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Catalogue of the fresh-water fishes of Africa in the British museum (Natural history) ... By George Albert Boulenger, F.R.S.

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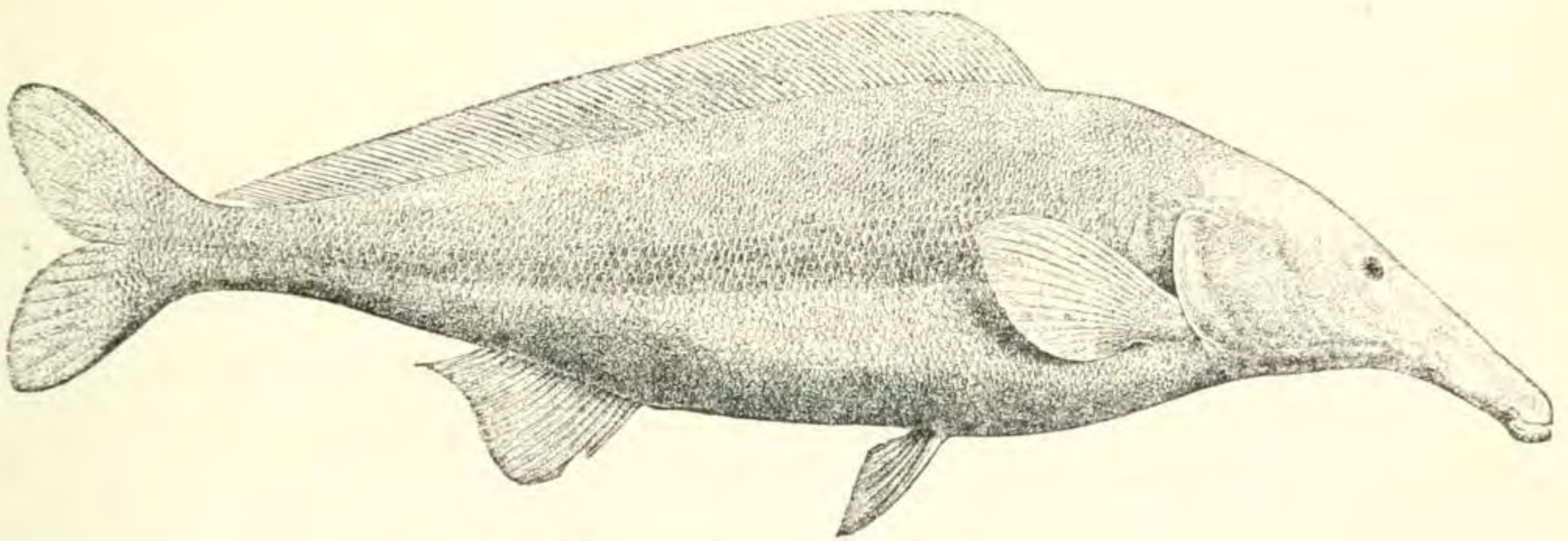
1-2. Ad. & hgr.	St. Louis, Senegal.	M. P. Delhez (C.).
3-10. Hgr. & yg.	Kaëdi, „	„
11-12. Ad.	Gambia.	J. S. Budgett, Esq. (P.).
13. Ad.	Mureji, Upper Niger.	„
14-15. Ad.	Jebba, „	Capt. G. F. Abadie (P.).
16. Hgr.	Benue R., N. of Ibi.	H. L. Norton Traill, Esq. (C.).
17. Hgr.	R. Shari at Maidugari.	Capt. G. B. Gosling (P.).
18. Hgr.	Gaboon.	
19. Yg.	Lower Congo.	M. A. Greshoff (C.); Utrecht University (E.).
20. Yg.	Monsembe, Upper Congo.	Rev. J. H. Weeks (C.).

14. MORMYRUS PROBOSCIROSTRIS.

Bouleng. Ann. Mus. Congo, Zool. i. 1898, p. 16, pl. viii. fig. 2, Proc. Zool. Soc. 1898, p. 818, and Poiss. Bass. Congo, p. 114 (1901).

Depth of body $4\frac{1}{4}$ to $4\frac{1}{2}$ times in total length, length of head $3\frac{2}{3}$ to $3\frac{4}{5}$ times. Upper profile of head descending in a curve; snout much produced, trunk-like, a little longer than postocular part of the head, its length $3\frac{1}{2}$ to $4\frac{1}{2}$ times its least depth; mouth very small, lower jaw slightly projecting, with thick lips; teeth notched, 5 or 7 in upper jaw,

Fig. 116.

*Mormyrus proboscirostris.*Type (A. M. C.). $\frac{1}{5}$.

12 or 14 in lower; eye small, its diameter $5\frac{1}{2}$ to $7\frac{1}{2}$ times in length of snout, twice in interorbital width. Dorsal 75-82, originating well in advance of base of ventral, nearly 5 times as long as anal, once and $\frac{1}{4}$ as long as its distance from end of snout. Anal 19-20, originating at equal distance from base of pectoral and from base

of caudal. Pectoral obtusely pointed, nearly $\frac{1}{2}$ length of head, ventral $\frac{1}{3}$ length of head. Caudal densely scaled, with rounded lobes. Caudal peduncle $1\frac{1}{2}$ to 2 times as long as deep, $\frac{1}{3}$ or less than $\frac{1}{3}$ length of head. 95–100 scales in lateral line, $\frac{21-26}{28-32}$ in transverse series on body, 32–36 in transverse series between dorsal and anal, 18–20 round caudal peduncle. Pinkish or brown, sometimes with a broad bluish-grey stripe extending along each side of the body and tail.

Total length 570 millim.

Upper Congo.—Type in Congo Museum, Tervueren.

1. Ad. Upper Congo. Brussels University.

10. HYPEROPISUS.

Gill, Proc. Ac. Philad. 1862, p. 443; Günth. Cat. Fish. vi. p. 222 (1866);

Bouleng. Proc. Zool. Soc. 1898, p. 819, and Fish. Nile, p. 70 (1907).

Phagrus, Marcusen, Mém. Ac. St. Pétersb. (7) vii. 1864, no. 4, p. 111.

