

II.—*A Contribution to the Knowledge of the Fish-fauna of the Rio de la Plata.* By Dr. A. GÜNTHER, F.R.S., Keeper of the Zoological Department, British Museum.

[Plate II.]

THE Fish-fauna of the Rio de la Plata and of the large affluents which discharge their waters into that estuary is but little known. On preparing a list of the species described by ichthyologists as occurring in the various parts of this great river-system, I found their number to amount to 153. But so little is known as regards the distribution of the species within the main river and its tributaries that that list utterly failed to fulfil the purposes for which it was drawn up, viz. to elucidate the degree of affinity between the Uruguay, Parana, Paraguay, and the rivers draining the country east of the Cordilleras, and to demonstrate a transition of the fauna of the lower parts into that of the upper—which latter may be supposed to be very similar to that of the San Francisco, so fully described by Dr. Lütken. Therefore it would have been premature to publish such a list, and I propose to limit the present communication to some notes and descriptions drawn up during an examination of a considerable collection of fishes received by the British Museum from Mr. E. White of Buenos Ayres. As a part of these species are identical with those received from the 'Challenger' expedition, I have thought it useful to supplement these notes by adding the names of the fishes obtained from the latter source, full descriptions being given in my "Report on the Shore-fishes" procured during that voyage; they are marked in the following notes by the letters *Ch.* The majority of the fishes enumerated in this paper belong to the fauna of the Rio de la Plata proper and of the lowermost portion of the Parana.

CHONDROPTERYGIANS.

1. *Mustelus vulgaris*, M. & H.
2. *Raja platana*, Gthr. [*Ch.*]
3. *Raja microps*, Gthr. [*Ch.*]
4. *Trygon hystrix*, M. & H.

I believe that authors have confounded several species under this name. The true *Trygon hystrix* of the Rio de la Plata has a large eye, the longitudinal diameter of which is two thirds of the width of the cartilaginous space between the eyes; the spiracles are very large, three times the size of the eye; and the tail is considerably longer than the body,



compressed into a crest behind the spine; rather large conical thorns in front of the spine, arranged partly uniserially, partly biserially. Six appendages at the bottom of the mouth behind the teeth.

An adult male, with the disk 10 inches long and broad, from the Parana, has the upper part of the disk ornamented with white ocelli, and nearly the whole of the lower parts of a brown colour.

#### 5. *Trygon brachyurus*, sp. n.

This species differs from *Trygon hystrix* in several important points. The eye is small, its longitudinal diameter being two fifths of the width of the cartilaginous space between the eyes. Spiracles of moderate width, about twice the size of the orbit. Tail much shorter than the body, with a low fin behind the dorsal spine and a very low fold of the skin along its lower side: the thorns in the median line of the tail in front of the spine are very small, arranged in a single series. Five appendages at the bottom of the mouth behind the teeth. Upper parts greyish brown, with a coarse network of blackish streaks; lower parts white, with the margins of the disk blackish.

A female from Buenos Ayres shows the following dimensions:—length of the disk 10 inches, width of the disk 12 inches; length of the tail 9 inches.

#### 5 a. *Trygon reticulatus*, sp. n.

Eye of moderate size, half the width of the cartilaginous space between the eyes. Spiracles scarcely twice the width of the orbit. Tail considerably longer than the disk, with a very low fold above and a still lower one below its terminal half; median line of the tail with a series of thorns of moderate size, irregularly arranged. Four appendages at the bottom of the mouth behind the teeth; upper part brown, with a network of black lines, the meshes being hexagonal and wide; lower parts uniform white.

A male from Surinam has a disk  $7\frac{1}{2}$  inches long and  $8\frac{1}{2}$  inches broad; the tail is 12 inches.

This is the species which I have described in the 'Catalogue of Fish' as *Trygon hystrix* of Müller & Henle.

#### 6. *Myliobatis aquila*, L.

#### ACANTHOPTERYGIANS.

7. *Otolithus guatucupa*, C. & V. [Ch.]

8. *Ancylodon atricauda*, Gthr. [Ch.]



9. *Micropogon ornatus*, Gthr. [Ch.]
  10. *Micropogon undulatus*, L.
  11. *Pogonias fasciatus*, Lac.
  12. *Pachyurus furcraeus*, Lac. (= *Corvina Gillii*, Steindachner, 1867).
  13. *Atherinichthys bonariensis*, C. & V.
  14. *Atherinichthys argentinensis*, C. & V.
  15. *Mugil platanus*, sp. n.
- D. 4 |  $\frac{1}{8}$ . A.  $\frac{3}{8}$ . L. l. 38. L. tr. 15.

