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THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY,

INCLUDING

ZOOLOGY, BOTANY, AND GEOLOGY.

(BEING A CONTINUATION OF THE 'ANNALS' COMBINED WITH LOUDON AND CHARLESWORTH'S 'MAGAZINE OF NATURAL HISTORY.')

CONDUCTED BY

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1867.

XV.—*New Fishes from the Gaboon and Gold Coast.*

By A. GÜNTHER, M.A., M.D., Ph.D., F.R.S.

[Plates II. & III.]

A most valuable collection of Fishes made by Mr. R. B. N. Walker in the Gaboon country has been recently secured by the Trustees of the British Museum. Besides several species which were formerly desiderata in this collection, the following prove to be new and of great interest, partly because some of them are the types of distinct groups, and partly because others prove that the Fish-fauna of the Upper Nile is nothing but the most eastern branch of that of Tropical West Africa. Repeatedly on former occasions I have directed attention to the identity of these two faunas; and we may safely conclude that there is an uninterrupted continuity of the fish-fauna from west to east, and that the species known to be common to both extremities inhabit also the great reservoirs of water in the centre of the African continent.

Mr. Walker had sent other collections to the Free Public Museum of Liverpool; and Mr. Moore was kind enough to lend them to me for examination, adding another very valuable collection made by H. T. Ussher, Esq., Deputy Assistant Commissary-General, Lagos, on the Bossumprah River, Gold Coast. The latter gentleman had previously sent a small collection to the British Museum from the same locality.

The Cyprinoids are not mentioned in this paper, as their descriptions will be found in the forthcoming seventh volume of the 'Catalogue of Fishes.'

Ctenopoma Petherici (Gthr.).

Dorsal spines sixteen, seventeen, or eighteen, anal spines nine or ten. This species, first discovered by Mr. Petherick in the White Nile, occurs also in the Gaboon.

Ctenopoma multispine (Ptrs.).

This species was first described from East-African specimens with seventeen dorsal and ten anal spines. An example from the Gaboon, with twenty dorsal and eleven anal spines, agrees in every other respect with the East-African type, and must be regarded as a variety only.

Mastacembelus cryptacanthus (Gthr.).

The number of dorsal spines varies between twenty-four and thirty. A fine example, 16 inches long, has been sent to the Liverpool Museum, from the Bossumprah River, by Mr. Ussher.

Hemichromis fasciatus (Ptrs.).

Guinea, Lagos (Mr. Ussher), Gaboon (Mr. Walker).

Clarias Gabonensis, sp. n.

D. 76-78. A. 56-60.

Vomerine teeth villiform, forming a band which is about as broad as that of the intermaxillaries; it has not a process behind in the middle of its concavity. Head finely granulated above, its length being one-fourth of the total (without caudal). Barbels long; those of the nostril extend to the base of the occipital process, those of the maxillary beyond the origin of the dorsal. The pectoral fin extends to, or somewhat beyond, the vertical from the origin of the dorsal; its spine is at least three-fourths as long as the fin. The dorsal extends to the root of the caudal. Snout somewhat narrowed in front.

River Ogome (Mr. Walker). 7 inches long.

This species may prove to be identical with *Clarias angolensis* of Dr. Steindachner, who, however, has omitted to give the formula of the fin-rays, so that it is impossible to determine our specimens from his description.

Heterobranchus isopterus (Blkr.).

Bossumprah River (Mr. Ussher).

GYMNALLABES, g. n. (*Silur.*).

(Group CLARIINA.) Adipose fin none; dorsal and anal fins very long (confluent with the caudal*). Jaws with a band of villiform teeth; a crescent-shaped band of similar teeth across the vomer; cleft of the mouth transverse, anterior, of moderate width; eight barbels, as in *Clarias*. Eyes very small. Head covered entirely with soft skin, the lateral parts especially muscular and soft. The postbranchial cavity is present; but the accessory organ is reduced to a simple securiform process of the second and third arches. Pectoral and ventral fins very small, the former with a pungent spine, the latter five-rayed.

