351 (compiled). ¹⁹¹⁷ BARNARD, Ann. South Afric. Mus., vol. 21, pt. 2, 1927, p. 579 (Natal). type locality

Umbrina angustilineata GILCHRIST and THOMPSON, Ann. South Afric. Mus.,

vol. 11, p. 2, (1911, p. 38 (Natal); Ann. Durban Mus., vol. 1, pt. 4, 1917, p. 351 (compiled).

fat pume
Depth 3 to $3\frac{1}{2}$; head $3\frac{1}{2}$. Eye 4 to 5 in head, $1\frac{1}{3}$ to $1\frac{1}{2}$ in snout, $1\frac{1}{4}$ to $1\frac{1}{3}$ in interorbital; maxillary reaches $\frac{1}{3}$ in eye; barbel $\frac{1}{4}$ of eye; preorbital depth slightly less in young to slightly greater than eye with age. Lower gill rakers 9 or 10, lowest mere knobs.

Scales ctenoid, 49 to 52 in lateral line, tubes with 3 to 5 branches; 8 or 9 above, 17 or 18 below.

fat
D. X, I, 24 to 26, third or third and fourth spines longest, about $\frac{2}{5}$ body depth or equals head; A. II, 7, second spine strong or $\frac{2}{5}$ of head; caudal subtruncate.

Brownish, probably with silvery sheen in life, with narrow, wavy, oblique, light streaks, much narrower than interspaces. Opercle often with dark blotch. All fins dark brown, especially spinous dorsal, ventral, and anal, which blackish. Length to 350 mm. (Barnard.)

Natal.

Analysis of Species

- a.¹ Depth $23\frac{1}{3}$; head $11\frac{2}{3}$. aomori.
- a.² Depth $18\frac{1}{2}$; head 7. xantusi.
- a.³ Depth $9\frac{3}{4}$ to $14\frac{7}{8}$; head $6\frac{3}{4}$ to $6\frac{4}{5}$.
caudatus
- a.⁴ Depth 24; head $6\frac{3}{4}$. gracilis.

Genus Thyrsites ^{Cuvier} ~~Valenciennes~~

Thyrsites ^{Cuvier} Valenciennes, Hist. nat.
Pois., vol. 8, 1831 (Jan. 1832), ~~pt.~~
~~196.~~ (Type ^{p. 46,} Scomber atun Euphrasen,
monotypic.)

467

Lepidopus aomori Jordan and Snyder

Lepidopus aomori Jordan and Snyder,
Journ. College Sci. Tokio, vol.
15, pt. 2, (1901) p. 303, (type locality,
Aomori, ^{Hakodate} 1). — Jordan, Tanaka, Snyder,
Journ. College Sci. Tokio, vol. 33,
(1913) p. 124, (reference).

Lepidopus tenuis (not Günther)
Tanaka, Journ. Faculty Sci.
Univ. Tokyo, Sect. 4, Zool., vol.
3, pt. 1, p. 50, no. 4, 1931
(reference).

on cheek to preopercle ridge. Scales with 1 to 3 basal radiating striae; circuli fine, apically extremely fine and numerous.

D. IX or X, 14 or 15, third spine 1 1/2 to 1 2/3 in head, first ray 2 3/4 to 3; A. V or VI, 12 or 13, second spine 2 to 2 1/5, first ray 3 1/4 to 3 1/2; least depth of caudal peduncle 3 1/2 to 4; ventral 2 1/5 to 2 3/5; caudal 3 to 3 1/4 in combined head and body to caudal base, forked, lobes pointed; pectoral 2 3/4 to 2 4/5.

More or less bright silvery white. Median, bright lateral vertebral whitish streaks. Fins very pale brown. Iris dull yellow or white.

India, Malayan Peninsula, Malacca Straits, East Indies, Philippines, Formosa.

Depth $23\frac{1}{3}$ in length; head $11\frac{2}{3}$. Snout $2\frac{2}{3}$ in head; eye $5\frac{2}{3}$; maxillary not quite reaching eye, $2\frac{5}{6}$ in head; teeth moderate, close set, equal, except 4 strong front upper canines.

Vertebrae 120.

D. 127; no anal fin; caudal very small, forked; pectoral $2\frac{1}{2}$ in head; no ventrals.

Color silvery. Length of dried specimen 2440 mm (8 feet). (Jordan and Snyder.)

Japan. The describers of this nominal form, considered by Tanaka as a questionable synonym of Lepidopus tenuis, fail to point out any distinctive characters.

Lepidopus xantusi Goode and Bean

Lepidopus xantusi Goode and Bean,
Oceanic Ichth., 1895, p. 519 (on p. 203),

— Jordan, Evermann, Clark, Rep. U. S.
Comm. Fisher., Append., 1928 (1930), p.

262 (reference)

— Brauer, Deutsch. Tiefsee - Exped. Valdivia, vol. 15, p. 291, 1906
(Gulf of Guinea, lat. 15° 6' 2" S., long. 9° 58' 6" W., 1500 m.), pl. 12, fig. 2, p. 397 (reference)

Lepidopus caudatus (not Euphrasen)

Goode and Bean, Oceanic Ichth., 1895

p. 203, pl. 58, fig. 213, (type locality,
Cape San Lucas; specimen from
John Xantus de Vesey). — Jordan
and Evermann, Bull. U. S. Nat. Mus.,
no. 47, pt. 1, (1896, p. 886) (part;
copied).

Jordan and Gilbert, Proc. U. S. Nat.
Mus., vol. 5, p. 358, 1882 (Cape San
Lucas).

p. 540, fig. 164. ¹ Fowler, Journ. Acad. Nat. Sci. Philadelphia, series 2, vol. 12, 1904, p. 517 (Padang). ¹ Jordan and Seale, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 24 (Cavite). ¹ Fowler and Bean, Proc.

U. S. Nat. Mus., vol. 62, 1922, p. 42 (Taka). ¹

Pentaprion gerreoides Bleeker, Natuurk. Tijdschr. Nedert. Indie, vol. 1, 1850, p. 4. ¹ Batavia. ¹ Yungher, Cat. Fishes

Depth $2\frac{2}{5}$ to $3\frac{1}{5}$; head $3\frac{1}{4}$ to $3\frac{1}{2}$, width $1\frac{5}{6}$ to 2. Snout $3\frac{1}{8}$ to $3\frac{2}{3}$ in head; eye $2\frac{4}{5}$ to 3, greater than snout, subequal with interorbital; maxillary nearly or quite reaches eye, expansion $2\frac{2}{3}$ to 3 in eye, length $2\frac{1}{3}$ to 3 in head; interorbital $2\frac{2}{3}$ to 3, broadly convex. Gill rakers 4 or 5 + 13 or 14, lanceolate, equal gill filaments or $\frac{1}{4}$ to $\frac{1}{3}$ of eye.

Scales (most fallen) 44 to 48 in lateral line to caudal base; 6 above, 11 or 12 below, 14 or 15 predorsal forward about opposite middle of eye; 3 rows

Depth $18 \frac{1}{2}$; head 7, width 6.

Snout $2 \frac{3}{4}$ in head from snout tip; eye 5, $1 \frac{3}{4}$ in snout, twice width of bony interorbital; maxillary reaches $\frac{7}{8}$ to eye, expansion 3 in eye, length 3 in head from snout tip; 3 large upper anterior canines, followed by 10 or 12 smaller teeth each side; pair of small anterior lower canines, followed by 18 small teeth each side; row of small teeth on each palatine; interorbital 9, low, nearly level; mandible 2 in total head length. Gill rakers 7 + 12, short, weak denticles, $\frac{1}{2}$ gill filaments which $\frac{1}{3}$ of eye.

no scales. Lateral line axial along side of trunk. Tail very slightly shorter than trunk.

Loaded
Follow—Incl Caps

134789

751

Sciaena sinuata (Day) ← 1129 ✓

Umbrina sinuata DAY, Fishes of India, pt. 2, 1876, p. 182, pl. 46, fig. 1, ¹⁸⁷⁶ (Kurrachee); Suppl., (1888, p. 788 (places Umbrina striata BOULENGER as synonym); Fauna Brit. India, Fishes, vol. 2, 1889, p. 109, fig. 48, ¹⁸⁸⁹ (Kararachi; Muscat). — GILCHRIST and THOMPSON, Ann. South Africa Mus., vol. 6, (1908-1911, p. 182, (26 fathoms Amatikulu Conical Hill N.W. 7¹/₂ miles). — ZUGMAYER, Abh. Bayer. Akad. Wiss., Math.-phys. Kl., vol. 26, 1913, p. 12 (Mekran). — GILCHRIST and THOMPSON, Ann. Durban Mus., vol. 1, pt. 4, (1917, p. 351 (compiled). — BARNARD, Ann. South Africa Mus., vol. 21, pt. 2, (1927, p. 579 (Natal).

Depth 3 or little less; head 3 or little more. Eye 3¹/₃ to 5¹/₂ in head, equals snout or interorbital; maxillary reaches ¹/₃ in eye; barbel ¹/₄ in eye; preorbital depth ²/₃ to ³/₄ in eye. Lower gill rakers 8 or 9, lowest mere knobs.

Scales ctenoid, 44 to 50 in lateral line; 7 above, 12 below. Lateral line with bifurcate tubes, hinder ones simple, at least in young.

D. X, I, 27 to 29, third spine or third and fourth longest, ²/₅ to ³/₄ in head or in body depth; A. II, 7, second spine strong, ¹/₂ of head or 2¹/₂ in body depth; caudal rounded or cuneate.

Grayish or brownish, with silvery sheen. Nine wide, sinuous, oblique dark bands, wider than interspaces. Opercle and pectoral axil blackish. Spinous dorsal and ventrals black. Soft dorsal and anal with black edges. Caudal with dusky edge. According to Day bands more numerous with age, being outer edges of wide bands in young. Length 420 mm. (Barnard.)

Natal coast, Persian Gulf, Indian Seas.

Type locality:

holotype

D. 10

471

D. 106? (damaged and most rays broken), fin height $1\frac{2}{3}$? in eye; A. 50?; caudal (broken) $4\frac{1}{2}$? in head; caudal peduncle narrowly constricted, least depth $4\frac{1}{3}$ in eye; pectoral (broken) $3\frac{3}{4}$ in total head length, rays 13?; ventral small, scale like, nearly eye diameter behind pectoral base,

uniform brownish, with traces of silvery or gray. Iris grayish.

Lower California. The species does not appear to have been described and the imperfect figure by A. H. Baldwin, published by Goode and Bean, reveals the imperfect type. Goode and Bean do not point

Leaded

Follow - Incl Caps

720

C. 129-N

134789

752

Sciaena striata (Boulenger)

type locality:

Umbrina striata BOULENGER, Proc. Zool. Soc. London, 1887, p. 660, (Muscat; East Arabia); 1889, p. 245 (Muscat). - GILCHRIST and THOMPSON, Ann. South Afric. Mus., vol. 6, (1908-1911, p. 181) (Natal). - ZUGMAYER, Abh. Bayer. Akad. Wiss., Math.-phys. Kl., vol. 26, (1913, p. 12) (Oman). - GILCHRIST and THOMPSON, Ann. South Afric. Mus., vol. 11, (1911, p. 58) (error); Ann. Durban Mus., vol. 1, pt. 4, (1917, p. 351) (compiled). - BARNARD, Ann. South Afric. Mus., vol. 21, pt. 2, (1927, p. 580) (East London; Natal coast).

Sciaena striata FOWLER, Proc. Acad. Nat. Sci. Philadelphia, 1925, p. 248 (Natal coast in 20 fathoms).

Umbrina capensis (not PAPPE) VON BONDE, Marine Surv. South Africa, Spec. Rep. 1, 1923, p. 15 (Natal).

holotype

Depth $2\frac{7}{8}$; head $3\frac{1}{8}$, width $2\frac{1}{10}$. Snout $3\frac{1}{4}$ in head; eye $4\frac{1}{8}$, $1\frac{1}{4}$ in snout, $1\frac{1}{8}$ in interorbital; maxillary reaches opposite front pupil edge, expansion $2\frac{3}{4}$ in eye, length $2\frac{2}{5}$ in head; chin with barbel $\frac{1}{2}$ of pupil, 2 pores each side and snout end with 6; interorbital 4 in head, convex. Gill rakers 5 + 11, short points.

Scales 47 in lateral line to caudal base and 17 more out over caudal, 8 above, 11 below, 42 predorsal. Scales with 14 or 15 basal radiating striae; 73 to 96 apical points, with 4 or 5 transverse rows of basal elements; circuli fine.

holotype

D. X, I, 28, I, fourth spine $2\frac{1}{8}$ in head, eighth ray 3; A. II, 7, I, second spine $3\frac{1}{8}$, second ray $2\frac{2}{3}$; caudal $1\frac{2}{3}$; pectoral $1\frac{1}{2}$; ventral $1\frac{7}{8}$.

