

most probably *vittata* of Peters. He sent a drawing of a middle-aged specimen to Prof. Peters, who says that there is no distinction traceable between the figure of the Kachh specimen and the type of *vittata*. The head, above, is spotted with dark, and the entire carapace is marked with very numerous irregularly radiating dark streaks. The granulation of the carapace becomes apparent after the epidermis has dried up, in fresh specimens no trace of it is to be seen. Young specimens are rather flat, but in old ones the convexity of the carapace is very considerable, and the shell is somewhat depressed along the centre. The species is common both in rivers and tanks, and is often met with crawling from one pool of water to another; I have seen specimens up to a length of 15 inches. One, recently received, has the carapace 10·5 inches long, and 7·7 broad across the abdomen; and the total height is nearly 3·5 inches. The odd osseous antero-central plate of the sternum is broadly rounded, somewhat narrower in front than behind, 1·3 inch long and 1·5 inch broad; the two posterior plates form a suture, 2·3 inch long, they are perfectly united, as in *E. Ceylonensis*, which has a quite similar coloration, and to which *vittata* is united by Gray in Shield Rept., 1870, p. 117.

NOTES ON FISH, COLLECTED BY DR. STOLICZKA IN KACHH,—
by Surgeon Major F. DAY.

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I am indebted to Dr. Stoliczka for the following eighteen species of fish with their local names, collected by him during his recent tour through Kachh. They are interesting as extending our knowledge of the localities to which species spread, and also as first demonstrating the existence of the Genus *Cyprinodon* in the fresh waters of India.

Fam.—GOBIDÆ.

1. *Gobius giuris*, Ham. Buch. Kharba Mah. Tulli, Kachh.

Five specimens up to 6 inches in length.

The inferior pharyngeal bones are each of a triangular shape, the base being external, whilst the two bones are closely approximated together along nearly two-thirds of their internal margins.

Fam.—OPHIOCEPHALIDÆ.

2. *Ophiocephalus punctatus*, Bl. Dhor, Kachh; Dhaka by foreigners.

Fam.—CYPRINODONTIDÆ.

3. *CYPRINODON STOLICZKANUS*, sp. nov.

B. III, D. 1/8, P. 17, V. 7, A 2/7, C. 15, L. 1. 27, L. tr. 8. .

Length of head 1/4, of caudal 1/5, height of body 1/4, of dorsal and anal fins 1/3, (in the males), about 1/8 in the females, of the total length. Eyes :

diameter $\frac{1}{3}$ of length of head, 1 diameter from end of snout, and $1\frac{1}{2}$ diameters apart. Head thick, snout somewhat obtuse, upper jaw rather protractile. *Teeth* in a single row, compressed, tricuspid. *Fins*: dorsal, in the males, commences midway between the middle of the eye and the base of the caudal fin, opposite the ninth scale of the lateral line, whilst in the females its origin is between the opercle and the base of the caudal, but still opposite the 9th scale of the lateral line. In the males the dorsal and anal fins when laid flat reach the base of the caudal; the anal commences below the last dorsal ray. Caudal lunate, its outer rays being slightly produced. The ova are exceedingly large, almost equalling the diameter of the eye, of the same size as in *Haplochilus panchax*, H. B. The length of the intestinal canal equals about three times that of the abdomen. *Colours*: male, yellowish green, reticulated with brownish green, a small black spot on the shoulder behind the opercle; dorsal fin spotted, anal more sparingly so; caudal yellowish with a crescentic black band in its outer third, and a second less wide (but still broader than the ground colour) between the outer one and the root of the caudal fin. Female, silvery, with about nine vertical black bands extending from the back to the abdomen. Out of 28 specimens the largest is 1.6 inches in length; they were obtained in a small nearly quite fresh-water stream at the village Joorun, and also at Lodai, along the edge of the Rann.

4. *Haplochilus rubrostigma*, Jerdon. I found this species likewise in the fresh waters of the hills between Sind and Bilúchistan.

Fam. CYPRINIDÆ.

5. *Discognathus lamta*, Ham. Buch. *Malék*, Kachh.

6. *Labeo calbasu*, Ham. Buch. *Dai*, Kachh.

Out of five specimens three have D. $\frac{3}{13}$, and in the majority the length of the head is $\frac{1}{5}$ of that of the total length. This fish is found in Sind, and I have also taken it at Jabalpúr in Central India &c.

