

## NOTES ON FISHES IN THE INDIAN MUSEUM.

### XIX.—ON A NEW LOACH OF THE GENUS *BOTIA*, WITH REMARKS ON *B. DARIO* (HAM. BUCH.).

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In an earlier account of the fishes of the genus *Botia* I<sup>1</sup> included Day's references<sup>2</sup> to *B. geto* in the synonymy of *B. birdi* Chaudhuri.<sup>3</sup> At that time I was greatly influenced by the variation in colouration exhibited by a large series of specimens of the latter species collected in the Kashmir Valley. In Messrs. G. E. Shaw and E. O. Shebbeare's collection from Northern Bengal there are seven specimens, obtained in the Mahanaddi River at the base of the Darjiling Himalayas, which undoubtedly belong to *B. geto* Day (*nec* Hamilton Buchanan). In the collection of the Zoological Survey of India there are three specimens which were referred by Day to *B. geto*, one of these from Sind is the original of his figure in the *Fishes of India*; whereas the other two are young examples of *B. dario* (H. B.). An examination of the material of *Botia* in the collection of the Indian Museum, as well as of the literature on the group, shows that Day's *B. geto* represents a new species, which may be designated as:—

#### ***Botia dayi*, sp. nov.**

1878. *Botia geto*, Day (*nec* Buchanan) *Fish. India*, p. 606, pl. oliv, fig. 2.

1889. *Botia geto*, Day (*nec* Buchanan) *Faun. Brit. Ind., Fish. I*, p. 217, fig. 77.

D. 2/9; V 1/6; P. 2/11-12; A. 2/5.

In *Botia dayi* the head and the body are greatly compressed, and the snout is evenly pointed anteriorly. From the tip of the snout the dorsal profile rises gradually to the base of the dorsal fin beyond which the body is almost rectangular. The head is long, narrow and pointed; its length is contained 3·8—3·9 times in the total length without the caudal, and 4·8—5·1 times in the length including caudal. The height of the head at occiput is contained 1·3—1·5 times, and the width of the head 2·2—2·3 times in its length. The eye is lateral in position, and is mostly situated in the posterior part of the head; its diameter is contained 5·9—6·4 times in the length of the head, 3·0—3·1 times in the length of the snout and 1·6—1·7 times in the interorbital width. The mouth is situated on the ventral surface; it is small, greatly arched and bordered by fleshy lips. There are 8 barbels, 4 rostral, 2 maxillary and 2 mandibular. The rostral barbels arise from a flap of skin hanging down

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<sup>1</sup> Hora, *Rec. Ind. Mus.* XXIV, pp. 313-321 (1922).

<sup>2</sup> Day, *Fish. India*, p. 606 (1878); *Faun. Brit. Ind., Fish. I*, p. 217 (1889).

<sup>3</sup> Chaudhuri, *Rec. Ind. Mus.* III, p. 339 (1909).

from the tip of the snout. The body is covered with small, but distinct, scales; its height is contained 4.1—4.7 times in the length without the caudal and 5.3—6.2 in the length with the caudal. The caudal peduncle is almost as high as long.

The position of the dorsal fin with reference to the tip of the snout and the base of the caudal fin is very variable. In some specimens its commencement is midway between these two points, whereas in others it is distinctly nearer to the base of caudal than to the tip of snout. The dorsal fin is not as high as the depth of the body below it; its commencement is almost opposite to that of the ventral. The pectoral fins are long and narrow, and in half-grown specimens reach the base of the ventral fins. The ventral fins are situated close together on the ventral surface and extend considerably beyond the anal opening; in some examples they almost reach the base of the anal fin. The caudal fin is longer than the head and is deeply forked with the two lobes sharp and pointed.

The head and the body are reticulated with dark bands which anastomose with one another and enclose yellowish spots of different sizes. All the fins are marked with black bands; their number varies with the size of the fish. In young specimens the body is marked with a number of oblique bands which show signs of anastomosing in the anterior part. In a large specimen the colour pattern is indistinct, but indications of oblique bands can be made out.