472

out any characters and simply state "The specific identity of the fish found at St. Lucas by Xantus is so doubtful that we prefer to refer to it as L. Xantusi, new specific name".

This method of introducing new names into literature is surely as unfortunate as it is careless or inexcusable. Although I admit the species here it is but tentative as further comparison may vindicate the distinctions, such as the more slender body, proportions of the head and greater number of anal fin rays.

U. S. N. M., no. 10115. Cape San Lucas, Lower California. J. Xantus de Vesey. Length 257 mm. Type.

Umbrina russelli CANTOR, Journ. Asiat. Soc. Bengal, vol. 8, pt. 2, 1849,
p. 1053 (Pinang, Malay Peninsula, Singapore). ✓

SEALE, Philippine Journ. Sci., vol. 5, No. 4, Oct. 1910, p. 279 (Sandakan, Borneo).

Umbrina russellii GORGOZA, Anal. Soc. Españ. Hist. Nat., Madrid, vol. 14,
1885, p. 73 (Manila).

Sciaena russelli BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, No. 3, vol. 14,
1874, p. 58 (Singapore, Bintang, Banka, Java, Madura, Celebes); Atlas
Ichth., vol. 9, 1877, pl. 386, fig. 2. - FOWLER, Proc. Acad. Nat.
Sci. Philadelphia, 1927, p. 286 (Philippines).

Sciaena russelli FOWLER and BEAN, Proc. U.S. Nat. Mus., vol. 63, 1923,
p. 17 (Philippines).

Umbrina kuhlii CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 170 (Java).

Johnius kuhli BLEEKER, Nederland. Tijdschr. Dierk., vol. 2, 1865, p. 56
(Amoy).

Sciaena indica (KUHL and VAN HASSELT) CUVIER, Hist. Nat. Poiss., vol. 5,
1830, p. 179 (Java). (Name in text.)

Depth $3\frac{1}{4}$ to $3\frac{1}{3}$; head 3 to $3\frac{1}{8}$, width $2\frac{1}{8}$ to $2\frac{1}{5}$. Snout $3\frac{2}{5}$
to $3\frac{3}{4}$ in head; eye $3\frac{1}{2}$ to 4, subequal with snout, slightly greater than
interorbital; maxillary reaches $\frac{3}{5}$ to $\frac{2}{3}$ in eye, expansion $2\frac{2}{5}$ to $2\frac{3}{4}$ in
eye, length $2\frac{3}{4}$ to $2\frac{4}{5}$ in head; mandibular barbel $1\frac{2}{5}$ in eye, 2 pores each
side; bands of minute villiform teeth in each jaw; interorbital $4\frac{2}{5}$ to $4\frac{1}{2}$,
slightly convex; preopercle edge denticulate. Gill rakers 6 + 10, low, short
points, $1\frac{1}{2}$ in gill filaments, which $2\frac{1}{4}$ in eye.

Scales 45 in lateral line to caudal base; 7 above, 8 below, 28 pre-
dorsal; anteriorly in lateral line each tube with 2 short branches. Scales
with 11 basal radiating striae; 25 or 26 apical denticles, with 7 or 8 trans-
verse series of basal elements; circuli fine.

Lepidopus caudatus (Euphrasen)

Trichiurus caudatus Euphrasen,
Kon. Vet. Schwed. Akad. Abhandl.
Stockholm, vol. 9, p. 49, pl. 9 (upper
figure), 1788 (type locality, Cape of
Good Hope).

Lepidopus caudatus Günther, Cat.
Fish. Brit. Mus., vol. 2, p. 344, 1860
(English coast; southern Europe;
Lisbon; Cape Seas). — Garnman, Mem.
Mus. Comp. Zool., vol. 24, p. 384, 1899
(reference). — Brauer, Deutsch.
Tiefsee Exped. Valdivia, vol. 15, p. 290,
1904 (diagnosis in key). —
Gilchrist, Marine Biol. Rep. South
Africa., vol. 2, p. 125, fig., 1914. —
Thompson, Marine Biol. Rep. South
Africa, vol. 4, p. 114, 1918 (references).
— Strubberg,

474

Danish Oceanogr. Rep., vol. 2, A. 6,
p. 7, 1918 (post-larval forms).

— Barnard, Ann. South Africa
Mus., vol. 21, pt. 2, p. 791, pl. 30,
fig. 1, ~~October~~ 1927 (Table Bay;
False Bay; to 200 fathoms). —

Mc Culloch, Mem. Austral. Mus.,
no. 5, pt. 2, p. 267, ~~September~~ 10,
1929 (reference).

Two short stripes over eye, one across cheek and opercle from lower corner of eye. General color darker and bars on side broader and almost black.

3 examples. Romblon. March 26, 1908.
Length 59 to 69 mm. [468.] Black opercular blotch surrounded by narrow yellow lines. General body color purplish amber, centers of scales darker. No traces of transverse dark bars on side of body. Narrow black line above opercular blotch. Obscure paler stripe from lower corner of eye across cheek to opercle. Abdominal region partly silvery.

475

Lepidopus argentus Bonnaterre,
Tabl. Ichth., p. 58, 1788 (type
locality, Mediterranean).

Lepidopus gouani Schneider,
Syst. Ichth. Bloch, p. 239, pl.
53, fig. 2, 1801 (no type locality
[= Mediterranean]).

Trichiurus gladius Holten, Kjöb.
Ak. Af. Nat. Selsk., vol. 5, p. 23,
pl. 2, fig. 1, 1802 (type locality,

Dandellius lusitanicus Shaw,
General Zool., vol. 4, pt. 2, p. 199,
1803 (type locality, Atlantic;
Mediterranean).

Lepidopus peronii Risso, Ichth.
Nice, p. 148, pl. 5, fig. 18, 1810
(type locality, Nice).

1 example. North West Verde Island.
July 22, 1908. Length 42 mm.

1 example. Port Dupon, Leyte Island.
March 17, 1909. Length 47 mm.

16101. Port Catangyan, Catangyan Bay. May 14, 1909. Length 40 mm.
3 examples. Port Jamelo, Luzon. July 13,

1908. Length 30 to 40 mm.

1 example. Port Natalvi, Luzon. November
23, 1908. Length 55 mm.

3 examples. Romblon. March 25, 1908.

Length 32 to 42 mm. [441, 442, 443.]

Black opercular blotch about size of eye,
narrow bordered with golden. Back
with opalescent reflection dusky.
Narrow brownish bars on middle of side.
Fins all vermilion. Another example
with short black stripes over blotch.

476

Ziphotheca tetradens Montague,
Wernerian Mem., vol. 1, p. 82, pls.
2-3, 1811 (type locality, British
Isles).

Lepidopus argyreus Cuvier, Hist.
Nat. Poiss., vol. 8, p. 223, 1831
(January 1832) (type locality,
seas of France).

Lepidopus ensiformis Bonaparte,
Cat. met. Pesc. Eur., p. 78, 1846
(type locality, Mediterranean).

1 example. Galera Bay, Mindanao Island.
 June 9, 1908. Length 42 mm.
 7370. Tigoso Point, Dinapundan Bay, Samar. ^{July 28, 1909. Length 48 mm.}
 6 examples. Great Tobea Island.

December 15, 1909. Length 20 to 50 mm.

[D. 5249.] Lauang Point, h. 1 mile. May 16,
 1908. Length 35 mm.

1 example. Limbones Cove, Luzon. February
 8, 1909. Length 61 mm. [1128.] Very dark
 olive. Black spots on lower side and
 caudal peduncle. Black blotch size of
 pupil on opercle narrowly margined
 white. Dorsals, anal and pectorals
 dusky vermilion, no bars. Caudal similar
 but darker, tips of outer rays paler.

6 examples. Mactan Island. August 31,
 1909. Length 39 to 73 mm.

477

Depth $9\frac{3}{4}$ to $14\frac{7}{8}$; head ~~width~~
 $6\frac{3}{4}$ to $6\frac{4}{5}$, width 5 to $5\frac{1}{5}$. Snout
 $2\frac{2}{5}$ to $2\frac{1}{2}$ in head from snout
tip; eye $5\frac{1}{4}$ to 6, $1\frac{3}{4}$ to $2\frac{1}{2}$ in
snout, greatly exceeds interorbital
in young, subequal with interorbital
with age; maxillary reaches eye,
length $2\frac{2}{5}$ to $2\frac{3}{4}$ in head from
snout tip; 3 or 4 large canines
forward above and 2 below,
followed by row of pointed
compressed teeth, 15 to 17 teeth
each side in each jaw; no teeth
on palate; interorbital 6 to $8\frac{1}{2}$,
level. Gill rakers 14 + 30,
variable, slender, pointed,
subequal with gill filaments
which $3\frac{1}{5}$ in eye.

No scales. Lateral line
axial along side of body.

no dips

8 pt. Loaded

725

Follow - Incl Caps

134739

757

No. 72691 U.S.N.M. Java. Bryant and Palmer. Length 135 mm.

No. 52990 A.N.S.P. Bombay, India. Prof. F. Hallberg. 1924. Purchased.

No. 27634 A.N.S.P. Padang, Sumatra. A.C. Harrison and H.L. Hiller. Length 148 mm

Sciaena dussumieri (Valenciennes)

Umbrina dussumieri VALENCIENNES, Hist. Nat. Poiss., vol. 9, 1833, p. 481

(Coromandel). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 278 (no

locality). - DAY, Proc. Zool. Soc. London, 1865, p. 18 (Cochin, Malabar)

Fishes of Malabar, 1845, p. 48; Fishes of India, pt. 2, 1876, p. 183,

pl. 43, figs. 2-3. Fauna Brit. India, vol. 2, 1889, p. 110. - PELLEGRIN

Bull. Soc. Zool. France, vol. 30, 1905, p. 84 (Baie d'Along, Tonkin).

JORDAN and SEALE, Bull. Bur. Fisher., vol. 26, 1906(1907), p. 25

(Cavite). - EVERMANN and SEALE, Bull. Bur. Fisher., vol. 26, 1906(1907)

p. 87 (San Fabian). - JORDAN and RICHARDSON, Bull. Bur. Fisher., vol.

27, 1907(1908), p. 26 (Manila). - ZUGMAYER, Abh. Bayer. Akad. Wiss.,

Math.-phys. Kl., vol. 26, pt. 6, 1913, p. 12 (Mekran). - PELLEGRIN,

Bull. Soc. Zool. France, vol. 39, 1914, p. 224 (Fort Dauphin, Madagas-

car). - GILCHRIST and THOMPSON, Ann. Durban Mus., vol. 1, No. 4, 1917,

p. 351 (compiled).

Sciaena dussumieri BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, vol. 14, No.

3, 1874, p. 56 (Sumatra, Singapore, Banka, Java, Amboina); Atlas Ichth.

Ind. Néerland., vol. 9, 1877, pl. (4)387, fig. 4. - FOWLER, Copeia, No.

58, June 18, 1918, p. 64 (Philippines); Proc. Acad. Nat. Sci. Philadel-

phia, 1918, p. 43 (Philippines). - FOWLER and BEAN, Proc. U.S. Nat.

Mus., vol. 63, 1923, p. 171 (Philippines); vol. 71, 1927, p. 8 (Benkoe-

len, Sumatra). - FOWLER, Proc. Acad. Nat. Sci. Philadelphia, 1927, p.

286 (Orion; Philippines).

type locality

ff

← 127

p. 87

478

D. 100 to 102, origin opposite first fourth of postocular, fin height $5\frac{1}{4}$? (damaged) in total head; A. about 30, most rays broken; caudal 3 to $4\frac{1}{5}$, rather broadly forked; least depth of caudal peduncle equals its width or $4\frac{2}{3}$ in eye; pectoral $2\frac{1}{8}$ to $2\frac{1}{3}$ in head, rays 12.

Brown, sides below burnished with silvery white. Iris whitish. Fins pale brownish.

Eastern Atlantic, from the British Isles to the Cape of Good Hope. Reaches 1824 mm.

Follow - Incl Caps
loaded

no dips

134789
726

758

Siaena dussumieri FOWLER, Journ. Bombay Nat. Hist. Soc., vol. 30, No. 4, Nov. 1926, p. 778 (Bombay). (Misprint.)

