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ON A COLLECTION OF FISHES FROM
BUENOS AIRES.¹

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THE present paper is a report on a collection of fishes obtained near Buenos Aires, Argentina, by Prof. W. B. Scott, of Princeton University. The collection adds several species to the La Plata fauna. These are marked*. Four of these species are new. The types are in the Museum of Princeton University, and a series of cotypes and duplicates is in the Museum of Indiana University.

The fresh-water fish fauna of Buenos Aires is essentially Amazonian and in striking contrast to the fresh-water fauna of North America of corresponding latitude and equally remote from the mouth of the Amazon which lies on the equator. None of the Amazon genera has passed much beyond the borders of the United States. Most of them do not reach beyond Panama. The Paraguay, whose sources are in contact with those of the Tapajos and Madeira, southern tributaries of the Amazon, has provided an easy and open road for the Amazon fauna to the Lower Parana and La Plata. But few Amazon types extend south of Buenos Aires.

SILURIDÆ.

Luciopimelodus pati Valenciennes.

One specimen.

Pseudoplatystoma coruscans Agassiz.

One specimen.

* Contributions from the Zoölogical Laboratory of Indiana University, No. 80.

Rhamdia quelen Quoy & Gaimard.

One specimen.

Pimelodus clarias macrospila Günther.

Two specimens, each with 3 series of large spots.

Pimelodus albicans Valenciennes.

One specimen.

Pimelodus valenciennis Kröyer.

Four specimens.

Iheringichthys labrosus (Kröyer).

Several specimens.

Doras granulatus Valenciennes.

A single specimen, 470 mm. long.

Lateral line 22, the hooks of the lateral plates beginning under the end of the dorsal.

LORICARIIDÆ

Plecostomus commersoni Cuvier & Valenciennes.

Four specimens.

* **Plecostomus laplatæ** Eigenmann, new species. (Plate XXI.)

Depth 5 in length; head 3.4 (3.28 in cotype); D. 1, 7 (not counting the fulcrum); A. 1, 4; scutes 31 + 1 caudal scute; depth of head 1.75 (1.66); width of head 1.2 in its length (1 +); length of snout equaling depth of head (1.5 in head); interorbital 2.8 in head (2.66); length of mandibular ramus 3 in interorbital (2 +); barbel more than half length of eye; snout spatulate, rounded; supraorbital margin not raised; supraoccipital ridge very feeble, temporal plates not carinate; scutes of sides little keeled, spinulose, 7 between dorsal and adipose, 14 to 16 between anal and caudal; supraoccipital bordered by a median and two or three lateral scutes. Lower surface of head and belly entirely granulate in the type, partly naked between the base of pectoral and ventral. First dorsal ray about equal to length of head, last ray .66 (.5) length of head; base of dorsal equal to its distance from end of second scute beyond tip of adipose spine; pectoral extending to second sixth of the ventrals; caudal distinctly emarginate; caudal peduncle a little more than 3 times as long as deep.

Color of type: Sides, ventral surface and head profusely spotted, the spots largest on the belly, minute on the head; lightish streaks along the lateral keels; dorsal dusky with one or two rows of spots between every two rays; caudal unspotted, the lower part dusky; anal dark, unspotted; ventrals and pectorals dusky, the former with large spots, the basal two thirds of the latter with very numerous minute spots similar to those of head.

Color of cotype: Ventral surface plain; sides with obscure large spots, the light streaks along the keels much more evident; head profusely covered with spots much larger than those in the type; dorsal with a series of large spots on the posterior half of each interradi al membrane; caudal sooty, anal obscurely spotted; entire upper surfaces of ventrals and pectorals spotted, the spots of the pectoral more numerous and smaller, but not as small as those of the head.

Apparently related to *Plecostomus carinatus vaillanti* and *tietensis*.

Type in Mus. Princeton Univ., a specimen 410 mm. long, from Buenos Aires; coll. Prof. W. B. Scott. Cotype, no. 11351, Mus. Ind. Univ., a specimen 214 mm. long, from same place.

Loricaria vetula Cuvier & Valenciennes. (Plate XXII.)

One specimen.

Loricaria anus Cuvier & Valenciennes.

Six specimens.

These specimens have the lateral keels separate to the last 3 or 4 scutes; the dorsal without spots but with the second half of the membrane dark.

CHARACIDÆ.

Curimatus platanus Günther.

One specimen.

Curimatus gilberti Quoy & Gaimard.

Two specimens.

Prochilodus lineatus (Valenciennes).

Six specimens, the largest 430 mm.

Leporinus obtusidens (Valenciennes).

