

NOTES ON FISHES IN THE INDIAN MUSEUM.

XLVI.—ON A NEW FISH OF THE GENUS *Laubuca* FROM COCHIN.

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(From the Laboratories of the Zoological Survey of India, Calcutta.)

In July 1950, Dr. Hora received a single specimen of a little aquarium fish for identification from Mr. Sam J. Dadiburjor, Aquarist, Bombay. In a letter, that he wrote to Dr. Hora, he stated that the fish collected, was reported to be from Cochin and that he had succeeded in breeding it in an aquarium. As Dr. Hora was then on leave, he instructed me to examine the fish and send a report to Mr. Dadiburjor. The fish could be referred to the genus *Laubuca*, but the beautiful colour markings on the body appeared to be very characteristic, not so far found in any other member of the genus. A request was, therefore, made to Mr. Dadiburjor for a few more specimens of the fish. He very readily complied with the request and sent me five more specimens, which on examination were found to represent a new species. They are now described here under the name *Laubuca dadiburjori*, sp. nov., after Mr. Sam J. Dadiburjor who brought this interesting fish to the notice of science.

Mr. Dadiburjor has supplied the following observations on the breeding habits of the fish :—

“ As I had a perfect pair, I set myself the task of breeding them, though their breeding habits were unknown to me. The pair was conditioned on live food and after a few days the female was very heavy with spawn as was evident from the full appearance of her body.

I removed the pair to a small aquarium of about four gals. capacity, planted the tank with “Vallisneria”, a small bunch of “Cabomba” and one large leaved plant, “Aponogeton undulatum”. The tank contained fresh-water. The next morning the male began chasing the female, but she showed no sign of spawning and the chasing continued till about 3 P.M. when the female got exhausted and appeared to swim with jerky movements. I became interested and watched them closely.

After a short while I found to my great surprise that the female approached jerkily one of the leaves of the ‘Aponogeton’ and started gliding over the leaf contacting her vent with the upper surface of the leaf while the male was all the time hovering over her. Then suddenly he came close to her side and grasped her in the crescent he made of his body. During this momentary embrace about 20 crystal-clear eggs were deposited on the leaf. The female then swam away and the same process was repeated on a thin blade of ‘Vallisneria’; in this case a few eggs dropped to the bottom of the tank as the leaf was not quite broad. In all four such batches were laid, and after the fourth batch the female started picking up the eggs. She devoured nearly all the eggs from the fourth batch. In order to save the remaining eggs, I quickly removed the parents from the breeding tank and impatiently awaited the result. The eggs hatched in about 24 hrs. at an average temperature of 80°F. Not a single egg was infertile. The young were extremely small and very transparent. They were seen hanging from the plants and on the sides of the aquarium. After three days the young began to swim freely but remained close to the surface. I fed them first on very fine infusoria, and when they were about two weeks old I started feeding them on the large sized infusorians. The fry were consuming a large quantity of food as was evident from their protruding bellies and were progressing satisfactorily.

I had taken two more spawnings from the same pair and they spawned in like manner in aquariums of the same capacity. The interval between the two spawnings was about 5 days. From this I think they are frequent breeders. One peculiarity I noticed was that this fish always spawned towards evening and not in the morning hours as do many other species."

