# NOTES ON FISHES IN THE INDIAN MUSEUM.
## XLII. On a New Loach from Poona.

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The fish fauna of Poona has received considerable attention in recent years[1] and the systematics of most of the forms described by Sykes[2] have now been straightened out. It would seem surprising, therefore, that in a small collection made by the writer at Poona in November 1948 in the Moola-mootha river, eight specimens of a characteristic loach were found which, though in general facies, resemble Annandale's *Nemachilus anguilla*[3], described from the adjoining district of Satara, differ specifically from it in colouration and several other diagnostic features. I propose to describe it here as a new species and to designate it as *Nemachilus poonaensis*. Including the new loach, the collection contains the following species :—

Family Cyprinidae

Subfamily *Abramidinae*

1. *Chela phulo* Ham.

Subfamily *Rasborinae*

2. *Danio aequipinnatus* (McClell.)

Subfamily : *Cyprininae*

3. *Barbus* (*Puntius*) *kolus* Sykes
4. *Barbus* (*Puntius*) *ticto* Ham.
5. *Barbus* (*Tor*) *khudree* Sykes
6. *Cirrhina fulungee* (Sykes)
7. *Garra mullya* (Sykes)
8. *Labeo calbasu* (Ham.)
9. *Rohtee virgosii* Sykes

Family Cobitidae

10. *Nemachilus botia* var. *aureus* Day
11. *Nemachilus denisonii* Day
12. *Nemachilus poonaensis*, sp. nov.

Family Bagridae

13. *Mystus cavasius* (Ham.)

Family Xenentodontidae

14. *Xenentodon cancila* (Ham.)

Family Ambassidae

15. *Ambassis ranga* (Ham.)

Family Gobiidae

16. *Glossogobius giuris* (Ham.)

Family Mastacembelidae

17. *Mastacembelus armatus* (Lacép.)

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[1]Fraser, A. G. L., *J. Bombay Nat. Hist. Soc.* XLIII, pp. 452-454 (1942); Hora, S. L. and Misra, K. S., *ibid.*, XLIII, pp. 218-225 (1942); Suter, M., *ibid.*, XLIII, pp. 663-664 (1942).

[2]Sykes, W. H., *Proc. Zool. Soc. London* VI, pp. 157-168 (1838); Sykes, W. H., *Trans. Zool. Soc. London* II, pp. 349-378 (1841).

[3]Annandale, N., *Rec.Ind. Mus.* XVI, pp. 127, 128 (1919).

**Nemachilus poonaensis,** sp. nov.

D.12 (4/8); P.11 (1/10); V.7 (2/5); C.19.

In this loach the body is much elongated; the dorsal profile rises very little from the tip of the snout to the base of the dorsal fin beyond which it is almost straight. The ventral surface is flattened, and its profile is almost horizontal. The head is conical and the snout very bluntly pointed. The length of the head is contained from 4·5 to 4·75 times, the depth of the body near the origin of the dorsal fin from 7·3 to 8·3 times, and the length of the caudal peduncle from 3·7 to 4·0 times, in the standard length. The eyes are dorso-lateral in position and are not visible from the ventral surface; they are situated nearer to the tip of the snout than to the hinder end of the operculum. The diameter of the eye is contained from 3·0 to 3·5 times in the length of the head and from 1·0 to 1·25 times in the length of the snout. The inter-orbital width is equal to the diameter of the eye. The nostrils are situated considerably nearer to the eye than to the tip of the snout. There are three pairs of short, thread-like barbels; the rostral barbel is shorter than the maxillary; the barbels of the inner maxillary pair extend backwards as far as the nostrils, while the barbels of the outer pair reach the anterior fourth of the eye. The lips are swollen and corrugated with two short digitiform processes in the middle of the upper lip, and the lower lip is interrupted in the middle line.

The origin of the dorsal fin is nearer to the tip of the snout than to the base of the caudal; it is very much higher than the depth of the body below it, and its upper margin is nearly straight. The pelvics commence slightly behind the origin of the dorsal, and are situated midway between the tip of the snout and the base of the caudal. The pectorals are long and narrow and are almost of the same length as the height of the dorsal. The caudal fin is long and emarginate; its upper lobe is slightly longer than the lower.

The most characteristic feature of the species lies in its colouration. There is a dark lateral stripe extending from the operculum to the base of the caudal fin. The back is marked by three rows of dark olive green patches which more or less coalesce to form a variable number of transverse bands bearing narrow, dull-yellow, interspaces between them. The rest of the body, including the fins, is of dirty yellow colour. There is a black oval blotch at the base of the caudal fin which is also provided with four V-shaped bands across its rays.

