

XXI. ON A NEW SPECIES OF *NEMACHILUS* FROM KOHAT, N. W. F. PROVINCE.

So far as I am aware no species of *Nemachilus* has up till now been recorded from the N. W. F. Province. In 1919, at my request, Mr. Prashar Bhatia made a small collection of fish near the cities of Bannu and Kohat, and obtained several specimens of *Nemachilus*. From Bannu he sent to me 4 examples of *N. corica* (H. B.), while in a spring about 300 yards north of Kohat city he discovered a new loach, of which he collected a large number of specimens. The new species resembles *N. kessleri* very closely, but is of a stouter build and of a different type of facies. I have great pleasure in associating this fish with the name of my friend, Mr. Prashar Bhatia, in recognition of the interest he took in making a collection of fishes for me.

Early in 1929, my colleague Dr. B. N. Chopra, while touring in the Peshawar District, collected a few specimens of *Nemachilus* in the Kabul River at Naushahra and in the Kalpani stream near Risalpur. With the exception of a damaged specimen of what appears to be *N. botia* (H.B.), the others belong to the new species obtained by Mr. Bhatia at Kohat. Attention may be directed here to a young specimen of *N. gracilis* Day from the Chel stream about 8 miles from Attock. This is a small stream with clear and slow-flowing water and a sandy bottom ; it joins the Indus a little above Attock, where the Kabul River also joins the Indus. *N. gracilis* was described from Basgo on the head waters of the Indus,¹ but I² have recorded this fish from the Lukong River, the Yasin River and from a lake about 4 miles from Sonmarg in Kashmir. It is interesting, therefore, to note that a representative of Central Asiatic loaches extends as far down in the Indus as Attock. In my account of the 'Fish of Afghanistan,'³ I have shown that the Central Asiatic element of the fish-fauna of the Kabul River extends as far as Attock. It seems likely, therefore, that the waters and the bed of the Indus River below Attock are not suitable for the abode of the Central Asiatic species of fish.

It is well known that the majority of the fishes of the N. W. F. Province are widely distributed in the plains of India. Of the four species of *Nemachilus* referred to above, two—*N. corica* and *N. botia*—are extensively found in the north-eastern parts of India, *N. gracilis* has its original home in the head waters of the Indus and *N. prashari*, the new species, has strong affinities with the Indian members of the genus.

***Nemachilus prashari*, sp. nov.**

(Plate V, figs. 1 and 2.)

D. 2/7 ; P 9 ; V 7 ; A. 2/5, C. 18.

Nemachilus prashari is a small and subcylindrical fish in which both the dorsal and the ventral profiles are slightly arched. The ventral

¹ Day, *Proc. Zool. Soc. London*, p. 798 (1876).² Hora, *Rec. Ind. Mus.* XXIV, p. 74 (1922).³ An account of the "Fish of Afghanistan" will be published in the volume for 1933 of the *Journal of the Bombay Natural History Society*.

surface of the head and to a certain extent of the body in front of the ventral fins is flattened. The head is small and broadly pointed anteriorly ; its length is contained 5.3 to 5.7 times in the total length and 4.4 to 4.8 times in the length without the caudal. The height of head at the occiput is equal to the width of the head about the middle of the eyes ; its greatest width is equal to the length of the head behind the nostrils. The snout is almost as long as the postorbital part of the head. The eyes are small and are situated in the middle of the length of the head ; they are dorso-lateral in position and are not visible from the ventral surface. The mouth is small and crescentic, and is bordered by fleshy lips ; the anterior lip is indistinctly fimbriated while the posterior lip is rugose and interrupted in the middle. There are 6 short barbels, 4 rostral and 2 maxillary ; the maxillary barbels are slightly longer than the rostral barbels. The greatest depth of the body lies just below the commencement of the dorsal ; it is contained 6.8 to 8.1 times in the total length and 5.4 to 6.8 times in the length without the caudal.

The commencement of the dorsal is almost opposite to that of the ventral, and is nearer to the base of the caudal than to the tip of the snout. The pectorals are shorter than the head and are separated from the ventrals by a considerable distance. The ventral fins are similar to the pectorals, and are almost as long ; they do not extend as far as the anal-opening. The caudal fin is deeply emarginate ; the upper lobe is slightly longer than the lower.

The head and body are smooth and devoid of scales. The lateral line is well marked anteriorly, becomes indistinct gradually and finally disappears above the base of the ventral fin. The caudal peduncle is well developed ; its least height is contained 1.4 to 1.6 times in its length. The eggs are large and a mature ovum is as much as 1 mm. in diameter.

In spirit specimens the general colouration is pale-yellow. The dorsal surface of the head is greyish, while the cheeks and the opercular regions are yellowish. The body is marked with 15-17 cross bars of dark olive colour ; these descend from the dorsal surface to the sides, but do not extend as far as the ventral surface. There is usually an interrupted band of somewhat darker colour at the base of the caudal fin. A prominent black spot is present at the base of the three anterior dorsal rays and an oblique band in the middle of the dorsal fin. The caudal fin possesses two dark wavy bands in its distal half. The pupil is dark, and the iris is white. The pectoral, ventral and anal fins are pale yellow.

Type-specimen.—F 10719/1, *Zoological Survey of India (Ind. Mus.)*.

Locality.—A spring 300 yards north of Kohat City (N. W. F. Province).

Remarks.—As has been indicated above *N. prashari* is very similar to a number of Himalayan forms. It is also related to *N. kessleri* known from Baluchistan. In *N. kessleri* the greatest depth of the body is contained 8 times in the length without the caudal, whereas in *N. prashari* it is contained 5.4 to 6.8 times in the same dimensions.

Measurements in millimetres.

Total length including caudal	49.5	44.3	43.2	42.7
Length of caudal	8.8	6.9	7.2	7.3
Length of head	8.8	7.8	7.5	8.0
Depth of body	7.0	6.0	5.3	6.5
Length of snout	3.7	3.0	3.3	3.3
Interorbital distance	2.0	1.5	1.5	1.7
Length of caudal peduncle	6.0	4.8	5.5	4.8
Least height of caudal peduncle	3.6	3.0	3.6	3.4
Longest ray of dorsal	7.2	7.0	5.9	6.0
Length of pectoral	7.8	7.0	6.0	7.0
Length of ventral	7.5	6.0	6.0	6.2
Longest ray of anal	5.7	5.2	4.9	5.0
Distance between tip of snout and commencement of dorsal	22.0	19.8	19.4	19.8
Distance between commencement of pectoral and that of ventral	14.5	12.8	12.0	11.2
Distance between tip of snout and anal opening	30.0	27.6	27.2	26.8