Umbrina amblycephalus BLEEKER, Nat. Tijds. Nederland. Indië, vol. 8, 1855, p. 412 (Amboina). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 278 (compiled). - KNER, Sitz. Ber. Akad. Wiss. Wien, Math.-nat. Kl., vol. 58, pt. 1, 1868, p. 320 (Formosa). - SCHMELTZ, Cat. Mus. Godeffroy, No. 4, 1869, p. 16 (East Indies); No. 5, 1874, p. 26 (Akyab). - KÁROLI, Termesz. Füzetek, Budapest, vol. 5, 1881, p. 159 (Canton).

type locality:

Umbrina fuscolineata VON BONDE, Fisher. Marine Surv. South Africa, Spec. Rep. 1, 1923, p. 15, pl. 4. - BARNARD, Ann. South Afric. Mus., vol. 21, pt. 2, 1927, p. 577 (Natal; Zululand coast; 20 to 30 fathoms).

holotype

Depth $3\frac{1}{2}$ to $3\frac{3}{5}$; head $3\frac{1}{8}$ to $3\frac{1}{5}$, width $1\frac{2}{3}$ to $1\frac{9}{10}$. Snout $3\frac{1}{4}$ to $3\frac{1}{3}$ in head; eye $4\frac{2}{5}$ to 5, $1\frac{1}{3}$ to $1\frac{3}{5}$ in snout, $1\frac{1}{8}$ to $1\frac{2}{5}$ in interorbital; maxillary reaches $\frac{2}{5}$ in eye or to hind pupil edge, length from snout tip $2\frac{1}{2}$ to 3 in head; front of snout below with pores and lower edge with 4 flaps along upper lip; arc of 5 pores around chin and barbel $\frac{1}{2}$ of eye; interorbital $3\frac{2}{5}$ to $3\frac{4}{5}$, broadly convex. Gill rakers 4 + 9, short tubercles, rudimentary.

Scales 52 to 57 along lateral line to caudal base; tubular scales 43 to 47 in lateral line to caudal base and 5 or 6 more on latter; 8 above, 10 to 12 below, 28 to 30 predorsal. Scales with 10 to 12 basal radiating striae; circuli very fine.

to slit

D. XI, 23, I or 24, I, third spine $1\frac{3}{4}$ to $1\frac{7}{8}$ in head, first ray $3\frac{1}{8}$ to $3\frac{1}{3}$; A. II, 7, I; second spine 3 to $3\frac{4}{5}$, third ray $1\frac{7}{8}$ to $2\frac{2}{5}$; caudal $1\frac{3}{5}$ to $1\frac{7}{8}$, obtuse, little obliquely rounded below; least depth of caudal peduncle $3\frac{3}{4}$ to $3\frac{4}{5}$; pectoral $1\frac{1}{5}$ to $1\frac{1}{3}$; ventral $1\frac{4}{5}$ to 2.

U. S. N. M., No. 28449. Messina,
Italy. Italian Government.
Length 900 mm.

U. S. N. M., No. 39700. New Zealand.
Otago Museum. Length 356 mm.

U. S. N. M., No. 48267. Bay of
Naples, Italy. Length 1200 mm.

no digits

Follow—Incl Caps
Loaded

727

134789

759

Above bister, with soiled or dusky appearance, sides generally with silvery, violet and bluish reflections. Along back 4 or 5 obscure, ill defined, dark blotches and sides with dark cloudings. Dusky blotch, more or less conspicuous, about size of eye, at suprascapula region. Iris brown. Spinous dorsal neutral blackish. Soft dorsal, anal and caudal dark brown. Paired fins pale basally, neutral brown terminally.

Mekran, Madagascar, India, East Indies, Philippines, Indo-China, China. Umbrina fuscolineata Von Bonde is very closely related, evidently synonymous. Barnard says ^{that} the "chief difference" from Sciaena dussumieri "lies in the lower spinous dorsal, which in dussumieri is much higher, being nearly or quite equal to the depth of the body". Bleeker's figure shows it $1\frac{1}{3}$.

fe | 22517, 22519. # Dagupan, Luzon. March 19, 1908. Length, 77 to 100 mm.

24 examples. Manila Bay. December 6, 1907. Length, 83 to 98 mm. Abundant

□ on sandy shores. Drummed audibly when touched. All individuals appeared to drum and on dissection though gonads not greatly developed both sexes seemed to be represented. The air bladder is of moderate size, pointed posteriorly and ~~is~~ bilobed head and all compound racemose, hollow and filled with air. Three or 4 most posterior more simple and directed nearly straight backward. Color of all upper parts bluish dusky or slaty, white below. Fins slaty, caudal greenish.

fl | 6546. # Off Daet. June 15, 1909. Length, 145 mm.

5021 to 5023. # Tacloban market. July 25, 1909. Length, 188 to 203 mm.

no. 56123. U. S. N. M. # San Fabian. Bureau of Fisheries (4097). Length, 131 mm.

no. 57979 U. S. N. M. Zamboanga. Dr. E. A. Mearns. Length, 128 to 139 mm. 3 examples

2 examples, A. N. S. P. □ Philippines. Commercial Museum of Philadelphia.

Length, 60 to 145 mm.

Lepidopus gracilis Brauer

Lepidopus gracilis Brauer, Deutsch.
Tiefsee Exped. Valdivia, vol. 15,
p. 291, 1904 (type locality, West
coast of South Africa, lat. $21^{\circ}53'$
S., long. $6^{\circ}58'6''$ E., in 1400 meters),
p. 297 (reference).

Lepidopus argenteus Brauer,
op. cit., vol. 15, pl. 12, fig. 1, 1904
(not fig. 5 as quoted in text).

481

Depth 14; head $4\frac{1}{2}$. Snout $2\frac{1}{3}$
in head from snout tip; eye
 $5\frac{1}{2}$, $2\frac{1}{4}$ in snout, greatly
exceeds interorbital; maxillary
reaches about $\frac{9}{10}$ to eye,
expansion $1\frac{3}{4}$ in eye, length
 $2\frac{2}{5}$ in head from snout tip;
jaws with small teeth;
interorbital width $2\frac{1}{5}$ in eye,
low.

Lateral line obsolete?

D. 65 to 67, fin origin
opposite last sixth in postocular
space; A. 27, fin origin about
last third in space between gill
opening and caudal base; 2
postanal scales before anal
fin; caudal $2\frac{1}{3}$ in head, well
forked and lobes sharply
pointed; least depth of

lines, below pale buff to whitish.
Iris silvery white. Dorsal and caudal
grayish, other fins whitish. Pectoral
with black blotch at origin.

Mediterranean and Eastern Atlantic
to South Africa, Natal and Delagoa
Bay.

1 example, A.N.S.P. Natal. H.W. Bellmarley.
Length 150 mm.

caudal peduncle half of eye;
pectoral rays 13, fin $2\frac{4}{5}$ in
total head length.

Silvery, with very fine
blackish longitudinal streaks.
Length 609 mm. (Brauer.)

Atlantic Ocean off South
Africa. Brauer has transposed
the numbers of the figures
representing this species and
his Lepidopus argenteus.

Depth 3; head $3\frac{3}{4}$, width $1\frac{4}{5}$.
 Snout $3\frac{1}{10}$ in head; eye $3\frac{2}{3}$, $1\frac{1}{5}$ in
 snout, $1\frac{1}{4}$ in interorbital; maxillary
 reaches $\frac{3}{4}$ in snout, length $3\frac{3}{4}$ in
 head; teeth compressed, notched; inter-
 orbital $2\frac{7}{8}$, comp. 4. Gill rakers 6 + 14,
 lanceolate.

Scales 71 in lateral line to caudal
 base and 10 more on latter; 6 above, 14
 below, 26 predorsal to occiput, 6 rows
 on cheek to preopercle ridge. Scales
 with 9 or 10 basal radiating striae; 68
 to 70 apical denticles, with 8 or 9
 transverse rows of basal elements;
 circuli fine.

D. $\overline{\text{XI}}$, 16, $\overline{\text{I}}$, fifth spine 2 in head,
 first ray 3; A. $\overline{\text{III}}$, 13, second spine
 $3\frac{1}{3}$, first ray $2\frac{3}{5}$; caudal 1, well
 forked; pectoral $1\frac{1}{4}$; ventral $1\frac{1}{2}$.

Back grayish, with 7 pale longitudinal

483

Genus Benthodesmus Goode and
Bean

Benthodesmus Goode and Bean,
Proc. U. S. Nat. Mus., vol. 4, (1881),
p. 380. (Type Lepidopus elongatus
Clarke, monotypic.)

Body very slender, greatly compressed, band like, with long tapering tail, trunk $2\frac{1}{2}$ in tail. Head long, slender, greatly attenuated. Snout conic, elongate. Eyes large, high, front edge median in head. Maxillary not reaching eye, well sheathed. Mouth completely closes, with long lower jaw protruding in front as rather long conic coriaceous point. Teeth in jaws

uniseriate, compressed, pointed, some anterior above enlarged. Row of even fine teeth on palate, none on tongue. Mandible $1\frac{2}{3}$ in rest of head. No occipital crest. Gill rakers few weak denticles. Pseudobranchiae present. Pyloric caeca 8? No scales. Lateral line complete, distinct. Dorsal begins on head little behind preopercle, low, more or less uniformly high. Anal preceded by single small scale like appendage, anterior rays spine like and only posteriorly rather few as distinct articulated rays. Caudal small, forked, lobes sharp pointed. Pectoral low, moderate, fin rays fine.

Nibea schlegelii JORDAN and HUBBS, Mem. Carnegie Mus., vol. 10, No. 2, June 27, 1925, p. 243 (Shizuoka, Osaka, Tokyo, Kobe, Mikawa Bay, Misaki, Fukuoka, Fukin, Miyazu).

Corvina yeddoensis (DÖDERLEIN) STEINDACHNER and DÖDERLEIN, Denkschr. Akad. Wiss. Wien, Math.-nat. Kl., vol. 48, pt. 1, 1884, p. 35, (Jeddo). (Name in text).

134789 722
type locality

Sciaena nibe JORDAN and THOMPSON, Proc. U.S. Nat. Mus., vol. 39, 1911, p. 258, fig. 4, (Wakanoura). type locality;

Nibea nibe JORDAN and HUBBS, Mem. Carnegie Mus., vol. 10, No. 2, June 27, 1925, p. 243 (Osaka market; Nickawa Bay).

Sciaena iharae JORDAN and METZ, Mem. Carnegie Mus., vol. 6, No. 1, 1913, p. 37, pl. 7, fig. 2, (Fusan, Korea). type locality;

1913

Depth $3\frac{1}{2}$ to $3\frac{4}{5}$; head $3\frac{1}{8}$ to $3\frac{1}{4}$, width $1\frac{7}{8}$ to $2\frac{1}{5}$. Snout $3\frac{1}{5}$ to $3\frac{1}{2}$ in head from snout tip; eye $4\frac{1}{2}$ to 5, $1\frac{2}{3}$ to $1\frac{1}{2}$ in snout, $1\frac{1}{4}$ to $1\frac{2}{5}$ in interorbital; maxillary reaches $\frac{1}{2}$ in eye, expansion $1\frac{2}{5}$ to $1\frac{1}{2}$ in eye, length 2 to $2\frac{1}{5}$ in head from snout tip; mouth terminal, mandible slightly protruding; 2 pairs of pores at chin, hind pair larger; rather narrow bands of villiform teeth in jaws, outer upper rows as canines with 4 at least partly exposed with closed jaws and inner row of mandible distinctly enlarged; interorbital $3\frac{1}{4}$ to 4 broadly convex; suborbital depth $1\frac{1}{2}$ to 2 in eye; flexible preopercle edge with numerous slender weak spinules, usually hidden by scales. Gill rakers 6 + 14 or 15, lanceolate, little greater than gill filaments or $\frac{1}{2}$ of eye; 1 to 3 above and 3 to 5 below of gill rakers usually rudimentary.

Scales 49 or 50 in lateral line to caudal base and 15 ? more out over caudal fin; 6 above, 9 below, 12 predorsal forward to occiput and 26 more forward to front end of snout; 11 rows of large scales across cheek; caudal and anal scaly basally, dorsals naked. Scales with 21 or 22 basal radiating striae; 23 to 48 weak short apical denticles with 10 to 19 transverse series of basal elements; circuli fine.

Ventral small or rudimentary scale like point opposite pectoral origin.

Fishes of deep water, usually much more slender than the preceding.

Analysis of Species

a.¹ D. 154 or 155.

b.¹ A. 100.

atlanticus.

b.² A. 25.

elongatus.

a.² D. 125 to 133; A. 71 to 75.

tenuis.

a.³ D. 115 to 122; A. 67 to 74.

philippinus.

Follow—Incl Caps
Leader

134789

726

699

Depth $3\frac{1}{2}$ to $3\frac{1}{2}$; head $3\frac{2}{3}$ to 4. Snout $4\frac{1}{2}$ in head; eye 4 to $4\frac{1}{2}$, little longer than subequal with snout, $1\frac{1}{2}$ in interorbital; maxillary reaches opposite eye center, length 3 in head; teeth villiform, outer upper row slightly enlarged, lower teeth uniformly low; interorbital low; preopercle edge denticulate.

Scales 45 along above lateral line to caudal base, 40 along below; 4 or 5 above, 12 below; soft vertical fins with basal half finely scaled.

