

*Measurements in millimetres.*

	♀			♂		
Total length including caudal	75.0	82.0	96.0	61.0	75.0	82.0
Length of caudal	16.0	17.1	21.0	14.0	16.0	17.1
Length of head	14.5	15.1	17.0	12.0	14.3	15.0
Width of head	12.0	12.5	14.1	10.0	11.3	12.0
Height of head at occiput	10.0	10.5	12.1	8.0	10.0	10.5
Height of body	16.0	16.5	21.0	11.0	15.0	15.5
Width of body	11.3	13.0	16.0	9.0	11.0	12.0
Length of snout	7.0	7.1	8.0	6.0	7.0	7.1
Diameter of eye	4.0	4.0	4.7	3.8	4.0	4.0
Interorbital width	7.0	7.0	8.0	6.0	7.0	7.1
Length of caudal peduncle	10.1	11.0	14.0	8.0	10.0	11.0
Least height of caudal peduncle	8.0	8.8	11.0	6.2	8.0	8.8
Longest ray of dorsal	15.0	15.0	18.5	12.0	15.2	15.3
Length of pectoral	14.0	15.0	18.0	12.1	15.0	16.0
Longest ray of anal	12.8	12.5	15.0	9.5	12.0	13.0

In *G. prashadi* the skin covering the anterior fin rays of the dorsal, the pectoral, the ventral, and the anal fins is produced into lappets which form a sort of a sheath for the following ray or rays. Such structures are characteristic of practically all torrential fishes and attention has already been directed to this feature by Smith and Deraniyagala. Their exact significance appears to be to provide a gliding surface for the current and thus minimise resistance. Their production seems to have been facilitated by the tearing away action of the current which would naturally pull an object in the direction of its flow.

**Nemachilus beavani** Günther.

1924. *Nemachilus* sp., Hora, *Rec. Ind. Mus.*, XXVI, p. 28, fig. 1.

1935. *Nemachilus beavani*, Hora, *Rec. Ind. Mus.*, XXXVII, p. 63.

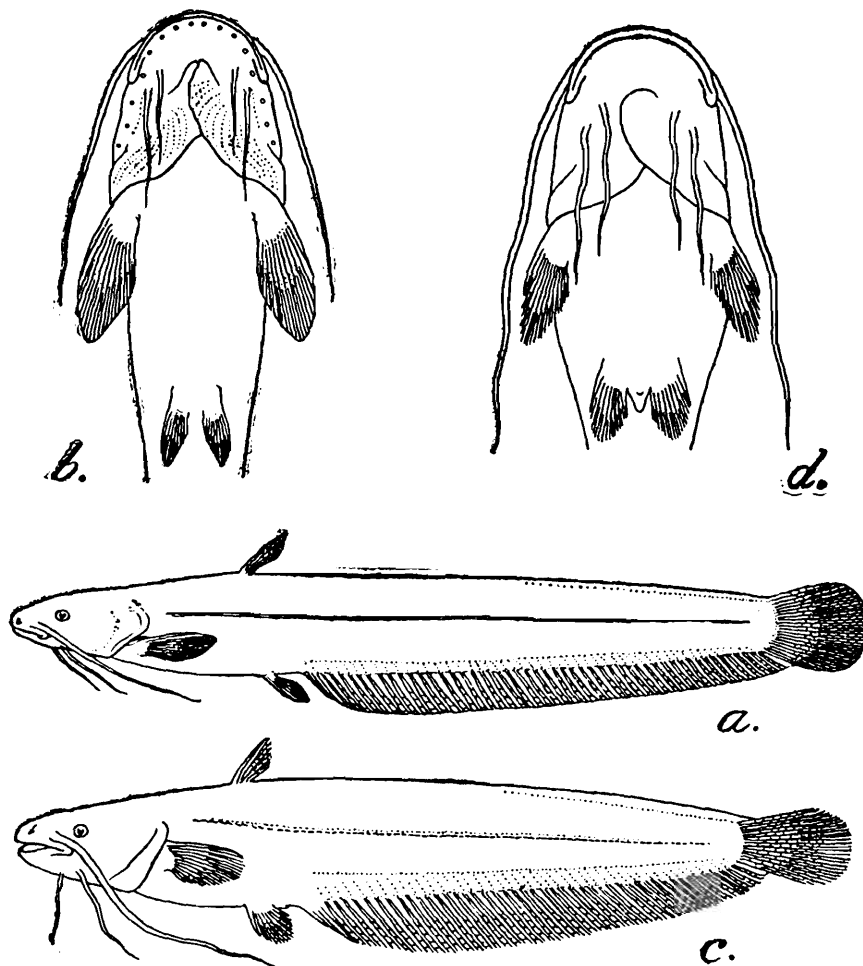
There are 22 examples in the collection under report which agree fairly closely with the Assamese and Eastern Himalayan specimens recently assigned by me to *Nemachilus beavani*. There are, however, variations in the number of bands and in the proportions of certain parts. It may here be noted that the species was originally described from the Kosi river and it is probable that the present lot represents the typical form of the species. I hope to deal with this point in my account of the species from the Western Himalayas.

