

## Family RATABOURIDAE

Body elongate, cylindrical. Head moderate or small. Snout rather short. Eye small or obscure. Mouth cleft reaches below or behind eye. Teeth pointed, conic, recurved, uniserial in jaws and on vomer. Tongue not free. Hind nostrils as subtubulate opening near middle of front border of eye and front nostrils tubular near snout end. Gill openings narrow, inferior or partly inferior slits. Heart some distance behind gills. First branchial opening in pharynx wide, following narrow slits. Body scaleless. Dorsal and anal confined to tail, confluent with caudal, rather low or reduced to low fold which furnished with rays only terminally. Pectorals short, vestigial or absent.

Small eels of brackish or salt water, living near shores, on reefs or in estuaries. They are usually found buried in sand, mud or gravel of the bottom. Indo Pacific.



Genus Rataboura Gray

Rataboura GRAY, Zool. Miscellany, Feb. 19, 1831, p.

9. Type Muraena rataboura BUCHANAN HAMILTON, tautotypic.

Moringua GRAY, Zool. Miscellany, Feb. 19, 1831, p. 9.

Type Moringua linearis GRAY, monotypic.

Pterurus SWAINSON, Nat. Hist. Animals, vol. 2, 1839, p.

334. Type Pterurus maculatus SWAINSON, designated by SWAIN, Proc. Acad. Nat. Sci. Philadelphia, 1882, p.

283.

Pachyurus (not AGASSIZ 1829) SWAINSON, Nat. Hist. Animals,

vol. 2, 1839, p. 335. Type Pachyurus linearis GRAY,

monotypic.

Ptyobranchus MC CLELLAND, Calcutta Journ. Nat. Hist., vol.

5, 1845, p. 199. Type Ptyobranchus arundinaceus MC

CLELLAND, designated by JORDAN, Genera of Fishes, pt.

2, 1919, p. 220.



Apthalmichthys KAUP, Archiv Naturg., vol. 22, pt. 1,  
1856, p. 68. Type Apthalmichthys javanicus KAUP.

Aphthalmichthys BLEEKER, Atlas Ichth. Ind. Neerland.,  
vol. 4, 1864, p. 16. Type Apthalmichthys javanicus  
KAUP,

Pseudomoringua BLEEKER, Atlas Ichth. Ind. Neerland.,  
vol. 4, 1864, p. 14. Type Moringua lumbricoides  
BLEEKER, orthotypic.

Stilbiscus JORDAN and BOLLMAN, Proc. U. S. Nat. Mus.,  
vol. 11, 1888, p. 549. Type Stilbiscus edwardsi  
JORDAN and BOLLMAN, orthotypic.

Gordiichthys JORDAN and DAVIS, Rep. U. S. Fish Comm.,  
pt. 16, 1888 (1892), p. 644. Type Gordiichthys  
irretitus JORDAN and DAVIS, orthotypic.



Body very slender, worm like, depth 30 to 100, tail much shorter than body. Mouth small, weak. Teeth feeble, acute, **very** small, usually uniserial, sometimes irregularly biserial on vomer. Gill openings small. Vertical fins usually rudimentary or covered by skin, often may form short fold around end of tail. Sometimes dorsal and anal may protrude higher with rays visible anteriorly and posteriorly with mere low fold of skin in middle.



Analysis of species

- a<sup>1</sup>. Rataboura. Dorsal and anal with visible rays anteriorly lower or scarcely more than low fold medially.
- b<sup>1</sup>. Distance between vent and anal origin somewhat more or much less than half head length.
- c<sup>1</sup>. Distance of dorsal origin from anal origin much less than half of head length.
- d<sup>1</sup>. Distance between anal origin and vent 1/2 to 3/4 in head; pectorals 5 to 7 in head.
- e<sup>1</sup>. Vomerine teeth biserial; distance between anal origin and vent 1 1/3 in head. cagayana.
- e<sup>2</sup>. Vomerine teeth uniserial; distance between anal origin and vent 1 3/4 to 2 in head. raitaboura.
- d<sup>2</sup>. Distance between anal origin and vent 1/4 or less in head; pectoral 4 to over 5 in head. floresiana.
- c<sup>2</sup>. Distance of dorsal origin from anal origin 1/2 of head; distance between anal origin and vent less than 1/3 of head; pectoral 7 1/2 in head. robusta.