D. IX or X, I, 32 or 33. Second spine 2 in head, first ray $2\frac{2}{5}$; A. II, 7 or 8, second spine $2\frac{3}{5}$, $1\frac{1}{3}$ in postocular, first ray 2 in head; caudal 1, cuneate with median point behind; least depth of caudal peduncle $3\frac{2}{5}$; pectoral $1\frac{1}{5}$; ventral $1\frac{3}{5}$.

Above bluish green, below silvery. Iris yellowish, above brownish. Opercle with diffuse purplish spot above. Body and fins dusted with grayish. Fins yellowish. Length, 115 mm. (Bleeker.)

Only known from Padang, Benculen, Ticu, and Trussan in Sumatra.

Johnius dussumieri (Cuvier) ← 129

Corvina dussumieri CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 118.

Malabar. - VALENCIENNES, Règne Animal, Cuvier, Ed. Ill., 1839, pl. 28, fig. 2, 1839.

Johnius dussumieri CANTOR, Journ. Asiat. Soc. Bengal, vol. 18, pt. 2, 1849.

p. 1046 (Pinang, Malay Peninsula, Singapore). - BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, vol. 14, ser. 3, 1874, p. 49 (compiled).

Sciaena glaucus DAY, Fishes of India, pt. 2, 1876, p. 192, pl. 46, fig. 2.

India. - JOHNSTONE, Fasc. Malayensis, Annandale and Robinson, Zool., vol. 2, 1903, p. 293 (outside Patani Bay). - BELLEGRIN, Bull. Soc. Zool. France, vol. 30, 1905, p. 84 (Baie d'Along, Tonkin). - PEARSON, Ceylon Administr. Rep., 1914, p. E7; 1915-1918, p. F14.

486

Benthodesmus atlanticus Goode and Bean

Benthodesmus atlanticus Goode and Bean, Oceanic Ichth., p. 205, pl. fig. 215, 1895 (type locality, From halibut on Grand Banks of Newfoundland, in 80 fathoms; off St. Kitts, West Indies, in 208 fathoms). — Jordan and Evermann, Bull. U. S. Nat. Mus., no. 47, pt. 1, p. 887, 1896 (copied). — Gilbert, Smithson. Miscell. Collection, vol. 66, no. 18, p. 1, 1917.

— Gilchrist and Van Bonde, Fishes. Marine Biol. Surv. South Africa, Special Rep. no. 3, no. 7, p. 16, 1922 (1924) (off Natal, in 250 fathoms). — Barnard, Ann. South African Mus., vol. 21, pt. 2, p. 792, Oct. 1927 (Natal record).

A 728. Danawan Island, Borneo.

September 27, 1901. Length 308 mm.

A 1353. Great Tobea Island. December
15, 1909. Length 258 mm.

51972 U.S.N.M. Regraz. ^{Dr.} Bashford
Dean. Length 69 mm.

1 example (with 51982 U.S.N.M.). Regraz.
Dr. Bashford Dean. Length 49 mm.

52274 U.S.N.M. Apia, Bureau of
Fisheries. Length 243 mm.

30495 U.S.N.M. New Guinea.
[Australian Museum. Length 275 mm.

56212 U.S.N.M. Van Fabian, Bureau
of Fisheries (No. 3972). Length 139 mm.

65996 U.S.N.M. Fakarawa, Tuamotus.
Albatross Collection. Length 435 mm.

65997 U.S.N.M. Moore, Carolines.

Albatross Collection 1900. Length 41 to 45 mm.
7 examples.

487

Lepidopus atlanticus Garman,
Mem. Mus. Comp. Zool., vol. 24, p.
384, 1899 (reference). — Brauer,
Deutsch. Tiefsee-Exp. Valdivia,
vol. 15, p. 291, 1904 (diagnosis
in key).

Benthodesmus elongatus (not Clarke)
Goode and Bean, Proc. U. S. Nat.
Mus., vol. 4, p. 380, 1881 (type of
Benthodesmus atlanticus). —
Jordan and Gilbert, Bull. U. S. Nat.
Mus., no. 16, p. 910, 1882 (1883) (copied).

Genus Spondylisoma Cantor

Spondylisoma Cantor, Journ. Asiatic Soc. Bengal, vol. 18, pt. 1, 1849, p. 1032. Type Sparus cantharus Linnaeus. Spondylisoma Cantor proposed to replace Cantharus Cuvier. Canthere Cuvier, Bull. Soc. Philomath. Paris, 1814, p. 92. Type Sparus cantharus Linnaeus, tantotypic. Name of improper form.

Cantharus (not Bolton 1798, Bentfort 1808) Cuvier, Règne Animal, vol. 2, 1817, p. 278.

Type Sparus cantharus Linnaeus, tantotypic.

Cantharusa Strand, Archiv Naturgesch., ab. 8, heft 8, 1926, p. 54. Type Sparus cantharus Linnaeus, virtually. Cantharusa Strand proposed to replace Cantharus Cuvier.

Caranthus Barnard, Ann. South African Mus., vol. 21, pt. 2, 1927, p. 720. Type Sparus cantharus Linnaeus, virtually.

Caranthus Barnard proposed to replace Cantharus Cuvier.

Lepidopus elongatus Günther, Rep. Voy. Challenger, vol. 22, 1887, p. 38 (part; copied).

Depth $29\frac{1}{3}$; head $7\frac{1}{4}$, width 6. Snout $2\frac{1}{4}$ in head from snout tip; eye $5\frac{1}{2}$, $2\frac{1}{2}$ in snout, greatly exceeds interorbital; maxillary reaches $\frac{7}{8}$ to eye, expansion 3 in eye, length $2\frac{2}{3}$ in head from snout tip; front of upper jaw with 6 enlarged canines, of which 3 depressible, followed by 7 or 8 larger, compressed, slender teeth each side; $22 + 17$ (asymmetrical) teeth below with pair of rather small canines inclined posteriorly; interorbital 10, low, level, concave. Gill rakers $4 + 9$, slender denticles,

no dips

Leaded
mellow - Incl Caps

700

Sciaena glauca DAY, Fauna Brit. India, Fishes, vol. 2, (1889, p. 122. mal
PEARSON, Ceylon Administr. Rep., 1915-1918, p. F. 14. mal MALPAS, Cey-
lon Administr. Rep., 1921, p. E5. mal

Sciaena glaucus PEARSON, Ceylon Administr. Rep., 1915-1918, p. F13.

(Error.)

134789

727

Johnius glaucus FOWLER, Journ. Bombay Nat. Hist. Soc., vol. 30, No. 4,
Nov. (1926, p. 10 (Bombay); vol. 32, No. 2, Oct. 20, 1927, p. 260
(Bombay) ✓

Depth $2\frac{4}{5}$ to $3\frac{3}{4}$; head $2\frac{7}{8}$ to $3\frac{1}{2}$, width $1\frac{3}{4}$ to 2. Snout $3\frac{1}{8}$
to $3\frac{3}{4}$ in head; eye $3\frac{1}{2}$ to $4\frac{1}{3}$, 1 to $1\frac{2}{5}$ in snout, 1 to $1\frac{1}{4}$ in inter-
orbital; maxillary reaches $\frac{2}{5}$ to $\frac{1}{2}$ in eye, expansion $1\frac{4}{5}$ to 2 in eye,
length $2\frac{1}{5}$ to $2\frac{4}{5}$ in head; chin with 5 pores; mandibular teeth in villiform
band, with inner posterior little larger; interorbital $3\frac{1}{2}$ to $4\frac{1}{4}$, broadly
convex; preopercle edge membranous or denticulate. Gill rakers 5 or 6 + 12 or
13, lanceolate, short, $\frac{1}{2}$ gill filaments, which $\frac{1}{2}$ eye.

Scales 45 to 50 along above lateral line to caudal base and 5 more
on latter; scales 48 in lateral line to caudal base, each tube with short
branch above and below; 6 scales above, 7 to 9 below, 19 to 25 predorsal for-
ward nearly to snout tip. Scales with 7 to 9 basal radiating striae; 18 to
35 apical denticles, with 8 to 11 transverse series of basal elements; circuli
very fine.

D. XI, 27, I to 32, I, second spine $1\frac{3}{5}$ to $1\frac{3}{4}$ in head, third ray
 $2\frac{2}{5}$ to $2\frac{1}{2}$; A. II, 7, I, second spine $2\frac{1}{10}$ to $3\frac{3}{4}$, first ray $1\frac{1}{2}$ to $1\frac{3}{4}$;
caudal 1 to $1\frac{1}{2}$, cuneate, rounded behind, lower median rays longest; pectoral
 $1\frac{1}{5}$ to $1\frac{1}{2}$; ventral $1\frac{1}{5}$ to $1\frac{4}{5}$, first ray ends in short filament.

489

subequal with gill filaments or
7 in eye.

Scales absent. Lateral line
complete, high at first, slopes
down until axial behind
pectoral.

D. 154, fin height 2 in eye,
A. 100, of which about 28.
articulated rays, fin height 2
in eye; caudal long as eye;
least depth of caudal peduncle
~~9 in total head~~ 9 in total head
length; pectoral $3\frac{1}{3}$, rays I, 11;
ventral damaged (computed by
Goode and Bean to be inserted
opposite pectoral origin,
rudimentary, represented by
minute scutes $\frac{1}{2}$ of interorbital
width).

Follow—Incl Caps
Leaded

Mauve-brown above or back vinaceous-buff to buff below, under surface whitish. Iris pale to slate. Inside gill opening neutral dusky. Opercle neutral or slate-brown. Spinous dorsal dusky or neutral dusky terminally. Soft dorsal and caudal grayish, other fins whitish. Sometimes vertical fins all more or less dusky to dusky gray terminally. Paired fins pale, sometimes sprinkled with dark dots. Pectoral with gray blotch within axil close behind origin of fin.

134789

728

India, Malay Peninsula, Singapore, Indo China. According to Day it attains a large size. Known chiefly by its pale yellowish gray color.

H (3) examples, A.N.S.P. Bombay. Bombay Natural History Society. 1925. Length, 173 to 203 mm.

Nos. 52986 to 52989. A.N.S.P. Bombay. Prof. F. Hallberg. 1923. Length 70 to 114 mm.

Johnius jubatus (Bleeker) ← 129

H Corvina jubata BLEEKER, Nat. Tijds. Nederland. Indië, vol. 8, (1855), p. 160 (Bandjermasin, in rivers, Borneo). — GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, (1860), p. 305 (compiled). — DÜNKER, Mitt. Naturhist. Mus. Hamburg, vol. 21, (1903(1904)), p. 154 (Bandar Maharani).

Johnius jubatus BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, ser. 3, vol. 14, (1874), p. 52 (Sumatra; Borneo); Atlas Ichth. Ind. Néerland., vol. 9, (1877), pl. (4) 387, fig. 5.

type locality

490

Brownish, with silvery white reflections. Gray tints on head. Iris gray white. Inside gill opening and mouth blackish.

Natal, also in the north Atlantic off Grand Banks and West Indies.

U.S.N.M., no. 29116. Western edge of Grand Banks (from stomach of a halibut). Capt. Roderick Morrison. Schooner "Laura Nelson". Length 896 mm. Type.

Follow—Incl Caps
Leaded

134789

730

hololepidotus

Depth $3\frac{1}{5}$ to $3\frac{2}{3}$; head 3 to $3\frac{1}{4}$, width $1\frac{3}{4}$ to 2. Snout $3\frac{4}{5}$ in head; eye $3\frac{1}{5}$ to $4\frac{1}{2}$, $1\frac{1}{3}$ in snout, $1\frac{1}{3}$ to $1\frac{1}{2}$ in interorbital; maxillary reaches opposite eye center, length 3 in head; teeth villiform, above outer row, but slightly longer, lower subequal; interorbital convex; preopercle edge entire (at least in figure).

134789

729

Scales 60 along above lateral line, 30 along below; 11 above (9 above anal origin on figure, 2 predorsal to front of snout tip). Scales cycloid except on front above and abdomen where strongly ciliated; soft vertical fins finely scaled over greater portions basally.

facilitate

D. X, I, 22 to 25, fourth and fifth spines subequally longest or 3 in head, first ray $3\frac{1}{8}$, fourteenth ray $2\frac{2}{3}$; A. II, 8 or 9, second spine $4\frac{1}{8}$, or $2\frac{2}{5}$ in postocular; caudal $1\frac{3}{4}$ in head, cuneate, ends rather broadly in median point behind; least depth of caudal peduncle $3\frac{3}{5}$; pectoral $1\frac{3}{5}$; ventral $2\frac{1}{3}$.

Above bluish or greenish gray, sides and below silvery. Iris yellowish, above brownish. Opercle with diffuse bluish blotch above. Fins yellow. Spinous dorsal margined with dusky. Anal and ventral broadly bordered white below. Length, 17 cm. (Bleeker.)