Gymnallabes typus, sp. n. Plate II. fig. A.

D. ca 98. A. ca 82. C. 12.

The height of the body is one-sixteenth or one-fifteenth of the total length (without caudal), the length of the head one-ninth or one-tenth. Head much depressed, flat, swollen on the temples, two-thirds as broad as long. Nasal and outer mandibular barbels not quite as long as those of the maxillary; the latter are longer, and the inner of the mandible shorter, than the head. Uniform brownish black.

West Africa, probably Old Calabar. 7 inches long.

* This is perhaps merely a specific character, as in *Clarias*.

Eutropius mandibularis, sp. n.

D. 1/6. A. 59. P. 1/10.

The height of the body is contained thrice and three-fourths in the total length (without caudal), the length of the head five times. The greatest width of the head equals its length without snout. The upper jaw is slightly the longer; cleft of the mouth twice as broad as deep. Anterior mandibulary barbels short; maxillary, nasal, and posterior mandibulary barbels subequal in length, not extending to the base of the pectoral, but beyond the orbit. The diameter of the eye is two-ninths of the length of the head. The dorsal fin is situated entirely before the ventral, the width of its base being more than that of the latter; its height equals the length of the head; spine slender, serrated posteriorly. The anal fin terminates at some distance from the caudal. Caudal deeply forked, with the lobes pointed. Pectoral spine rather broad, serrated, terminating at some distance from the ventral.

A single specimen, 9 inches long, was sent by Mr. Ussher from the Bossumprah River to the Liverpool Museum.

Chrysichthys macrops (Gthr.).

Upper Nile, Gaboon, Bossumprah River (Gold Coast).

Synodontis guttatus (Gthr.).

Gaboon, Lake Aznigo.

Malapterurus affinis (Gthr.).

Old Calabar, Gaboon.

NANNOCHARAX, g. n. (*Characin.*).

Dorsal fin short, placed in the middle of the body, above the ventrals; anal short. Body elongate, covered with scales of moderate size; belly rounded. Cleft of the mouth very small, similar to that of a *Coregonus*; intermaxillary and mandible with a single series of notched incisors. Nostrils close together. Gill-openings rather narrow, the gill-membrane being grown to the isthmus.

This genus is the type of a separate group, NANNOCHARACINA, intermediate between *Anostomatina* and *Tetragonopterina*.

Nannocharax fasciatus, sp. n. Plate III. fig. A.D. 12. A. 10. V. 10. L. lat. 46. L. transv. $4\frac{1}{2}/4\frac{1}{2}$.

The height of the body is contained six times in the total length (without caudal), the length of the head four times and one-third. Eye large, the length of its diameter being less than

one-third of that of the head, and more than that of the snout or the width of the interorbital space. Head low, elongate, flat above; snout subconical, the upper jaw somewhat longer than the lower. Ventral fin below the anterior dorsal rays, long, pointed; the third ray is the longest, extending to the vent. The distance of the origin of the dorsal fin from the end of the snout is somewhat more than that from the adipose fin. Back with seven rhombic brown spots, lighter in the centre; sides with about ten brown cross bars broader than the interspaces between.

Gaboon. 2 inches long.

This discovery of Mr. Walker is of the greatest interest, not only because the fish is the type of a distinct group of the family of *Characinidæ*, but also because it throws light upon the fish from the Nile which was described by Joannis in Guérin's *Mag. Zool.* 1835 (Günth. *Fish.* v. p. 379) as *Coregonus niloticus*, and which has ever since been a riddle to ichthyologists. There cannot be the slightest doubt of the affinity of these two fishes, although Joannis (who had no experience whatever in the description of fishes) states that his fish is toothless. The affinity between the two fishes is so great that the differences which at present appear on comparing the descriptions may prove to be accidental, and the *Nannocharax niloticus* to be identical with the West-African species.

