

Macrocephalichthyidae

n. family
gen. + species

Echelidae

Microschistys retrofina n. sp.

16 " elerae n. sp.

Ophichthiidae

Ophichthys parcephalozona n. sp.

Ratabouridae

Rataboura oculis n. sp.

Notacanthidae before
Apodes

Polyacanthus notus B. Leisler

Guthnotacanthus n. subg.

P. vaillanti n. sp.

notacanthus abboti n. sp.

Halosauridae

Halosaurus ridgwayi n. sp.

Family Macrocephenchelyidae ²⁰²⁸

Body greatly elongated. Head
^{narrow,} small, obtuse. Vent far advanced.
Snout short, wide. Eye in front
part of head. Mouth small, broad,
not reaching beyond eye. Teeth
form small dental areas, acute,
small, numerous, crowded, in jaws
and on vomer. No tongue. Front
nostril tubular, near front of snout,
lateral and hind nostril slit
close above upper part of eye.
Gill opening small slit, close below

pectoral base. No scales.
 Lateral line complete. Dorsal
 origin advanced to middle of
 short trunk, confluent with
 caudal and anal. Pectorals
 present.

One genus. Related to the
 Leptocephalidae and Henchelidae,
 differing in the entirely different
 aspect due to the very short muzzle,
 advanced eye, modified preorbital,
 thick lips, feeble dentition, ^{reduced} infero
 lateral gill openings below the pectorals,

short mouth cleft and comparatively
long pectorals.

Macrocephenchelys new genus

Type macrocephenchelys ^{brachialis} ~~pectoralis~~
new species.

Body long and with long though rather deep tapering tail; both well compressed. Head long, compressed. Combined head and trunk much less than half of tail. Snout short, very obtuse, with strong fleshy lateral expansion each side embracing long preorbital. Eye moderate, far forward, lateral. Mouth cleft short, wide, lower jaw little shorter than upper.

Lips broad, fleshy, finely plaited.
 Teeth villiform, very small, pointed,
 form broad short bands in jaws,
 premaxillary group coextensive in
 broad upper band with vomerine.
 Front nostril in short tube at
 side of snout end, groove below;
 hind nostril simple rather large
 pore level and close before upper
 front eye edge, with slightly
 elevated cutaneous rim. On
 pharynx 3 or 4 impressions of
 branchial arches. Gill opening

small, ^{close} below pectoral base.

Lateral line distinct. Body scaleless. Dorsal origin nearly midway in trunk, fin continuous with caudal and anal. Pectorals long, but little shorter than head.

Diagnosis. Known by its combination of characters, affording a very peculiar physiognomy, especially due to the very short muzzle, long pectorals, small trunk and long tapering tail.

Macrocephenchelys ^{brachialis} pectoralis new species

Depth $1\frac{4}{5}$ to 2 in head, $18\frac{4}{5}$ to $25\frac{4}{5}$ to caudal base; head $11\frac{2}{5}$ to $12\frac{2}{3}$, $3\frac{1}{3}$ to $3\frac{4}{5}$ to vent, width $2\frac{1}{2}$ to $2\frac{3}{4}$ in its length; combined head and trunk $2\frac{2}{7}$ to $2\frac{4}{5}$ in tail to caudal base. Snout 5 in head; eye 9, $1\frac{2}{3}$ to $1\frac{3}{4}$ in snout, greater than interorbital; mouth cleft reaches $\frac{1}{3}$ to $\frac{2}{5}$ in eye, length 4 to $4\frac{3}{5}$ in head; interorbital $9\frac{1}{2}$ to 10, level to slightly depressed. Gill opening 7 to $7\frac{3}{4}$ in head.

Lateral line axial, prominent, complete.

Dorsal origin much nearer gill opening than vent, behind depressed pectoral, received in groove, fin height $3\frac{1}{4}$ to 4 in head; anal received in groove, fin height 3 to $3\frac{1}{4}$; caudal 3 to 4, pointed; pectoral $1\frac{1}{2}$ to $1\frac{3}{5}$.

Light brown, belly and under surface of head scarcely paler. Iris grayish. Inside gill opening dusky. Peritoneum blackish.

Pharynx dark neutral gray.
 Fins largely pale or whitish,
 posteriorly vertical ones more or
 less dark dusky brown. Pectoral
 pale or whitish, with upper edge
 narrowly dusky, terminally grayish.

Diagnosis. Characters largely
 in those of the genus.

Type no. U. S. N. M.

2923. D. 5586. Sipidan Island (M.) West,
 9.4 miles (N. $40^{\circ}10'35''$ E. $118^{\circ}37'42''$), Sibuko
 Bay, Borneo. In 347 fathoms.
 September 28, 1909. Length 440 mm.

3808. D. 5667. ^{Onkona} ~~Lang~~ Point, S. $5^{\circ}W$, 11
 miles (S. $2^{\circ}56'E$, $118^{\circ}47'30''$), Macassar Strait.
 In 367 fathoms.
 December 29, 1909. Length 498 mm. Type.

Family Dysommidae

Mouth cleft extends far behind eye. Frontals ankylosed to form simple bone; suspensorium directed very obliquely backwards; palatopterygoid absent; vertebral column as in *Muraenidae*. Body naked. Pectorals present or absent. Vent not much removed from below gill openings.

Analysis of genera

a. Dorsal begins some distance behind gill opening; no pectoral; vent near ³/₄ head length behind gill opening.

Dysommopsis.

a.² Dorsal begins close behind gill opening; pectoral well developed; vent close behind gill opening.

Dysomma.

Genus Dysommopsis Alcock

Dysommopsis Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 8, 1891, p. 137. Type

Dysommopsis muciparus Alcock, monotypic.

Dorsal begins some distance behind gill opening. No pectorals. Vent nearly 3/4 head length behind gill opening.

Dysommopsis muciparus Alcock

Dysommopsis muciparus Alcock,
Ann. Mag. Nat. Hist., ser. 6, vol. 8,
1891, p. 137. N. 15° 56' 50" E. 81° 30' 1/2';
Bay of Bengal, 240 to 276 fathoms;
Journ. Asiatic Soc. Bengal, vol. 65,
pt. 2, 1896, p. 337 (reference).

Dysommopsis mucipara Alcock, ^{Deep.} Cat.
Deep Sea Fishes Indian Mus., 1899,
p. 193 (types).

Genus Dysomma Alcock

Dysomma Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4, 1889, p. 459. Type

Dysomma bucephalus Alcock, monotypic.

Tail tapering. Snout short, projects beyond mouth and lower jaw. Eyes very small, subcutaneous. Mouth cleft wide. Small sharp teeth uniserial or extremely narrow band in each jaw; short row of large teeth on vomer. Tongue not free. Gill openings rather small, well separated, branchial openings in pharynx wide slits. Heart placed between gills. No scales. Lateral

line of minute pores. dorsal begins immediately behind gill openings. Anal begins close behind vent. Paired fins well developed. Vent placed immediately behind gill openings, between bases of pectoral fins.

Analysis of species

a.¹ Depth 9 in total; head 4. bucephalus.

a.² Depth 20 in total; head 7. anguillaris.