- c<sup>3</sup>. Distance of dorsal origin from anal origin more than half head length.
- f<sup>1</sup>. Eye 2 in snout. linearis.
- f<sup>2</sup>. Eye nearly long as snout. ocularis.
- b<sup>2</sup>. Distance between vent and anal origin more than head length. bicolor.
- a<sup>2</sup>. Aphthalmichthys. Dorsal and anal as reduced or vestigial low folds, usually as few weak short rays only at extreme tip of tail.
- f<sup>3</sup>. Depth 34 to 40; head  $8 \frac{4}{5}$  to  $9 \frac{9}{10}$ . macrocephala.
- f<sup>4</sup>. Depth 40 to 58; head  $10 \frac{1}{2}$  to  $13 \frac{1}{2}$ . abbreviata.
- f<sup>5</sup>. Depth 67 to 95; head 12 to 22. javanica.



Rataboura cagayana (Seale)

Moringua cagayana SEALE, Philippine Journ. Sci., vol.

4, 1909, p. 493. Cagayan, Mindanao. -- HERRE, Philippine Journ. Sci., vol. 23, No. 2, Aug. 1923, p. 186, pl. 8, fig. 8 (teeth) (type).

Moringua robusta HERRE, Philippine Journ. Sci., vol. 23,

No. 2, Aug. 1923, p. 185, pl. 7. Dumaguete, Oriental  
Negros.



Rataboura raitaborua (Buchanan-Hamilton)

Muraena raitaborua BUCHANAN-HAMILTON, Fishes of Ganges,  
1822, pp. 25, 364. Ganges River.

Ptyobrunchus raitborua MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, p. 222 (Bengal; error).

Anguilla (Moringua) raitaborua CANTOR, Naturk. Tijdschr.

Nederl. Indie, vol. 4, 1853, p. 228 (estuaries of  
Ganges).

Moringua raitaborua BLEEKER, Verh. Batav. Genootsch.

(Nal. Ich., Bengal), vol. 25, 1853, p. (76) 154

(Calcutta). -- KAUP, Archiv Naturg., 1856, pt. 1, p.

69 (compiled); Cat. Apodal Fish Brit. Mus., 1856, p.

106 (no locality). -- GÜNTHER, Cat. Fishes Brit. Mus.,

vol. 8, 1870, p. 90 (Hooghly, India, type of Moringua

lumbriciformis, Batu). -- BEAVAN, Fresh Water Fishes

of India, 1877, p. 160 (Bengal). -- DAY, Fishes of

India, pt. 4, 1878, p. 666, pl. 170, fig. 3; Fauna

Brit. India, Fishes, vol. 1, 1889, p. 98, fig. 42.



WEBER, Siboga Exp., vol. 57, Fische, 1913, p. 52

(Elat, High Key).

Rataboura hamiltonii GRAY, Zool. Miscellany, 1831, p.

9 (on BUCHANAN-HAMILTON).

Rataboura hardwickii GRAY, Zool. Miscellany, 1831, p.

India; Illustrat. Ind. Zool. Hardwiche, pt. 1, 1832-

33 (1832), pl. 95, fig. 4.

Ptyobranchus hardwickii MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, p. 222 (note).

Pterurus maculatus SWAINSON, Nat. Hist. Animals, vol. 2,

1839, p. 334 (on BUCHANAN-HAMILTON).

Ptyobranchus arundinaceus MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, pp. 200, 221, pl. 10, fig.

1. Bengal.



Ptyobranchnus guthrianus MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, pp. 201, 222, pl. 10,

fig. 2. Bengal.

Ptyobranchnus erythreus MC CLELLAND, Calcutta Journ. Nat.

Hist., vol. 5, 1845, pp. 201, 223, pl. 9, fig. 3.

Bengal.

Ptyobranchnus multidentata MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, p. 201, pl. 9, fig. 4.

Bengal.

Ptyobranchnus multidentatus MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, p. 223 (Bengal).

Ptyobranchnus parvidentata MC CLELLAND, Calcutta Journ.

Nat. Hist., vol. 5, 1845, p. 202, pl. 9, fig. 5.