The figure is double the natural size.

Alestes macrophthalmus, sp. n.

D. 10. A. 21. L. lat. 39. L. transv. 11.

Closely allied to *A. sethente*, but with larger scales. The height of the body equals the length of the head, and is two-ninths of the total length (without caudal). Eye very large, scarcely less than one-third of the length of the head, with broad adipose eyelids. The origin of the dorsal fin is exactly opposite to that of the ventral. Pectoral not much shorter than the head. Silvery, a blackish stripe along each series of scales; pectoral blackish.

Gaboon. 11 inches long.

Alestes tæniurus, sp. n.

D. 10. A. 19. L. lat. 23. L. transv. $4\frac{1}{2}/3\frac{1}{2}$.

Closely allied to *A. acutidens*, but with the body more elevated, its depth being more than one-third of the total length (without caudal). The origin of the dorsal fin is a little behind the base of the ventral. A narrow deep-black band runs along the middle of the tail and caudal fin, commencing below the end of the dorsal fin.

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Gaboon. 5 inches long.

I do not retain the genus *Brachyalestes*, as the last two species would be separated from those most nearly allied to them by the technical character on which that genus was founded.

Alestes leuciscus, sp. n.

D. 10. A. 17. L. lat. 26-27. L. transv. $5\frac{1}{2}/3\frac{1}{2}$.

The height of the body is contained thrice and one-fourth in the total length (without caudal), the length of the head thrice and two-thirds. The origin of the dorsal fin is exactly opposite that of the ventrals. The pectoral terminates close to the ventral. Bright silvery, with a very indistinct dark humeral spot and a second at the root of the caudal. Iris golden.

Two specimens, $2\frac{1}{2}$ inches long, from West Africa; purchased of a dealer.

Sarcodaces odoë (Bl.).

Bossumprah River (Mr. Ussher). This fish has fifty scales in the lateral line, and not sixty, as stated in 'Fish.' v. p. 352.

XENOCHARAX, g. n. (*Characin*).

(Group CRENUCHINA.) Dorsal fin rather long, placed in the middle of the length of the body, above the ventrals. Anal not elongate. Body compressed, rather elevated, covered with rather small scales; lateral line present; belly rounded. Cleft of the mouth rather wide. Intermaxillary and mandible with a double or treble series of small bicuspid teeth; a few teeth in the maxillary. Nostrils close together. Gill-openings wide; the gill-membranes not attached to the isthmus. Gill-rakers long, setiform.

Xenocharax spilurus, sp. n. Plate III. fig. B.

D. 18. A. 13. V. 11. L. lat. 73. L. transv. 10/15.

The height of the body is contained twice and two-thirds in the total length (without caudal), the length of the head thrice and one-fourth. Jaws equal in length; the maxillary extends to below the front margin of the large eye. Root of the ventral below the middle of the dorsal. Silvery; body with about fourteen narrow blackish transverse bands. A large round black spot on the root of the caudal.

Gaboon. 4 inches long.

Distichodus notospilus, sp. n.

D. 16-17. A. 15-16. L. lat. 39. L. transv. 7/9.

The height of the body is two-fifths of the total length (with-

out caudal), the length of the head one-fourth; snout a little longer than broad, with the nose slightly protruding. Teeth in a double series, the lower jaw with sixteen teeth in the front series. Body silvery, caudal and lower fins red; a large, oblique, band-like black blotch on the dorsal; a small black spot on the root of the caudal.

Gaboon. From 3 to 5 inches long.

Mormyrus zanclirostris, sp. n. Pl. II. fig. B.

D. 19. A. 39. L. lat. 70.

Snout much prolonged, tubiform, straight. Lower jaw without appendage; eye rather nearer to the end of the snout than to that of the opercle, very small. Teeth small, compressed, incisor-like, $\frac{14}{16}$. Pectorals much longer than ventrals, but terminating at a great distance from the base of the ventrals. Caudal very small. Origin of the dorsal fin opposite to the thirteenth anal ray. The height of the body is one-seventh of the total length (without caudal), the length of the head rather more than one-fourth. Brown; an ill-defined band along the lateral line, and the tail of a darker colour.