Dysomma bucephalus Alcock

Dysomma bucephalus Alcock, Ann.
Mag. Nat. Hist., ser. 6, vol. 4, 1889,
p. 459. N. $20^{\circ}17'30''$ E. $88^{\circ}51'$, Bay of
Bengal, 193 fathoms; ser. 6, vol. 8,
1891, p. 137, fig. 5 (type); Illustrat.
Zool. Investigator, pt. 1, 1892, pl. 6,
fig. 1 (type); Journ. Asiatic Soc.
Bengal, vol. 62, pt. 2, 1893, p. 184
(Bay of Bengal); vol. 65, pt. 2, 1896, p.
336 (reference); Descri. Cat. Deep Sea
Fishes. Indian Mus., 1899, p. 192
(Bay of Bengal, 112 to 250 fathoms).

~~Dysomma~~ ~~anguillaris~~ Barnard

Dysomma anguillaris Barnard, Ann.
South African Mus., vol. 13, pt. 8, 1923,
p. 443. Off Tugela River mouth, Natal,
63 fathoms; vol. 21, pt. 1, 1925, p. 195,
pl. 8, fig. 8 (type).

Family Cheilidae

2045

Body elongate, worm like or slightly compressed, or short and much compressed. Snout rather short, more or less prominent by prominence of ethmoid with premaxillary plate beyond articulation with maxillaries. Eye large or small. Mouth cleft reaches beyond eye. Teeth in jaws in 1 or more series or bands, variable in form and size; on premaxillary in group or in rows, generally larger or even caniniform. Vomerine teeth present or absent. Tongue not free. Front nostril in short tube at edge of upper lip, hind one generally near eye in upper lip in valve or protruding flap. Gill

Depth $2\frac{3}{5}$ to $3\frac{1}{8}$; head $2\frac{7}{8}$ to $3\frac{2}{5}$, width $1\frac{2}{3}$ to 3. Snout $2\frac{1}{4}$ to $3\frac{1}{5}$ in head; eye $3\frac{1}{5}$ to $4\frac{3}{4}$, greater than snout in young to 1 to 2 in snout with age, greater than interorbital in young to $1\frac{1}{5}$ in interorbital with age; maxillary reaches eye or to pupil, expansion $1\frac{2}{5}$ to $2\frac{3}{4}$ in eye, length $2\frac{1}{2}$ to $3\frac{2}{5}$ in head; lips broad, thick, fleshy, coriaceous, especially with age; teeth in jaws fine, conic, in bands of about 5 irregular series with outermost slightly enlarged; interorbital 3 to $4\frac{1}{4}$, broadly convex; hind preopercle edge with small, rough, obsolete denticles. Gill rakers 9 or 10 + 20 or 21, lanceolate, short, $\frac{1}{2}$ to $\frac{3}{5}$ in gill filaments, which $1\frac{1}{3}$ to $1\frac{1}{2}$ in eye.

Scales 84 to 97 in lateral line to caudal base and 14 or 15 more on latter; tubular scales 52 to 62 in lateral line to caudal

openings small, separated by interspace of different breadth. Branchial openings in pharynx wide slits. No scales. Dorsal, anal and caudal confluent. Dorsal origin above or far behind gill openings, before, above or behind vent. Pectoral well developed, vestigial or absent. Vent far behind gill openings, in front half of length.

Usually small plain colored eels, more or less suggestive of worms, living in coral reefs, on sandy shores or surface near them, in tropical seas.

Key to genera

a¹ Pectorals present.

b¹ Dorsal origin close behind pectoral base or much nearer latter than vent.

c¹ End of snout below with teeth external to closed jaws. Bathymyrus.

c² Teeth confined to jaws, not extending externally on under surface of snout.

d¹ Teeth in jaws in cardiform bands. Echelus.

d² Teeth in jaws mostly biserial. Paramyrus.

b² Dorsal origin midway between pectoral base and vent, or nearer latter; teeth in jaws variably biserial or triserial. Myrophis.

a² no pectorals. Muraenichthys.

Genus Bathymyrus Alcock

Bathymyrus Alcock, Journ. Asiatic Soc. Bengal, vol. 58, pt. 2, 1889, p.

305. Type Bathymyrus echinorhynchus Alcock, monotypic.

Body cylindrical, little shorter than compressed tail. Head cylindrical, slightly tapering. Snout projects beyond lower jaw, tip formed by massive upward and lateral expansion, studded with small curved teeth of premaxillaries. Mouth moderate.

Nostrils labial, in contact with edge of upper lip, anterior tubular near snout end, posterior valved before lower front eye edge.

~~gill openings~~
from upper edge of pectoral base of almost to middle line of abdomen, interspace narrow. Branchial openings wide slits in pharynx. Branchiostegal region 1/3 of head. Oblique bony stay

Genus Bathymyrus Alcock

Bathymyrus Alcock, Journ. Asiatic Soc. Bengal, vol. 58, pt. 2, 1889, p.

305. Type Bathymyrus echinorhynchus Alcock, monotypic.

Body cylindrical, little shorter than compressed tail. Head cylindrical, slightly tapering. Snout projects beyond lower jaw, tip formed by massive upward and lateral expansion, studded with small curved teeth of premaxillaries. Eye moderate. Mouth cleft moderate. Single series of close set, uniform, small, sharp teeth in jaws. Few similar teeth on vomer at junction with premaxillaries and cluster of sharp down curved teeth on extra oral expansion of premaxillaries. Tongue long, attached up to tip by extensible frenum. Gill openings extend obliquely from upper edge of pectoral base to almost to middle line of abdomen, interspace narrow. Branchial openings wide slits in pharynx. Branchiostegal region 1/3 of head. Oblique bony stay

2049
across opercle. No scales. Dorsal
begins close behind gill opening,
fin confluent with caudal and
anal. Pectoral longer than body
depth.

One species, India.

Bathymyrus echinorhynchus Alcock
Bathymyrus echinorhynchus Alcock,
 Journ. Asiatic Soc. Bengal, vol. 58,
 pt. 2, 1889, p. 305, pl. 22, fig. 6.

Sixteen miles east of the mouth of the
 Devi river in the Mahanaddi delta
 in 68 fathoms; vol. 65, pt. 2, 1896, p.
 337 (reference).

Depth $2\frac{3}{4}$ in head; ^{excluding branchiostegal region} head, 7 in
 total; head and trunk 2 in tail.
 Snout 6 in head to gill opening above;
 eye $6\frac{2}{3}$, $1\frac{1}{8}$ in snout; mouth cleft
 reaches hind eye edge, length 3 in
 head; interorbital low. Gill opening
 about 4.

Dorsal rather low, begins close behind pectoral base; caudal well developed, tip truncate; pectoral placed in upper half of body depth, length $2\frac{1}{4}$ in head.

Transparent gray, with numerous specks of black. Length 267mm. (Alcock.)

Bay of Bengal.

Genus Echelus Rafinesque

Echelus Rafinesque, ~~Carrot~~. inov.

Animal Plant. Sicil., 1810, p. 63.