One specimen. Depth 3.5; head 4.33; interorbital equals snout; snout conical; teeth short, truncate; lateral spots obscure, vertical, the caudal spot most prominent; anal concave, the second and third ray reaching much beyond the tip of the last, nearly to caudal.

Astyanax rutilus (Jenyns).

Five specimens.

D. 11; A. 28 in one, 30 in the others; scales 6 or 7-37 to 39-5 to 7.

* **Acestrorhamphus brachycephalus** (Cope).

One specimen. D. 10; A. 26; head 3.75; depth 3.33; eye 4 in head; scales 11-55-9.

Acestrorhamphus hepsetus (Cuvier).

One specimen.

* **Acestrorhamphus ferox** (Günther).

One specimen.

Salminus maxillosus (Cuvier & Valenciennes).

Three specimens.

In the older ones the dark lateral lines are much more conspicuous than in the younger.

Serrasalmo marginatus Valenciennes.

Two specimens.

Hoplias malabaricus (Bloch).

Two specimens.

CLUPEIDÆ.

Pomolobus ? melanostomus Eigenmann, new species. (Plate XXIII, Fig. 6.)

I am not sure of the identification of this species. It differs from the other American relatives of *Clupea* in having the dorsal inserted *behind* the ventrals.

D. 13 to 16; A. 17 to 20; head 4.5 to 5; depth 3.33 to 3.66; ventral serræ strong, beginning near posterior margin of preopercle, 26-29. Eye a little longer than snout, 3 to 3.5 in head; mouth oblique, the lower jaw included; maxillary extending a little beyond front of eye; gillrakers about two thirds as long as eye; no teeth on vomer; alimentary canal short, peritoneum

white; dorsal short, its origin over some part of the last third of the ventrals, a little nearer caudal than tip of snout. Scales caducous, crenulate.

A dark band along the entire back, median predorsal line free from pigment; a faint dusky streak along the upper part of the side to the middle of caudal; no humeral spot; upper lip black, tip of snout and lower jaw dusky; sides of head and body without pigment cells.

The reproductive organs indicate that the larger specimens are mature.

Type in Mus. Princeton Univ., a specimen 85 mm. long, from Buenos Aires; coll. Prof. W. B. Scott. Cotypes in the collections of Princeton and Indiana Universities (No. 11364, Mus. Ind. Univ.), 14 specimens 58 to 85 mm. long, from same place.

STOLEPHORIDÆ.

Ilisha flavipinnis (Valenciennes).

Two specimens.

Stolephorus olidus Günther.

Seven specimens.

Upper margin of silvery band well defined, the lower margin not, the silvery area in the adult covering the entire sides. Anal about 26; depth about 5.5 (4.5 in the types).

MUGILIDÆ.

Mugil platanus Günther.

Five specimens. These agree with Günther's description, except that in the three better preserved specimens and the smallest the upper half of the base of the pectoral is black, the rest of the fin uniform.

ATHERINIDÆ.

Atherinichthys bonariensis Cuvier & Valenciennes.

Four specimens.

Atherinichthys argentinensis Cuvier & Valenciennes.

Origin of spinous dorsal behind anus. A. 1, 15; scales 50, 8 between dorsal and anal; depth 6.5 to base of caudal; head 4.33; scales rounded behind; pectorals equal head less mouth; lateral band one sixth depth of body.

SCIÆNIDÆ.

Pachyurus bonariensis Steindachner.

Many specimens.

CICHLIDÆ.

Heros autochthon Günther.

Two specimens.

Geophagus australe Eigenmann, new species. (Plate XXIII, Fig. 7.)

Closely related to *G. duodecimspinosum* = *balzanii*, from the Paraguay. It differs from that species in the more pointed snout, less steep profile, more rapidly descending dorsal slope, longer, more slender caudal peduncle, narrower interorbital, etc. It differs from its next nearest relative, *G. gymdogenys*, in the scales of the cheek and in the color.

Head 3 to 3.16; depth 2 to 2.4; D. XII to XIV, 10 or 11; A. III, 8; lateral line 28 to 30 (16 to 18 + 10 to 12); 25 to 27 scales along the middle of the side.

Subrhomboidal; dorsal outline unequally arched, the highest point at the origin of the dorsal. In *G. balzanii* the dorsal profile is much more regularly arched from the tip of snout to end of dorsal; anterior profile convex in front of dorsal, nearly straight on head; caudal peduncle rather long and slender, its depth 1 to 1.33 in its length; interorbital very convex, the bony portion 3.5 in the head (2.5 in *balzanii*); cheeks with 3 series of scales on their upper part, the lower portion naked (about 7 series in *balzanii*); 7 or 8 tubercular gillrakers on lower half of arch; a single complete series of scales on the subopercle with a few scales forming an imperfect second series below them. Eye 4 to 4.5 in head; nares half way between tip of snout and eye (distance of nares from tip of snout 1.6 in their distance from eye in *balzanii*).