Gaboon. 10 inches long.

The figure is two-thirds the natural size.

Mormyrus microcephalus, sp. n.

D. 15-16. A. 28-31. L. lat. 62.

Snout obtuse, very short, twice as long as the eye, the diameter of which is about one-seventh or one-eighth of the length of the head. Mouth subanterior. Teeth brown, emarginate, small, $\frac{6}{6}$. The height of the body is two-elevenths of the total length (without caudal), the length of the head one-sixth. Pectoral nearly as long as the head, extending beyond the root of the ventral. Caudal fin small. Brown; head and fins black.

Gaboon (River Ogome). 7 inches long. Evidently allied to *Marcusenius brachyistius* (Gill).

Mormyrus Henryi.

Isichthys Henryi (Gill).

This is not a *Mormyrops* as I formerly supposed; it has an elongate band of teeth on the palate and tongue. Our specimen has D. 48. A. 46, and is from West Africa, probably Old Calabar.

Mormyrus Moorii, sp. n.D. 24. A. 29. L. lat. 45. L. transv. $\frac{\text{ca } 7}{\text{ca } 7}$ *.

Snout obtuse, with the jaws equal in length, the mouth being terminal. Eye small, its diameter being one-half of the length of the snout, and one-eighth of that of the head. Teeth small, deeply notched, $\frac{4}{8}$. Pectoral fin not much shorter than the head, extending somewhat beyond the middle of the ventral fin. The height of the body is contained thrice and four-fifths in the total length (without caudal), the length of the head nearly five times. Brown; head and a small spot on the root of the caudal fin black.

One specimen, 9 inches long, is in the Liverpool Museum; it was discovered by Mr. Walker in the River Ogome.

Mormyrus Ussheri, sp. n.D. 27-28. A. 30. L. lat. 58. L. transv. $\frac{\text{ca } 10}{\text{ca } 10}$.

Snout not very obtuse, with the lower jaw somewhat prominent, and terminating in a very short skinny flap. Eye small, its diameter being two-fifths of the length of the snout, and two-thirteenths of that of the head. Teeth small, slightly notched, $\frac{4}{8}$. Pectoral fin at least as long as the head, extending beyond the middle of the ventral fin. The height of the body is contained thrice and a half in the total length (without caudal), the length of the head four times and two-thirds. Uniform brown.

Two specimens, from 7 to 9 inches long, were collected by H. T. Ussher Esq., in the Bossumprah River, Gold Coast.

Mormyrus catostoma (Gthr.).

This species was described from East-African specimens. An example with twenty-nine anal rays, from the Bossumprah River, has been sent by Mr. Ussher to the Liverpool Museum.

Mormyrus Walkeri, sp. n. Plate III. fig. C.

D. 21. A. 22-23. L. lat. 55.

Allied to *M. niger*.

Snout obtuse, convex, not projecting beyond the mouth, which is terminal. Eye small, its diameter being shorter than the length of the snout. Teeth deeply notched, $\frac{12}{12}$. Pectoral fin as long as the head without snout, not quite twice as long as, and extending beyond the root of, the ventral. The

* In an oblique line between the origins of the dorsal and anal fins.

height of the body is two-sevenths of the total length (without caudal), the length of the head one-fourth. Uniform brown.

River Ogome (Gaboon). 4 inches long.

Mormyrops longiceps, sp. n.

D. 26. A. 39. L. lat. 90.

Head very low and elongate, more than twice as long as high. Snout subcylindrical, of moderate length, rounded in front, with the upper jaw somewhat longer than the lower. Eye very small, situated in the anterior third of the head. Teeth not very small, truncated and notched at the apex, $\frac{24}{22}$. Dorsal fin more than half as long as the anal. The height of the body is one-seventh of the total length (without caudal), the length of the head a little less than one-fourth. Coloration uniform.