Type Echelus punctatus Rafinesque,

designated by Bleeker, Atlas Ichth.

Ind. Néerl., vol. 4, 1864, p. 20.

Myrus Kaup, Cat. Apodal Fish Brit.

Mus., 1856, p. 31. Type Muraena

myrus Linnaeus, monotypic.

Body elongate, subterete. Tail longer than rest of body. Teeth in jaws in cardiform bands. Vomer with teeth. Nostrils on or very close to edges of upper lip, front one tubular, hind one lobed. Vertical

and pectoral fins well developed.
Dorsal begins close behind
pectoral base. Caudal very short.

Echelus wropterus (Schlegel)

Conger wropterus Schlegel, Fauna
Japonica, Poiss., pts. 10 to 14, 1846, p. 261.
Seas of Japan.

Ophisurus wropterus Bleeker, Act. Soc.
Sci. Ind. Néerl. ^{and} (Japan 4), vol. 3,
p. 28; vol. 5, , pl. 1, fig. 1 ;
~~Verhandel.~~ ~~Batavia.~~ Genootsch. (hal.
Ich. Jap.), vol. 25, 1853, p. 19 (reference).

Myrus wropterus Günther, Cat. Fishes
Brit. Mus., vol. 8, 1870, p. 50 (no
locality). — hystrom ^{Bikony}, Kongy. Svenska.
Vet. Akad. Handl. Stockholm,
1887, p. 46 (Nagasaki). — Jordan and
Snyder, Proc. U. S. Nat. Mus., vol. 23,

1901, p. 861 (compiled).

2055

2056

Genus Paramyrus Günther
Paramyrus Günther, Cat. Fishes Brit.
Mus., vol. 8, 1860, p. 51. Type Conger
cylindroides Ranzani, designated by
Jordan and Davis, Rep. U. S. Fish
Comm., pt. 16, 1888 (1892), p. 641.

Body well elongate, cylindrical,
compressed posteriorly. Vent near
first third in length. Snout projects
beyond lower jaw. Mouth cleft extends
to hind edge of eye or beyond. Teeth
in jaws mostly biserial, also present
on vomer. Nostrils on edge of upper
lip, anterior in broad tube near
snout tip, posterior in pendulous

valve slightly before vertical through eye. Gill openings small, separated by broad isthmus. No scales. Lateral line present. Dorsal origin over pectorals. Dorsal, anal and caudal confluent. Pectorals present.

Celebes, Tonga, Brazil.

Analysis of species

a.¹ no black dots or spots along side of abdomen. Microchir.

a.² Row of contrasted black dots or spots along each side of abdomen. kellersi.

Paramyrus microchir (Bleeker)

Echelus microchir Bleeker, Nederl. ~~and~~
~~Tijdschr.~~ Dierk., vol. 2, 1865, p. 40.

Macassar, Celebes; Atlas Ichth. Ind.
Néerl. ~~and~~ vol. 4, 1864, p. 30, pl. ⁽⁴⁵⁾ 189, fig. 4

(type).

Paramyrus microchir Günther, Cat.

Fishes Brit. Mus., vol. 8, 1870, p. 51

(type). — Weber and Beaufort, Fishes

Indo Austral. Archipelago, vol. 3,

1916, p. 273, figs. 121-122 (type).

Paramyrus bellersi Fowler

Paramyrus bellersi Fowler, Proc. U. S.

Nat. Mus., vol. 81, art. 8, 1932, p. 1,

fig. 1. Niuafoou, Tonga Group.

Depth $2\frac{2}{5}$, $7\frac{3}{5}$ to vent; head $2\frac{1}{4}$,

$6\frac{2}{3}$ to caudal base, combined head

and trunk to vent $2\frac{9}{10}$ in tail to

caudal base; head width $3\frac{3}{5}$ in its

length.

Snout 4 in head; eye $6\frac{3}{4}$, $1\frac{1}{2}$ in

snout, little greater than interorbital;

maxillary reaches opposite hind eye

edge, length from snout tip $2\frac{4}{5}$ in

2060

head; teeth very minute, simple,
conic, edges entire, uniserial at
sides of jaw and at least 2 series
anteriorly in each; premaxillary teeth
scarcely larger, similar and would
form as several irregular series;
tongue free; front nostril near snout
tip in short tube, hind nostril in
upper lip opposite front eye edge;
interorbital $7\frac{1}{2}$ in head, low. Gill
opening very small slit, largely
below and before pectoral.

Lateral line distinct.

2061

Dorsal begins about over middle of pectoral, rather low, confluent with caudal and anal; caudal $4\frac{1}{2}$ in head; pectoral $3\frac{1}{2}$.

Uniform brown above, under surface of head and belly whitish. Along each side of belly a single row of black dots, fading out along front of anal. Head now largely pale or whitish, largely on account of macerated skin.

Tonga Group.
91870 U.S.N.M. Niuafoou Island,
Tonga Group. September 17, 1930.
Length 60 mm. Type.

Genus Muraenichthys Bleeker

Muraenichthys Bleeker, ~~Verhand.~~

~~Batavia~~. Genootsch. (Muraen.), vol. 25,

1853, p. 71. Type Muraena

gymnopterus Bleeker.

Scolenchelys Ogilby, Proc. Linn. Soc.

New South Wales, vol. 22, 1897⁽¹⁸⁹⁸⁾, p. 246.

Type Muraenichthys australis Macleay.

Myropterura Ogilby, Proc. Linn. Soc.

New South Wales, vol. 22, 1897 (1898), p.

247. Type Myropterura laticaudata

Ogilby, monotypic.

Body very long, cylindrical, sometimes worm like. Head usually ill defined, small or moderate. Snout somewhat protrudes beyond lower jaw, conic, small. Eye small, well advanced. Mouth cleft usually extends behind eye. Teeth in jaws and on vomer. Nostrils on edge of upper lip, front one in tube, posterior at base of pendulous flap. Gill openings very small, lateral, separated by broad isthmus. Lateral line axial. Dorsal origin far behind gill openings.

before, above or slightly behind vent. Vertical fins confluent, usually low. No pectoral.

Small worm like eels of the Indo Pacific, living in the sea near shore, pelagic or found about reefs and sandy shores. In the following key as I have been unable to consult the description of Muraenichthys godeffroyi Regan I have been unable to insert it.

The following imperfectly described and therefore doubtful:

Muraenichthys moorii Günther

Muraenichthys moorii Günther, Cat.

Fishes Brit. Mus., vol. 8, 1870, p. 53.

Locality?

Body very slender; head 3 1/2 to vent; tail little longer than body. Snout rather obtuse, not quite twice long as eye; mouth cleft extending somewhat behind eye; front lower teeth, also vomerine, biserial, others uniserial.

Dorsal begins opposite vent, vertical fins low. Length 190 mm. (Günther.)

