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ON THREE ABNORMAL SPECIMENS OF *MYSTUS CAVASIUS* (HAMILTON) (FAMILY : BAGRIDAE)

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ABSTRACT

Three abnormal specimens of *Mystus cavasius* Hamilton (Order Siluriformes : Bagridae) were found during the course of a revisionary study of the fishes of the genus *Mystus* Scopoli. The right maxillary barbel in two specimens are found to be short in length, and dissimilar in girth than its counterpart on the left side. The maxillary bone attachment of the barbel is also very prominent. In the third example the pelvic fin on the left side is rudimentary and not developed. The caudal fin in this specimen is also abnormal with the lobes unequal. These teratological abnormalities are ascribed to disproportionate growth and not due to any injury.

During the course of a world revision of the catfishes of the genus *Mystus* Scopoli three examples of *Mystus cavasius* (Hamilton) were seen to be abnormal with some teratological peculiarities. These are discussed in this paper.

Abnormal Specimens

Lot A :

Regd. no. Cat 525, three examples collected from Tenasserim by Major Berdmore.

One example measuring 134·2 mm in standard length has the right maxillary barbel dissimilar in length, girth and point of origin as compared to the maxillary barbel on its left side.

The left maxillary barbel measures 119·1 mm in length from its base to the tip, while the right maxillary barbel measures only 61·4 mm in length. The other two specimens in the lot are normal, measuring 113·9 mm and 90·1 mm in standard length and have the maxillary barbels 82·8 mm and 78·1 mm or near about in length on both sides respectively. The right maxillary barbel is of uniform normal thickness upto a distance of 5·9 mm from its base. Thereafter it suddenly thins out in the form of a filament.

The maxillary barbel on the right side which is stunted is 57·7 mm shorter in length and is much thinner in diameter than its counterpart on the left side. The fish is normal in all other external features.

The right maxillary barbel does not show any scar in its length nor at its place of insertion, indicating that the abnormality is not due to any injury.

Another notable feature observed in this example is that the maxillary bone support

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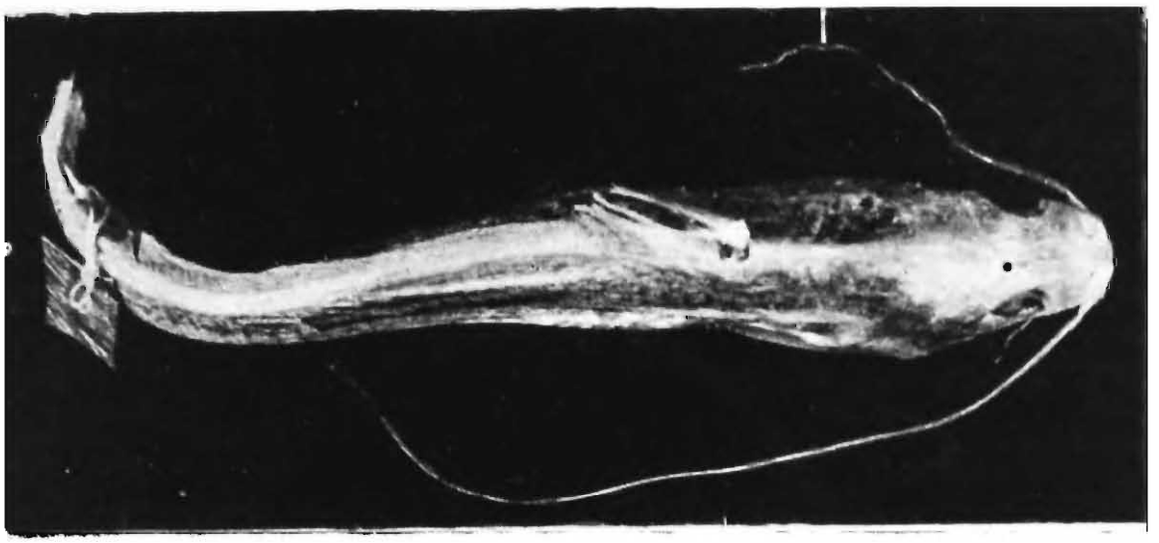

Fig 1. Dorsal view of specimen No. Cat 525 (SL 134.2 mm) showing the stunted maxillary barbel.

