by Chopard[3] on the basis of a single male specimen, collected by N. Annandale from Simla. As the female of this species is so far unknown, it is described for the first time.

Myrmecophila albicincta var. *concolor* Chopard.

Female : (Fig. 1). Total length 3·0 mm; body chocolate-brown; cerci and hind femora darker. Head shape as shown in the figure, size 0·47 × 0·56 mm; eyes minute, black; the antennae cylindrical, filiform, shorter than the length of the body; basal segment wider than long, second longer and the remaining segments smaller, but apically indistinct. Thorax wider than long; pronotum largest, at least twice longer than mesonotum which bears a transverse whitish band; metanotum longer than mesonotum but smaller than the pronotum. Abdomen eleven segmented; anterior terga larger than the posterior. Genitalia represented by two small spoon-shaped projections, covered by a transparent cuticular sheath (Fig. 2). Each projection is gutter-shaped, with lateral margins upturned and irregular on the left side. Cerci vertical, many segmented, covered with dense pubescence; apically pointed. Legs, anterior and middle similar but hind legs larger and saltatorial; hind femur markedly swollen; tibia flattened, bearing a row of seven spines; metatarsus a little thicker, with only three spines, as shown in Fig. 1.

Males from our collection are similar to the specimen described by Chopard[3] from Simla. Total length 2·6 mm. General colour similar to that of the female but 10th abdominal tergite strongly notched anteriorly and divided into two similar hemitergites by a longitudinal suture (Fig. 3).

Material examined : One female type on slide, 15 *paratypes* and 7 nymphal stages in alcohol, collected on 10–8–1977, by B. L. Bradoo, from Chandigarh. 5 females and 25 nymphs were collected from Abohar, in association with *M. indicum*, on 18–8–1972. All the type specimens will be deposited in the Zoological Survey of India, Calcutta.

We record our thanks to Dr. B. Bolton, British Museum, Natural History, London, for the identifications.

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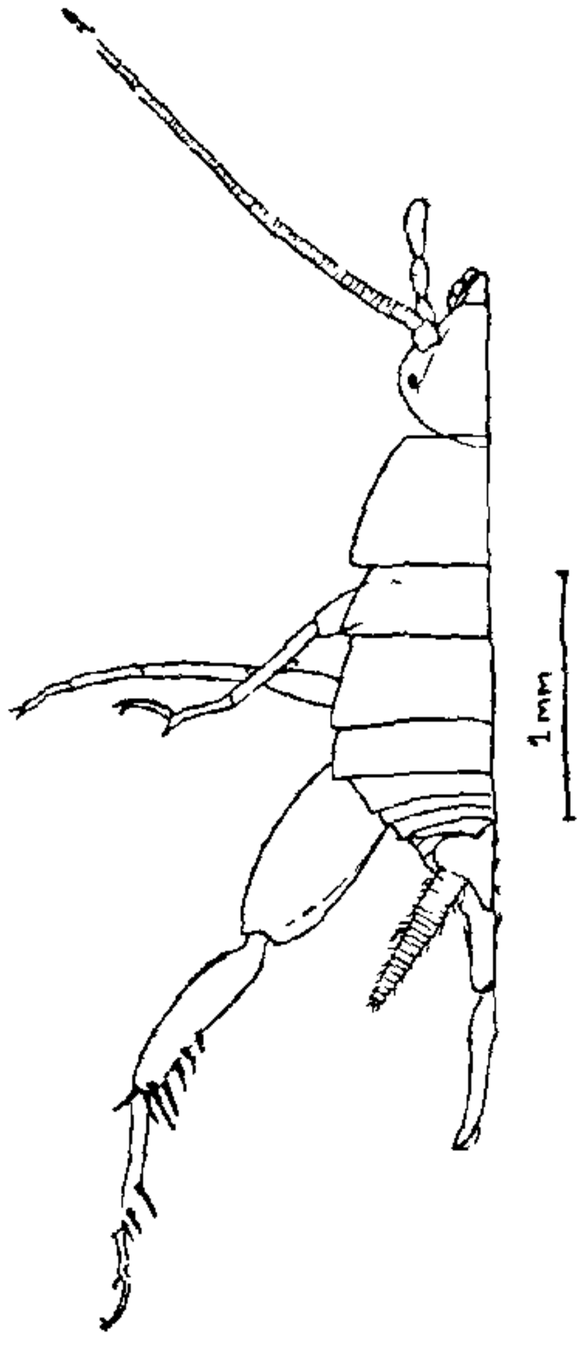