Teeth in jaws small, notched, few (3–5 in the upper jaw, 5–6 in the lower); parasphenoid and tongue with a pavement of large spheroid teeth; mouth terminal, below the level of the eyes. Nostrils moderately far apart, remote from the eye. Body elongate; ventrals much nearer pectorals than anal. Dorsal very short (12–15 rays); anal very long. Vertebrae 55–59 (15–16 + 4–6 + 35–38).

1. HYPEROPISUS BEBE.

Kaschoué, Sonnini, Voy. Égypte, pl. xxi. fig. 3 (1799).

Mormyrus bebe, Lacep. Hist. Poiss. v. p. 619 (1803).

Mormyrus dorsalis, I. Geoffr. Descr. Égypte, Poiss. p. 276, pl. viii. figs. 1 & 2 (1827); Cuv. & Val. Hist. Poiss. xix. p. 271 (1846).

Phagrus dorsalis, Marcus. l. c. p. 142.

Hyperopisus dorsalis, Günth. Cat. Fish. vi. p. 222 (1866); Steind. Sitzb. Ak. Wien, lxi. i. 1870, p. 554, pl. iv. fig. 2.

Hyperopisus occidentalis, Günth. t. c. p. 223.

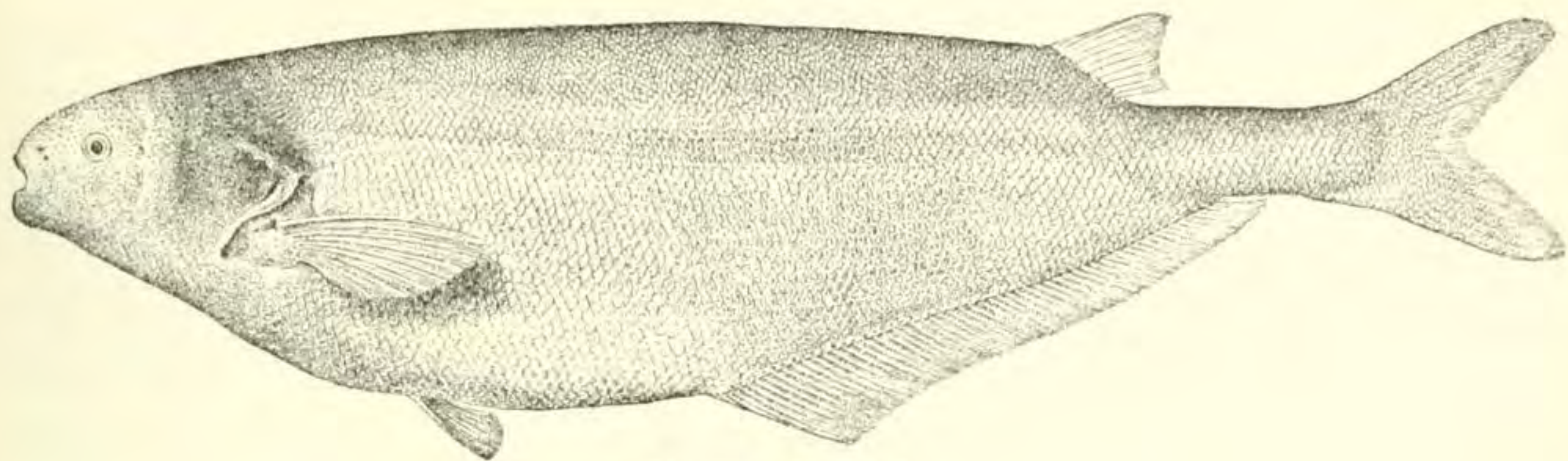
Hyperopisus bebe, Bouleng. Proc. Zool. Soc. 1898, p. 820, and Fish. Nile, p. 70, pl. v. fig. 2 (1907).

? *Hyperopisus tenuicauda*, Pellegr. Bull. Mus. Paris, 1904, p. 312.

Depth of body $3\frac{2}{3}$ to $5\frac{1}{2}$ times in total length, length of head $4\frac{2}{3}$ to $5\frac{2}{3}$ times. Head a little longer than deep, with strongly curved upper profile; snout $\frac{2}{5}$ to $\frac{1}{2}$ as long as postorbital part of head; eye moderate, its diameter about $\frac{1}{2}$ length of snout; width of mouth $\frac{1}{5}$ or $\frac{1}{6}$ length of head. Dorsal 12–16, $2\frac{1}{2}$ to $3\frac{1}{2}$ times as far from head as from caudal. Anal 58–68, originating at equal distance from end of snout

and from root of caudal, or a little nearer latter. Pectoral obtusely pointed, $\frac{2}{3}$ to $\frac{4}{5}$ length of head, ventral $\frac{1}{3}$ to $\frac{2}{5}$. Caudal scaled, with obtusely pointed lobes. Caudal peduncle 2 to $2\frac{2}{3}$ times as long as deep,

Fig. 117.



Hyperopisus bebe.
Lower Nile (F. N.). $\frac{1}{2}$.

nearly $\frac{1}{2}$ to $\frac{2}{3}$ length of head. 93–120 scales in lateral line, $\frac{15-24}{22-30}$ in transverse series on body, $\frac{15-20}{18-22}$ in transverse series between dorsal and anal, 20 (rarely 18 or 22) round caudal peduncle. Plumbeous or olive above, silvery beneath.

Total length 460 millim.

Lower Nile to Blue Nile and Bahr-el-Gebel, Chad Basin, Senegal, Gambia, Niger.—Type in Paris Museum.