Bengal.

Ptyobranchnus gracilis MC CLELLAND, Calcutta Journ. Nat.

Hist., vol. 5, 1845, pp. 202, 223, pl. 9, fig. 6.

Bengal.



Ptyobranchus brevis MC CLELLAND, Calcutta Journ. Nat.

Hist., vol. 5, 1845, p. 223. Bengal.

Moringua macrochir BLEEKER, Nat. Tijds. Nederland.

Indië, vol. 9, 1855, p. (66) 71. Batu Islands;

Atlas Ichth. Ind. Neerland., vol. , 1864, p. 15,

pl. (3) 147, fig. 4 (type). -- KNER, Reise Novara,

Fische, 1865, p. 389 (no locality). -- WEBER and

BEAUFORT, Fishes Indo Austral. Archipelago, vol. 3,

1916, p. 339, fig. 166 (dentition) (Java; Kei Islands).

Muraena raktaboruya (BUCHANAN-HAMILTON) KAUP, Archiv.

Naturg., 1856, pt. 1, p. 69 (name in synonymy).

Moringua lumbriciformis KAUP, Archiv Naturg., 1856, pt.1,

p. 70. India; Cat. Apodal Fish Brit. Mus., 1856, p.

107 (copied).



Depth 27 to  $29 \frac{3}{5}$ ; head 8 to  $8 \frac{7}{8}$ , 5 to  $5 \frac{3}{4}$  to vent, width 4 to  $4 \frac{1}{8}$  in its length; tail  $1 \frac{7}{8}$  to 2 in combined head and trunk. Snout  $6 \frac{1}{2}$  to 7 in head; eye 14 to 18, 2 to  $2 \frac{1}{2}$  in snout,  $1 \frac{3}{4}$  to 2 in interorbital; mouth cleft reaches hind eye edge to half an eye diameter beyond, length  $4 \frac{1}{4}$  to  $4 \frac{7}{8}$  in head; teeth simple, conic, uniserial in jaws and on vomer; interorbital 8 to  $9 \frac{1}{5}$ , rather low, convex. Gill opening  $9 \frac{1}{2}$  to 12, less than interspace.

Dorsal origin at space about  $\frac{1}{4}$  of head behind vent; caudal short, broad, truncated; anal behind snout length to space equal to combined snout and eye behind vent; pectoral 5 to  $5 \frac{1}{5}$  in head.

Brown, under surfaces paler. Iris gray. Fins brown like body/

India, East Indies, Philippines.

11004, 11005, 11007. Iloilo market, Panay. March 29, 1908. Length 302 to 314 mm.

22476. Romblon. March 25, 1908. Length 173 mm.



Rataboura floresiana (Weber and Beaufort)

Moringua floresiana WEBER and BEAUFORT, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 340, fig. 167  
(dentition). South coast of Flores.

Rataboura robusta (Herre)

Moringua robusta HERRE, Philippine Journ. Sci., vol. 23, No. 1, 1923, p. 185, pl. 7. Damaguete, Oriental Negros.

Rataboura linearis (Gray)

Moringua linearis GRAY, Zool. Miscellany, 1831, p. 9.  
India; Illustrat. Ind. Zool. Hardwicke, pt. 1, 1832-33 (1832), pl. 95, fig. 3.



Pachyurus linearis SWAINSON, Nat. Hist. Animal., vol.  
2, 1839, p. 335 (reference).

?Muraena vamos BUCHANAN-HAMILTON, Fishes of Ganges,  
1822, pp. 24, 364. -- DAY, Fishes of India, pt. 4,  
1878, p. 666 (note).

Ptyobrachus linearis MC CLELLAND, Calcutta Journ. Nat.  
Hist., vol. 5, 1845, p. 222 (note; error).

Moringua lumbricoidea RICHARDSON, Voy. Sulphur, Ichth.,  
1844, p. 113, pl. 56, figs. 7-11. China. -- GUNTHER,  
Cat. Fishes Brit. Mus., vol. 8, 1870, p. 91 (China;  
type of Moringua microchir). -- SAUVAGE, Bull. Soc.  
Philomath. Paris, ser. 7, vol. 5, 1881, p. 107 (Swa-  
tow). -- ISHIKAWA and MATSUURA, Prelim. Cat. Fish.  
Mus. Tokyo, 1897, p. 6. -- JORDAN and SEALE, Proc.  
U. S. Nat. Mus., vol. 28, 1905, p. 773 (        );  
Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 7 (Cavite).