Only known from Sumatra, Malay Peninsula, and Borneo. Bleeker calls attention to the scales on the front and abdomen, not only ciliated, but their roughness also apparent in profile, also the shape of the dorsal.

Johnius hololepidotus (Lacépède)

← 129

11 Labrus hololepidotus LACÉPÈDE, Hist. Nat. Poiss., vol. 3, 1802, pp. 448, 518, pl. 21, fig. 2, (Great Equatorial Ocean).

9

1802

type locality

491

Benthodesmus elongatus (Clarke)

- Lepidopus elongatus Clarke, Trans.
New Zealand Inst., vol. XI, (1879),
p. 294, pl. 14^(3 figs) (type locality, Hokitika
Beach, New Zealand). —
- Günther, Rep. Voy. Challenger,
vol. 22, (1887), p. 38 (copied). —
- Goode and Bean, Oceanic Ichth.,
(1895) p. 206, ~~pl. 14~~ figs (copied).
- Garnman, Mem. Mus. Comp. Zool.,
vol. 24, p. 384, 1899 (reference).

— McCulloch, Mem. Austral. Mus.,
no. 5, pt. 2, p. 267, September 10,
1929 (reference).

no dips

Follow—Incl Caps
8 pt. Leaded

703

134789

731

Sciaena hololepidota CUVIER, Hist. Nat. Poiss., vol. 6, 1830, p. 53

(Cape of Good Hope; Fort Dauphin, Madagascar). - ANDREW SMITH, Illustr. Zool. South Africa, Fishes, 1849, pl. 15 (Cape Town). - PAPPE, Synopsis Edible Fishes South Africa, 1853, p. 15 (Cape of Good Hope). - CASTELNAU, Mém. Poiss. Afrique Australe, 1861, p. 9 (Cape of Good Hope). - PAPPE, Synopsis Edible Fishes South Africa, ed. 2, 1866, p. 11 (South Africa).

Sciaena hololepidota QUOY and GAIMARD, Voy. Astrolabe, Zool., vol. 3,

1830, p. 697, pl. 12, fig. 1 (Cape of Good Hope). - BLEEKER, Nat. Tijds. Nederland. Indië, vol. 21, 1869, p. (50, 52) 63 (Cape of Good Hope). - GUICHENOT, Mém. Soc. Sci. Nat. Cherbourg, ser. 2, vol. 2, 1866, p. 145 (Madagascar). - SAUVAGE, Hist. Nat. Madagascar, Poiss., 1891, p. 349. - BARNARD, Ann. South Afric. Mus., vol. 21, pt. 2, 1927, p. 569 (Luderitzbucht, Table Bay, False Bay, Natal, Delagoa Bay to 200 fathoms).

Sciaena capensis ANDREW SMITH, Illustr. Zool. South Africa, Fishes, vol.

4, 1849, pl. 15.

Sciaena aquila (not LACÉPÈDE) GÜNTHER, Cat. Fish. Brit. Mus., vol. 2,

1860, p. 291 (Algoa Bay). - SCHMELTZ, Cat. Mus. Godeffroy, No. 7, 1879, p. 44 (Sydney). - MCCOY, Rep. Melbourne Internat. Exhib., 1866, p. 317. - SCHMELTZ, Cat. Mus. Godeffroy, vol. 6, 1877, p. 14 (Sydney). - CASTELNAU, Proc. Linn. Soc. New South Wales, vol. 2, 1878, p. 232 (Brisbane; Sydney); vol. 3, 1879, p. (351)381 (Port Jackson). - OGILBY, Edible Fishes New South Wales, 1843, p. 72, pl. 22. - STEINDACHNER, Zool. Anz., vol. 32, Nos. 24-25, Nov. 21, 1895, p. 259 (Suez). - REGAN, Ann. Natal Mus., 1908, p. 245 (Bird Island). - PELLEGRIN, Bull. Soc. Zool. France, vol. 39, 1914, p. 224 (Fort Dauphin, Madagascar). - VON BONDE, Fishes Marine Survey, Spec. Rep. 1, 1923, p. 16.

492

Depth $35\frac{1}{4}$; head $8\frac{1}{3}$. Snout
 $2\frac{2}{5}$ in head from snout tip; eye 6,
3 in snout; maxillary reaches $\frac{7}{8}$
to eye, length $2\frac{2}{5}$ in head; teeth
uniserial, 8 on each maxillary;
5 long recurved upper fangs and
2 on each side near end of
symphysis; lower teeth uniserial,
11 each side; no teeth on palate
or tongue; interorbital very low.

Lateral line well marked,
yellow, axial.

D. 155; A. 25; pectoral rays
12; ventral minute rudiment,
in vertical with hind end of
pectoral base; anal high as
dorsal, base $\frac{1}{5}$ of dorsal base;
caudal deeply forked; pectoral
 $2\frac{4}{5}$ in head.

Uniform light metallic
silvery. Fins yellowish, caudal
pinkish. Length 691 mm.
(Clarke.)

New Zealand.

494

Philippinus new species
Benthodesmus argenteus (Brauer)

(not Bonnatere¹⁷⁸⁸)

Lepidopus argenteus Brauer, Deutsch.

Tiefsee Exped. Valdivia, vol. 15, p. 292,

1904 (type locality, northeast coast of Africa, Lat. $9^{\circ}6'1''$ N.,

long. $53^{\circ}41'2''$ E., in 1500 meters).

p. 397 (reference).

Lepidopus gracilis Brauer, op.

cit., vol. 15, pl. 12, fig. 3, 1904

(not figure 1 as quoted in text).

Lepidopus argenteus B.

~~Parthocheilichthys philippina, new species~~

Depth 21 to $21\frac{2}{3}$; head $6\frac{2}{3}$ to $7\frac{4}{5}$, width $5\frac{1}{3}$ to 6. Snout $2\frac{1}{6}$ to $2\frac{1}{5}$ in head from snout tip; eye $6\frac{4}{5}$ to $8\frac{4}{5}$, 3 to 4 in snout, $1\frac{2}{5}$ ^{to greater than} interorbital; maxillary reaches $\frac{9}{10}$ or to eye, expansion $1\frac{1}{2}$ to 2 in eye, length $2\frac{1}{5}$ to $2\frac{2}{5}$ in head from snout tip; 4 large upper front canines followed by 5 or 6 smaller wide set teeth each side; 8 or 9 wide set teeth each side below, first one of which well inclined back and not enlarged; row of small slender teeth on each palatine; interorbital $6\frac{1}{4}$ to 9, rather low, level. Gill rakers as 3 + 7 short low feeble denticles, barely $\frac{1}{4}$ of gill filaments, which

496
 $1\frac{3}{4}$ in eye.

No scales. Lateral line complete, axial along side of body.

D. ~~14~~ 115 to 122, fin height 7 in total head length; A. ^{73 of} 74, lower than dorsal, caudal 6 to $6\frac{1}{4}$? (damaged); least depth of caudal peduncle $2\frac{1}{2}$ to 5 in eye; pectoral $2\frac{2}{5}$ to 3 in total head, rays 12; ventral small pair of rudimentary scale like flaps opposite pectoral origin on median line of belly, about $\frac{1}{3}$ of eye.

Gray or leaden, where skin rubbed off brown. Iris gray. Fins pale. Inside gill opening and mouth blackish brown.

Follow—Incl Caps
8 pt. Leaded

704

134789

732

p. 100

Sciaena antarctica CASTELNAU, Proc. Zool. Acclimat. Soc., vol. 5, 1872

p. 100. (Bass Strait; Cape of Good Hope); Rec. London Internat. Exhib.

1873, pt. 7, No. 5, p. 11 (Victoria). - MACLEAY, Proc. Linn. Soc. New

South Wales, vol. 5, 1881, p. 520. - WOODS, Fishes New South Wales,

1883, p. 53, pl. 16. - GILBY, Handb. Sydney 1898, p. 130. - WAITE,

Rec. Australian Mus., vol. 5, pt. 2, 1904, p. 63 (Mandurah, West Aus-

tralia). - STEAD, Fishes of Australia, 1906, p. 113, fig. 42 (New

South Wales, Victoria, Queensland, South Australia); Edible Fishes

New South Wales, 1907, p. 66, pl. 37. - OGILBY, Commercial Fishes Fishes

Queensland, 1916, p. 23. - ROUGHLEY, Fishes of Australia, 1916, p. 112,

pl. 35 (Queensland, New South Wales, Victoria, South Australia, West

Australia, Tasmania). - WAITE, Rec. South Austral. Mus., vol. 2, No. 1,

Apr. 23, 1921, p. 107, fig. 164. - MC CULLOCH, Fishes New South Wales,

ed. 2, 1927, p. 58, pl. 24, fig. 211a.

Sciaena hololepidota antarctica OGILBY, Mem. Queensland Mus., vol. 6,

Dec. 19, 1916, p. 70, pl. 21 (Moreton Bay; Brisbane River).

Sciaena margaritifera HALI, Mag. Nat. Hist., ser. 4, vol. 15, 1875,

p. 269, (Port Natal). - REGAN, Ann. Natal Mus., 1908, p. 245 (Durban

Bay). - GILCHRIST and THOMPSON, Ann. Durban Mus., vol. 1, No. 4, 1917,

p. 350 (compiled).

Corvina axillaris (not CUVIER) DE VIS, Proc. Linn. Soc. New South Wales,

vol. 9, 1884, p. 538 (Brisbane River).

Sciaena neglecta RAMSAY and OGILBY, Proc. Linn. Soc. New South Wales,

ser. 2, vol. 1, 1886, p. 941 (Broken Bay, New South Wales).

Sciaena heinii STEINDACHNER, Anz. Akad. Wiss. Wien, vol. 39, Nachr. 24,

Nov. 20, 1902, p. 317 (Kischin, South Arabia); Dep. Akad. Wiss.

Wien, Math.-nat. Kl., vol. 71, pt. 1, 1907, p. 141, pl. 1, fig. 4

(Gischin).

type locality

Fishes
1916

type locality

p. 350

Off northeast Africa,
Philippines and East Indies.
My series of material appears
to agree with Brauer's
account, which is based on
a specimen much larger than
any I possess.

Depth 24; head $6\frac{3}{4}$. Snout $2\frac{7}{8}$ in head from snout tip; eye $6\frac{1}{5}$, $2\frac{1}{4}$ in snout, greatly exceeds interorbital; mouth cleft ~~not quite reaching eye;~~ reaches little beyond front eye edge; interorbital low, eye impinging on upper profile.

No lateral line ~~or~~ or at least not indicated on figure.

D. about 115, fin origin opposite last $\frac{2}{5}$ in postocular space; A. 67 to 70, fin origin slightly before second third in space between gill opening and caudal base; 2 preanal scales; caudal $3\frac{1}{5}$ in total head length, deeply forked; least depth of caudal peduncle $2\frac{2}{5}$ in eye; pectoral rays 12,

729

Cuv 130

Genus Salpa Bonaparte

Salpa Bonaparte, Prosp. Syst. Nat. Génér.,
1831, p. 175. Type Sparus salpa Linnaeus,
designated by Jordan, Genera of Fishes,
pt. 2, 1919, p. 175. (no description.)

Ensalpa Fowler, Univ. Mus. Novitates,
N. Y., no. 162, March 31, 1925, p. 4. Type
Sparus salpa Linnaeus, orthotypic.

Body slender, depth $2\frac{4}{5}$ to $2\frac{7}{8}$ in
its length. Upper teeth with 2 points,
lower with single triangular point.
Dorsal spines 11, rays 14 to 16.

Differs from Bops Cuvier chiefly
in the oblong compressed body and the
relatively fewer dorsal spines.

499

fin $2\frac{1}{2}$ in total head; ventral
shown inserted ^{close} behind pectoral
base, nearly long as eye.

Silvery, with very delicate
blackish longitudinal streaks.
Length 1109 mm. (Brauer.)
~~off northeast Africa.~~

Sarpa salpa (Linnaeus)

Sparus salpa Linnaeus, Syst. Nat., ed. 10, vol. 1, 1758, p. 280. Mediterranean.

→ Box salpa Gilchrist and Thompson, Ann. South Afr. Mus., vol. 6, 1908-11, p. 165 (Natal); Ann. Durban Mus., vol. 1, pt. 4, 1917, p. 357 (reference). ¹/_m Thompson,

Marine Biol. Rep. South Africa, no. 4, 1918, p. 85. ¹/_m Barnard, Ann. South Afr. Mus., vol. 21, pt. 2, 1927, p. 726 (Saldanha Bay, Table Bay, False Bay, Agulhas Banks, Natal, Delagoa Bay).

Boops salpa Papp, Synop. Edible Fishes Cape of Good Hope, 1853, p. 22 (Cape Town, Saldanha Bay). ¹/_m Castelnau, Mém. Poiss. Afrique Australe, 1861, p. 31 (Table, Simons and Delagoa Bays).