Ventrals reaching the anal papilla or slightly beyond origin of anal; pectoral reaching to first anal spine or first anal ray; soft dorsal and anal high, reaching considerably beyond base of caudal; caudal lunate or but slightly emarginate, its base much less densely scaled than in *G. balzanii*; bases of dorsal and anal with few scales; fold of the lower lip not continuous.

A dark area across back in front of the dorsal; bases of some

of the scales of the back frequently very dark brown; side with about 6 cross-bands, each of those on middle of side composed of double dark lines with a band of light of equal width between them; no dark spot on side; pectoral light; ventrals blue-black; dorsal dusky, with ascending light stripes which are largely replaced by light spots on the soft dorsal; caudal dusky, with round hyaline spots on the rays similar to those on soft dorsal; anal with similar but smaller and less distinct spots; no spot or ocellus on the caudal.

Type in Mus. Princeton Univ., a specimen 155 mm. long, from Buenos Aires; coll. Prof. W. B. Scott. Cotypes in Princeton and Indiana Universities (no. 11352, Mus. Ind. Univ.), 6 specimens 100 to 150 mm. long, from same locality.

Batrachops scottii Eigenmann, new species. (Plate XXIII, Fig. 8).

? *Crenicichla semifasciata* Pellegrin (not Heckel) Cichlides, 339, 1904 (Buenos Aires; Montevideo).

This species is closely related to *semifasciata* of Heckel, from which it differs conspicuously in color. *B. semifasciatus* was described from specimens collected in the Paraguay River at Caicara in Matto Grosso. No other specimens have been found unless those recorded by Pellegrin belong to *semifasciatus*. The two species may be distinguished as follows:

- a. D. XXII, 10; A. III, 7; lateral line $25 + 12$; scales 56 or 57; greatest thickness 1.25 in greatest height which is 5 in the total length; depth of caudal peduncle equals five eighths of the greatest depth; eye 1.5 diameters behind tip of lower jaw, 5.5 in head; suborbital one third the diameter of eye; peropercular margin turned forward; a dark band from eye to opercle, 7 or 8 dark lines from base of dorsal to middle of side, darkest below lateral line and fading out below; a dark ocellus on base of caudal; each scale of the side yellow, with a dark brown margin; fins without spots, *semifasciatus*.
- aa. D. XXI or XXII, 13; A. III, 8 or 9; lateral line $25 + 14$; scales 57; head 3.4 to 3.5; depth 4 to 4.5; greatest thickness 1.5 in greatest depth; depth of caudal peduncle 2 in greatest depth; eye 2.5 diameters behind tip of lower jaw, 5.5 to 7 in the head; preorbital 1 (in adult) to 2 (in youngest) in the eye; peropercular margin slanting obliquely backward;

tips of dorsal and anal reaching caudal; a dusky shade from eye to edge of opercle continued faintly in the young to the caudal; very conspicuous markings extending from eye down and back; they consist first of a black blotch followed by two or four parallel black lines, these followed after an interval by one to 5 similar ones and these again in some specimens by other similar ones; back to the lateral line in the young with very obscure cross shades; side, and in the adult the back also, with light stripes along the middle of the scales and prominent zigzag dark stripes between each two rows of scales; entire dorsal and base of anal spotted; caudal obscurely spotted; pectorals and ventrals plain.

The black markings below the eye are so unique and conspicuous that they attract the attention at once and give the impression of India ink pen strokes.

I take great pleasure in dedicating this species to the collector, Prof. W. B. Scott, of Princeton University.

Type in Mus. Princeton Univ., a specimen 280 mm. long, from Buenos Aires; coll. Prof. W. B. Scott. Cotypes in Princeton and Indiana Universities (No. 11420, Mus. Ind. Univ.), 145 to 165 mm. long, from same place.

PLEURONECTIDÆ.

Achirus lineatus (Linnæus).

Two specimens.

EXPLANATION OF FIGURES.

- 1-3. *Plecostomus laplatæ* Eigenmann, type.
- 4-5. *Loricaria vetula* Cuvier & Valenciennes.
6. *Pomolobus melanostomus* Eigenmann, type.
7. *Geophagus australe* Eigenmann, type.
8. *Batrachops scotti* Eigenmann, type.



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