Analysis of species

a. Dorsal origin midway or more advanced in space between gill opening and vent.

b. Dorsal origin at first fourth between gill opening and vent.

c. Head $4\frac{1}{2}$ to vent. ogilbyi.

c. Head 4 to vent. devisi.

b.² Dorsal origin at first $\frac{1}{3}$ to $\frac{2}{5}$ between gill opening and vent.

d. Head $3\frac{4}{5}$ to vent; dorsal origin slightly before first third in trunk. breviceps.

d.² Head 2 to $2\frac{1}{5}$ to vent; dorsal origin at first $\frac{2}{5}$ in trunk. macropterus.

b.³ Dorsal origin nearly midway between gill opening and vent.

2067

e.¹ Head $2\frac{2}{3}$ to vent; mouth cleft $2\frac{4}{5}$ in head, eye little premedian.
thompsoni.

e.² Head $2\frac{4}{5}$ to vent; mouth cleft $3\frac{2}{5}$ in head, eye nearly median.
malabonensis.

e.³ Head $3\frac{1}{4}$ to vent; mouth cleft 4 in head, eye postmedian. nicholsae.

a.² Dorsal begins slightly before (last $\frac{2}{5}$), above or behind vent.

f. Combined head and body $1\frac{1}{2}$ times or less in tail.

g. Head 7 to more than $9\frac{2}{3}$ in total.

h. Depth 20 to 30, $3\frac{2}{5}$ ^{to 4} in head; head 7 to $8\frac{1}{4}$ in total.

i. Eye postmedian in mouth cleft..

f.¹ mouth cleft $3\frac{1}{2}$ in head; vomerine teeth biserial or triserial. schultzei.

f.³ mouth cleft 5 in head; vomerine teeth uniserial. vermiformis.

i.² Eye premedian in mouth cleft.

h.¹ mouth cleft $3\frac{1}{3}$ in head. gymnopterus.

h.² mouth cleft 3 in head. macrostomus.

h.³ mouth cleft $2\frac{1}{2}$ in head. clerae.

14 h.² depth 37 or 38, $3\frac{2}{5}$ to $3\frac{2}{3}$ in head; head 8 to $9\frac{2}{3}$ in total.

l.¹ Snout broad, depressed, 6 in head; mouth cleft $3\frac{1}{3}$ in head, extends little behind eye. cookei.

l.² Snout narrowly pointed, $5\frac{2}{3}$ in head; mouth cleft 4 in head, extends well behind eye. huyemani.

f.² mouth cleft $3\frac{1}{2}$ to $3\frac{1}{2}$ in head; vomerine teeth biserial; dorsal origin over head length behind small origin. retroprimaria.

2069

h.³ Depth 40 to 48, 4 1/2 in head, 4 1/2
in head; mouth cleft 2 4/5.
acutirostris.

g.² Head more than 10 in total.

m.⁴ Head less than 5 to vent.

n.¹ Amboina, Red Sea; teeth on vomer
uniserial. gymnotus.

n.² Japan. aoki.

m.² Head 5 or more to vent.

o.¹ Eye less than 3 in snout;
vomerine teeth uniserial.

p.¹ Eye 2 in snout. iredalei.

p.² Eye 2 2/3 in snout. australis.

o.² Eye more than 3 in snout.

g.¹ Dorsal ^{origin} not quite snout
length behind anal
origin. oliveri.

g.² Dorsal origin nearly
head length behind
anal origin. tasmaniensis.

f.² Combined head and body twice in
tail. sibogae.

Muraenichthys ogilbyi Fowler

Muraenichthys ogilbyi Fowler, Proc.
Acad. Nat. Sci. Philadelphia, 1907, p.
423, fig. 3. Victoria, Australia;
1912, p. 13 (type).

Muraenichthys devisi Fowler

Muraenichthys devisi Fowler, Proc.
Acad. Nat. Sci. Philadelphia, 1907, p.
421, fig. 2. Victoria, Australia, 1912,
p. 13 (type).

Muraenichthys breviceps Günther

Muraenichthys breviceps Günther, Ann.

Mag. Nat. Hist., ser. 4, vol. 17, 1876, p.

401. Tasmania (Allport). — Macleay,

Proc. Linn. Soc. New South Wales, vol.

6, pt. 2, 1882, p. 273 (compiled). — McCulloch,

McCulloch, Zool. Res. Endeavour, vol. 1,

1911, p. 21, fig. 7 (head) (south of St.

Francis Island, South Australia). —

Waite, Records South Austral. Mus.,

vol. 2, no. 1, April 23, 1921, p. 50 (reference).

? Muraenichthys macropterus (not

Bleeker) Klunzinger, Archiv Naturg.,

vol. 38, pt. 1, 1872, p. 43.

Muraenichthys macropterus Bleeker
Muraenichthys macropterus Bleeker,
 Act. Soc. Sci. Ind. Néerl., no. 7, vol. 12,
 1857, p. (8) 91. Amboina; Atlas Ichth.
 Ind. Néerl., vol. 4, 1864, p. 31, pl. (7) 151,
 fig. 3 (Solow; Amboina). — Günther,
 Cat. Fishes Brit. Mus., vol. 8, 1870, p. 52
 (type). — Steindachner, Sitz. Ber. Akad.
 Wiss. Wien, math.-naturw. Kl., vol. 60,
 pt. 1, 1870, p. 571 (Singapore). — Martens,
 Preuss. Exped. Ost-Asien, vol. 1, 1876, p.
 406 (Ternate). — Klunzinger, Sitz. Ber.
 Akad. Wiss. Wien, math.-naturw. Kl.,
 vol. 80, pt. 1, 1879, p. 419 (Port Philip,
 Murray River). — Gorgoza, Anal. Soc.

Espan. Hist. Nat. Madrid, vol. 14, 1885,
 p. 74 (Paragua). — Elera, Cat. Fauna
~~Filipinas~~, vol. 1, 1895, p. 588 (Puerta
 Princesa, Paragua). — Ogilby, Proc.
 Linn. Soc. New South Wales, vol. 22,
 1897, p. 770 (New Caledonia). — Jordan
 and Seale, Proc. U. S. Nat. Mus., vol.
 28, 1905, p. 772 (Negros); Bull. Bur.
 Fisher., vol. 25, 1905 (1906), p. 396 (New
 Caledonia). — Günther, Journ. Mus.
 Godeffroy, vol. 9, pt. 17, 1910, p. 306
 (Tongatabu). — Kendall and Goldborough,
 Mem. Mus. Comp. Zool., vol. 26, 1911, p. 245
 (Arno Atoll, Marshall Atoll). —
Weber and Beaufort, Fishes Indo

Austral. Archipelago, vol. 3, 1916, p.
 275 (Banda, Flores, Saman). —
Herre, Philippine Journ. Sci., vol. 23,
 no. 2, Aug. 1923, p. (Mindoro; Lingayen).
 — Fowler, Bull. Bishop Mus., vol. 22, 1925,
 p. 5 (Guam). — Deraniyagala, Ceylon
 Administrat. Rep., 1925, p. F15. —
Fowler, Mem. Bishop Mus., vol. 10, 1928,
 p. 40 (type Echidna uniformis; Guam;
 Arno Atoll); vol. 11, no. 5, 1931, p. 316
 (reference).

Muraenichthys.

Echidna uniformis Seale, Occas.

Pap. Bishop Mus., vol. 1, no. 3, 1900 (1901),
 p. 62. Guam.