Sarpa salpa Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1925, p. 243 (Natal).

D. 5445.

500

8687. [^]Atalaya Point, Batag
Island, S. 56° E., 5.3 miles (~~S.~~ N.
lat. 12° 44' 42" E. long. 124° 59' 50"),
east coast of Luzon. June 3, 1909.
~~Length~~ (In 383 fathoms.)

Length 632 mm. Type.

D. 5444.

8684. [^]Atalaya Point, Batag
Island, S. 65° E., 5.1 miles
(~~S.~~ N. ^{lat.} 12° 43' 51" E. long. 124° 58'
50"), east coast of Luzon. In
308 fathoms. June 3, 1909. Length
622 to 632 mm. 2 examples.

D. 5408.

1687. [^]Capitancillo Light N. 25° W.,
20.8 miles (N. lat. 10° 40' 15" E.
long. 124° 15'), between Cebu and
Leyte. In 159 fathoms. March
18, 1909. Length 260 mm.

Leader

134789

733

Follow - Incl Caps

Dol. p. 100

Depth $4\frac{3}{4}$; head $3\frac{1}{2}$ to $3\frac{7}{8}$, width $2\frac{2}{5}$. Snout $3\frac{2}{3}$ in head from snout tip; eye 6 to $6\frac{1}{5}$; maxillary reaches opposite hind pupil edge, expansion $\frac{5}{8}$ of eye, length $2\frac{1}{8}$ to $2\frac{1}{5}$ in head from snout tip; mandible protruding; bands of villiform teeth in jaws and outer row of enlarged conical teeth in each, though especially enlarged and canine like toward front of upper; interorbital $3\frac{7}{8}$ to 4, convex; hind preopercle edge with several flattened denticles at corner, ridge entire. Gill rakers removed.

Scales 60 to 64 in lateral line to caudal base and 24 to 34 more over caudal fin; 10 above, 12 below, 62 predorsal; scales smaller along body edges, breast, predorsal and fin bases; row of 4 large scales on cheek to preopercle ridge; caudal largely covered with small scales basally.

D. X, I, 27 to 29, fourth spine $2\frac{1}{4}$ in total head length, second ray $2\frac{2}{3}$; A. II, 7, second spine 4, second ray $2\frac{2}{5}$; caudal $1\frac{1}{2}$; least depth of caudal peduncle 4; pectoral $1\frac{1}{2}$; ventral $1\frac{3}{4}$.

Dull brownish above, silvery white on sides and below. Fins and iris brownish.

Eastern tropical Atlantic, Mediterranean, Red Sea, Madagascar, Natal, South Africa, West Australia, South Australia, Victoria, Tasmania, New South Wales, Queensland. Mediterranean examples show gill rakers 7 ~~+~~ 9, with some rudiments for the Australian form. Barnard gives 9 or 10 on lower arch with some rudiments. According to Ogilby it reaches ^{more than} over 1830 mm, with a weight of 125 (lbs.); though the average is ^{less than} under 30 (lbs).

Sciaena heinii STEINDACHNER, based on a single example 415 mm long is likely a fairly matured specimen of the present species, as its slightly emarginate caudal shows. It only seems to me to differ in a few more dorsal rays, not however much beyond the range of variation for the species as I find them 26 to 29. In brief it shows:

D. 5563.

4321. Dammi Island (N.), N. 79° W., 6.1 miles (N. lat. 5° 48' 12" E. long. 120° 30' 48"), between Jolo and Tawi Tawi. In 224 fathoms. September 21, 1909. Length 418 mm.

1883. D. 5247. Dimalag Island (S.), S. 78° W., 3.8 miles (N. lat. 7° 02' E. long. 125° 38' 45"), Gulf of Davao. In 135 fathoms. May 18, 1908. Length 287 mm.

1789, 1790. D. 5270. Escarceo Light, S. 9° E., 4.25 miles (N. lat. 13° 35' 45" E. long. 120° 58' 30"), Verde Island Passage and Batangas Bay. In 235 fathoms. June 8, 1908. Length 310 to 348 mm. 2 examples.

Follow—Incl Caps

134789

706

734

Leaded

tail fin

Depth $3\frac{1}{3}$; head $3\frac{1}{8}$. Snout $3\frac{2}{3}$ in head; eye 6, $1\frac{3}{5}$ in snout; maxillary reaches $\frac{7}{8}$ in eye, expansion $1\frac{1}{3}$ in eye, length $2\frac{3}{5}$; jaws even; outer row of teeth slightly enlarged; interorbital $3\frac{3}{5}$, moderately high; preopercle edge weakly denticulated.

Scales 53 in lateral line; 106 along above lateral line to caudal base, 84 along below; 10 or 11 above, 25 below (figure shows 12 above anal origin); soft dorsal and anal scaleless; caudal largely covered with fine scales basally.

tail fin

D. X, I, 32, third spine $2\frac{4}{5}$ in head, first ray $4\frac{2}{5}$; A. II, 7, second slender spine weak, $4\frac{4}{5}$ in head or $2\frac{4}{5}$ in postocular, second ray $2\frac{2}{5}$; caudal $1\frac{4}{5}$, little emarginate behind; least depth of caudal peduncle $3\frac{3}{5}$; pectoral $1\frac{1}{3}$; ventral $1\frac{4}{5}$.

Body gray-violet with silvery sheen above and on sides, silver gray on abdomen. Blackish brown blotch at pectoral origin (shown about size of pupil in figure).

25575. A.N.S.P. # Melbourne, Australia. Mrs. Agnes Kenyon. Length, 625 mm.

25576. A.N.S.P. # Melbourne. Mrs. Agnes Kenyon. Length, 635 mm.

Johnius plagiostomus (Bleeker) ← 1129

Corvina plagiostoma BLEEKER, Nat. Tijds. Nederland. Indië, vol. 1, 1850,

p. 100, ¹⁸⁵⁰ (Madura Straits near Surabaja and Kammal). ¹⁸⁵⁰ GÜNTHER, Cat.

Fish. Brit. Mus., vol. 2, (1850, p. 303 (compiled). ¹⁸⁵⁰ SCHMELTZ, Cat.

Mus. Godeffroy, No. 4, (1869, p. 43 (Saigon); No. 7, (1879, p. 44

(Saigon). ¹⁸⁶⁹ PÖHL, Cat. Mus. Godeffroy, No. 9, (1884, p. 30 (Saigon).

Pseudosciaena plagiostoma BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, ser.

3, vol. 14, 1874, p. 31 (Singapore, Java, Madura); Atlas Ichth. Ind. Néerland., vol. 9, (1877, pl. (2)385, fig. 1.

type locality:

2869. D. 5551. Jolo Light (E.), N. 60° E., 18 miles (N. lat. 5° 54' 48" ~~50~~ E. long. 120° 44' 24"), Jolo Island. In 193 fathoms. September 17, 1909. Length 293 mm.

10115. D. 5290. Matorot Point, S. 50° E., 3.10 miles (N. lat. 13° 40' 09" E. long. 120° 59' 30"), China Sea in vicinity of southern Luzon. In 214 fathoms. July 22, 1908. Length 472 mm.

4700. D. 5111. Sombrero Island, S. 41° E., 4.50 miles (N. lat. 13° 45' 15" E. long. 120° 46' 30"), China Sea off southern Luzon. In 236 fathoms. January 16, 1908. Length 621 mm.

4558. D. 5287. Sombrero Island, N. 68° E., 11.25 miles (N. lat. 13° 37' 40" E. long. 120° 39'), China Sea off southern Luzon. In 379 fathoms. July 20, 1908. Length 503 mm.

Follow Incl Caps
Leaded

134789

741

Sciaena semiluctuosa DAY, Fishes of India, pt. 2, (1876, p. 191 (Bombay, Sind, Beloochistan); Fauna Brit. India, Fishes, vol. 2, 1889, p. 121.
- ZUGMAYER, Abh. Bayer. Akad. Wiss., Math.-phys. Kl., vol. 26, pt. 6, 1913, p. 12 (Mekran).

Sciaena ten-lo BASILEWSON, Nouv. Mém. Soc. Nat. Moscou, vol. 10, 1855, p. 220, pl. 3, fig. 1 (not pl. 1, fig. 3), (China).

Corvina fauvelii SAUVAGE, Bull. Soc. Philom. Paris, ser. 7, vol. 5, 1881, p. 105, (Swatow, China) type locality

Sciaena fauvelii RUTTER, Proc. Acad. Nat. Sci. Philadelphia, 1897, p. 76 (Swatow).

Depth 3; head $2\frac{7}{8}$, width $1\frac{2}{3}$. Snout $3\frac{7}{8}$ in head; eye $4\frac{1}{2}$ to 6, 1 to 2 in snout, 1 to $1\frac{1}{2}$ in interorbital; maxillary reaches $\frac{1}{2}$ to $\frac{3}{4}$ in eye, expansion $2\frac{3}{4}$ in head; lower jaw little shorter than upper; 3 open pores across snout base, 5 more along free edge of skin and small lateral lobe; 5 pores under mandibular symphysis; teeth villiform, outer row enlarged and few enlarged outer ones above mandibular symphysis; interorbital low; hind preopercle edge denticulate or crenulate.

Scales 85 along above lateral line to caudal base, 75 along below; 55 to 60 scales in lateral line to caudal base; 8 or 9 above, 25 below; base of soft dorsal thickly scaled.

D. X, I, 28 to 31, spines weak, third spine $2\frac{3}{4}$ in head, $\frac{1}{3}$ higher than rays; A. II, 7, second spine strong, $\frac{3}{4}$ first ray or $2\frac{3}{4}$ in head; caudal $1\frac{3}{4}$, rounded or cuneate; least depth of caudal peduncle $3\frac{1}{2}$; pectoral $1\frac{2}{3}$; ventral $1\frac{1}{3}$, first ray filamentous.

Deep gray, with blackish band running along center of each row of scales, faint in young. Head glossed with purple. Fins all deep black.

(Cuvier; Day.)

2995. D. 5374. Jayabas Light (outer), N. 9° E., 7.4 miles (N. lat. 13° 46' 45" E. long. 121° 35' 08"), Marinduque Island and vicinity. In 190 fathoms. March 2, 1909. Length 395 mm.

4087. D. 5606. Dodepo Island (W.), N. 3° W., 10.8 miles (N. lat. 0° 16' 28" E. long. 121° 33' 30"), Gulf of Tomini, Celebes. In 834 fathoms. November 17, 1909. Length 162 mm. Depth 19; head $6\frac{2}{3}$. Snout $2\frac{3}{5}$ in head from snout tip; eye $4\frac{1}{4}$, $1\frac{3}{4}$ in snout, greatly exceeds interorbital; maxillary reaches eye, expansion $2\frac{3}{4}$ in eye, length $2\frac{2}{5}$ in head from snout tip; interorbital 7, concave.

Follow—Incl Caps
Loaded

710

134789

742

India, Malacca, East Indies, China, Reported from the Philippines by Elera. According to Sauvage Corvina fauvelii is said to differ from Johnius semiluctuosus in the marked notch between the 2 dorsal fins and the denticulated preopercle. Likely the young. It is described in brief:

Depth somewhat over 4 in total; head 4. Eye $4\frac{1}{2}$ in head; maxillary nearly reaches opposite hind eye edge; upper jaw convex, covers lower; upper jaw with 7 little enlarged teeth each side; preopercle distinctly denticulated, with 3 or 4 denticles enlarged at angle.

Scales 68 in lateral line.

D. X, I, 29, fins nearly separated by deep notch, first dorsal length $2\frac{1}{3}$ in soft dorsal length; A. II, 7, second spine strong, $\frac{3}{4}$ length of first ray; caudal rounded; ventral prolonged in filament.

Gray-green, with numerous oblique lines, Black spot at base of each ray and each spine of dorsal. Dorsal and anal mottled with dusky. Length 245 mm.

Johnius coitor (Hamilton-Buchanan) ← 1129

Bola coitor HAMILTON-BUCHANAN, Fishes of Ganges, 1822, pp. 75, 368, pl.

27, fig. 24, (Ganges River far as Kanpur and Jumna River to Agra).

Corvina coitor CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 116 (Ganges

mouth; Irawaddi). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860,

p. 301 (China, Calcutta, India). - ELERA, Cat. Fauna Filip., vol. 1,

1895, p. 502 (Cavite, Luzon, Santa Cruz). - DÜNCKER, Mitt. Naturhist.

Mus. Harburg, vol. 21, 1903(1904), p. 154 (Kuala Selangor).

Johnius coitor BLYTH, Journ. Asiat. Soc. Bengal, vol. 29, 1860, p. 141

(Sitang River). - MASON, Burmah Nat. Resources, 1860, p. 695.

(Type locality)

Benthodesmus tenuis (Günther)

Lepidopus tenuis Günther, Ann.

