CATALOGUE

OF THE

FISHES

IN THE

BRITISH MUSEUM.

BY

ALBERT GÜNTHER,
M.A., M.D., PH.D., F.Z.S., ETC., ETC.

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CATALOGUE

OF THE

PHYSOSTOMI,

CONTAINING THE FAMILIES

SALMONIDÆ, PERCOPSIDÆ, GALAXIDÆ, MORMYRIDÆ,
GYMNARCHIDÆ, ESOCIDÆ, UMBRIDÆ, SCOMBRESOCIDÆ,
CYPRINODONTIDÆ,

IN THE

COLLECTION

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III

are also tricuspid. The origin of the dorsal fin corresponds exactly to the middle of the total length, and is somewhat in advance of that of the anal. All the fins small. Greenish-brown (in a preserved state), with some indistinct light bands along the sides. (*Jen.*)

Montevideo.

3. CHARACODON.

Cleft of the mouth small, developed laterally and horizontally; mandible short, with the bones of each side firmly united. Snout short. Teeth rather small, bicuspid, in a single series; but there is a narrow band of villiform teeth behind the series of incisors. Scales of moderate size. Origin of the anal fin opposite, or nearly opposite, to that of the dorsal. Anal rays more numerous in the male than in the female. Intestinal tract but slightly convoluted.

Central America.

1. Characodon lateralis.

D. 10–11. A. 13 in fem., 15–16 in male. L. lat. 35.
L. transv. 12.

In general habits very similar to a Cyprinodon. Body rather elevated, with the neck somewhat arched, its greatest depth being rather more than the length of the head, and one-third of the total (without caudal). Head thick and broad, with the snout obtuse, as long as the diameter of the eye, which is one-fourth of the length of the head. The mandible ascends obliquely, and is longer than the eye. There are about twenty smallish teeth in each jaw; their apex is indistinctly notched. Interorbital space flat, its width being two-fifths of the length of the head. The origin of the dorsal fin is a little nearer to the end of the caudal than to the occiput, and a little behind that of the anal. Both fins are small and rounded. In the male the six anterior rays are of nearly equal length, but considerably shorter than the following, forming a very distinct portion of the fin; all these rays are very closely set. Caudal fin small, truncate or slightly convex. The distance between dorsal and caudal is somewhat more than the least depth of the tail, and equal to the distance between eye and gill-opening. Pectoral obtuse, not quite reaching the ventral. Ventral small, not quite extending to the vent. Brownish olive (in spirits), with a darker band running from the eye to the root of the caudal: this band is sometimes broken up into a more or less regular series of brownish black spots.

Central America.

a–d. Females, $2\frac{1}{2}$ inches long. From Dr. B. Seemann's Collection.
e–i. Females and two males, $1\frac{2}{3}$ inch long. From the Haslar Collection.

4. TELLIA.

Tellia, *Gervais, Ann. Sc. Nat.* 1853, xix. p. 15.

Very similar to *Cyprinodon*, but without ventral fins. The

lower jaw projecting beyond the upper; teeth tricuspid, in a single series in both jaws.

Alpine pools of the Atlas.

1. Tellia apoda.

Gervais, l. c.; Valenc. in Compt. Rend. 1858, xlvi. p. 715.

D. 15. A. 13.

The dorsal fin commences a little before the posterior third of the length of the body.

River Tell.

5. LIMNURGUS.

Girardinichthys*, *Bleek. Cyprin.* p. 481.

Cleft of the mouth directed upwards, rather narrow, upper jaw very protractile; bones of the mandible firmly united; both jaws with a series of small subcylindrical teeth. Scales rather small. Dorsal and anal fins many-rayed, but not very long; anal below the dorsal; sexes not differentiated by modification of the anal fin. Intestinal tract about as long as the fish. The gill membranes of both sides are partially united, and not attached to the isthmus.

Mexico.

1. Limnurgus variegatus.

Lucania, sp., *Girard, Proc. Acad. Nat. Sc. Philad.* 1859, p. 118.
Girardinichthys innominatus (!)*, *Bleek. l. c.* p. 484.

D. 20–21. A. 22–23. V. 6. L. lat. 44.

The height of the body is more than the length of the head, which is scarcely one-fourth of the total length (without caudal). The neck is arched, the upper profile of the head being concave. Head thick, with the snout obtuse, the mandible being vertically directed upwards. The diameter of the eye is one-half of the width of the interorbital space, which is two-fifths of the length of the head. The origin of the dorsal fin is midway between the root of the caudal and the occiput, and, in females, conspicuously in front of that of the anal. Brownish olive, with irregular dark-brown cross bands, which are sometimes confluent.

Vicinity of the city of Mexico.

a. Many adult female specimens, 2½ inches long. Old Collection.

6. LUCANIA†.

Lucania, sp., *Girard, Proc. Acad. Nat. Sc. Philad.* 1859, p. 118.

Cleft of the mouth small; bones of the mandible firmly united; snout not produced, the lower jaw more or less prominent; both jaws with a single series of conical teeth. Scales rather large. Rays

* This barbarous name has been proposed by Bleeker, who never saw the species.

† 1. Lucania affinis, *Girard, Proc. Acad. Nat. Sc. Philad.* 1859, p. 118.—Matamoras.

of the dorsal and anal fins in moderate number. Origin of the dorsal fin in advance of that of the anal. Sexes not differentiated by modification of the anal fin. Intestinal tract?