7. *Labeo boggut* Sykes. *Loi*, Kachh.

B III. D. $\frac{2}{9}$, P. 17, V. 9, A. $\frac{2}{5}$, L. 1. 60—65, L. tr. $12\frac{1}{2}/15$.

Length of head $\frac{2}{11}$, height of body $\frac{2}{5}$ of the total length. *Eyes*: diameter $\frac{2}{9}$ of length of head, $1\frac{1}{2}$ diameters from end of snout and 2 diameters apart. Snout thick and somewhat projecting beyond the lower jaw, having a small lateral lobe. Interorbital space convex. A small maxillary but no rostral barbel. Lower lip fimbriated, sometimes having a distinct inner fold; pores on the snout in some specimens. *Fins*: dorsal commence somewhat in advance of the ventrals, and nearer the end of the snout than the root of the caudal. *Lateral line*: eight to nine rows of scales between it and the base of the ventral fin. *Colours*: silvery, darkest superiorly, occasionally a series of light vertical bands descend along the middle of the side; fins orange.

Several specimens up to 6 inches long from Kachh; others from Púna and Jabalpúr, where it was termed "Kolees," as stated by Sykes; and one specimen in the Calcutta Museum came from Nágpúr.

Very probably this species may prove to be identical with *Tylognathus striolatus*, Günther, which is stated to have come from Púna.

8. *Cirrhina mrigala*, Ham. Buch. *Moraka*, Kachh.

Snout tuberculated; length of head $\frac{1}{5}$ in the total length; five specimens up to 8 inches in length.

9. *Cirrhina bata*, Ham. Buch. *Tchirri*, Kachh.

Several specimens up to 6 inches in length.

10. *Cirrhina dero*, Ham. Buch.

B. III. D. $\frac{3}{9}$, P. 19, V. 9, A. $\frac{2}{5}$, C. 19, L. 1. 39, L. tr. $7\frac{1}{2}/7$.

Length of head $\frac{2}{11}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$, of dorsal fin $\frac{1}{6}$ of total length. *Eyes* rather high up, diameter $\frac{1}{5}$ of length of head, $1\frac{1}{4}$ diameters from end of snout, and 2 diameters apart. *Maxillary barbels* minute and concealed in the groove. Snout rather overhanging the mouth and having some open glands across it. Lower jaw the shorter, with a ridge above the symphysis. *Fins*: dorsal commences midway between the end of the snout and the posterior border of the base of the anal fin, its last ray divided to the root, its upper border very concave, the anterior two and the last ray being elongated; pectoral rather shorter than the head, and not reaching so far as the ventral; caudal deeply forked, its lobes being of equal length. *Scales*: $5\frac{1}{2}$ rows between the lateral line and the base of the ventral fin. *Colours*: greyish superiorly as low as the row of scales above the lateral line, wherefrom it becomes silvery white. Several specimens up to 6 inches long. I also obtained two others in Calcutta.

I should have hesitated identifying this fish with Hamilton Buchanan's merely from the engraving; for that shows very long barbels, but is otherwise correct, even to the relative proportions, but in the text he observes "at each corner of the mouth is a minute tendril."

11. *Barbus sarana*, Ham. Buch. *Popri*, Kachh.

12. *Barbus ticto*, Ham. Buch. *Phiari*, Kachh. No black spot at the commencement of the lateral line; dorsal and anal fins tipped with black.

13. *Barbus stigma*, Cuv. and Val. Very numerous.

14. *Barbus vittatus*, Day. Twelve specimens up to 1.5 of an inch in length. The last undivided dorsal ray is articulated.

15. *Nuria danrica*, Ham. Buch.

16. *Rasbora daniconius*, Ham. Buch. *Jonir* or *Goner*, Kachh.

17. *Chela bacaila*, Ham. Buch. *Vai matchi*, Kachh.

Family.—SILURIDÆ.

18. *Macrones carcio*, Ham. Buch.

Local, only found in the deep recesses of streams. Another larger species also occurs, it is probably *Macrones aor*, H. B.



Day, Francis. 1872. "Notes on Fish, Collected by Dr. Stoliczka in Kachh." *The journal of the Asiatic Society of Bengal* 41(III), 258–260.

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