**XXXIV.—ON A NEW CATFISH FROM KWANGSI, CHINA.**

In his 'Study on some Chinese Catfishes', Tchang<sup>1</sup> referred a specimen of *Silurus* Linn. from Luchow in the Kwangsi Province, China, to Day's *S. wynaadensis*, which is known only from the Wynaad and Canara Hills in South India. At the same time he published a full description of the specimen along with two illustrations—a lateral view

<sup>1</sup> Tchang, *Bull. Fan Mem. Inst. Biol.*, VII, p. 35 (1936).

of the whole fish and a view of the ventral surface of the body in front of the anal fin. As I<sup>1</sup> had been working recently on the Indian species of *Silurus*, this interesting record attracted my attention and I requested Mr. T. L. Tchang to lend me the specimen of his *S. wynaadensis* for comparison with the typical examples of the species in the collection of the Zoological Survey of India, but he regretted his inability to comply with my request. Fortunately his description and figures are sufficiently detailed to enable me to institute a comparison between his form and the typical examples.



TEXT-FIG. 8.—*Silurus wynaadensis* Day and *S. sinensis*, sp. nov.

*a.* Lateral view of *Silurus wynaadensis* Day.  $\times ca \frac{4}{5}$ ; *b.* Ventral surface of head and anterior part of body of *S. wynaadensis* Day.  $\times 1\frac{1}{2}$ ; *c.* Lateral view of *S. sinensis*, sp. nov.  $ca \frac{4}{5}$ ; *d.* Ventral surface of head and anterior part of body of *S. sinensis*, sp. nov.  $ca 1\frac{1}{2}$ .

Figs. *c.* and *d.* are copied from Dr. T. L. Tchang's drawings.

In the Indian specimens the dorsal fin is entirely in advance of the ventrals, the pectorals are separated from the ventrals by a considerable distance and the maxillary barbels do not extend beyond the pectoral fin. In the specimen from Kwangsi a portion of the dorsal fin is situated above the bases of the ventrals, the pectorals almost extend to the bases of the ventrals and the maxillary barbels extend beyond the

<sup>1</sup> Hora, *Rec. Ind. Mus.*, XXXVIII, pp. 351-356 (1936).

commencement of the anal fin. A comparative table of proportions of the various parts is given below :—

	Kwangsi.	Wynaad.		Canara.
	90 mm.	100 mm.	122 mm.	123 mm.
Length to base of caudal				
Depth in length without caudal	. 6.0	9.1	8.1	7.3
Head in length without caudal	. 4.7	5.4	5.5	5.6
Eye in head	. 8.0	9.2	7.3	7.3
Interorbital distance in head	. 1.9	2.5	2.2	2.2
Snout in head	2.4	3.1	3.0	3.0
Outer Mandibular barbel in head	1.2	1.8	1.8	1.8
Inner Mandibular barbel in head	1.3	1.9	2.0	2.0
Longest dorsal ray in head	2.1	2.5	2.4	2.6
Pectoral in head	. 1.5	1.5	1.7	1.7
Ventral in head	2.5	3.0	3.1	3.1

It is clear from the above table that in the Chinese example the body is considerably deeper, the head is longer, the interorbital space wider, the snout longer and all the barbels much better developed than those in the Indian examples. On account of the differences noted above and also on geographical grounds it is necessary to regard Tchang's specimen of *S. wynaadensis* as representing a new species which I propose to name ***Silurus sinensis***. For a description of the species reference may be made to Tchang's account. His illustrations are reproduced here along with fresh drawings of a typical specimen of *S. wynaadensis* for comparison.

The occurrence of a true *Silurus*, with 4 mandibular barbels, in South China is of special significance. Hitherto only two species of the genus, in its restricted sense, were known, *S. glanis* Linn. from Europe (east of the Rhine) and *S. wynaadensis* Day from South India. Among the species, which are usually included in the genus *Parasilurus* on account of having only two mandibular barbels, we have two very widely distributed species, one in the north, *Parasilurus asotus* (Linn.) known from Japan, China and Eastern Russia, and the other in the south, *P. cochinchinensis* (Cuv. & Val.), found in Formosa, South China, Cochin-China, Mergui Archipelago, Burma, and Eastern Himalayas. The remaining species of the group, *P. cinereus* (Dabry), *P. grahami* (Regan) and *P. mento* (Regan), are found only in Yunnan. It has been found that very young specimens of *Parasilurus asotus* are provided with 2 pairs of mandibular barbels<sup>1</sup> which shows that *Silurus* (s.s.) certainly represents a more primitive type of fish.

From the distributional records given above it is clear that the largest number of species of the genus *Silurus* are found in South China. In fact, all the species, with the exception of *S. glanis* and *S. wynaadensis*, have been found in this region. *S. glanis* and *S. wynaadensis* are characterised by 4 mandibular barbels and, therefore, represent the earliest stock of the genus which is now pushed out into very great distances from the original centre of the distribution of the genus. *Silurus sinensis* should, according to this view, represent a part of the original stock in the home country of the genus.

<sup>1</sup> Atoda, *Dolutsugaku rasshi*, XLVII, p 228 (1935); Kimura, *Journ. Shanghai Sci., Inst. Sec. 3, III*, p. 105 (1935).