Southern parts of North America and Central America.

For the knowledge of this genus and its species we depend entirely on the accounts given by Girard, which are not only most incomplete, but which prove so frequently to be incorrect: one thing appears to be certain, that he has united in it species which can hardly be kept together in the same natural genus.

1. Lucania venusta.

Limia venusta, *Girard, U. S. & Mex. Bound. Ichthyol.* p. 71, pl. 39. figs. 20–23.

Lucania venusta, *Girard, Proc. Acad. Nat. Sc. Philad.* 1859, p. 118.

D. 13. A. 11. V. 6.

The height of the body is about equal to the length of the head, and two-sevenths of the total (without caudal). The origin of the dorsal is midway between the extremity of the snout and the base of the caudal. Origin of the anal opposite the middle of the dorsal. Reddish brown; fins immaculate. (*Girard.*)

Texas.

7. HAPLOCHILUS*.

Aplocheilus, *McClell. Ind. Cypr. As. Res.* xix. pp. 301, 426.
Panchax, *Cuv. & Val.* xviii. p. 380.
Zygonectes, *Agassiz, in Sillim. Amer. Journ.* 1854, xvii. p. 353.
Micristius, *Gill, Canad. Nat. & Geol.* 1865, August.

Snout flat, both jaws being much depressed. Bones of the mandible firmly united; upper jaw protractile; both jaws with a narrow band of villiform teeth†. Body oblong, depressed anteriorly, compressed posteriorly. Dorsal fin short, commencing behind the origin of the anal, which is more or less elongate. Intestinal tract but slightly convoluted; air-bladder present.

East Indies; tropical Africa; temperate and tropical America.

The species may be geographically arranged:

α. Indian species, p. 311.
β. African species, p. 312.
γ. American species, p. 314.

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* 1. Aplocheilus melastigmus, *McClell. Ind. Cyprin.* pp. 301, 427.—Calcutta.—D. 7. A. 22.

2. Aplocheilus, sp., *McClell. l. c.* pl. 55. fig. 4; A. macclellandii, *Bleek. Cypr.* p. 487 (name only).—Bengal.

3. Fundulus cingulatus, *C. & V.* xviii. p. 197.—United States.—D. 8. A. 10. Panchax pictum, *C. & V.*, has proved to be identical with *Betta trifasciata*; see Bleeker, Cyprin. p. 489.

† The vomerine teeth of *Panchax* are minute and rudimental, not offering a character on which a genus may be founded. In one out of three specimens, they are entirely absent.

Fundulus zebra, *Dekay, Nat. Hist. New York, Fish.* p. 218; *Baird, Ninth Smithson. Report*, 1855, p. 342.
—— viridescens, *Dekay, l. c.* p. 217, pl. 31. fig. 99.
?? Fundulus fonticola, *Cuv. & Val.* xviii. p. 198.
Fundulus grandis, *Baird & Gir. Proc. Acad. Nat. Sc. Philad.* 1853, p. 389, *and U. S.* and *Mex. Bound. Ichthyol.* p. 69, pl. 36.
—— floridensis, *Girard, Proc. Acad. Nat. Sc. Philad.* 1859, p. 157.

B. 5. D. 11. A. 11. L. lat. 35. L. transv. 15–16.

The height of the body equals the length of the head, and is contained thrice and two-thirds in the total length (without caudal); males have the body comparatively shorter. Snout rather obtuse, the mandible being directed obliquely upwards. The diameter of the eye is two-thirds of the length of the snout, one-fifth of that of the head, and rather less than one-half of the width of the interorbital space, in large specimens; in younger examples the snout is shorter. Dorsal and anal of moderate size, higher in males than in females. The origin of the dorsal is midway between the extremity of the caudal and the anterior margin of the orbit in females, but in males it is exactly in the middle of the total length; it corresponds to the seventeenth scale of the lateral line; it is distinctly in advance of the vertical from the base of the anal, the first anal ray being below the fourth of the dorsal. Coloration uniform (in spirits).

The opening tube of the oviduct is attached to the anterior rays of the anal fin.

Southern States of North America.

a–c. Adult females (5 inches long) and young. Lake Pontchartrain.

Specimens, two inches long, sent by Prof. Agassiz under the name of *Fundulus spilotus* (Holbr.), to the Liverpool Free Public Museum, appear to me to be the young of *F. heteroclitus*; they are obscurely spotted on the sides, and have a black dot in the middle of the last dorsal rays.

2. Fundulus parvipinnis.

Girard, Proc. Acad. Nat. Sc. Philad. 1854, p. 154.

D. 11. A. 11. V. 5. L. transv. 12.

The height of the body is a little less than one-fifth of the total length (with the caudal), the length of the head a little less than one-fourth. The diameter of the eye equals the length of the snout, and is one-fourth of that of the head. Origin of the dorsal fin midway between the extremity of the caudal and the end of the snout; origin of the anal fin opposite the middle of the dorsal. Fins small. A black stripe on the middle of the side, from the anterior third of the body to the base of the caudal. (*Gir.*)

San Diego, California.

3. Fundulus labialis.

B. 6. D. 13–14. A. 16–17. V. 6. L. lat. 37–39. L. transv. 15.

The height of the body, taken on the level of the base of the pec-