1–4. Ad. & hgr.	Lower Nile.	S. S. Allen, Esq. (P.).
5. Ad.	Barrage N. of Cairo.	L. Loat, Esq. (C.).
6–7. Ad.	Beni Souef, Lower Nile.	„
8–9. Ad.	Between Beni Souef and Biba.	„
10–17. Hgr. & yg.	Near Luxor.	„
18–19. Ad. & yg.	Khartum.	J. Petherick, Esq. (C.).
20. Skel.	„	„
21. Ad.	Wad Medine, Blue Nile.	L. Loat, Esq. (C.).
22–24. Ad. & hgr.	Jebelain, White Nile.	„
25–26. Ad. & hgr.	Fashoda, „	„
27–31. Ad. & hgr.	Tewfikyeh, „	„
32. Ad.	Kerro, Bahr-el-Gebel.	„
33. Ad.	Gondokoro, „	„
34. Ad.	Wadelai, „	J. S. Budgett, Esq. (P.).
35. Ad.	R. Shari at Maidugari.	Capt. G. B. Gosling (P.).
36–38. Ad. & yg.	St. Louis, Senegal.	Mr. P. Delhez (C.).
39–41. Hgr.	Kaëdi, „	„
42–45. Ad.	Gambia.	J. S. Budgett, Esq. (P.).
46. Ad.	Lokoja, Upper Niger.	„

47. Ad.	Jebba, Upper Niger.	Capt. G. F. Abadie (P.).
48. Hgr.	Abo, Lower Niger.	Dr. W. J. Ansorge (C.).
49. Ad. (Type of <i>H. occidentalis</i> .)	Niger.	Mr. J. T. Dalton (C.).

11. GYMNARCHUS.

Cuv. R. An. 2nd ed. ii. p. 357 (1829); Günth. Cat. Fish. vi. p. 225 (1866);
Bouleng. Proc. Zool. Soc. 1898, p. 821, and Fish. Nile, p. 74 (1907).

Teeth forming a single complete series on the entire edge of both jaws (14 in the upper, 24–28 in the lower), with compressed, pointed, truncated, or slightly notched crowns finely serrated on the sides; palate and tongue toothless; mouth wide, terminal. Nostrils far apart, remote from the eye. Body much elongate, the tail gradually attenuated into a point. Dorsal occupying the whole length of the body; anal, ventral, and caudal fins absent. Vertebrae 114–120 (45–47 + 67–75). Air-bladder cellular, lung-like.

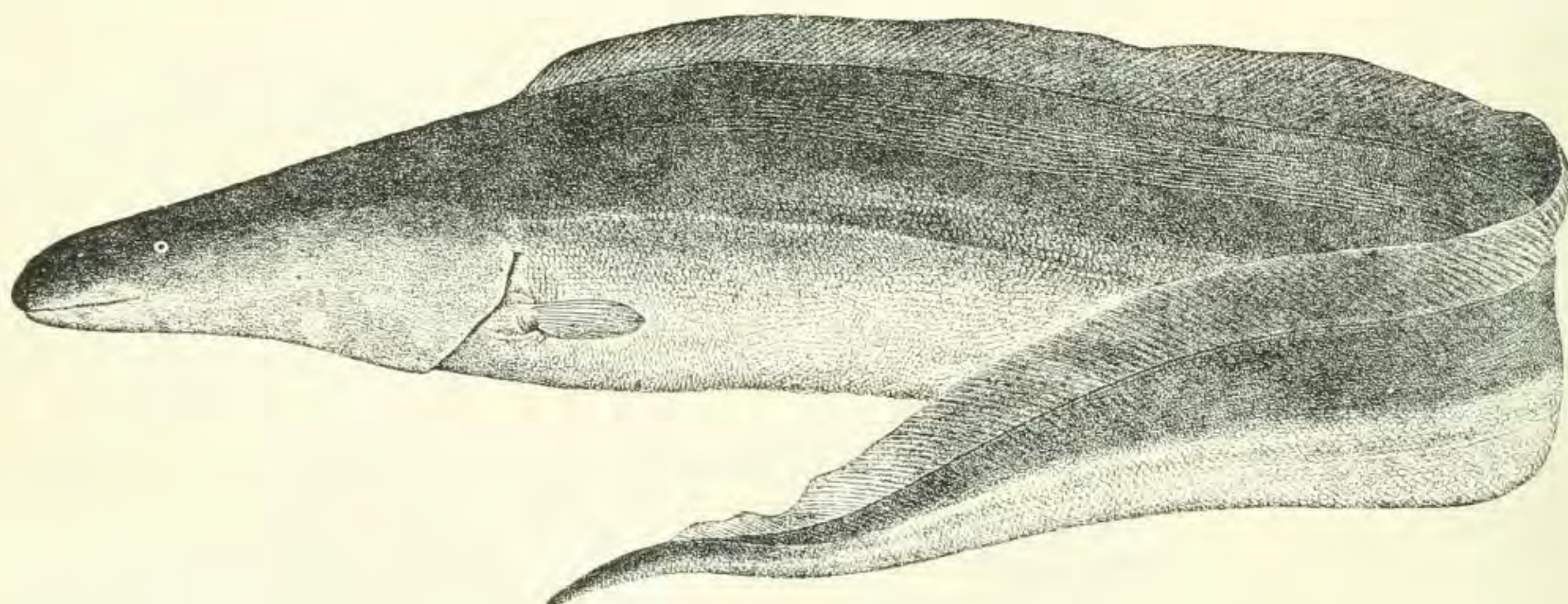
Tropical Africa, north of the Equator.

1. GYMNARCHUS NILOTICUS.

Cuv. l. c.; Rifaud, Voy. Égypte, pl. 138 bis (1830); Erdl, Abh. Bayer. Ak. v. 1847, p. 209, pl. v.; Heckel, Denkschr. Ak. Wien, vi. 1854, p. 11, pl. i.; Hyrtl, Denkschr. Ak. Wien, xii. 1856, p. 1, pls. i.–iv.; Günth. Cat. Fish. vi. p. 225 (1866); Steind. Sitzb. Ak. Wien, lxi. i. 1870, p. 556; Budgett, Tr. Zool. Soc. xvi. 1901, p. 126, pl. xi. figs. 4 & 5; Bouleng. ll. cc. pl. xiii.

Depth of body 7 to $10\frac{2}{3}$ times in total length, length of head $5\frac{1}{3}$ to $6\frac{3}{4}$

Fig. 118.