Mag. Nat. Hist., ser. 4, vol. 20, (1877)

p. 437 (type locality, off Inosima, ^{Japan});

Ref. Voy. Challenger, vol. 22, (1887)

p. 37, pl. 7, fig. 13 (type); vol. 31, p. 7, 1889.

Jordan and Snyder, Ann.

Zool. Japon., vol. 3, 1901, p. 65,

(reference); — Jordan, Tanaka,

Snyder, Journ. College Sci., vol.

33, 1913, p. 124 (reference) — Weber,

Siboga Exped., vol. 57, Fische, p. 405, 1913 (lat. 5° 53' 8" S., long. 132° 48' 8" E.,
Kei's Island, 560 meters);

— Garnman, Mem. Mus. Comp. Zool., vol. 24, p. 384, 1899 (reference)

Benthodesmus tenuis Goode and

Bean, Oceanic Ichth., (1895) p. 206,

(reference);

— Brauer, Deutsch. Tiefsee Exped. Valdivia,

vol. 15, p. 293, 1904 (northeast coast of Africa, lat. 4° 41' 9" N., long. 48° 38' 9" E., in

823 meters), p. 397 (reference).

134789

743

Sciaena coitor DAY, Fishes of India, pt. 2, (1876), p. 187, pl. 46, fig. 3

(Irawaddi). - VINCIGUERRA, Ann. Mus. Civ. Stor. Nat. Genova, 1882-1883

(Feb. 3, 1883), p. 652 (Minla on the Irrawaddi, Burma). - DAY, Fauna

Brit. India, Fishes, vol. 2, (1889), p. 115, fig. 49. - TIRANT, Service

Océanogr. Pêch. Indo Chine, (1929, Note 6^o), p. 169 (Cochin China).

? Corvina grypota RICHARDSON, Ichth. China Japan, (1846, p. 225 (Canton).

Corvina nalla-katchelee RICHARDSON, Ichth. China Japan, (1846, p. 226

(Canton; China Sea).

Sciaena (Corvina) nasus STEINDACHNER, Verh. Zool. bot. Ges. Wien, vol.

16, (1866, p. 771, pl. 15, fig. 1. Calcutta).

Corvina furcraea (not LACÉPÈDE) SCHMELTZ, Cat. Mus. Godeffroy, No. 4,

(1869, p. 16 (Saigon); No. 7, 1879, p. 44 (Saigon). - DÜNCKER, Mitt.

Naturhist. Mus. Hamburg, vol. 21, (1903(1904), p. 154 (Jeram).

Depth $3\frac{3}{5}$; head $3\frac{1}{3}$, width $1\frac{1}{2}$. Snout $3\frac{1}{8}$ in head; eye 4 to $5\frac{1}{2}$, $1\frac{1}{2}$ to 2 in snout, $1\frac{1}{3}$ in interorbital; maxillary reaches opposite eye center, length $2\frac{4}{5}$ in head; 3 small open pores across snout, 5 much larger ones along free edge of skin of snout and well developed lateral lobe; 1 central and 2 lateral orifices below mandibular symphysis; upper jaw somewhat longer; teeth villiform, outer upper row slightly enlarged and inner similar in lower jaw; interorbital nearly flat; preopercle serrate, serrae most distinct at angle.

Scales 58 along above lateral line, 50 in lateral line, 52 to 56 along below lateral line; 5 or 6 above, 15 below; cycloid on snout and below eyes, elsewhere ctenoid.

D. X, I or II, 26 to 29, second spine 2 in head, first ray $2\frac{7}{8}$;

A. II, 7, second spine $2\frac{1}{3}$ or equals postorbital, robust, first ray $1\frac{4}{5}$;

caudal $1\frac{1}{3}$ cuneate; least depth of caudal peduncle $3\frac{4}{5}$; pectoral $1\frac{1}{3}$;

ventral $1\frac{3}{5}$.

type locality

not found

not listed

Depth $23\frac{2}{3}$; head $6\frac{1}{3}$. Snout $2\frac{1}{4}$ in head from snout tip; eye $6\frac{7}{8}$, $3\frac{7}{8}$ in snout; maxillary reaches $\frac{7}{8}$ to eye, length $2\frac{2}{5}$ in head from snout tip; interorbital very low. Gill rakers minute, remote from each other.

Lateral line with about 180 pores (shown on figure).

D. 126, fin height $10\frac{1}{5}$ in total head length; A. 71, front rays hidden under skin and not free, fin height little lower than dorsal; caudal very small; pectoral $2\frac{4}{5}$ in total head length, rays 9 (on figure).

Uniform silvery. Length 610 mm. (Günther.)

Japan.

Teeth in cardiform or villiform bands, become narrower laterally, outermost row largest, lanceolate, without canines or molars. Hind nostril more or less slit like. Preorbital moderately deep or narrow. Branchiostegals 6. Air bladder with 2 horns posteriorly. Pyloric coeca 3 or 4. Scales moderate. Cheeks scaly. Interorbital and preopercle flange scaled or naked. Tubes in lateral line short, often appear bifurcate owing to 2 divergent series of pores opening to exterior. Dorsal spines 10 or 11, compressible in scaly sheaths. Anal spines 3.

Vegetable feeders. Species chiefly of the Mediterranean. The following are all modified from Barnard.

Genus Aphanopus Lowe

Aphanopus Lowe, Proc. Zool. Soc.
London, (1839, p. 79, (Type Aphanopus
carbo Lowe, monotypic.)

Body greatly elongate, strongly compressed to band like, tapering very gradually from head to very slender and rather long caudal peduncle. Head compressed, pointed. Snout conic, arched. Eye large, high, very slightly postmedian. Maxillary reaches below eye, expansion narrow. Mandible much longer than rest of head, protruded with conic coriaceous point in front. Mouth large, not completely closing. Teeth uniserial, well compressed,

several canine like forward on
 each jaw. Opercle with few weak
 striae anteriorly. Gill rakers
 rudimentary. Branchiostegals 7.
 Air bladder present. Pyloric
 caeca 6. Vertebrae 43 + 57.
 No scales. Lateral line present,
 pronounced. Dorsal divided,
 second fin beginning over anal
 spine. Caudal small, deeply
 forked. Anal spines numerous,
 weak, fin preceded by 1 or 2
 flattened depressible spines.
 Pectoral set very low and
 forward of upper hind end
 of opercle.
 Species few.

no depth

Follow - Incl Caps
headed

134789

699

Johnius belangeri KNER, Reise Novara, Fische, 1866, p. 133 (Java; Manila). - FOWLER, Journ. Bombay Nat. Hist. Soc., vol. 32, No. 2, Oct. 20, 1927, p. 230 (Bombay); Mem. Bishop Mus., vol. 10, 1928, p. 235 (on DAY).

Corvina kuhlii CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 121. Labouane River, Java.

Corvina lobata CUVIER, Hist. Nat. Poiss., vol. 5, 1830, p. 122, pl. 107. (Malabar). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 304 (compiled). - DAY, Fishes of Malabar, 1865, p. 55 (compiled).

Johnius coitor (not CUVIER) BLEEKER, Natuur. Geneesk. Arch. Nederland. Indië, ~~(Batavia)~~ vol. 2, 1845, p. 523 (Batavia).

Depth $3\frac{2}{5}$ to $3\frac{1}{2}$; head $3\frac{1}{3}$ to $3\frac{4}{5}$, width $1\frac{4}{5}$ to 2. Snout $3\frac{1}{4}$ to $3\frac{1}{2}$ in head; eye $3\frac{4}{5}$ to $4\frac{1}{8}$, $1\frac{1}{4}$ to $1\frac{1}{2}$ in snout, equals interorbital; maxillary reaches opposite eye center, expansion $2\frac{1}{5}$ in eye, length 3 to $3\frac{1}{10}$ in head; chin with 5 pores; outer row of upper teeth slightly enlarged, lower teeth uniform; interorbital $3\frac{4}{5}$ to $4\frac{1}{8}$, broadly convex; preopercle edge flexibly serrate. Gill rakers 4 + 9, short, lanceolate, half of gill filaments, which $2\frac{2}{5}$ in eye.

Scales 43 to 37 in lateral line to caudal base; 6 or 7 above, 8 or 9 below, 23 or 24 predorsal. Scales with 7 to 10 basal radiating striae; 31 to 37 apical denticles, with 2 or 3 transverse series of basal elements; circuli fine.

D. IX or X, 29, I, or 30. third spine $1\frac{3}{4}$ to 2 in head, first ray $2\frac{3}{5}$ to $2\frac{2}{3}$; A. II, 8, I or 9, I, second spine $2\frac{1}{8}$ to $2\frac{1}{4}$, second ray $1\frac{1}{2}$ to $1\frac{3}{5}$; caudal 1, cuneate, ends in median point; least depth of caudal peduncle $3\frac{1}{5}$ to $3\frac{1}{4}$; pectoral $1\frac{1}{5}$ to $1\frac{1}{3}$; ventral $1\frac{1}{8}$ to $1\frac{1}{5}$, first ray ends in filament.

Analysis of Species

a.¹ Head $4\frac{1}{2}$ to $4\frac{4}{5}$.

carbo.

a.² Head $6\frac{5}{6}$ to 7.

simonyi.

A 485. Lampinigan Island, south of Zamboanga; September 11, 1909.

Length 374 mm.

9018, 9366. Lingao Point, Luzon. June 24, 1909. Length 235 to 282 mm.

8314, 16965. Lode Bay, Nestacado Island. March 13, 1909. Length 238 to 302 mm.

14580. Maculabo Island. June 14, 1909. Length 198 mm.

8515. . Makesi Island, Palawan. April 5, 1909. Length 247 mm.

19609. Mansalay, Mindoro. June 4, 1908. Length 52 to 92 mm. 19 examples.

11232. Mantajin Bay, Palawan. April 2, 1909. Length 216 mm.

6579 and 6580. Maricaban Island near Sepoc. July 29, 1908. Length 242 to 268 mm.

7 examples. Matalvi, Luzon. November 23, 1908. Length 57 to 120 mm. In largest

Aphanopus carbo Lowe

509

Aphanopus carbo Lowe, Proc. Zool.
Soc. London, (1839) p. 79, (type
locality, Madeira); Trans.
Zool. Soc. London, vol. 3, 1839
(1849) p. 5, (Madeira). — Günther,
Cat. Fish. Brit. Mus., vol. 2,
(1860) p. 343, (Madeira); Ref. Voy.
Challenger, vol. 22, (1887) p. 36,
pl. 7, fig. A, (Madeira; Portugal).
— Capello, Journ. Sci. Math. Acad.
Lisboa, vol. 1, (18) pl. 4, fig. 4,
(). — Goode and Bean,
Oceanic Ichth., (1895) p. 207, fig.
216, (copied). — Garman, Mem.
Mus. Comp. Zool., vol. 24, p. 384, 1899
(reference). — Brauer, Deutsch.
Tiefsee Exped. Valdivia, vol. 15, p. 30,
1904 (reference).

Aphanopus minor Collett, Vid.
 Selsk. Forh. Christiania, no. 19,
 (1886) p. 3, (type locality, h. Lat.
 65° W. long. 31°, east coast of
 Greenland). — Goode and Bean,
 Oceanic Ichth., (1895) p. 207,
 (copied).

— Garman, Mem. Mus. Comp. Zool.,
 vol. 24, p. 384, 1899 (reference).

— Jordan and Evermann, Bull.
 U.S. Nat. Mus., no. 47, pt. 1, p. 885,
 1896 (copied).

Follow—Incl Caps
Loaded

134789

725

Scales 48 or 49 in lateral line to caudal base; 7 above, 8 below, 30 predorsal. Scales with 9 to 11 basal radiating striae; 36 to 38 apical denticles, with 7 or 8 transverse rows of basal elements; circuli fine.

D. X or XI, 27, I or 28, I, third spine $1\frac{2}{3}$ to $1\frac{4}{5}$ in head, first ray $2\frac{3}{5}$ to $2\frac{4}{5}$; A. II, 7, I, second spine $2\frac{1}{2}$ to $2\frac{3}{4}$, third ray $1\frac{2}{3}$ to 2; caudal $1\frac{1}{5}$ to $1\frac{1}{4}$, cuneate; least depth of caudal peduncle $3\frac{1}{2}$ to $3\frac{3}{4}$; pectoral $1\frac{1}{3}$ to $1\frac{2}{5}$; ventral $1\frac{1}{2}$ to $1\frac{3}{5}$.

fac
dit

Drab-brown above, white below. Spinous dorsal neutral dusky terminally. Soft vertical fins brownish, also paired fins, but lower rays of both pale yellowish. Iris gray.

India, East Indies, Philippines, China. The nominal Corvina papuensis is evidently synonymous, Hase seeming to distinguish it chiefly by the larger scales.

4 examples, A.N.S.P. Vigan, Luzon. Rev. Joseph Clemens. 1923. Length 90 to 148 mm.