Muraenichthys owstoni Jordan and
Snyder, Proc. U. S. Nat. Mus., vol. 23,
 1901, p. 862, fig. 11. Yaeyama, southern
 Riuikiu. — Franz, ~~Abhandl.~~ Kon. Bayer.
Abad. Wiss., vol. 4, Suppl. band 1, 1910,
 p. 12 (Sagami Bay).

Muraenichthys labialis Seale, Bull.
 Mus. Comp. Zool., vol. 61, no. 4, May 1917,
 p. 80. Arhno Atoll, Marshalls.

2078

Depth 23 to 24; head $8\frac{1}{4}$ to $8\frac{7}{8}$,
 $3\frac{1}{5}$ to $3\frac{1}{2}$ in trunk, width $4\frac{1}{2}$ to
 $4\frac{7}{8}$ its length; combined head and
trunk $1\frac{1}{2}$ to $1\frac{2}{3}$ in tail. Snout 5
to $5\frac{7}{8}$ in head; eye 11 to 13, $2\frac{1}{4}$ to
 $2\frac{3}{4}$ in snout, 2 to $2\frac{1}{5}$ in interorbital;
mouth cleft extends $1\frac{1}{2}$ to 2 eye diameters
behind eye, length $2\frac{3}{4}$ to $3\frac{1}{8}$ in
head; teeth biserial in jaws, small,
subconic; 2 series of small close set
similar teeth on vomer; interorbital
 $7\frac{7}{8}$ to $8\frac{1}{5}$, low, convex. Gill opening
 $9\frac{1}{4}$ to 13.

Lateral line distinct.

Dorsal origin midway between eye center and gill opening or little nearer latter; vertical fins all low folds.

Uniform brown, or only under surface of head and belly slightly paler. Iris grayish.

Ceylon, Singapore, East Indies, Philippines, Riu Kiu, Japan, Victoria, Melanesia, Micronesia, Polynesia.

2 examples. Batan Island, tide pools. ²⁰⁸⁰
June 5, 1909. Length 70 to 81 mm.

5622. Caxisigan Island, off Balabac.
January 2, 1909. Length 193 mm.

21781. Cebu market. March 20, 1909.
Length 191 mm.

5098. Cebu market. April 5, 1908.
Length 77 mm.

8148. Cebu market. August 24, 1909.
Length 211 mm.

D. 5431. Corandagos Island (NW.), N.
 $28^{\circ}E$, 4.8 miles ($N. 10^{\circ}38'45''E. 120^{\circ}12'45''$),
eastern Palawan and vicinity. In 51 fathoms.
April 8, 1909. Length 120 to 138 mm.
5 examples.

D. 5433. Corandagos Island (NW.), N.
 $35^{\circ}E$, 6.5 miles ($N. 10^{\circ}37'30''E. 120^{\circ}11'5''$),
eastern Palawan and vicinity. In 54 fathoms.
April 8, 1909. Length 124 to 135 mm.
2 examples.

2081

1 example. Endeavor Strait, Palawan.
December 23, 1908. Length 86 mm.

4 examples. Great Toba Island,
tide pool. December 15, 1909. Length 85
to 110 mm.

2 examples. Gubat Bay, Luzon.
June 23, 1909. Length 90 to 96 mm.

2205, D. 5393. Pangamalan Point,
Talapit Island, S. $5^{\circ}9'E$, 14.8 miles
(N. $12^{\circ}3'30"E$. $124^{\circ}3'36"$), between Samar
and Masbate. In 136 fathoms. March 13,
1909. Length 155 mm.

1 example. Reef opposite Cebu. April 5,
1908. Length 73 mm.

1 example. Sacol Island. September 8,
1909. Length 49 mm.

1 example. San Pascual. May 8, 1909.
Length 51 mm.

D. 5208. Taratara Island (N.), S. ²⁰⁸²
67° 30' E, 4.10 miles (N. 11° 45' 53" E,
124° 42' 50"), off western Samar.

In 26 fathoms. April 14, 1908. Length
88 mm.

12561 and 12562. Apra Bay, Guam.
November 19 to 21, 1907. Length 118 to
161 mm.

Muraenichthys thompsoni Jordan and
Richardson

Muraenichthys thompsoni Jordan and
Richardson, Bull. Bur. Fisher., vol. 27,
1907 (1908), p. 237, fig. 1. Manila Bay.

Muraenichthys malabonensis Herre

Muraenichthys malabonensis Herre,

Philippine Journ. Sci., vol. 23, no. 2, Aug.

1923, p. 157, pl. 2, fig. 1. Malabon, Rizal

Province, Manila Bay. — Chen, Bull. Biol.

Dep. Sun Yatsen Univ., vol. 1, no. 1, 1929, p.

15, fig. 7 (not 8 as numbered) (dentition)

(Hoihow). — Fowler, Hong Kong Naturalist,

vol. 3, no. 1, March 1932, p. 56 (compiled).

The single poorly preserved example
will hardly admit description.

D. 5432. Corandagoz Island (NW.), N.
30° E., 5.7 miles (N. 10° 37' 50" E. 120° 12'),
eastern Palawan. In 51 fathoms.
April 8, 1909. Length 94 mm., very poor
condition.

Muraenichthys nicholsae Waite

Muraenichthys nicholsae Waite, Records
Austral. Mus., vol. 5, 1904, p. 142, pl.
17, fig. 1. Lord Howe Island.

Muraenichthys schultzei Bleeker
Muraenichthys schultzei Bleeker,
 Naturk. Tijdschr. Nederl. ^{land} Indië, vol.
 13, 1857, p. 366. Karangbollong, Java;
 Atlas Ichth. Ind. Néerl. ^{land}, vol. 4, 1864,
 p. 33, pl. (4) 148, fig. 3 (type). — Day,
 Fishes of India, pt. 4, 1878, p. 663;
 Fauna British India, vol. 1, 1889, p.
 93, fig. 40. — Kendall and Goldsborough,
 Mem. Mus. Comp. Zool., vol. 26, 1911, p.
 245 (Funafuti, Ellice Islands). —
Weber, Siboga Exped., vol. 57, Fische,
 1913, p. 45 (Noimini Bay; Timor). —
Weber and Beaufort, Fishes Indo
 Austral. Archipelago, vol. 3, 1916,

p. 277, fig. 123 (head) (Ambon;
 Timor). — Fowler and Ball, Bull.
 Bishop Mus., no. 26, 1925, p. 5
 (Johnston Island). — Fowler, Mem.
 Bishop Mus., vol. 10, 1928, p. 41
 (Johnston Island; Funafuti).
Muraena polyzona (not) Day,
 Fishes of India, pt. 4, 1878, pl. 169,
 fig. 3 (transposed).

Depth $19\frac{1}{2}$ to 27; head $6\frac{7}{8}$ to $7\frac{1}{2}$, $2\frac{3}{4}$ to 3 to vent, width $4\frac{1}{2}$ to $5\frac{1}{2}$ its length; combined head and trunk $1\frac{1}{3}$ to $1\frac{2}{5}$ in tail.