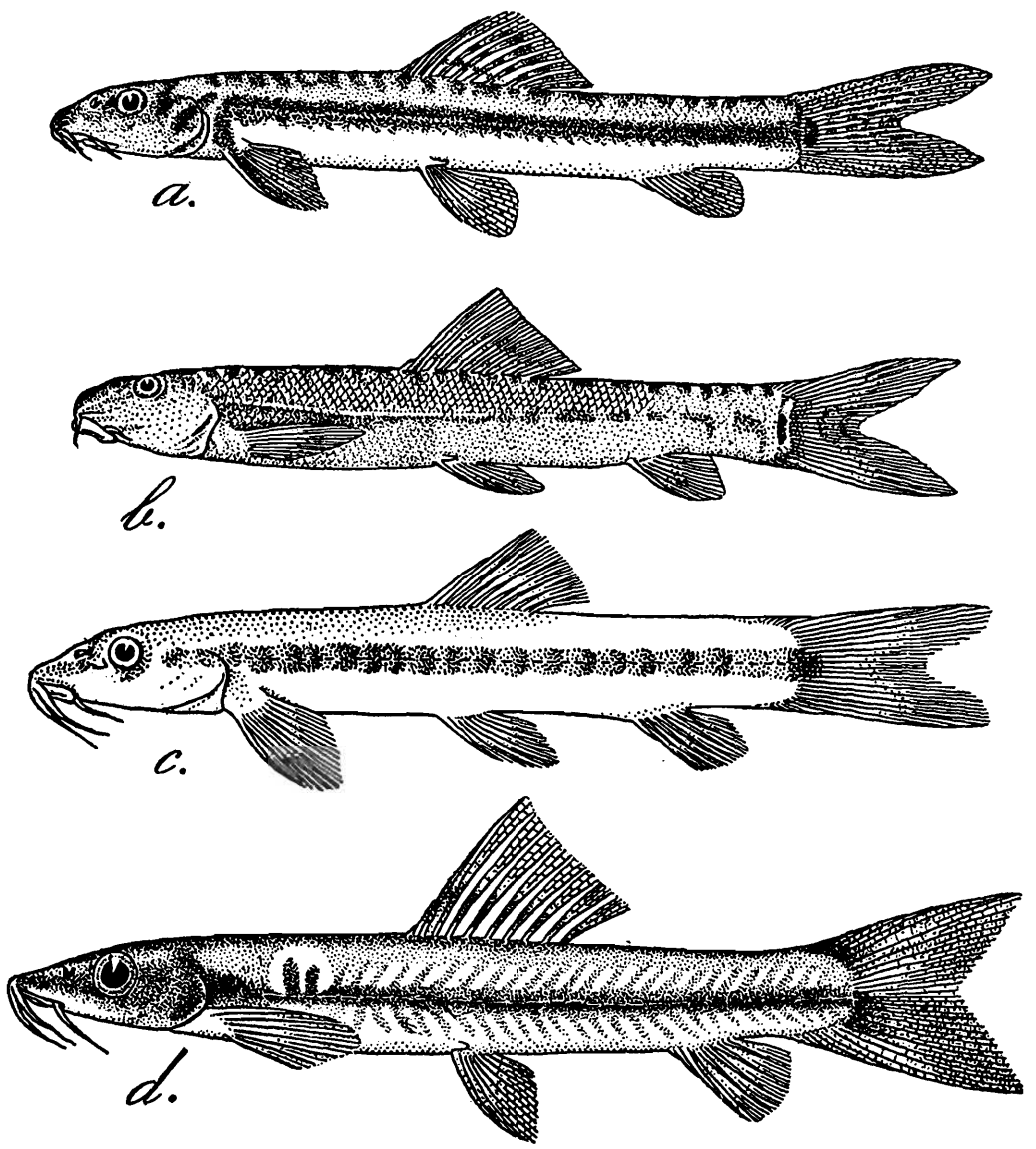
*Type-specimen.*—No. F242/2, Zoological Survey of India, Calcutta.

*Locality.*—Moola-Mootha river at Poona, Bombay Presidency

*General remarks.*—The general resemblance of this species to *N. anguilla* has already been noted. In the build of its body and colouration, its resemblance to *N. monilis*[1] from the Nilgiris on the one hand and to *N. binotatus*[2] from Thailand on the other may also be noted. The unmistakable distinguishing feature of these species lies in their body colouration, especially the nature of the lateral band in each. In

[1]Hora, S. L., *Rec. Ind. Mus.* XXII, pp. 19-21 (1921).
[2]Smith, M. H., *Bull U. S. Nat. Mus.* CLXXXVIII, pp. 328-29 (1948).