This species is more closely allied to *M. anguilloides* from the Nile than to *M. deliciosus* from West Africa; it differs from the former in the shape of its head. It was discovered by H. T. Ussher, Esq., in the Bossumprah River. One specimen, 11 inches long, is in the Liverpool Museum.

XVI.—*Description of a new Species of Apocryptes.*

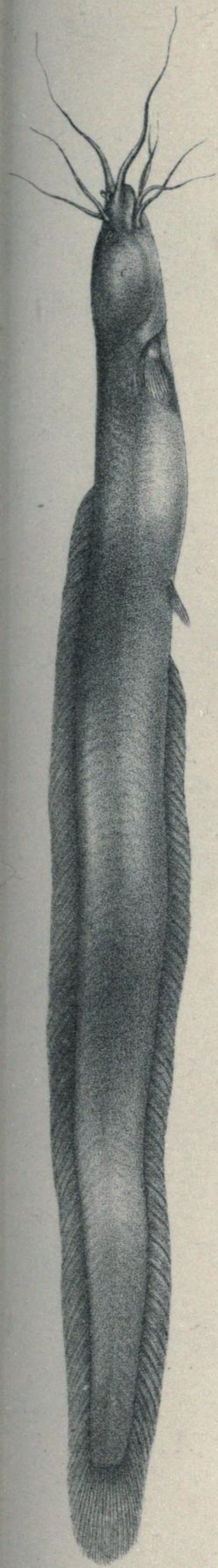
By Dr. ALBERT GÜNTHER.

Apocryptes polyophthalmus.

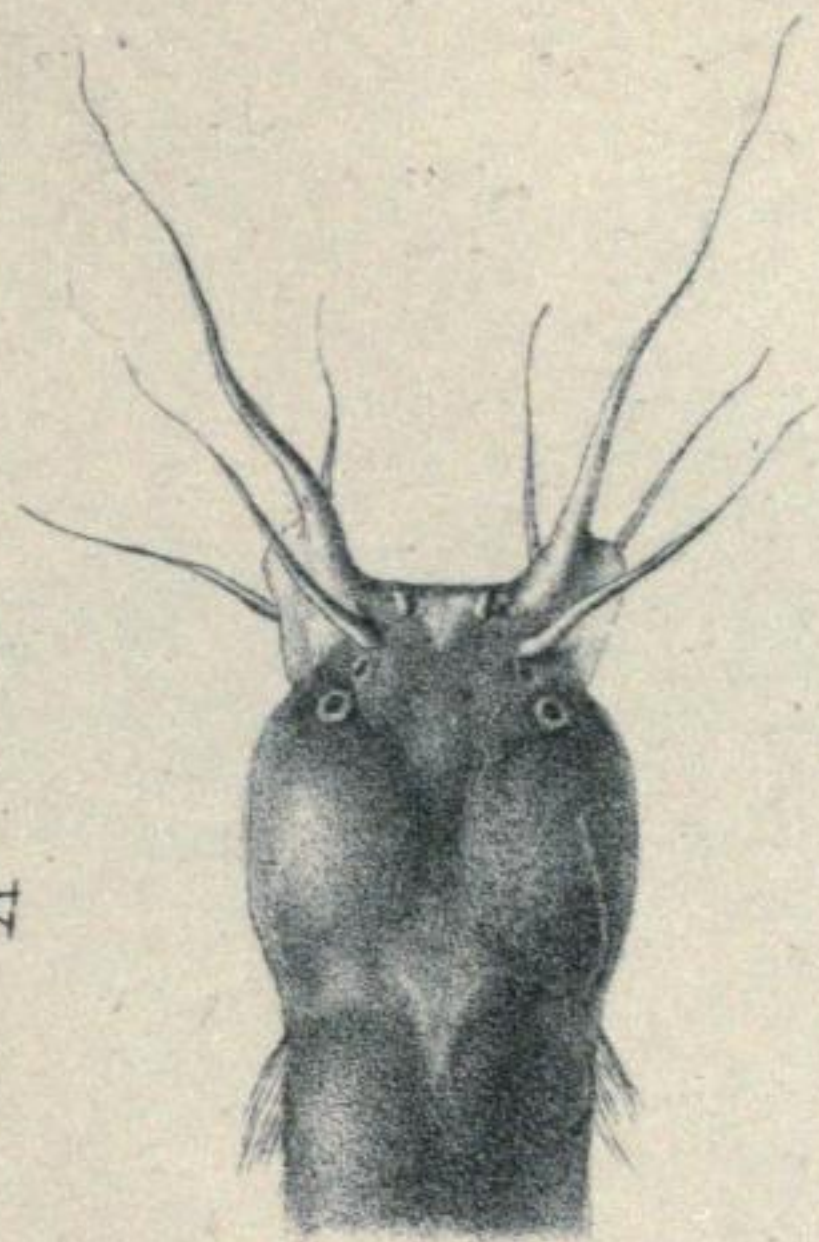
D. 5-6 | $\frac{1}{24}$. A. 25.