Snout $5\frac{1}{2}$ to $6\frac{1}{3}$ in head; eye $10\frac{2}{3}$ to 13, 2 to $2\frac{1}{4}$ in snout, 2 in interorbital; mouth cleft extends $1\frac{3}{4}$ to 2 eye diameters behind eye, length $2\frac{7}{8}$ to $3\frac{1}{8}$ in head; teeth small, pointed, subequal, in rather broad bands in jaws and at least 2 series on vomer; interorbital 6 to $6\frac{1}{4}$, depressed or nearly level.

Gill opening slightly less than eye, at upper level in lower half of body depth.

Lateral line distinct, complete.

Dorsal origin about over anal origin, fins low feeble folds with anal little higher, caudal very short.

Andamans,
India, East Indies, Philippines,
Polynesia.

10011. D. 5273. Corregidor Light, N.
27° E., 27.25 miles (N. 13° 58' 45" E. 120°
21' 35"), China Sea vicinity southern
Luzon. In 114 fathoms. July 14, 1908.
Length 91 mm.

22475. ^lRambon. March 25, 1908.
Length 102 mm.

Muraenichthys retrospinisⁱⁿ new species²⁰⁹²
Depth $29\frac{1}{2}$ to 33; head $9\frac{2}{3}$ to $9\frac{3}{4}$,

$3\frac{1}{2}$ to vent, width $4\frac{2}{3}$ to $5\frac{1}{4}$ its
length; combined head and trunk
from $\frac{1}{5}$ greater than rest of body to $1\frac{3}{4}$
in tail. Snout 5 to $5\frac{3}{4}$ in head;
eye 12 to 15, $1\frac{7}{8}$ to 2 in snout, $1\frac{2}{5}$ to
 $1\frac{1}{2}$ in interorbital; mouth cleft reaches
 $1\frac{1}{2}$ to 2 eye diameters behind eye,
length $3\frac{1}{10}$ to $3\frac{1}{2}$ in head; teeth
small, simple, pointed in jaws,
uniserial; 2 short rows of five teeth
at front of vomer; interorbital $7\frac{1}{4}$
to $7\frac{2}{5}$, convex. Gill opening about

equals eye.

Lateral line distinct, complete.

Dorsal begins behind vent space equal to $1 + \frac{2}{5}$ to $1 + \frac{1}{2}$ head lengths; vertical fins as very low feeble confluent fold. No pectoral.

Uniform brown. Iris gray.

Diagnosis. Known chiefly by the posterior insertion of its dorsal fin, this over a head length behind that of anal. Other characters are its uniserial jaw teeth, eye postmedian over the mouth cleft and pointed snout. It differs from Muraenichthys schultzei chiefly in its more backward dorsal origin.

Type no.:

U.S.N.M.

D. 5206. Badian Island (N.),
N. 27° E., 5.75 miles (N. 11° 31' 40" E. 124°
42' 40"), off western Samar. In 32
fathoms. Length 87 mm.

1 example. Binanga, China Sea.
January 8, 1908. Length 66 mm.

1 example. Camp Overton, Mindanao.
August 15, 1909. Length 57 mm.

1 example. Taal Anchorage.
February 20, 1909. Length 120 mm.

D. 5208. Taratara Island (N.), S. 67°
30' E., 4.10 miles (N. 11° 45' 53" E. 124° 42'
50"), off western Samar. In 26 fathoms.
April 14, 1908. Length 114 mm. Type.

(Retro, backward; pinna, fin.)

Muraenichthys vermiformis (Peters)
Chlorhinus (Muraenichthys) vermiformis
Peters, Monatsb. Akad. Wiss. Berlin,
1866, p. 524. Ceylon.

Ophisurus vermiformis Bleeker, Verh.
Batavia. Genootsch. Nat. Ich. Bengal,
vol. 25, 1853, p. 78 (reference).

Muraenichthys vermiformis Günther,
Cat. Fishes Brit. Mus., vol. 8, 1870, p. 53
(compiled). — Day, Fishes of India,
pt. 4, 1878, p. 663; Fauna British
India, vol. 1, 1889, p. 93.

Head $3\frac{2}{3}$ to vent; $8\frac{2}{3}$ in total;
body $1\frac{2}{5}$ in tail. Snout less than
2 eye diameters; mouth cleft reaches

2096

eye diameter behind eye, length
5 1/2 in head; teeth uniserial in
jaws and on vomer. Gill opening 4?
in head.

Dorsal and anal very low, first
shorter.

Colorless. Length 95.5 mm. (Peters.)

Ceylon.

Muraenichthys gymnopterus (Bleeker)

Muraena gymnopterus Bleeker, Verh.

~~Batavia~~, Genootsch. (Muraen.), vol. 25,

1853, p. 52. Batavia, Java.

Muraenichthys gymnopterus Kaup, Archiv

Naturg., 1856, pt. 1, p. 53 (Java; Macassar);

Cat. Apodal Fish Brit. Mus., 1856, p. 30

(same localities). — Bleeker, Atlas Ichth.

Ind. Néerl^{and}, vol. 4, 1864, p. 32, pl. (6) 150,

fig. 1 (Java, Celebes, Batu). — Schmeltz,

Cat. Mus. Godeffroy, no. 4, 1869, p. 26

(Kandavu). — Günther, Cat. Fishes

Brit. Mus., vol. 8, 1870, p. 52 (types of

Muraenichthys gymnopterus and

Muraenichthys microstomus). — Schmeltz,

Cat. Mus. Godeffroy, no. 5, 1874, p. 37
 (Avalau). — Rutter, Proc. Acad. Nat.
 Sci. Philadelphia, 1897, p. 61 (Swatow).
 — Jordan and Seale, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 6 (Carite).
 — Günther, Journ. Mus. Godeffroy, vol.
 9, pt. 17, 1910, p. 396 (Kandavu). —
Weber and Beaufort, Fishes Indo Austral.
 Archipelago, vol. 3, 1916, p. 276 (Makassar).
 — Herre, Philippine Journ. Sci., vol. 23,
 Aug. 1923, p. 155, fig. 2 (teeth) (Mindoro;
 Sagupan). — Seraniyagala, Ceylon Administr.
 Rep., 1925, p. F15. — Fowler, Proc. Acad.
 Nat. Sci. Philadelphia, 1927, p. 259 (San
 Fernando; Orani); Mem. Bishop Mus.,
 vol. 10, 1928, p. 40 (Hawaiian Islands).
 — Chen, Bull. Biol. Dep. Sun Yat Sen

pl. 1, fig. 1 (anterior body) fig. 1a (dentition) 2099
Univ., vol. 1, no. 1, 1929, p. 14, (Ying
Khow, Kwang tung).

Muraenichthys microstomus Bleeker,
Nederl. Tijds. Dierk., vol. 2, 1865, p. 39.
Macassar, Celebes; Atlas Ichth. Ind.
Néerland, vol. 4, 1864, p. 32, pl. (6) 150,
fig. 2 (type).

Myropterura laticaudata Ogilby, Proc.
Linn. Soc. New South Wales, vol. 22, 1897
(1898), p. 247. Fidji Islands.