*N. auguilla* (Text-fig. 1*b*) there is a row of blackish spots or blotches along the mid-lateral line extending to the caudal fin, and not a broad black band as in the case of the other three species. In *N. monilis*, (Text-fig. 1*c*. as the name implies, the broad lateral band is moniliform, while it is continuous in the new species (Text-fig. 1*a*) as well as in *N. binotatus* (Text-fig. 1*d*). These changes in the nature of the lateral bands, exhi-




TEXT-FIG. 1.—A New Loach from Poona, Western Ghats, and certain allied species *a. Nemachilus poonaensis*, sp. nov. : × 1½ ; *b. N. anguilla* Annandale : × 2 ; *c. N. monilis* Hora : × 1½, and *d. N. binotatus* Smith.

bited by these otherwise closely allied forms, but occurring in different localities, are significant, and lead to the conclusion that possibly these forms may have evolved from a common ancestral stock, and that their present diagnostic features are the results of isolation in different watersheds. If further material shows that this surmise is correct, then the distribution of these allied species will add further evidence to the hypothesis of the continuity of the Satpura mountains with the hills of Assam and further east on the one hand and the Western Ghats on the other[1].

[1] Hora, S. L., *Rec. Ind. Mus.* XXXIX p. 225 (1927).

*Measurements in millimetres.*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Total length .. .. .. | 63·25 | 40·75 | 42·0 | 38·0 | 34·0 | 34·25 | 32·0 | 31·0 |
| Standard length .. .. | 50·0 | 32·5 | 33·25 | 31·0 | 2..0 | 28·0 | 26·0 | 24·5 |
| Leng.h of head .. .. .. | 10·5 | 7·5 | 7·25 | 6·75 | 6·0 | 6·25 | 6·05 | 6·0 |
| Height of head .. .. .. | 5·25 | 4·0 | 4·05 | 3·75 | 3·25 | 3·25 | 3·0 | 3·0 |
| Width of head .. .. .. | 6·5 | 4·75 | 5·0 | 4·75 | 4·0 | 4·0 | 3·75 | 3·75 |
| Diameter of eye .. .. .. | 3·0 | 2·25 | 2·75 | 2·25 | 2·0 | 2·0 | 1·75 | 1·5 |
| Length of snout .. .. .. | 4·5 | 3·0 | 3·25 | 3·0 | 2·75 | 2·75 | 2·5 | 2·5 |
| Inter-orbital distance .. .. | 3·0 | 2·25 | 2·25 | 2·25 | 2·0 | 2·0 | 2·0 | 2·0 |
| Depth of body .. .. .. | 6·0 | 4·75 | 4·75 | 4·25 | 3·75 | 3·75 | 3·5 | 3·05 |
| Width of body .. .. .. | 5·75 | 4·5 | 4·5 | 3·75 | 3·0 | 3·05 | 3·0 | 3·0 |
| Le gth of caudal peduncle .. | 6·5 | 5·0 | 5·0 | 4·0 | 3·6 | 3·75 | 3·5 | 2·75 |
| Least height of caudal peduncle | 5·0 | 3·25 | 3·5 | 3·0 | 2·75 | 2·75 | 2·5 | 2·5 |
| Length of dorsal fin .. .. | 8·25 | 6·5 | 6·5 | 6·25 | 5·25 | 6·0 | 5·05 | 5·0 |
| Length of pecotral fin .. .. | 8·0 | 6·0 | 6·25 | 5·5 | 5·0 | 5·25 | 5·0 | 5·0 |
| Length of pelvic fin .. | 7·5 | 5·5 | 5·5 | 5·0 | 4·5 | 5·0 | 4·5 | 4·5 |
| Length of anal fin .. .. | 7·5 | 5·0 | 4·75 | 4·25 | 4·0 | 4·0 | 3·75 | 4·0 |
| I ength of rostral barbel .. | 1·5 | 1·25 | 1·25 | 1·25 | 1·25 | 1·25 | 1·05 | 1·0 |
| Length of inner max. barbel .. | 2·75 | 1·5 | 1·75 | 2·0 | 2·0 | 2·0 | 1·75 | 1·5 |
| Length of outer max. barbel .. | 2·75 | 2·0 | 2·0 | 2·0 | 2·0 | 2·0 | 1·75 | 1.5 |

## XLIII. On a small Collection of Fish from east Punjab.

In January 1949, Mr. H. Khajuria of the Zoological Survey of India made a small collection of fishes from the districts of Hoshiarpur and Gurdaspur in East Punjab. It was mainly obtained from Naya Pataya and Purana Pataya, two small tributaries of the river Ravi, and also from other brooks which ultimately join either the Ravi or the Chanab. The fish were collected either by netting or, for the most part, by damming smaller channels in the rocky portions of the bed of a stream. The entire collection comprises 304 specimens belonging to the following 19 species :—

### Family Cyprinidae

### Subfamily *Rasborinae*

| | Specimens. |
|---|---|
| 1. *Barilius vagra* Ham. | 33 |
| 2. *Danio* (*Brachydanio*) *rerio* Ham. | 7 |
| 3. *Danio devario* Ham. | 10 |
| 4. *Esom usdanricus* (Ham.) | 36 |