The height of the body is a little more than the length of the head, which is one fourth of the total (without caudal). The snout is broad, the width of the interorbital space being half of the length of the head. Eye with a thick and broad adipose membrane; lips thin. The præorbital leaves only the extremity of the maxillary uncovered. Cleft of the mouth twice as broad as deep; the angle made by the anterior margins of the mandibles is obtuse. The first dorsal spine scarcely longer than the second, and half as long as the head; it is a little nearer to the end of the snout than to the base of the tail. Anal and dorsal fins not scaly; the pectoral fin terminates opposite to the eighth scale of the lateral line; base and posterior margin of the pectoral blackish.

Six specimens from Buenos Ayres, the largest being 18 inches long.

#### ANACANTHINI.

16. *Solea Jenynsii*, Gthr. (= *Achirus Lorentzii*, Weyenbergh).
17. *Aphoristia ornata*, Lac. [Ch.]

#### MALACOPTERYGIANS.

18. *Platystoma Orbignianum*, Val.
19. *Piramutana albicans* (= *Arius albicans*, C. & V., = *Arius albidus*, Val., = *Arius moroti*, Val., nec = *Piramutana Blochii*, C. & V.).

In this species pterygoid teeth are constantly absent, the teeth on the palate being reduced to two small separate groups on the vomer. There is no doubt whatever of our specimens being identical with those obtained by D'Orbigny in the Rio de la Plata; therefore Müller and Troschel were wrong in identifying this fish with the *Silurus clarias* of Bloch. The fish described by Lütken as *Pseudariodes albi-*



*cans*, again, seems to be a different fish, as it is stated to have pterygoid teeth (Lütken, Vid. Medd. Kjöb. 1874, pp. 193–199).

In very young specimens, *i.e.* in specimens from 6 to 8 inches long, the maxillary barbel reaches to the root of the caudal, whilst it reaches only to the anal fin in specimens 10 inches long, and in older examples it is still shorter (*cf.* Steindachner, SB. Ak. Wien, lxxiv. 1877, pp. 599–602).

20. *Piramutana macrospila*, sp. n. (Pl. II.)

D. 1/6. A. 11.

Closely allied to *Piramutana pantherina* and *Piramutana albicans*. Head granulated above; occipital process longer than broad, extending to the dorsal scute. An elliptical patch of pterygoid teeth (Pl. II. D); vomerine teeth none. Eye of moderate size, half the width of the interorbital space; upper jaw longer than the lower; the maxillary barbel reaches to the origin of the anal fin. Adipose fin much longer than the dorsal; but the distance between the two fins is less than the length of the dorsal. Dorsal spine rather longer than that of the pectoral fin, but shorter than the head. Body with four or five longitudinal series of round blackish spots; also the upperside of the head and the dorsal fin are spotted.

One specimen, 15 inches long.

21. *Pimelodus maculatus*, Lac.

22. *Pimelodus gracilis*, Val.

23. *Pimelodus labrosus*, Kröy., Ltk.

24. *Pimelodus platanus*, sp. n.

D. 1/6. A. 12. P. 1/13.

Head covered with thin skin above; occipital process narrow; no prædorsal scute. Adipose fin rather high, its length being two ninths of the total (without caudal) and equal to its distance from the fifth dorsal ray. Maxillary barbels extending to the origin of the adipose fin, the outer ones of the mandible beyond the root of the pectoral.

The height of the body is rather less than the total length (without caudal); the length of the head a little more than one fourth; snout rather long and spatulate, with the upper jaw much projecting beyond the lower. The eye occupies nearly the middle of the length of the head, has free orbital margins, and is about half of the width of the interorbital space; its diameter is one ninth of the length of the head.



The first dorsal and pectoral rays are not spinous. Caudal fin deeply forked. Coloration uniform.

One specimen from the Parana, 13 inches long.

25. *Pimelodus sapo*, Val.

26. *Pimelodus Hilarii*, C. & V.

27. *Pirinampus Pati*, Val.

28. *Arius Commersonii*, Lac.

Very common, and growing to a length of 4 feet and more.

29. *Ageniosus militaris*, Bl.

30. *Doras maculatus*, Val. (= *D. muricus*, Kner).

Common about the shipping, and attaining to a length of more than 2 feet; it seems almost omnivorous, greedily swallowing the offal from ships. The stomach of one was filled with large bones, probably of sheep, pieces of carrots, shells, &c.

31. *Callichthys punctatus*, Bl.

32. *Plecostomus Commersonii*, Val.

33. *Plecostomus alatus*, Casteln.

Received from the Lower Parana.

34. *Plecostomus cordovæ*, sp. n.