Muraenichthys hattae Jordan and Snyder,
Proc. U. S. Nat. Mus., vol. 23, 1901, p.
862, fig. 12. Wakanoura, Japan.

Depth $2\frac{2}{5}$ to $2\frac{7}{8}$; head $6\frac{7}{8}$ to $7\frac{1}{8}$, $2\frac{4}{5}$ to vent; width 5 to $6\frac{7}{8}$ its length; combined head and trunk $1\frac{2}{5}$ to $1\frac{1}{2}$ in tail.

Snout $7\frac{7}{8}$ to $8\frac{3}{4}$ in head; eye 16 to $17\frac{1}{4}$, 2 to $2\frac{1}{4}$ in snout, 2 to $2\frac{1}{5}$ in interorbital; mouth cleft extends $1\frac{3}{4}$ eye diameters behind eye, length $3\frac{2}{3}$ to 4 in head; teeth fine, simple, conic, in narrow bands of several series anteriorly and narrowing posteriorly, on vomer biserial; interorbital

2101

9 to 10 $\frac{1}{4}$, convex. Gill opening
12 to 14 $\frac{1}{2}$, in lower half of
body depth.

Lateral line distinct, incomplete
posteriorly.

Dorsal origin at last $\frac{2}{5}$ to $\frac{4}{9}$
between gill opening and vent;
vertical fins rather low fold
around end of tail.

Brown. Iris dark gray. Fins
dull or pale brown.

East Indies, Philippines, China,
Japan, Polynesia.

2102

22985. Cebu market. March 22, 1909.
Length 176 mm.

8147. Cebu market. August 29, 1909.
Length 222 mm.

11003, 11006. Iloilo market, Panay.
March 29, 1908. Length 290 to 335 mm.

5506 to 5513. Malabon. August 8,
1908. Length 179 to 240 mm.

~~22985~~

2 examples. Port Dupon, Leyte. March
17, 1909. Length 125 to 167 mm.

D. 5220. San Andreas Island (W.),
S. 57° W., 8.50 miles (N. $13^{\circ} 38' E.$ $121^{\circ} 58'$),
between Marinduque and Luzon. In
50 fathoms. April 24, 1908. Length 183 mm.

(D. 358, 1836.) Sandakan Light, S. 34° W.,
19.7 miles (N. $6^{\circ} 6' 40'' E.$ $118^{\circ} 18' 15''$), Jolo
Sea. In 39 fathoms. January 7, 1908.
Length 150 mm.

Muraenichthys macrostomus Bleeker

Muraenichthys macrostomus Bleeker,
Nederl^{and} Tijds. Dierk., vol. 2, 1865, p.

38. Amboina; Atlas Ichth. Ind.

Néerl^{and}, vol. 4, 1864, p. 33, pl. (41) 185,

fig. 1 (type). — Günther, Cat. Fishes

Brit. Mus., vol. 8, 1870, p. 53 (type).

— Weber, Siboga Exped., vol. 57, Fische,
1913, p. 46 (Amboina; south coast

Timor). — Weber and Beaufort, Fishes

Indo Austral. Archipelago, vol. 3,

1916, p. 278, fig. 125 (head) (above

materials).

2104

Muraenichthys cleral new species

Depth $34\frac{3}{4}$; head $8\frac{1}{2}$, $3\frac{2}{5}$ to vent, width $4\frac{1}{5}$ its length; combined head and trunk $1\frac{1}{3}$ in tail. Snout $6\frac{1}{3}$ in head; eye 20, $3\frac{1}{8}$ in snout, $2\frac{1}{2}$ in interorbital; mouth cleft extends 4 eye diameters behind eye, length $2\frac{1}{2}$ in head; teeth uniserial, small, pointed, in jaws, sometimes little irregular in places; vomerine teeth similar; biserial in front and then uniserial; interorbital $7\frac{1}{4}$, broadly convex. Gill opening in lower half

2105
of body depth, about twice long
as eye.

Lateral line distinct, complete.

Dorsal origin advanced before
anal origin for space about equal
to postocular length of head.

Vertical fins low feeble fold around
end of tail.

Uniform brown, scarcely paler on
under surface of head and belly.

Iris dark gray. Fins pale.

Diagnosis. Apparently related to
Muraenichthys macrostomus Bleeker,

though differing in its dorsal²¹⁰⁶
origin at last third of trunk,
its much longer mouth cleft and
body $1\frac{1}{3}$ in tail. It also differs
from M. thompsoni Jordan and Richardson
and M. malabonensis Herre in
much the same way.

Type no.

U.S.N.M.

2369. D. 5131. Island off Panabutan
Point, N. 20° E., 0.40 mile, Sulu Sea
off western Mindanao. In 27 fathoms.
February 6, 1909. Length 156 mm.

Muraenichthys cookei Fowler

Muraenichthys cookei Fowler, Mem.

Bishop Mus., vol. 10, 1928, p. 41, fig. 9.

Milaekahana, Oahu.

Muraenichthys hysmani (Weber) ²¹⁰⁸

Sphagebranchus hysmani Weber, Siloga
Expt., vol. 57, Fische, 1913, p. 48, fig.
10 (head). Molo Strait, 69 to 91 meters.

Muraenichthys hysmani Weber and
Beaufort, Fishes Indo Austral.

Archipelago, vol. 3, 1916, p. 278, fig. 126
(copied; type).

Muraenichthys acutirostris Weber and Beaufort

Muraenichthys acutirostris Weber and Beaufort,

Fishes Indo Austral. Archipelago,

vol. 3, 1916, p. 279, fig. 127 (head).

Ambon.

Muraenichthys gymnotus Bleeker

Muraenichthys gymnotus Bleeker, Act.
 Soc. Sci. Ind. Néerl. (Amboyn. 8), vol.
 2, 1857, p. 90. Amboyna; Atlas Ichth.
 Ind. Néerl.^{land}, vol. 4, 1864, p. 33, pl. (6)
 150, fig. 3 (type). — Günther, Cat.
 Fishes Brit. Mus., vol. 8, 1870, p. 53
 (type). — Klunzinger, Verhand. zool. bot.
 Gesell. Wien, vol. 21, 1871, p. 608 (Red
 Sea). — Weber, Siboga Exped., vol. 57,
 Fische, 1913, p. 46 (Obi major; south
 east Timor); Weber and Beaufort,
 Fishes Indo Austral. Archipelago,
 vol. 3, 1916, p. 277 (compiled).

Depth 37; head $10\frac{2}{5}$, $5\frac{1}{8}$ to ²¹¹¹
vent, width $4\frac{5}{5}$ its length;
combined head and trunk $1\frac{1}{8}$ in
tail. Snout 6 in head; eye 19,
 $3\frac{3}{5}$ in snout, $2\frac{1}{2}$ in interorbital;
mouth cleft extends eye diameter
behind eye, length $4\frac{1}{5}$ in head;
teeth small, conic, pointed, uniserial
in jaws and on vomer; interorbital
10, convex. Gill opening $11\frac{1}{2}$, low
in lower half of body depth.

Lateral line distinct.