Gymnarchus niloticus.
White Nile (F. N.). $\frac{1}{4}$.

times. Head 2 to $2\frac{1}{2}$ times as long as deep; snout rounded, scarcely projecting beyond the lower jaw; eye very small; a strong fold of the

skin connects the gill-openings across the isthmus. Dorsal 183–230. Pectoral rounded, $\frac{1}{4}$ to $\frac{2}{7}$ length of head. Scales very small, largest along the middle of the side. Olive or brown above, whitish beneath, end of tail blackish.

Total length 1070 millim.

Upper Nile to Bahr-el-Ghazal, Lake Rudolf, Chad Basin, Senegal, Gambia, Niger.—Type in Paris Museum.

1. Ad.	Upper Nile.	J. Petherick, Esq. (C.).
2. Ad.	Kawa, White Nile.	L. Loat, Esq. (C.).
3–6. Hgr.	Fashoda, „	„
7. Ad.	Polkom, Baro R. (Solat).	Mr. P. C. Zaphiro (C.); W.N. McMillan, Esq. (P.).
8. Head of ad.	Bahr-el-Ghazal.	Capt. S. Flower (P.).
9. Ad.	Galeba, Lake Rudolf.	Mr. P. C. Zaphiro (C.); W.N. McMillan, Esq. (P.).
10. Ad.	R. Shari at Maidugari.	Capt. G. B. Gosling (P.).
11–14. Ad. & hgr.	Kaëdi, Senegal.	M. P. Delhez (C.).
15. Skel.	Lagos.	Sir A. Moloney (P.).
16. Yg.	Oguta, Lower Niger.	Dr. W. J. Ansorge (C.).
17–18. Yg.	Assay, „	J. S. Budgett, Esq. (P.).
19, 20. Ad., stuffed (skull separate).	Niger.	Mr. J. T. Dalton (C.).
21. Hgr.	„	„
22–23. Yg.	West Africa.	„

Fam. 3. NOTOPTERIDÆ.

Margin of the upper jaw formed by the præmaxillaries and the maxillaries, the latter the more developed; parietal bones separating the supraoccipital from the frontals; a large hole on each side of the skull, between the squamosal, the exoccipital, and the epiotic; symplectic present; no suboperculum; interoperculum small, hidden under the præoperculum. No pharyngeal teeth. Ribs sessile; accessory bones (adpleurals) attached to the extremity of the anterior ribs, with which they may be fused, and embraced by ossifications forming a double ventral serrature; præcaudal vertebræ with transverse processes in front of the ribs. Pectoral fins folding against the sides of the body. Air-bladder communicating with the ear. No oviducts.

Fresh and brackish waters of S.E. Asia and Tropical Africa.

Two genera:—

Dorsal fin present	1. <i>Notopterus</i> , Lacep., p. 146.
No dorsal fin	2. <i>Xenomystus</i> , Gthr., p. 147.

1. NOTOPTERUS.

Lacep. Hist. Poiss. ii. p. 189 (1800), part. ; Cuv. & Val. Hist. Poiss. xxi. p. 119 (1848) ; Günth. Cat. Fish. vii. p. 478 (1868) ; Bouleng. Poiss. Bass. Congo, p. 117 (1901).

Body elongate and very strongly compressed, attenuate behind, the vent far forward ; scales small and cycloid ; lateral line distinct ; a double ventral serrature. Mouth large, with small teeth on the præmaxillaries and maxillaries ; teeth on vomer, palatines, pterygoids, and tongue. Bones of the head cavernous ; anterior nostril with a tentacle, the posterior near the eye. 6–9 branchiostegal rays. A short dorsal fin, in the middle of the body. Anal fin very long, confluent with the small caudal. Ventral fins rudimentary or absent. Air-bladder very large, with several divisions, forked in front and behind.

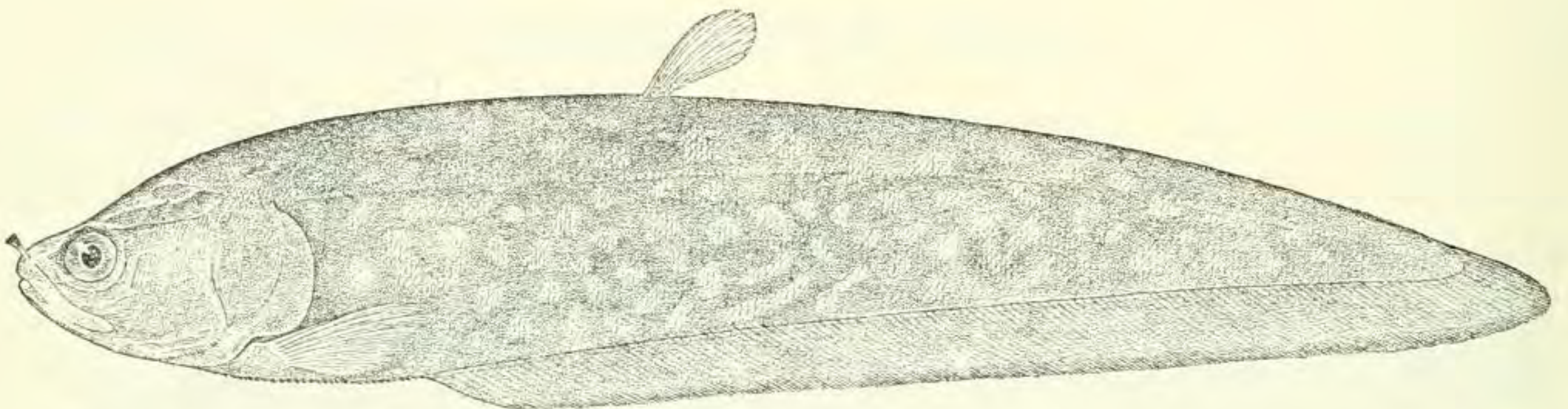
S.E. Asia and Tropical Africa.

1. NOTOPTERUS AFER.

Günth. Cat. Fish. vii. p. 480 (1868) ; Steind. Notes Leyd. Mus. xvi. 1894, p. 83 ; Bouleng. Poiss. Bass. Congo, p. 117 (1901).