Scales minute anteriorly, becoming somewhat larger posteriorly. The height of the body is one-sixth or one-seventh of the total length (without caudal). Snout rather high, twice as long as the eye, with the upper jaw somewhat longer than the lower; gape extending to below the posterior margin of the eye. Eye retractile as in *Periophthalmus*. Teeth small, two anterior pairs enlarged in each jaw; mandibular teeth nearly horizontal. Dorsal fins not continuous, the spines of the anterior prolonged into filaments. Caudal fin shorter than the head. Olive-coloured; head with some minute whitish dots. Anterior dorsal with numerous small (in spirits white) ocelli. Similar ocelli on the second dorsal, where they are elongate and arranged in four regular series; a few ocelli on the caudal fin.

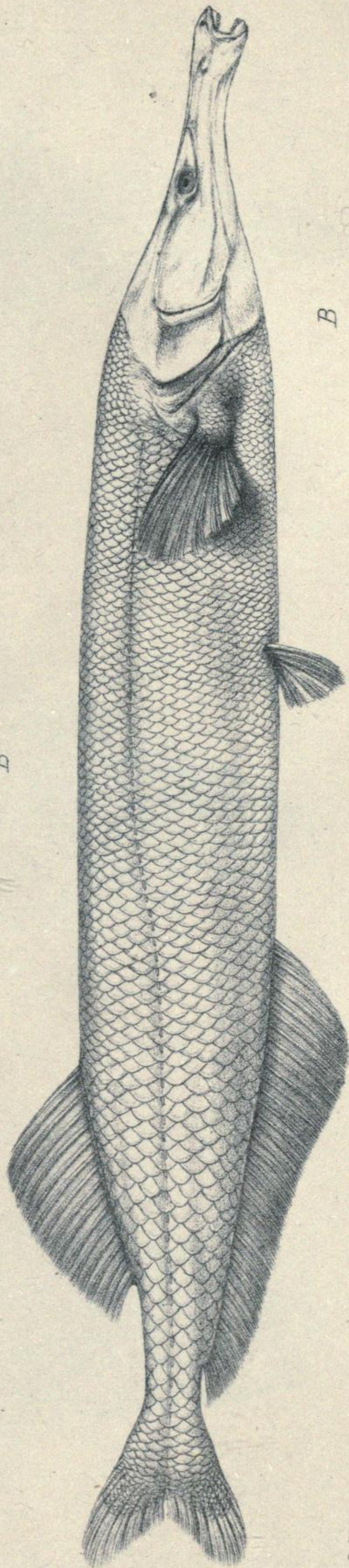
China. 5 inches long.