Dorsal origin begins behind

anal space equal to postorbital region of head. Vertical fins low feeble fold continuous around end of tail.

Brown, under a lens shaded with darker dots over upper surface. Iris gray. Fins uniformly pale. Pharynx pale.

Red Sea, East Indies, Philippines. Of all the species examined this has the most robust tail, little compressed, nearly wide as deep and all four sides more or less flattened.

2933. Tubig Point, N. 49° E., 5 miles (N. 12° 12' 35" E. 124° 2' 48"), between Samar and Masbate. In 135 fathoms. March 13, 1909. Length 314 mm.

Muraenichthys aoki Jordan and Snyder

Muraenichthys aoki Jordan and Snyder,
Proc. U. S. Nat. Mus., vol. 23, 1901, p.

863, fig. 13. Misaki.

Muraenichthys iredalei Whitley

Muraenichthys iredalei Whitley,

~~Records~~ Australimurus, vol. 16, pt. 1,

Oct. 7, 1927, p. 5, fig. 1. Michaelmas Cay,

Queensland.

Muraenichthys australis Macleay ²¹¹⁵

Muraenichthys australis Macleay, Proc.

Linne. Soc. New South Wales, vol. 6, pt. 2,
1882, p. 272. Lane Cove, Port Jackson. —

McCulloch, Zool. Res. Endeavour, vol. 1,

1911, p. 20, fig. 6 (head) (type; Port

Jackson); Austral. Mus. Mem., vol. 5,

pt. 1, June 29, 1929, p. (type).

Muraenichthys gymnotus (not Bleeker)

Günther, Rep. Voy. Challenger, vol. 1, ^{pt. 6}
_{pt. 6,}

1880, p. 30. (Port Jackson).

Muraenichthys oliveri Waite

Muraenichthys oliveri Waite, Trans.

New Zealand Inst., vol. 42, 1909 (1910), p.

374, pl. 35, fig. 2. Kermadec Islands.

Muraenichthys tasmaniensis McCulloch

Muraenichthys tasmaniensis McCulloch,
Zool. Res. Endeavour, vol. 1, 1911, p. 19,
fig. 5 (head). Oyster Bay, Tasmania.

Muraenichthys sibogae Weber and Beaufort
Muraenichthys sibogae Weber and Beaufort,
Fishes Indo Austral. Archipelago,
vol. 3, 1916, p. 276. Obi major; southern
Timor.

Depth $34\frac{3}{4}$; head $9\frac{3}{4}$, $3\frac{1}{6}$ to
vent, width 4 in its length; combined
head and trunk 2 in tail. Snout
 $5\frac{1}{4}$ in head; eye 13, $2\frac{1}{4}$ in snout,
 $1\frac{1}{2}$ in interorbital; mouth cleft
extends about eye diameter behind
eye, length $3\frac{2}{5}$ in head; teeth
simple, minute, in narrow bands
in jaws and on vomer; interorbital,
 $7\frac{1}{5}$, broadly convex. Gill opening

2419
equals eye, within lower half
of body depth.

Lateral line distinct, complete.

Dorsal origin advanced from
anal origin space about equal
to mouth cleft. Vertical fin as
low feeble fold around end of
tail.

Uniform brown. Iris gray. In
this species the tail is rather thick,
but little compressed.

1 example. Masbate Bay, Duinalasag
Island. June 11, 1909. Length 120 mm.

Muraenichthys godeffroyi Regan

Muraenichthys godeffroyi Regan, Ann.

Mag. Nat. Hist., ser. 8, vol. 4, no. 1, 1909,
p. 439. Bowen, Queensland.

Genus Myrophis Lütken

Myrophis Lütken, Vidensk. Medd.

Nat. Foren. Kjöbenhavn, 1851, p. 1. Type

Myrophis punctatus Lütken, monotypic.

Body elongate, partly terete. Teeth partly equal. Vomerine teeth anteriorly in 2 or 3 series. Nostrils on edge of upper lip, front one tubular. Vertical fins low, confluent around tail.

Tail much longer than rest of body. Dorsal begins before vent. Pectoral very small.

Analysis of species

a¹ Dorsal begins much nearer pectoral than vent.

b¹ Coloration uniform; Japan. uropterus.

b² Body marbled darker, fins slaty; Australia. australis.

a² Dorsal origin midway between gill opening and vent. chryso-gaster.

Myrophis uropterus (Schlegel)

Conger uropterus Schlegel, Fauna

Japonica, Poiss., pt. 10, 1846, p.
261. Seas of Japan.

Myrophis wropterus Bleeker 2124

Myrophis wropterus Bleeker, ~~nat.~~
~~Tijdschr.~~ ~~Dierk~~ Nederlandsch Indië, vol.
20, 1859-60, p. 235. Nagasaki; Act.
Soc. Sci. Ind. Néerland^e, no. 3, vol. 3,
1857-58 (1859), p. 3 (Kioesio), p. 6
(Japan), p. 28 (reference).

Myrus wropterus Günther, Cat. Fishes
Brit. Mus., vol. 8, 1870, p. 50 (Japan).

— Nyström, Bihang K. Svenske Vet. Akad.

Handl., vol. 13, pt. 14, no. 4, 1887, p. 46 (Nagasaki).

↓
Stockholm

— Jordan and Snyder, Proc. U. S. Nat. Mus.,
vol. 23, 1901, p. 861 (copied).

Tail twice long as trunk (without head).

Front eye edge much nearer end of maxillary than end of snout; mouth cleft extends nearly below hind edge of eye.

Dorsal begins above end of pectoral.

Coloration uniform. Length 330 mm. (Günther.)

Japan.

Myrophis australis Castelnau

Myrophis? australis Castelnau, Proc.
Linn. Soc. New South Wales, vol. 3, 1878,
p. (355) 396. Port Jackson. — Macleay,
Proc. Linn. Soc. New South Wales, vol. 4,
pt. 2, 1882, p. 271 (reference).

Tail much longer than body, very pointed. Head with strong longitudinal central ridge. Orbit $1\frac{1}{2}$ in snout. Mouth cleft reaches over $\frac{1}{2}$ of orbit. Teeth very numerous, small, truncated, uniserial, except in front, where another equal short series. Hind nostril large, below arched longitudinal median ridge just above and on side

2127

of lip, with fleshy fringe below,
front one very small.

Dorsal and anal united, well
developed, former begins much
nearer pectoral than vent. Pectoral
well developed.

Gray brown, sometimes almost
red, body marbled with rather
darker. Fins slaty. Length 860
mm. (Castelnau.)

New South Wales.

Myrophis chrysogaster macleay
Myrophis chrysogaster macleay, Proc.
 Linn. Soc. New South Wales, vol. 6, pt.
 2, 1882, p. 271. Port Darwin, Northern
 Territory.

Head 12 in total; tail twice body
 without head. Snout rather long, rounded
 and rather depressed in front; teeth have
 round molar appearance; nasal tubes
 large.

Dorsal appears to begin midway between
 gill opening and vent.

Reddish brown, yellowish on belly.
 Length 610 mm. (Macleay.)

Port Darwin.