Moringua lumbricoides KAUP, Archiv Naturg., 1856, pt.

1, p. 70 (type); Cat. Apodal Fish Brit. Mus., 1856,

pt. 1, p. 70 (type). -- SCHMELTZ, Cat. Mus. Gode-

ffroy, No. 5, 1874, p. 38 (Ovalau); No. 7, 1879, p.

59 (Ovalau). -- KAROLI, Termesz. Fuzetek, Budapest,

vol. 5, 1881, p. 185 (Simumju). -- ELERA, Cat. Fauna

Filip., vol. 1, 1895, p. 591 (Luzon, Manila).

Aphthalmichthys lumbricoides HERRE, Philippine Journ.

Sci., vol. 23, No. 2, Aug. 1923, p. 189 (copied).



Moringua microchir BLEEKER, Nat. Tijds. Nederland.

Indië, vol. 4, 1853, p. 124. Amboina; Cauer, West  
Sumatra; Atlas Ichth. Ind. Neerland., vol. 4, 1864,  
p. 16, pl. (4) 148, fig. 2 (Sumatra; Amboina). --

KNER, Reise Novara, Fische, 1865, p. 388 (no locality).

-- SCHMELTZ, Cat. Mus. Godeffroy, No. 4, 1869, p. 26

(Ovalau); No. 7, 1879, p. 59 (Ovalau). -- GÜNTHER,

Journ. Mus. Godeffroy, vol. 9, pt. 17, 1910, p. 405

(Marquesas Islands; Ovalau). -- WEBER and BEAUFORT,

Fishes Indo Austral. Archipelago, vol. 3, 1916, p.

338 (Ambon).

Aphthalmichthys microchir FOWLER, Mem. Bishop Mus., vol.

10, 1928, p. 47 (compiled); vol. 11, No. 5, 1931, p.

316 (reference).



Rataboura oculis new species

Depth  $45 \frac{1}{4}$ ; head  $10 \frac{1}{5}$ ,  $7 \frac{1}{6}$  to vent, width  $5 \frac{1}{5}$  in its length; tail 2 in combined head and trunk. Snout  $7 \frac{3}{4}$  in head; from snout tip; eye  $9 \frac{7}{8}$ ,  $1 \frac{1}{5}$  in snout, equals interorbital; mouth cleft reaches opposite eye center, length  $4 \frac{3}{4}$  in head from snout tip; teeth simple, conic, uniserial in jaws; interorbital  $9 \frac{7}{8}$ , level. Gill opening  $10 \frac{3}{4}$ , equals interspace.

Dorsal inserted space behind vent equal to head length; anal inserted behind vent space equal to  $\frac{1}{3}$  head; caudal obtusely rounded, rather broad; pectoral  $4 \frac{3}{5}$ .

Brown, paler or lighter below. Eye gray. Fins all pale brown.

Diagnosis. Apparently well distinguished by its large eye, short pointed muzzle and space between vent and dorsal origin subequal with the head.

Type No.                      U. S. N. M.

1 example. Tifu Bay, Bouro Island, Dutch East Indies.  
December 10, 1909, Length 219 mm.



Rataboura bicolor (Kaup)

- Moringua bicolor KAUP, Archiv Naturg., 1856, pt. 1, p. 70. Timor (Leyden Museum); Cat. Apodal Fish Brit. Mus., 1856, p. 107 (copied). -- BLEEKER, Atlas Ichth. Ind. Neerland., vol. 4, 1864, p. 15, pl. (3) 147, fig. 1 (Timor). -- GÜNTHER, Cat. Fishes Brit. Mus., vol. 8, 1870, p. 91 (Timor). -- GÜNTHER, Journ. Mus. Godeffroy, vol. 9, pt. 17, 1910, p. 405 (Kandavu; New Pommerania). -- WEBER and BEAUFORT, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 338, fig. 165 (East Flores; New Britain).
- Aphthalmichthys bicolor FOWLER, Mem. Bishop Mus., vol. 10, 1928, p. 47 (compiled).