A



B



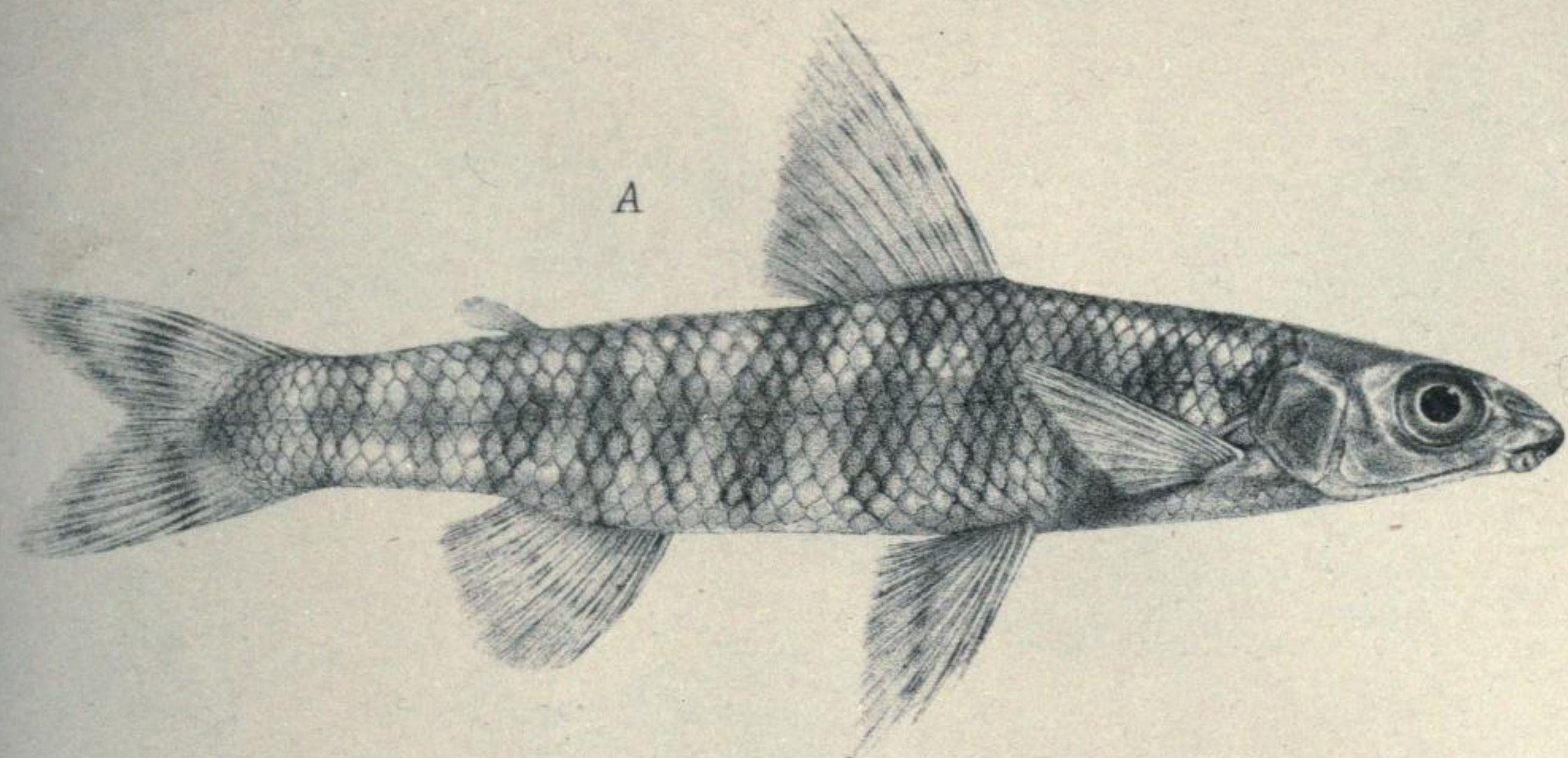
B

G. H. Ford.

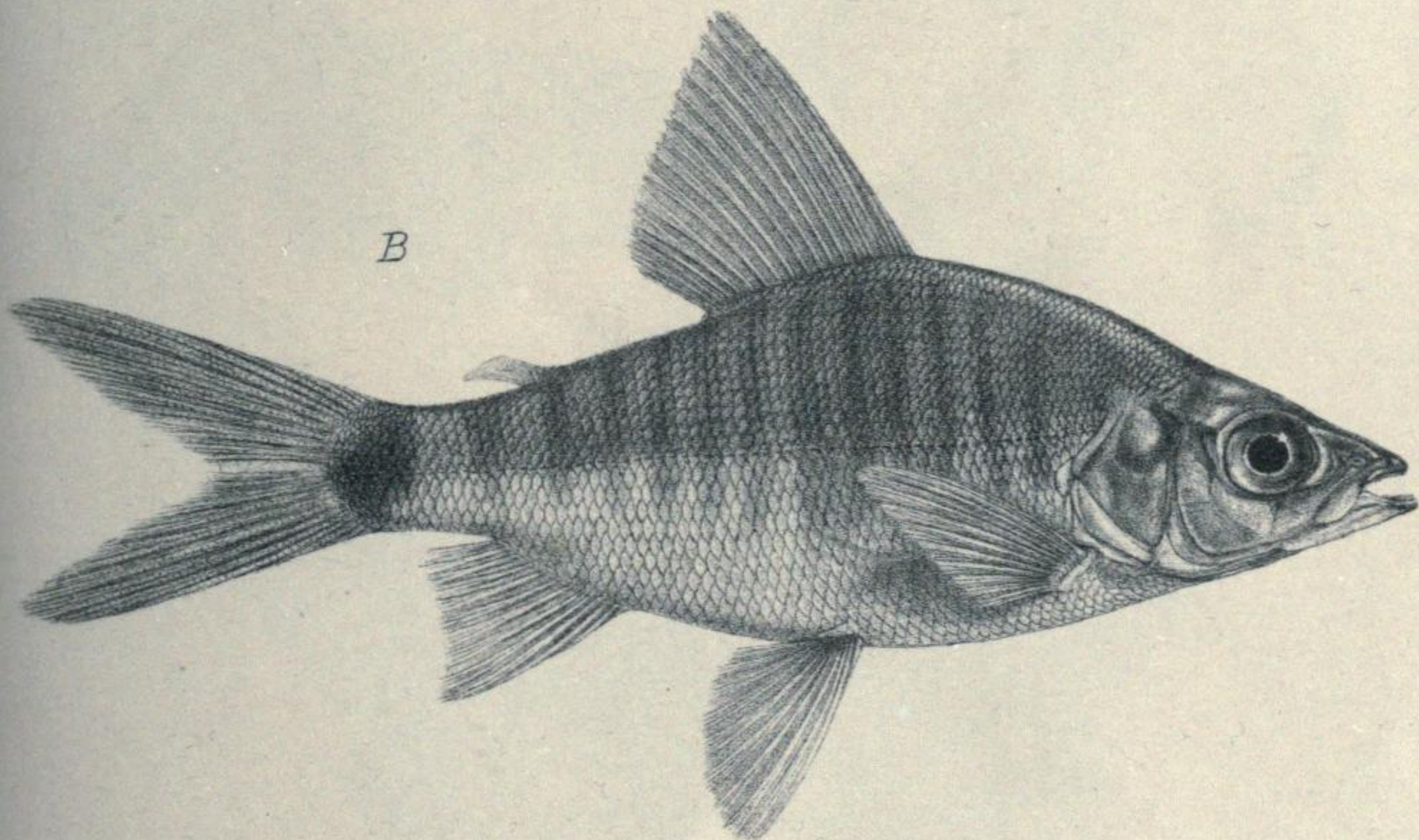
A. Gymnallabes typus. B. Mormyrus xanclirostris.

W. West imp.

A



B



C