Depth of body $4\frac{1}{2}$ to $5\frac{1}{2}$ times in total length, length of head 5 to 6 times. Upper profile of head slightly concave ; snout as long as or a little longer or a little shorter than eye, the diameter of which is

Fig. 119.



Notopterus afer.

Type. $\frac{1}{2}$.

$4\frac{1}{2}$ to $6\frac{1}{2}$ times in length of head, $1\frac{1}{4}$ to $1\frac{3}{4}$ times in interocular width ; nasal tentacle truncate, $\frac{2}{5}$ or $\frac{1}{2}$ diameter of eye ; maxillary extending to below posterior border of eye ; lower border of præoperculum denticulate. Gill-membrane rather deeply notched ; 7 branchiostegal rays. Gill-rakers long, 8 or 9 on lower part of anterior arch. Dorsal 6–7. Anal 113–130 (caudal rays included). Pectoral $\frac{3}{4}$ to $\frac{4}{5}$ length of head. Ventrals absent. Ventral serrature formed of 35–40 pairs of spines.

Lateral line 130-165. Olive-grey to blackish, with more or less distinct darker spots or marblings, sometimes enclosing lighter roundish spots on the body or on the anal fin.

Total length 570 millim.

Gambia to Congo.

1-2. Ad.	Gambia.	J. S. Budgett, Esq. (P.).
3-4. Hgr., types.	Sierra Leone.	
5. Ad., type.	Niger.	A. Murray, Esq. (P.).
6. Hgr., type.	„	Mr. J. T. Dalton (C.).
7-8. Hgr., skins, types.	„	„
9-10. Yg.	Oguta, Lower Niger.	Dr. W. J. Ansorge (C.).
11. Ad.	Sapelle, „	„
12. Hgr.	„ „	Mr. J. D. Hamlyn (C.) ; Hon. W. Rothschild (P.).
13. Ad.	Old Calabar.	Miss Kingsley (C.).
14. Skel.	„	„
15. Ad.	Ibali, L. Leopold II., Congo.	M. P. Delhez (C.).

2. XENOMYSTUS.

Günth. Cat. Fish. vii. p. 479 (1868) ; Bouleng. Poiss. Bass. Congo, p. 118 (1901), and Fish. Nile, p. 80 (1907).

Differing from the preceding in the absence of dorsal fin and the presence of only 3 branchiostegal rays.

A single species.

1. XENOMYSTUS NIGRI.

Notopterus nigri, Günth. Cat. Fish. vii. p. 481 (1868).

Notopterus (Xenomystus) nili, Steind. Sitzb. Ak. Wien, lxxxiii. i. 1881, p. 196, pl. iv. fig. 2.

Notopterus (Xenomystus) nigri, Steind. Notes Leyd. Mus. xvi. 1894, p. 85.

Xenomystus nigri, Bouleng. Poiss. Bass. Congo, p. 118 (1901) ; Werner, Sitzb. Ak. Wien, cxv. i. 1906, p. 1124 ; Bouleng. Fish. Nile, p. 80, pl. xv. fig. 1 (1907).

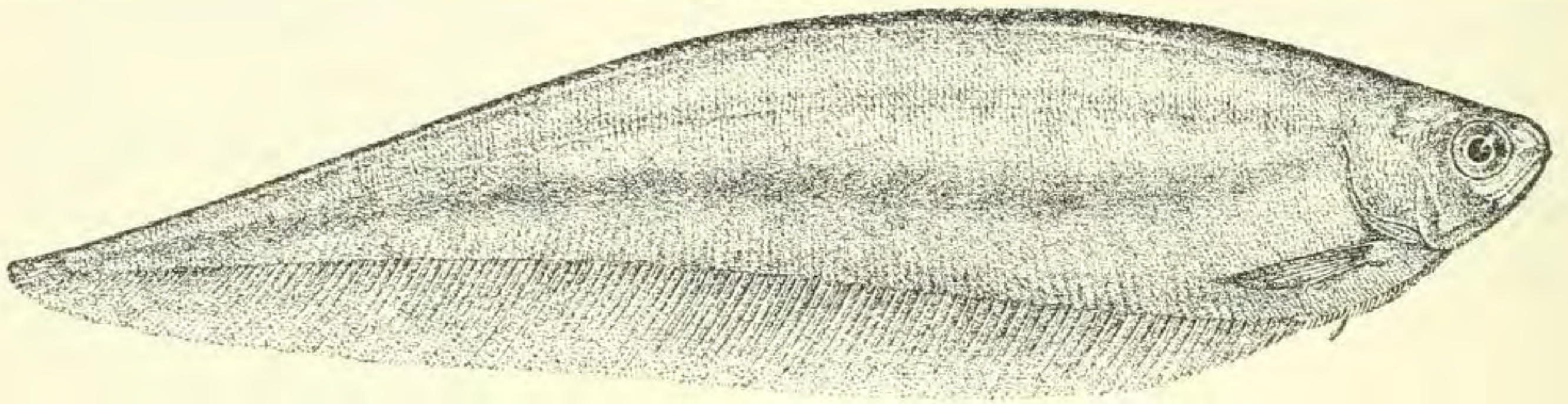
Depth of body $4\frac{1}{3}$ to 5 times in total length, length of head 6 to $7\frac{3}{4}$ times. Snout very short, shorter than eye, the diameter of which is 3 to $3\frac{1}{2}$ times in length of head and equals or nearly equals interocular width ; mouth extending to below anterior third or centre of eye ; nasal tentacle long and attenuate, $\frac{3}{5}$ to $\frac{2}{3}$ diameter of eye ; præorbital, suborbitals, præoperculum, and mandible with the edge strongly serrated ; præoperculum with a serrated ridge, parallel with the lower border. Gill-membranes extending without a notch across the isthmus. Gill-rakers very short, tubercular, 9 to 11 on lower part of anterior arch.

Anal 108–130 (including caudal). Pectoral as long as head or a little shorter. Ventral serrature formed of 26–30 pairs of spines. Lateral line 120–142. Brownish, uniform or with fine darker longitudinal streaks.

Total length 200 millim.