Depth  $38 \frac{1}{3}$  to  $49 \frac{3}{4}$ ; head 12 to  $12 \frac{7}{8}$ ,  $8 \frac{1}{8}$  to  $8 \frac{1}{5}$  to vent, width  $5 \frac{1}{5}$  to  $5 \frac{1}{4}$  in its length; tail 2 to  $2 \frac{1}{4}$  in combined head and trunk. Snout  $6 \frac{1}{2}$  to  $7 \frac{1}{4}$  in head from snout tip; eye 12 to  $12 \frac{1}{2}$ , 2 to  $2 \frac{1}{4}$  in snout,  $1 \frac{3}{4}$  to 2 in interorbital; mouth cleft reaches opposite hind eye edge, length 4 to  $4 \frac{1}{3}$  in head from snout tip; teeth simple, conic, small, uniserial in jaws and on vomer, little larger anteriorly, rather few; interorbital  $8 \frac{2}{3}$  to 9, low, nearly level. Gill opening 11 to  $11 \frac{2}{3}$ , subequal with interspace.

Lateral line distinct.

Dorsal origin behind vent variably from space equal to postocular length of head to space little greater than total head length; anal opposite dorsal though usually little shorter or lower; caudal forms rather prominent short point at end of tail; pectoral 6 to  $6 \frac{4}{5}$  in total head length.

Brown above, paler or whitish below. Iris gray. Dorsal, anal and pectoral pale to whitish. Caudal deep or dusky brown.

East Indies, Philippines, Melanesia, Polynesia.



D. 5561. Teomabal Island (NW.), S.  $36^{\circ}$  W., 0.2  
mile (N.  $5^{\circ} 50' 45''$  E.  $121^{\circ} 1' 15''$ ), Jolo Island  
and vicinity. In 10 fathoms. September 18, 1909.  
Length 235 to 255mm. 2 examples.



Rataboura macrocephala (Bleeker)

Aphthalmichthys macrocephalus BLEEKER, Nederland.

Tijds. Dierk., vol. 1, 1863, p. 165. Timor; Atlas

Ichth. Ind. Neerland., vol. 4, 1864, p. 17, pl.

(3) 147, fig. 2 (Timor). -- PETERS, Monatsb. Akad.

Wiss. Berlin, 1868, p. 275 (Legaspi, Luzon, Albay).

-- BARTLETT, Sarawak Gazette, vol. 26, No. 368,

1896, p. 180 (Sadong). -- WEBER, Siboga Exp., vol.

57, Fische, 1913, p. 52 (Nusa Laut). -- HERRE,

Philippine Journ. Sci., vol. 23, No. 2, Aug. 1923,

p. 188, fig. 9 (teeth), pl. 7, fig. 2 (Alaminos and

Luboc Beach). -- FOWLER, Mem. Bishop Mus., vol. 10,

1928, p. 47 (Samoa).



Moringua macrocephala GÜNTHER, Cat. Fishes Brit. Mus.,  
vol. 8, 1870, p. 92 (Timor; India). -- DAY, Fishes  
of India, pt. 4, 1878, p. 166. -- MEYER, Anal. Soc.  
Españ. Hist. Nat. Madrid, vol. 14, 1885, p. 44 (Rubi,  
New Guinea). -- DAY, Fauna Brit. India, Fishes, vol.  
1, 1889, p. 98. -- JORDAN and SEALE, Bull. Bur. Fisher.,  
vol. 25, 1905 (1906), p. 45 (Pago Pago). -- GÜNTHER,  
Journ. Mus. Godeffroy, vol. 9, pt. 17, 1910, p. 407  
(Kanathia; Vitu). -- WEBER and BEAUFORT, Fishes Indo  
Austral. Archipelago, vol. 3, 1916, p. 341 (Simalur;  
Dirk de Vries Bay, Java; Nusa Laut).

Moringua (Apthalmichthys) macrocephalus STEINDACHNER,  
Sitz. Ber. Akad. Wiss. Wien, Math.-naturw. Kl., vol.  
115, pt. 1, 1906, p. 1422 (Upolu).

?Moringua abbreviata (not BLEEKER) VOLZ, Zool. Jahrb.  
Syst., vol. 19, 1903, p. 410.