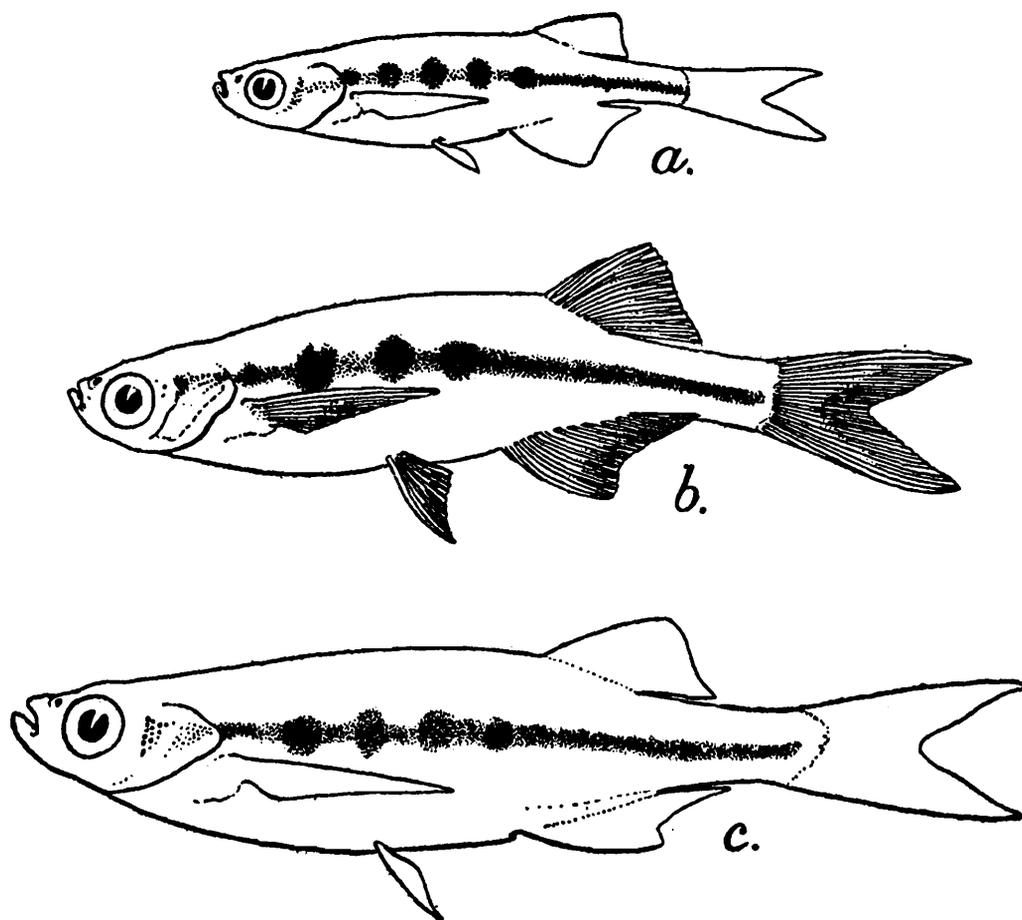
***Laubuca dadidurjori*, sp. nov.**

D. 2/7., A. 3/11., P. 1/7., V. 1/5., C. 19 ; L. 1.30-34 ; L. tr. 7.

In *Laubuca dadidurjori* the dorsal profile rises gently from the tip of the snout to the origin of the dorsal fin beyond which it slopes down to the base of caudal fin. The ventral profile is bow-shaped. The body is greatly compressed from side to side with a sharply cutting abdominal edge. The length of the head is somewhat shorter in the male than in the female ; its length is contained from 3.4 to 4 times in the standard length. The greatest width of the head is contained from 1.7 to 2 times and its height at occiput 1.5 times in its length. The eyes are large dorso-lateral in position and visible from the ventral surface. The diameter of the eye is greater than the length of the snout and considerably smaller than the inter-orbital width ; it is contained from 3 to 3.5 times in the length of the head. The eyes are situated entirely in the anterior half of the head. The inter-orbital space is almost flat or slightly convex. The mouth is directed obliquely upwards. Barbels are absent. The depth of the body is somewhat shorter than the length of the head in the female and is almost equal in the male ; it is contained 4.1 to 4.4 times in the standard length. The body is covered with firmly adherent scales ; those on the dorsal surface are fairly conspicuous, but those on the lower half of the fish are hardly distinguishable. There are 30 to 34 scales in a longitudinal series and 7 rows in a transverse series. There are 16 to 18 pre-dorsal scales. The lateral line pierces only 8 anterior scales and is totally absent in the posterior region.

The dorsal fin commences in the posterior third of the body without the caudal and its origin is opposite to the 4th branched ray of the anal fin ; it contains 2 spines and 7 branched rays. The pectoral fin is long and pointed ; it is much longer than the length of the head and extends beyond the base of the pelvic fin. The pelvic fin is considerably shorter ; it does not extend to the anal opening which is situated just anterior to the anal fin. The base of the anal fin is considerably longer than that of the dorsal ; it contains 3 spines and 11 branched rays. The depth

of the caudal peduncle is about 2.3 times in its length. The caudal fin is longer than the head ; it is deeply furcate with lobes of almost equal length.



TEXT-FIG. 1.—Lateral view of three specimens of *Laubuca dadiburjori* sp. nov. showing variations in the markings on the body.

a. A juvenile specimen of 16 mm. in length without caudal $\times 4$; b. A mature male specimen of 24.5 mm. in length without caudal $\times 4$; c. A mature female specimen of 27 mm. in length without caudal $\times 4$.

In spirit specimens there is a lateral black band along the middle of the body extending from the angle of the opercles to the base of the caudal with three distinct black dots on it in the male specimens and four in the female. In younger specimens the number of black dots on the lateral band vary from four to six. There is also a black band along the dorsum from the occiput to the base of the dorsal fin. Fins are without any colour markings.

Mr. Dadiburjor observed that in life the lateral band is steel blue in colour and that there is, in addition, a golden stripe above the blue band.

Types.—F. $\frac{541}{2}$, Male, *Holotype*; F. $\frac{542}{2}$, One Female and four

Juvenile *Paratypes*; Zoological Survey of India, *Calcutta*.

Locality.—Cochin (S. India).

Relationships.—In general facies and scale-count, *Laubuca dadiburjori* is remarkably related to *Laubuca maassi* found in Sumatra. *Laubuca dadiburjori* can, however, be easily distinguished from the South-East Asian form by the presence of the characteristic black dots on the lateral band and the incomplete lateral line. The resemblances exhibited by these two forms occurring in such widely separated areas as Sumatra and Cochin are very significant and lead to the conclusion that possibly these two species may have evolved from a common ancestor and their present diagnostic features are most probably results of isolation in widely separated localities.

Measurements in millimetres.

Total length without caudal	..	27.0	24.50	16.50	16.0	16.0	13.5
Depth of the body	6.50	5.5	3.70	3.70	3.65	3.2
Length of head	7.0	6.0	5.0	5.0	4.50	4.0
Width of head	4.0	3.5	2.50	2.50	2.50	2.0
Height of head at occiput	4.50	4.0	3.0	3.0	3.0	2.50
Length of snout	2.0	1.30	1.20	1.20	1.20	1.0
Diameter of eye	2.10	1.80	1.50	1.50	1.50	1.20
Interorbital width	3.0	3.0	2.50	2.50	2.30	2.0
Longest ray of dorsal	5.0	4.50	3.0	3.0	3.0	2.20
Length of pectoral	8.50	7.0	5.0	5.0	5.0	4.50
Length of ventral	3.0	3.0	2.0	2.0	2.0	1.75
Length of anal	5.50	4.50	3.0	3.0	2.50	2.0
Length of caudal peduncle	5.50	4.70	3.0	3.0	3.10	2.5
Least height of caudal peduncle		2.50	2.20	1.20	1.20	1.25	1.2