D. 1/7. A. 5. P. 1/7. V. 1/5. L. l. 30.

Head very much depressed, its length being nearly two sevenths of the total (without caudal); no ridge between eye and nostril; occiput with a very slight elevation along its middle; nuchal scutes not elevated in the middle, and obtusely bicarinate. The middle of the extremity of the snout is naked; mouth straight, transverse, very broad, stretching from one side of the snout to the other; labial fold rather broad, not notched behind, covered with minute papillæ. Interoperculum without spines. The entire lower surface of the head, thorax, and belly are covered with minute scutes. The length of the base of the dorsal fin is a little less than its distance from the second fin; there are ten pairs of scutes between the two fins. Caudal fin obliquely marginate. The pectoral spine extends to the base of the ventral, and has its extremity covered with very short spines. Seventeen scutes between anal and caudal; the lateral scutes of the body with very indistinct keels, which have no particular armature. Brownish black, with black dots; these are smallest and most numerous on the head, a little larger on the body, and largest and least numerous on the abdomen, the abdominal spots being not quite the size of



the eye. Each ray of the caudal, pectoral, and ventral fins is crossed by a number of short black streaks, whilst the dorsal fin is crossed by six or seven black zigzag stripes.

One specimen,  $9\frac{1}{2}$  inches long, from Cordova.

35. *Trichomycterus dispar*, Tschudi (= *T. cordovensis*, Weyenbergh).

Received from Cordova.

36. *Macrodon intermedius*, Gthr. (an = *M. auritus*, C. & V.?).

37. *Curimatus platanus*, sp. n.

D. 11. A. 9. L. lat. 55. L. transv. 12/11.

Allied to *Curimatus Alberti*, but with considerably smaller scales. The height of the body is contained thrice and one third in the total length (without caudal); the length of the head nearly four times. The upper profile is slightly concave above the occiput; snout as long as the eye, the diameter of which is a little more than half the width of the inter-orbital space. An anterior and posterior eyelid. The origin of the dorsal fin is nearer to the extremity of the snout than to the base of the caudal. The pectoral terminates at some distance from the caudal, its length being two thirds of that of the head. Ventral not extending to the vent. Abdomen rounded in front of and behind the ventrals. Scales not ciliated. Silvery; a more or less distinct black spot on the root of the caudal.

Two specimens 6 inches long.

38. *Prochilodus lineatus*, Val.

39. *Anostomus vittatus*, C. & V.

40. *Leporinus obtusidens*, Val.

41. *Tetragonopterus orbicularis*, C. & V.

42. *Tetragonopterus fasciatus*, Cuv. (= *T. Cuvieri*, Ltk., = *T. rutilus*, Jen.).

43. *Tetragonopterus microstoma*, Gthr.

44. *Tetragonopterus petenensis*, Gthr.

From the Rio Negro, Argentine Rep.

45. *Tetragonopterus abramis*, Jen.

46. *Tetragonopterus cordovæ*, sp. n.

D. 11. A. 26. V. 8. L. l. 45. L. tr. 9/10.

The height of the body is one third of the total length (without caudal), sometimes a little more or less; the length of



the head one fourth; interorbital space convex, its width being more than the diameter of the eye, which is one fourth of the length of the head. The maxillary extends to, or very little beyond, the front margin of the eye. Origin of the dorsal fin above the root of the ventral. Caudal fin not scaly. There are eight series of scales between the lateral line and the ventral fin. Silvery, sometimes with a dark spot above the commencement of the lateral line; a black caudal spot is generally absent.

Several specimens, measuring from 3 to  $5\frac{1}{2}$  inches, were collected in the Rio de Cordova by E. Fielding, Esq.

47. *Brycon orthotænia*, Gthr. (an = *B. Lundii*, Ltk.?).

48. *Chalcinus paranensis*, sp. n.

D. 11. A. 30. V. 7. L. lat. 33. L. transv.  $6/3\frac{1}{2}$ .

The height of the body is contained twice and two thirds in the total length (without caudal), the length of the head four times. Operculum twice as high as long, reaching nearly to the vertical from the axil of the pectoral. The scales above the lateral line and in the thoracic region are larger than the others. The distance of the origin of the dorsal fin from the root of the caudal is two thirds of its distance from the extremity of the snout. Pectoral one third longer than the head. Silvery; the outer parts of the fins blackish; the middle caudal rays black.

One specimen, 5 inches long, from the Parana.

49. *Anacyrtus argenteus*, Val.

50. *Anacyrtus humeralis*, Val.

51. *Salminus maxillosus*, C. & V.

Attaining to a length of 4 feet.

52. *Xiphorhamphus Jenynsii*, Gthr.

Specimens of this species were probably confounded by Valenciennes with *X. hepsetus*.

53. *Serrasalmo marginatus*, Val.

54. *Serrasalmo spilopleura*, Kner.

55. *Myletes brachypoma*, Cuv.

56. *Engraulis olidus*, Gthr. ✓

57. *Pellona flavipinnis*, Val.

58. *Sternopygus virescens*, Val.

59. *Conger conger*, L. (an = *C. Orbignyanus*, Val.?).



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