Depth  $35 \frac{1}{3}$  to 39; head 9 to  $10 \frac{1}{5}$ ,  $6 \frac{1}{8}$  to 7 to vent, width 5 to  $5 \frac{1}{3}$ ; tail  $2 \frac{1}{3}$  in combined head and trunk. Snout 7 to 8 in head from snout tip; eye 15 to  $27 \frac{1}{2}$ ,  $2 \frac{1}{2}$  to 4 in snout,  $2 \frac{2}{3}$  to  $3 \frac{2}{3}$  in interorbital; mouth cleft extends  $\frac{1}{2}$  to  $1 \frac{1}{2}$  eye diameters behind eye, length  $3 \frac{4}{5}$  to  $4 \frac{2}{3}$  in head from snout tip; teeth conic, pointed, recurved, uniserial in jaws, anterior larger and stronger; interorbital  $6 \frac{1}{2}$  to  $8 \frac{1}{5}$ , low, broadly convex. Gill opening  $9 \frac{1}{4}$  to 16, slightly greater than to  $1 \frac{2}{5}$  in interspace.

Space between dorsal origin and vent  $1 \frac{1}{4}$  to  $1 \frac{2}{3}$  in head; dorsal and anal as low fold, little higher posteriorly where joining short low rounded caudal; pectoral short, low, length about equals eye, base broad.

Brown, lighter below. Fins brown. Eye gray.

India, East Indies, Philippines, Polynesia.

3 examples. Batan Island, tide pools. July 22, 1909.

Length 101 to 140 mm. 3 examples.

13989. Iloilo market. Panay. May 31, 1908. Length 427 mm.

23019. Nogas Point, Panay. February 4, 1908. Length 102 to 190 mm. 2 examples.



Rataboura abbreviata (Bleeker)

Aphthalmichthys abbreviatus BLEEKER, Nederland. Tijds.

Dierk., vol. 1, 1863, p. 163. Frigi, Java; Batu;

Manado, Celebes; Ternate; Amboyna; Atlas Ichth. Ind.

Neerland., vol. 4, 1864, p. 17, pl. (1) 145, fig. 1

(Java, Batu, Celebes, Ternate, Amboina, Timor). --

SCHMELTZ, Cat. Mus. Godeffroy, No. 4, 1869, p. 26

(Namusu). -- JORDAN and SNYDER, Proc. U. S. Nat. Mus.,

vol. 23, 1901, p. 877 (Yaeyama). -- WEBER, Siboga

Exp., vol. 57, Fische, 1913, p. 52 (Ambon; Elat). --

BEAUFORT, Bidj. Dierk., Amsterdam, vol. 19, 1913,

p. 99 (Saonek). -- HERRE, Philippine Journ. Sci.,

vol. 23, No. 2, Aug. 1923, p. 190 (Damugete).

-- FOWLER, Bull. Bishop Mus., No. 38, 1927, p. 6

(Tahiti); Mem. Bishop Mus., vol. 10, 1928, p. 47

(compiled); vol. 11, No. 5, 1931, p. 316 (reference).



Moringua abbreviata GUNTHER, Cat. Fishes Brit. Mus.,  
vol. 8, 1870, p. 92 (type). -- SCHMELTZ, Cat. Mus.,  
Godeffroy, No. 5, 1874, p. 38 (Viti Levu). --  
PETERS, Monatsb. Akad. Wiss. Berlin, 1876 (1877),  
p. 850 (Pariti, Timor, 6 fathoms). -- SCHMELTZ,  
Cat. Mus. Godeffroy, No. 7, 1879, p. 59 (Viti Levu).  
-- ELERA, Cat. Fauna Filip., vol. 1, 1895, p. 591 (  
Luzon, Manila). -- VOLZ, Rev. Suisse, Zool., vol. 12,  
1904, p. 482 (Upper Langkat, Sumatra). -- JORDAN  
and SEALE, Proc. U. S. Nat. Mus., vol. 28, 1905, p.  
773 (Negros). -- JORDAN and RICHARDSON, Bull. U. S.  
Fish Comm., vol. 27, 1907 (1908), p. (Ticao). --  
GUNTHER, Journ. Mus. Godeffroy, vol. 9, pt. 17,  
1910, p. 406 (Fiji). -- WEBER and BEAUFORT, Fishes  
Indo Austral. Archipelago, vol. 3, 1916, p. 341  
(North of Flores; Ambon; Saonek; Kei; Humboldt Bay,  
New Guinea).