Bahr-el-Gebel and Bahr-el-Zeraf, Chad Basin, Liberia, Niger, Gaboon, Congo.

Fig. 120.



Xenomystus nigri.

Bahr-el-Gebel (F. N.). $\frac{2}{3}$.

1. Hgr.	Gondokoro, Bahr-el-Gebel.	Dr. F. Werner (P.).
2–5. Ad.	Fort Lamy, Shari R.	Capt. G. B. Gosling (P.).
6. Type.	Niger.	Mr. L. Fraser (C.).
7. Ad.	Gaboon.	R. B. N. Walker, Esq. (P.).
8. Hgr.	Kondo-Kondo, Ogowe.	Miss Kingsley (C.).
9–10. Ad. & hgr.	Lambarene, „	Dr. W. J. Ansorge (C.).
11. Hgr.	Bangala Country, Congo.	M. De Meuse (C.).
12. Hgr.	Kondue, Lower Congo.	M. Luja (C.).
13. Ad.	Kutu, L. Leopold II., Congo.	M. P. Delhez (C.).
14. Skel.	„ „	„
15. Hgr.	Ibali, „	„
16–17. Ad.	Monsembe, Upper Congo.	Rev. J. H. Weeks (P.).
18. Ad.	Upper Congo.	Brussels University.
19. Ad.	Banzyville, Ubanghi.	Capt. Royaux (C.).

Fam. 4. OSTEOGLOSSIDÆ.

Margin of the upper jaw formed by the præmaxillaries and the maxillaries, the latter the more developed; nasal bones large and in contact with each other; parietal bones separating the supraoccipital from the frontals; suboperculum much reduced and entirely or partially concealed under the præoperculum. No pharyngeal teeth. Ribs inserted on the strong parapophyses; epipleurals, no epineurals. Pectoral fins low down, folding against the belly. Head scaleless, the

thin skin confluent with the bones ; body covered with large bony scales, composed of pieces like mosaic. No oviducts.

Fresh waters of South America, Australia, the Malay Archipelago, and Africa.

1. HETEROTIS.

Sudis (non Rafin.), part., Cuv. Règne Anim. i. p. 180 (1817).

Heterotis (Ehrenb.), Cuv. & Val. Hist. Poiss. xix. p. 465 (1846) ; Günth. Cat.

Fish. vii. p. 380 (1868) ; Bouleng. Fish. Nile, p. 83 (1907).

Helicobranhus, Hyrtl, Denkschr. Ak. Wien, viii. 1854, p. 86.

Mouth moderate, with small conical teeth forming a single series in the præmaxillaries, maxillaries, and dentaries ; groups of villiform teeth on the entopterygoids and on the tongue. Branchiostegal rays 7 or 8. Body strongly compressed. Dorsal and anal fins equally developed, on the caudal region of the body, elongate and narrowly separated from the small caudal ; ventral fins nearer end of snout than caudal fin, with 6 rays. Vertebrae 27+42-43. Air-bladder cellular, lodged in the closed hæmal arches of the caudal vertebrae. Fourth branchial arch with an accessory breathing-organ.

A single species.

1. HETEROTIS NILOTICUS.

Sudis niloticus (Ehrenb.), Cuv. Règne Anim. 2nd ed. i. p. 328 (1829) ; Rüpp.

Beschr. n. Fische Nil, p. 10, pl. iii. fig. 2 (1829).

Sudis adansonii, Cuv. l. c.

Garafche, Rifaud, Voy. Egypte, pl. exc. (1830).

Heterotis ehrenbergii, Cuv. & Val. Hist. Poiss. xix. p. 469, pls. cccclxxxiii. &

ccccclxxxiv. (1846) ; Hyrtl, Denkschr. Ak. Wien, viii. 1854, p. 73, pls. i.-iii.

Heterotis adansonii, Cuv. & Val. t. c. p. 478.

Heterotis niloticus, Günth. Cat. Fish. vii. p. 380 (1868), and Petherick's Trav. ii.

p. 266 (1869) ; Steind. Sitzb. Ak. Wien, lxi. i. 1870, p. 565, pl. viii. fig. 2 ;

Hempr. & Ehrenb. Symb. Phys., Zool. pl. i., and Zoot. pls. viii. & ix. (1899) ;

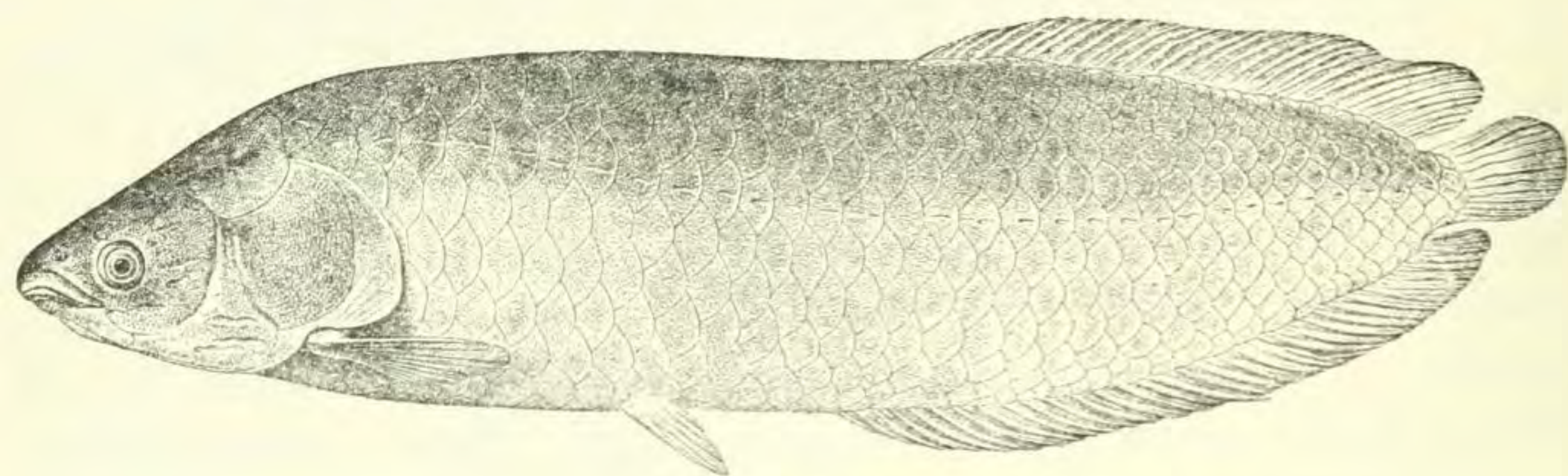
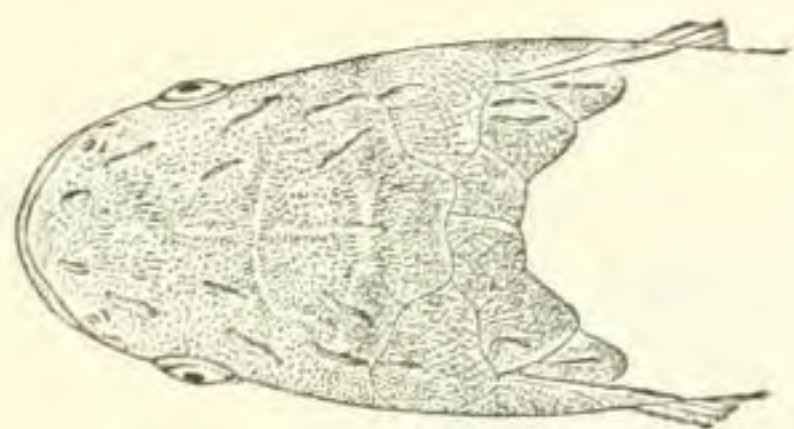
Budgett, Tr. Zool. Soc. xvi. 1901, p. 128, pl. xi. figs. 6 & 7 ; Bouleng. Fish.