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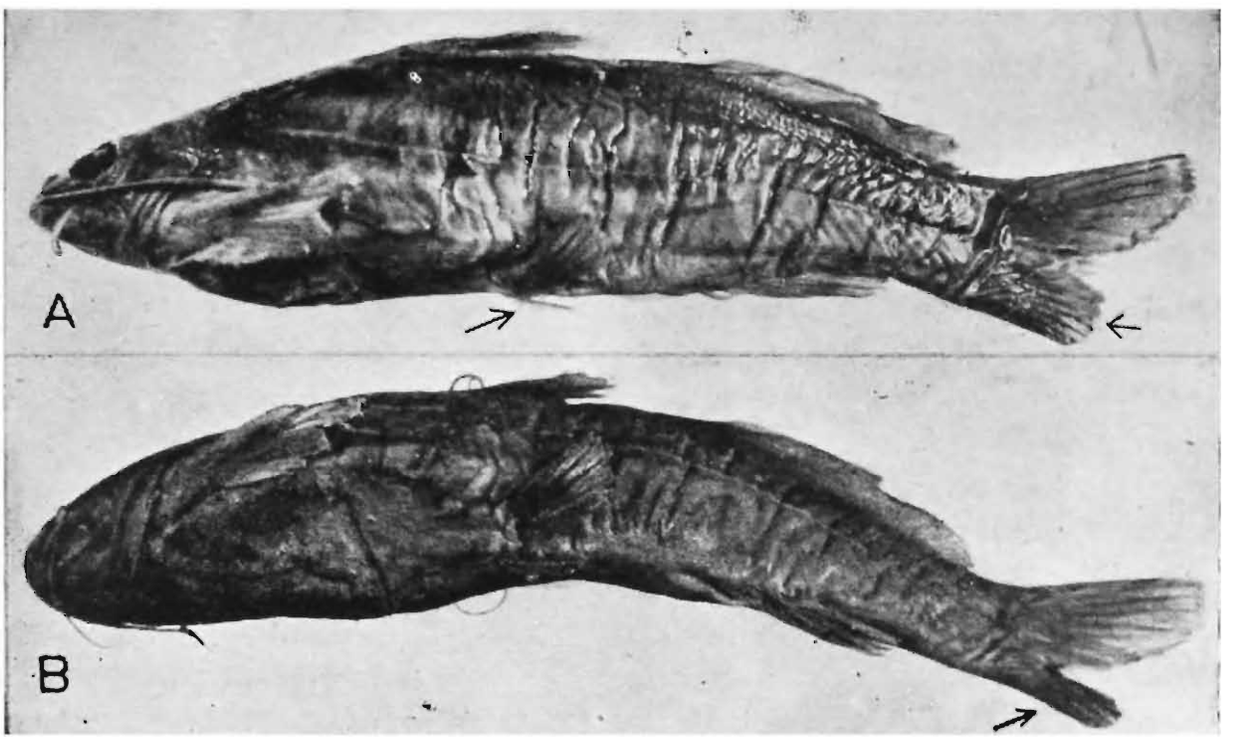

Fig. 2. A. Lateral view of specimen No. F. 12139/1, showing the rudimentary pelvic fin (see arrow).
B. Ventro-lateral view of the same specimen showing the abnormal lower lobe of the caudal fin.

for the barbel is well defined in the form of a hard, rectangular bony plate, measuring 5·9 mm in length and 0·9 mm in width on the right side.

Lot B :

Regd. no. F. 784, one example from Calcutta, purchased from Dr. F. Day.

This example measures 80.7 mm in standard length. In this specimen, the left maxillary barbel measures 72·1 mm in length from its base to the tip, while the right maxillary barbel measures only 31·2 mm in length. The right maxillary barbel is much thinner in diameter than the left maxillary barbel. Barring this, the fish is normal in its external features and there is no sign of external injury.

Lot C :

Regd. no. F. 12139/1, five examples collected from Poona by Mr. C. V Kulkarni, Dept. of Fisheries, Bombay state.

One example measuring 105·1 mm in standard length is found to have the pelvic fin on the left side rudimentary and not developed.

The distance between the pectoral and the rudimentary pelvic fin of the specimen under report is 29·1 mm. The right pelvic fin of the fish is quite normal, having one simple and five branched rays while the left pelvic fin has only two branched rays.

The caudal fin in this specimen is also abnormal in the sense that the two lobes are not uniform. The lower lobe is stunted in growth and considerably shorter, measuring only 15·2 mm while the upper lobe measures 24.6 mm. Generally in *Mystus cavasius* (Hamilton) the upper lobe has seven and lower lobe eight branched rays. However in this specimen, the upper lobe has five clearly branched rays, the sixth ray is rudimentary, though the branching is discernible. In the lower lobe six rays are clearly branched, the seventh and the eighth rays appear to have become completely fused with that of the sixth ray of the upper lobe.

This specimen as compared to the normal specimens of *Mystus cavasius* (Hamilton) is somewhat brownish in colour, the adipose dorsal fin commences with a small interspace from the rayed dorsal fin, the head is narrower and the body with faint longitudinal stripes. In most specimens of *Mystus cavasius* (Hamilton), that I have examined the colour is uniformly pale, the adipose fin commences without any interspace from the rayed dorsal fin, the head is broader and the body plain without any stripes.

Discussion

In the Teleosts, which are bilaterally symmetrical, the occurrence of asymetrically paired organs is very rare. Dissimilarity in the growth of paired maxillary barbels is generally exceptional.

Menon (1973) recorded the absence of pelvic fins on both sides in *Tachysurus platystomus* (Day) (= *Arius platystomus*) (Ariidae). Sundarsingh (1975) reported the presence of stunted pectoral spine in *Mystus montanus* (Jerdon) (Bagridae). Absence of pectoral and pelvic fins in two abnormal specimens of *Silonia silondia* (Hamilton) has been reported by Singh (1975) (Schilbeidae). Rahman and Raghavan (1977) reported on a tailless example of the "*magur*" *Clarias*

batrachus (Linnaeus) (Clariidae). Chandrasekaran (1979) reported the presence of forked left maxillary barbel in *Tachysurus maculatus* (Thunberg) = (*Arius maculatus*) and the absence of right pelvic fin in *Osteogeneiosus militaris* (Linnaeus) which belong to Ariidae.

It appears that abnormalities of the maxillary barbel on the right side alone in both the examples and the prominent maxillary bone support for the barbel are not due to any injury but may be due to disproportionate growth.

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