?Aphthalmichthys intermedius OGILBY, Proc. Royal

Soc. Queensland, vol. 20, January 2, 1907, p. 9.

North east Australia.

Rataboura intermedia MC CULLOCH, Austral. Mus. Mem.,

vol. 5, June 29, 1929, p. 70 (reference).

Moringua socialis GÜNTHER, Journ. Mus. Godeffroy,

vol. 9, pt. 17, 1910, p. 406, pl. 169, fig. A.

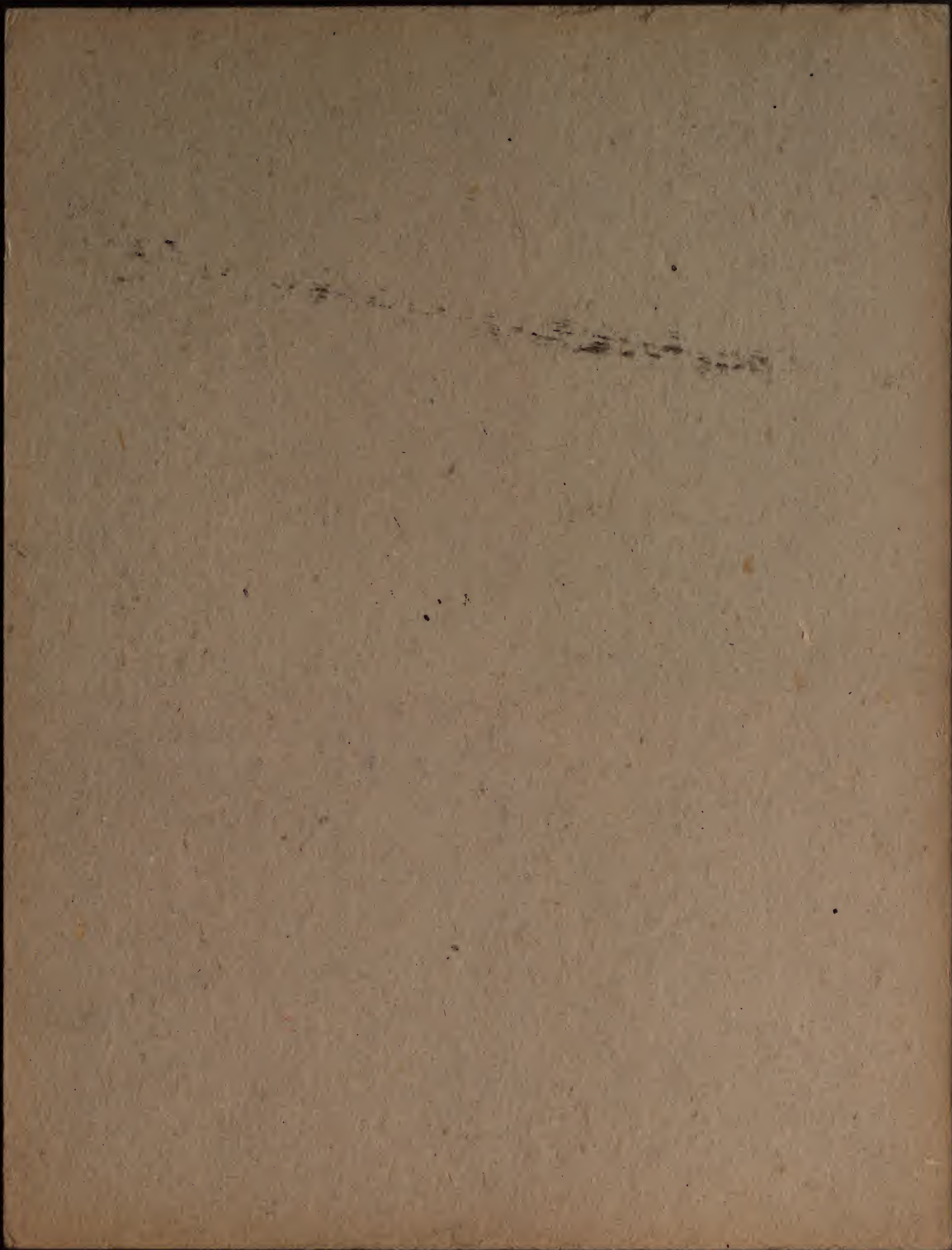
Tahiti?