*Locality.*—I have examined 7 specimens collected in the Mahanaddi River at the base of the Darjiling Himalayas (type-locality), and the original specimen of Day's figure of *Botia geto* which is said to have come from "a stream in the Sind Hills". This last may be due to a wrong labelling of the specimen, but if Day's record is correct it is likely that the species will be found all along the base of the Himalayas.

*Type-specimen.*—F  $\frac{11299}{1}$ , Zoological Survey of India, Indian Museum, Calcutta.

*Remarks.*—The colouration of *Botia dayi* is very characteristic as can be seen on reference to plate 154 of Day's *Fishes of India*. It can be further distinguished from *B. dario* by the form of its caudal peduncle which is squarish; whereas in *B. dario* it tapers posteriorly. *B. almorhae* and *B. birdi* are very closely allied species; they differ from *B. dayi* in the nature and form of their head besides several other minor points.

In the possession of a long and pointed snout the new species comes fairly close to *B. rostrata* Günther.<sup>1</sup> Mr. J. R. Norman, to whom I am indebted for comparing the two forms, has informed me that *B. rostrata* "may be readily distinguished from Day's *geto* by the longer snout, longer barbels on snout, and rather different type of colouration. In *rostrata* the snout is distinctly longer than the remaining part of the head, whereas in '*geto*' it is about equal to or (generally) less than this".

<sup>1</sup> Günther, *Cat. Fish. Brit. Mus.* VII, p. 367 (1868).

Mr. Norman also informs me that in the collection of the British Museum Day's *B. geto* is represented from "Jove R.," "Delhi," "Bheer-Bhoon," "Roorki" and "R. Jumna".

*Measurements in millimetres.*

	Sind.	Mahanaddi River.	
		70.0	68.0
Total length without caudal	85.5	70.0	68.0
Length of caudal	28.0	21.0	19.0
Length of head	22.0	18.0	18.0
Width of head	9.5	8.2	7.7
Height of head at occiput	15.0	13.5	13.0
Depth of body	18.2	17.0	16.0
Diameter of eye	3.5	3.0	3.0
Length of snout	11.0	9.0	9.0
Interorbital width	6.0	5.0	5.0
Longest ray of dorsal	16.7	15.5	14.0
Length of pectoral	18.0	17.3	17.0
Length of ventral	15.2	14.2	13.5
Length of caudal peduncle	14.5	15.0	14.0
Least height of caudal peduncle	14.0	13.5	12.0

NOTE.—The specimen from Sind has a damaged caudal fin, and on account of its long preservation in spirit the depth of its body could not be ascertained properly.

***Botia dario*** (Ham. Buch.).

1922. *Botia dario*, Hora, *Rec. Ind. Mus.* XXIV, p. 320.

1922. *Botia geto*, Hora, *ibid.*, p. 321.

Buchanan<sup>1</sup> described two very closely allied forms—*Botia dario* and *B. geto*—from Northern Bengal. Günther<sup>2</sup> regarded *B. geto* as a young form of *B. dario*; but Day<sup>3</sup> in his earlier work considered the former as a doubtful synonym of the latter. In 1922, I recognised them as distinct species, but on a further examination of the material I am now of opinion that *B. geto* (H. B.) is in reality a young form of *B. dario* (H. B.); the slight differences in the colouration of the two forms being due to the age of the specimens. *B. geto* of Day's later works<sup>4</sup> is a totally different species as has been shown above.

<sup>1</sup> Buchanan, *Fish. Ganges*, pp. 354, 355 (1822).

<sup>2</sup> Günther, *Cat. Fish. Brit. Mus.*, VII, p. 366 (1868).

<sup>3</sup> Day, *Journ. As. Soc. Bengal* XLI, p. 177 (1872).

<sup>4</sup> Day, *Fish. India*, p. 606 (1878); *Faun. Brit. Ind. Fish.* I, p. 217 (1889).