Nile, p. 84, pl. xiv. (1907).

Depth of body $3\frac{1}{2}$ to $4\frac{1}{2}$ times in total length, length of head $3\frac{1}{2}$ to $4\frac{3}{4}$ times. Head short and thick, convex above, its upper surface and sides rugose, granulate in the adult, with large sensory pits ; snout short, rounded, $3\frac{3}{5}$ to 5 times in length of head ; eye perfectly lateral, its diameter $5\frac{1}{2}$ to 8 times in length of head and 2 to $3\frac{1}{4}$ times in interorbital width ; mouth with thick lips, straight and transverse in

front, obliquely bent on the sides, nearly square when fully open, extending to below anterior border of eye or a little beyond; a very large dermal flap borders the gill-cover. Gill-rakers long and slender, closely set. Dorsal 32-37, beginning a little further back than the

Fig. 121.

*Heterotis niloticus.*White Nile (F. N.). $\frac{1}{5}$.

anal; latter 34 to 39. Pectoral obtusely pointed, $\frac{3}{5}$ to $\frac{2}{3}$ length of head. Ventral $\frac{1}{3}$ to $\frac{2}{5}$ length of head. Caudal short, rounded. Caudal peduncle very short. Scales more or less rugose, 32-38 in lateral line, $\frac{2\frac{1}{2}}{6}$ in transverse series on body in front of ventral, $\frac{5}{6}$ between origin of dorsal and anal. Lateral line extending in a straight line from above gill-cover to middle of caudal peduncle; the canals tubular in the young, deep grooves in the adult. Brown, grey, or olive; young with dorsal and anal marked with rather indistinct longitudinal streaks, and a round dark spot on each of the scales of the caudal region of the body.

Total length 800 millim.

Tropical Africa north of the Equator.—Type in Berlin Museum.

1. Ad.	Nile.	
2-3. Ad.	El Kirbegan, near Korti, Upper Nile.	L. Loat, Esq. (C.).
4. Skel.	Khartum.	J. Petherick, Esq. (C.).
5, 6-9. Ad. & hgr.	Fashoda, White Nile.	L. Loat, Esq. (C.).
10. Hgr.	White Nile, lat. 9°.	J. Petherick, Esq. (C.).
11. Ad.	Gabt-el-Megahid, between Sobat and Bahr-el-Zeraf.	Capt. S. Flower (P.).

12. Ad.	Galeba, Lake Rudolf.	Mr. P. C. Zaphiro (C.) ; W.N.McMillan, Esq. (P.).
13. Skull.	Shari River.	Capt. G. B. Gosling (P.).
14, 15. Ad. & hgr.	St. Louis, Senegal.	M. P. Delhez (C.).
16. Ad.	Gambia.	J. S. Budgett, Esq. (P.).
17. Hgr.	Niger.	Mr. J. T. Dalton (C.).
18. Ad.	„	W. A. Forbes, Esq. (P.).
19-20. Yg.	Assay, Lower Niger.	J. S. Budgett, Esq. (P.).
21. Yg.	Benue R., N. of Ibi.	H. L. Norton Traill, Esq. (C.).

Fam. 5. PANTODONTIDÆ.

Margin of the upper jaw formed by the single præmaxillary and the maxillaries, the former very small ; nasal bones large but not in contact with each other ; parietal bones separating the supraoccipital from the frontals ; præoperculum and suboperculum absent. Ribs inserted on the strong parapophyses ; epipleurals, no epineurals. Pectoral fin low down, folding against the belly ; mesocoracoid arch slender, strongly curved, meeting its fellow on the median line. Ventral fin with 7 rays, immediately behind pectorals.

A single genus.

1. PANTODON.

Peters, Mon. Berl. Ac. 1876, p. 195 ; Bouleng. Poiss. Bass. Congo, p. 121 (1901).

Body moderately elongate, compressed, the back, as well as the head, flattened, keeled below ; scales large ; lateral line distinct, canals straight and simple. Mouth large, with small sharp teeth ; similar teeth on the palate (vomer, palatines, pterygoids) and on the tongue. Nostrils widely separated, the posterior large and close to the eye. A very short dorsal fin ; anal fin longer and inserted further forward. Pectoral fin very large, the lower ray adnate to a fleshy process. Vertebræ 16+14.

A single species.