Aphthalmichthys gangeticus FOWLER, Proc. Acad. Nat.

Sci. Philadelphia, 1912, p. 32, fig. 9. Ganges

River, India.







Rataboura javanica (Kaup)

Aphthalmichthys javanicus KAUP, Archiv Naturg., 1856,  
 pt. 1, p. 68. Java. -- BLEEKER, Nederland. Tijds.  
 Dierk., vol. 1, 1863, p. 164 (Celebes; Timor); Atlas  
 Ichth. Ind. Neerland., vol. 4, 1864, p. 16, pl. (2)  
 146, fig. 2 (Java, Celebes, Ceram, Timor). -- SNYDER,  
 Proc. U. S. Nat. Mus., vol. 23, 1901, p. 877 (com-  
 piled). -- BEAUFORT, Bijd. Dierk. Amsterdam, vol. 19,  
 1913, p. 191 (Dumaguete). -- FOWLER, Mem. Bishop  
 Mus., vol. 10, 1928, p. 47 (Honolulu, Guam, type of  
Moringua hawaiiensis); vol. 11, No. 5, 1931, p. 316  
 (reference).

Aphthalmichthys javanicus KAUP, Cat. Apodal Fish Brit.  
 Mus., 1856, p. 105, pl. 14, fig. 71 (head) (copied).  
Rataboura javanica MC CLELLAND, Asiatic Mus. Mem., vol.  
 5, pt. 1, June 29, , p. 70 (reference).



Moringua javanica GÜNTHER, Cat. Fishes Brit. Mus.,  
vol. 8, 1870, p. 92 (Moluccas, Fiji, Japan). --  
SCHMELTZ, Cat. Mus. Godeffroy, No. 7, 1879, p.  
59 (Samoa). -- ISHIKAWA and MATSUURA, Prelim. Cat.  
Fishes Mus. Tokyo, 1897, p. 5. -- SEALE, Occas. Pap.  
Bishop Mus., vol. 4, No. 1, 1906, p. 12 (Nukuhiva,  
Marquesas). -- GÜNTHER, Journ. Mus. Godeffroy, vol.  
6, pt. 17, 1910, p. 405 (Samoa, Fiji, Friendly  
Islands, Paumotu, Rarotonga). -- WEBER and BEAUFORT,  
Fishes Indo Austral. Archipelago, vol. 3, 1916, p.  
342, fig. 164 (Saonek; Humboldt Bay, New Guinea).  
-- FOWLER, Bull. Bishop Mus., No. 22, 1925, p. 4  
(Guam).



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vol. 22, 1902 (1904), p. 517, pl. 3, fig. 6. Hono-

lulu. -- JORDAN and EVERMANN, Bull. U. S. Fish

Comm., vol. 23, pt. 1, 1903 (1905), p. 86.



Depth  $78 \frac{1}{2}$ ; head  $17 \frac{1}{3}$ ,  $12 \frac{1}{3}$  to vent, width 5 in its length; tail  $2 \frac{1}{2}$  in combined head and trunk. Snout  $6 \frac{4}{5}$  in head from snout tip; mouth cleft 5, extends about 2 eye diameters beyond very small rudimentary eye, which 5 in snout and  $3 \frac{1}{2}$  in interorbital; teeth conic, pointed, recurved, uniserial in jaws, rather large anteriorly; interorbital  $9 \frac{7}{8}$  in head, convex. Gill opening  $10 \frac{3}{4}$ , about equal to interspace.

Dorsal and anal as very low rudimentary folds continuous with low or short rounded caudal at posterior portion of tail; no pectoral, though front edge of gill opening with very short or low marginal flap concealing gill opening.

Uniform brown. Iris gray.

East Indies, Philippines, Japan, Micronesia, Polynesia, Hawaii.

8428. Pandanon Island. March 24, 1909. Length 1030 mm.