52717 A.N.S.P. Orion, Luzon. Rev. Joseph Clemens. 1923. Purchased. Length 108 mm.

Johnius hypostomus (Bleeker) 129

Corvina hypostoma BLEEKER, Nat. Tijds. Nederland. Indie, vol. 5, 1853, p. 499, (Padang, Sumatra).

Sciaena hypostoma GÜNTHER, Cat. Fish. Brit. Mus., vol. 2, 1860, p. 293 (copied).

Johnius hypostoma BLEEKER, Verh. Kon. Akad. Wet. Amsterdam, ser. 3, vol. 14, 1874, p. 42 (Sumatra); Atlas Ichth. Ind. Néerland., vol. 9, 1877, pl. (1)384, fig. 2, 1877.

typo
locality:

571

Depth $13\frac{2}{5}$; head $4\frac{4}{5}$, $2\frac{2}{3}$ to vent,
width $4\frac{1}{5}$ in its length; trunk
5 in tail. Snout $2\frac{2}{5}$ in head
from snout tip; eye $5, 2$ in
snout, greater than interorbital;
maxillary reaches $\frac{1}{4}$ in eye,
expansion $3\frac{1}{3}$ in eye, length
 $2\frac{1}{8}$ in head from snout tip;
4 large canines in upper jaw
anteriorly followed by 6 long
slender compressed teeth
each side; lower teeth as pair
of slender enlarged anterior
canines, followed by 7 left
and 8 right compressed slender
teeth; palate toothless;
interorbital 7, slightly concave,
very low. Gill rakers 3+5
short feeble rudimentary points,
 $\frac{1}{2}$ of gill filaments, which $\frac{1}{4}$ in eye.

no dips

Leaded
Follow—Incl Caps

134789

723

D. X or XI, 1, 26, 1 to 28, 1, fourth spine $2\frac{1}{5}$ to $2\frac{1}{2}$ in total head length, first ray $3\frac{2}{5}$ to $3\frac{3}{4}$; A. II, 7, I, second spine $4\frac{1}{2}$ to 6, first ray $2\frac{3}{4}$ to $3\frac{1}{3}$; caudal $1\frac{1}{3}$ to $1\frac{1}{2}$, cuneate; least depth of caudal peduncle $3\frac{2}{5}$ to $3\frac{4}{5}$; pectoral $1\frac{1}{5}$ to $1\frac{1}{4}$; ventral $1\frac{3}{4}$ to $1\frac{7}{8}$.

Back brown, sides and below silvery white. Iris white. Spinous dorsal with membranes brown to dusky. Soft dorsal and caudal pale brownish, other fins whitish.

India, China, Formosa, Korea, Japan. This species greatly resembles Bleeker's figure of Pseudosciaena aeneus, which shows but 23 soft dorsal rays and the entire preopercle edge denticulate. The nominal Sciaena nibe Jordan and Thompson does not seem to me to differ.

- No. 22543 U.S.N.M. Japan. Japanese Government. Length, 265 mm. As Corvina sina.
- No. 44892 U.S.N.M. Japan. Japanese Government. Length, 325 mm. As Corvina sina.
- No. 57595 U.S.N.M. Japan. P.L. Jouy. Length, 188 mm. As Corvina schlegeli.
- No. 59728 U.S.N.M. Kochi, Japan. Dr. H.M. Smith. Length, 146 mm.
- No. 67331 U.S.N.M. Wakanoura, Japan. Jordan and Snyder. Length, 380 mm. Type of Sciaena nibe.
- No. 75438 U.S.N.M. Nagasaki. Jordan and Snyder. Length, 200 to 220 mm. (2) examples.
- No. 75439 U.S.N.M. Tokyo. Jordan and Snyder. Length, 175 mm.
- No. 75440 U.S.N.M. Inomichi. Jordan and Snyder. Length, 99 to 140 mm. (3) examples.
- No. 75441 U.S.N.M. Kawatana. Jordan and Snyder. Length, 205 mm.
- No. 75922 U.S.N.M. Japan? P.L. Jouy. Length, 300 mm.

572

Skin smooth, very delicate.
Lateral line complete; axial,
pores about 164, not distinct
on caudal peduncle.

D. 40 to 54, fin height
anteriorly 7 in total head length;
2 flattened, close set depressible
anal spines, subequal or $2\frac{1}{2}$
in eye, rays 45, lower about
3 in eye; very slender caudal
peduncle with least depth $6\frac{1}{2}$;
caudal with slender, pointed
lobes, length $4\frac{3}{5}$ in total head;
pectoral $2\frac{1}{2}$, rays 13, set low.

Largely uniform livid black.
Eastern Atlantic. Reaches 1140
mm in length. According to
Günther, with age dorsal with
~~12-13~~ only spines to number of 92. Small
or moderate sized examples
are like the one described above,

Follow—Incl Caps
Loaded

134789

724

697

Johnius axillaris (Cuvier) ← c. 129

Type Locality:

11 Corvina axillaris CUVIER, Hist. Nat. Poiss., vol. 5, (1830, p. 113, Mala-
bar). ¹/_m VALENCIENNES, Voy. Ind. Orient. Bélanger, Zool., (1834, p. 356
(Malabar coast). ¹/_m GÜTHER, Cat. Fish. Brit. Mus., vol. 2, (1860, p. 302
302 (no locality). ¹/_m DAY, Fishes of Malabar, (1865, p. 53 (copied). ¹/_m
SAUVAGE, Bull. Soc. Philom. Paris., ser. 7, vol. 5, (1881, p. 106
(Swatow, China).

Sciaena axillaris DAY, Fishes of India, pt. 2, 1876, p. 188, pl. 43, fig.
6 (Orissa; Madras). ¹⁸⁷⁶ ¹/_m FAUNA BRIT. INDIA, Fishes, vol. 2, (1889, p. 116. ¹/_m
RUTTER, Proc. Acad. Nat. Sci. Philadelphia, 1897, p. 76 (compiled). ¹/_m
HORA, Journ. Nat. Hist. Soc. Siam, vol. 6, No. 2, Oct. 31, 1923, p.
177 (Nontaburi). ¹⁹²³ ¹/_m PEARSON, Ceylon Administr. Rep., 1925, p. F14.

Bola axillaris JORDAN and STARKS, Ann. Carnegie Mus., vol. 11, Nos. 3-4,
Nov. 5, (1917, p. 451 (Ceylon).

Johnius axillaris FOWLER, Proc. Acad. Nat. Sci. Philadelphia, 1927, p.
285 (Vigan; Orion).

Corvina papuensis HASE, Jena Zeitschr. Nat., vol. 51, 1914, p. 531, figs.
4-6, (Tami, Kaiser Wilhelms Land, New Guinea).

Johnius papuensis FOWLER, Mem. Bishop Mus., vol. 10, (1928, p. 235
(copied).

Depth $3\frac{1}{2}$ to 4; head 3 to $3\frac{1}{3}$, width $1\frac{4}{5}$ to $1\frac{7}{8}$. Snout $3\frac{1}{2}$
to $3\frac{3}{4}$ in head; eye 4 to $4\frac{2}{3}$, $1\frac{1}{8}$ to $1\frac{1}{4}$ in snout, $1\frac{1}{8}$ to $1\frac{1}{4}$ in inter-
orbital; maxillary reaches $\frac{2}{5}$ to $\frac{1}{2}$ in eye, expansion $1\frac{1}{2}$ to $1\frac{2}{3}$ in eye,
length $2\frac{1}{4}$ to $2\frac{2}{5}$ in head; outer upper row and inner lower row of teeth
enlarged, latter little shorter; interorbital $3\frac{1}{2}$ to 4, slightly convex.
Gill rakers $7+4$, lanceolate.

Type Locality:

Papua

and apparently indistinguishable
from the nominal Aphanopus
minor Collett.

Benthodesmus atlanticus Goode and
Bean

Benthodesmus atlanticus Goode
and Bean, Oceanic Ichth., (1895) p.
205, pl. , fig. 215, (type locality,
From halibut on Grand Banks
of Newfoundland, in 80 fathoms;
off St. Kitts, West Indies, in 208
fathoms). — Jordan and Evermann,
Bull. U. S. Nat. Mus., no. 47, pt. 1, (1896)
p. 887 (copied). — Gilbert, Smithson.
Miscell. Collection, vol. 66, no. 18, p. 1,
1917. — Gilchrist and Von
Bonde, Zeitschr. Marine Biol. Surv. S. Africa, Rep. no. 3,
no. 57, p. 16, 1922 (1924) (off Natal, 250 fathoms).

Benthodesmus elongatus (not Clarke)
Goode and Bean, Proc. U. S. Nat.
Mus., vol. 4, (1881) p. 380, (type of
B. atlanticus). — Jordan and
Gilbert, Bull. U. S. Nat. Mus., no.
16, 1882 (1883), (p. 910) (copied).
— Barnard, Ann. South Afric. Mus., vol. 21, pt. 2, p.
792, Oct. 1927 (Natal record).

Depth $7\frac{1}{3}$ to vent; head $2\frac{3}{5}$.
~~Eye $4\frac{4}{5}$ in head. Snout $2\frac{1}{2}$ in~~
 head; eye $4\frac{4}{5}$, $1\frac{9}{10}$ in snout;
 8 long premaxillary teeth, 2
 foremost canines, and largest;
 8 lower teeth, ^{trifle shorter}; palate toothless.

D. 41 + ?; A. ?, strong
 dagger-shaped spine behind
 vent; no ventrals.

Silvery gray. Length from
 snout tip to vent 352 mm.

(Collett)

Off eastern Greenland!

U. S. N. M., No.

515

?

UNIVERSITY OF CALIFORNIA
LIBRARY
DIVERSITY OF LIFE
AND THE ENVIRONMENT

UNIVERSITY OF CALIFORNIA
LIBRARY
DIVERSITY OF LIFE
AND THE ENVIRONMENT

DIVERSITY OF LIFE
AND THE ENVIRONMENT

UNIVERSITY OF CALIFORNIA LIBRARY

through eye; bright yellow blotch covers entire upper portion of caudal peduncle extending down nearly to middle of side. Barbels

yellow at tip. Dorsal spines purplish, membranes olivaceous; soft dorsal with rays purplish and membranes purplish at bases, oblique sulphur yellow bars originating medially on fin and cross terminal portion, cover about 2 membranes or 1 membrane and adjacent tip of ray. Anal much paler, with about 6 sulphur yellow bars, lower crossing from base of first ray to tip of last, others parallel.

516

Aphanopus simonyi Steindachner

Aphanopus simonyi Steindachner,
Anzeig. Akad. Wiss. Wien, Math.-
naturw. Kl., 1891, p. 173 (type locality, Canary
Islands); Sitzs. Ber. Akad.
Wiss. Wien, math.-naturw. Kl.,
vol. 100, pt. 1, 1891, p. 356 (Valle
de San Andres, north east Santa
Cruz de Teneriffe, 150 m.).

Depth $3\frac{1}{10}$ to $3\frac{1}{6}$ in pectoral length;
 head $6\frac{5}{6}$ to 7 in total, long, low.
 Snout $2\frac{1}{13}$ to $2\frac{1}{12}$ in head; broad,
 flat; eye $5\frac{1}{2}$ to $5\frac{2}{3}$, $2\frac{2}{5}$ in snout;
 teeth in jaws compressed, pointed,
 with smaller teeth in middle of
 jaws; no teeth on palate; interorbital
 7 to $7\frac{1}{4}$ in head, deeply concave;
 opercle and subopercle with fine
 radiating striae.

D. XLV to XLVII, 105 to 107,
 second ray equals eye; small
 leaf formed spine behind vent;
 caudal with pointed lobes, $4\frac{2}{3}$
 to $5\frac{1}{2}$ in head; pectoral rays 12.

Clear silvery gray, somewhat
 darker on head. Dark brownish
 violet on hind part of rump and
 on caudal. Length 1300 mm.
 (Steindachner.)

Canary Islands.

dark band from eye extends back
far as end of depressed second
dorsal.

17628. Mompoo Island. March 3, 1909.
Length 210 mm.

9999. Murrelagos Bay, Mindanao.
August 21, 1911. Length 193 mm.

1 example. Hoyas Point, Panay. February
4, 1908. Length 72 mm. [40.]

13888 [153]. Observatory Island. December
19, 1908. Length 67 mm. Golden above lateral stripe

18822. Pandanon Island. March 23, 1909.
anteriorly. Dorsal and anal apparently not barred.
Length 237 mm.

2 examples. Pandanon Island. March 24, 1909.
Length 70 to 91 mm.

1 example. Pandanon Island. May 24, 1909.
Length 87 mm.

12871. Paros Point, Albay Gulf, Luzon.

June 21, 1909. Length 225 mm.

A 587 Panpan Point, Tara Island. September
20, 1909. Length 350 mm.