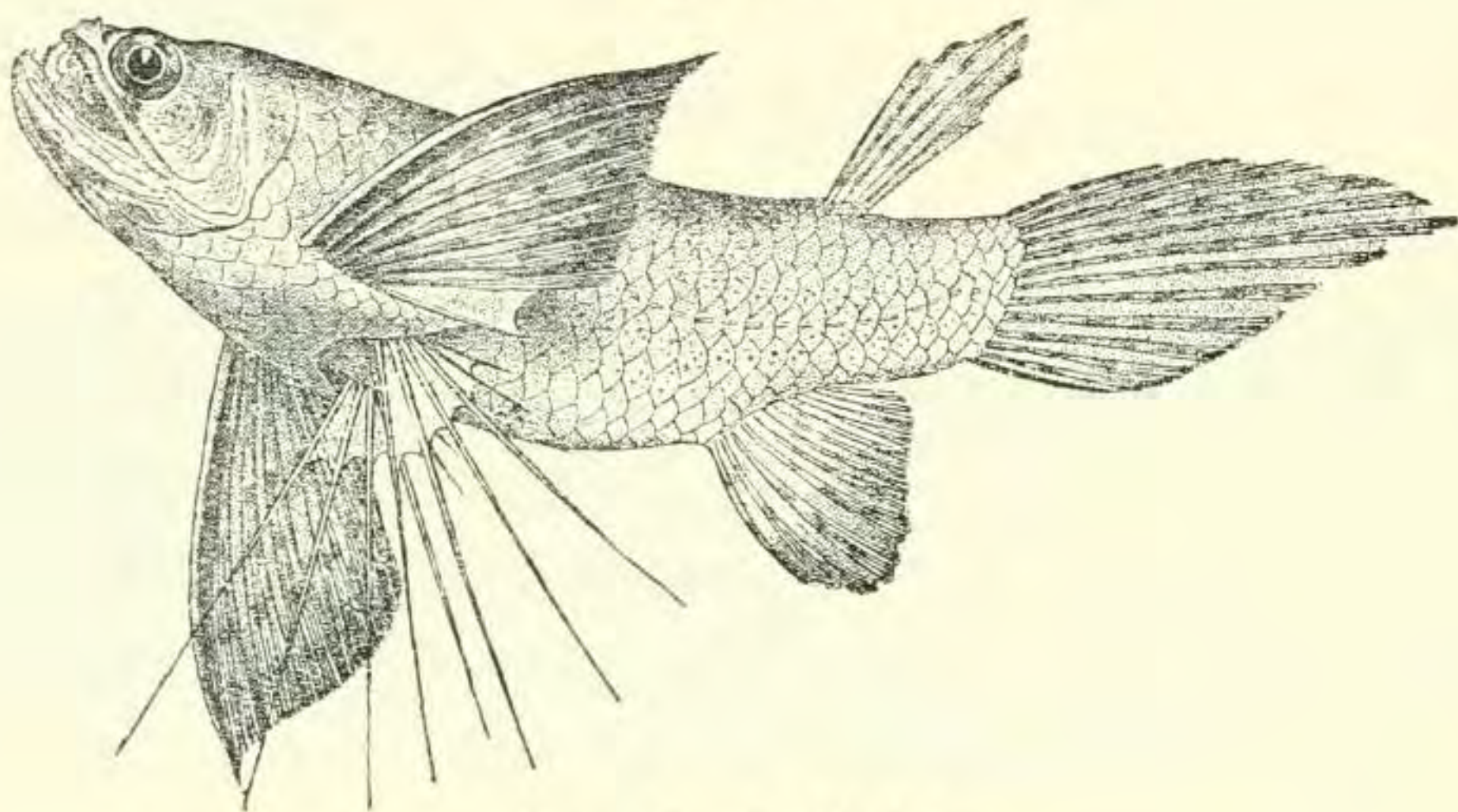
1. PANTODON BUCHHOLZI.

Peters, t. c. p. 196, pl. — ; Bouleng. l. c. ; Popta, Notes Leyd. Mus. xxiii. 1902, p. 111.

Depth of body $3\frac{1}{3}$ to $3\frac{2}{3}$ times in total length, length of head 4 to $4\frac{1}{3}$ times. Snout shorter than eye, the diameter of which is $3\frac{1}{2}$ times in length of head, $1\frac{2}{3}$ times in interocular width ; mouth very oblique, directed upwards, extending beyond posterior border of eye. Dorsal 6,

above last rays of anal, $3\frac{1}{2}$ to 4 times as distant from head as from caudal; third ray nearly as long as head. Anal 9-14, sometimes divided into two by a notch, posterior rays shortest. Pectoral $\frac{2}{5}$ to $\frac{1}{2}$ total length, formed of 8 rays, first longest and strong. First 4 ventral rays more or less produced, sometimes reaching caudal. Caudal pointed, median rays nearly twice as long as head. Caudal peduncle as long as deep. 28-30 scales in lateral line, $\frac{3\frac{1}{2}}{5}$ in transverse series, 22 or 23 between occiput

Fig. 122.

*Pantodon buchholzi.*

Upper Congo.

and dorsal. Olive above, yellow or silvery beneath, more or less tinged with carmine; a few blackish dots on the body; sometimes dark bands across the back; fins pink, with small, round, purplish-brown spots, forming cross-bands on the pectorals, which are dark purple on the inner side and towards the end; dark bars across the lower jaw.

Total length 95 millim.

Niger, Old Calabar, Cameroon, Congo.—Type in Berlin Museum.

1. Ad.	Brass, Lower Niger.	N. Burrows, Esq. (P.).
2. Ad.	Assay, „	J. S. Budgett, Esq. (P.).
3-4. Ad. & hgr.	Old Calabar.	D. G. Rutherford, Esq. (C.).
5. Skel.	„	„
6. One of the types.	Victoria R., Cameroon.	Dr. Buchholz (C.); Berlin Museum (E.).
7-8. Hgr.	Cameroon.	
9-10. Ad.	Monsembe, Upper Congo.	Rev. J. H. Weeks (P.).
11. Ad.	Banzville, Ubanghi.	Capt. Royaux (C.).