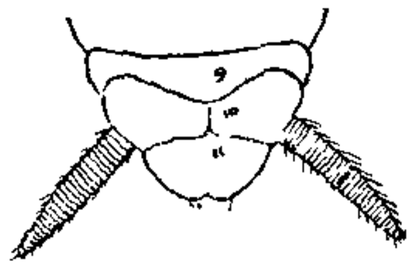

FIG. 3

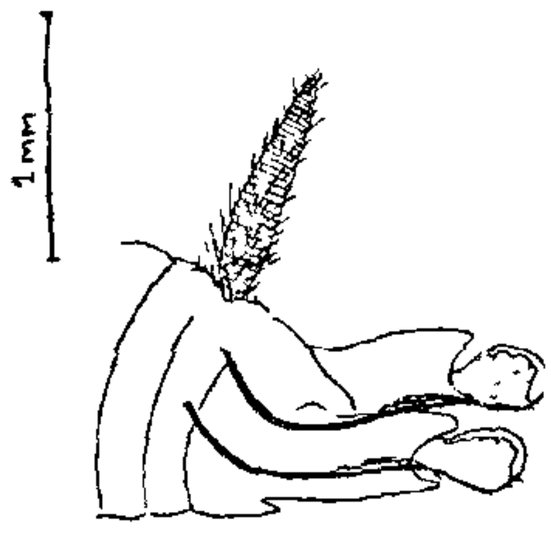

Fig. 1 Fig. 2

FIGS. 1–3

DISTRIBUTION OF GLYCOGEN IN THE NORMAL AND REGENERATED BARBEL OF THE FISH *HETEROPNEUSTES FOSSILIS* (BLOCH)

THE amount of glycogen necessary for actual tissue building in the repair phase is probably small, and some workers have failed to correlate glycogen-content with blastema formation or with proliferation. Regenerating blastema shows less amount of glycogen. It appears that the regenerating blastema does not depend upon a glycogen reservoir as a source of energy[1,2], and the energy needed for metabolic activities in blastema is provided through anaerobic respiration[2].

Glycogen distribution in regenerating systems has been investigated in various animals[3–7]. The present paper deals with the distribution of glycogen in the normal and regenerate barbels and regeneration blastema of fish *Heteropneustes Fossilis* (Bloch).

Fifteen fish were procured locally and kept in laboratory aquaria. Normal barbels from 5 fishes were cut and fixed in Bouin's fluid. The barbels of the remaining 10 fishes were amputed leaving half the length of the barbels. Amputated barbels of 5 fishes were removed (After 4 days) in which blastema formation had taken place. In remaining 5 fishes the amputated barbels were allowed to regenerate, and the regenerated barbels (fully formed after 30 days of

amputation) were removed and fixed. The embedded material was then sectioned at 6 μ and stained with the Periodic acid–Schiff procedure for polysaccharides. Similar sections were used for salivary-amylase and malt-diastase tests to confirm the presence of glycogen. The cytoplasm of epidermal cells of the normal barbel shows strong globular PAS positive reaction (Fig. 1). The basement membrane, as well as connective tissue-fibres show less intense PAS response while the taste-buds, blood vessel as well as nerve-fibres are moderately stained. The cartilage cells demonstrate intense PAS positive response as compared to the surrounding perichonodrium (Fig. 2).

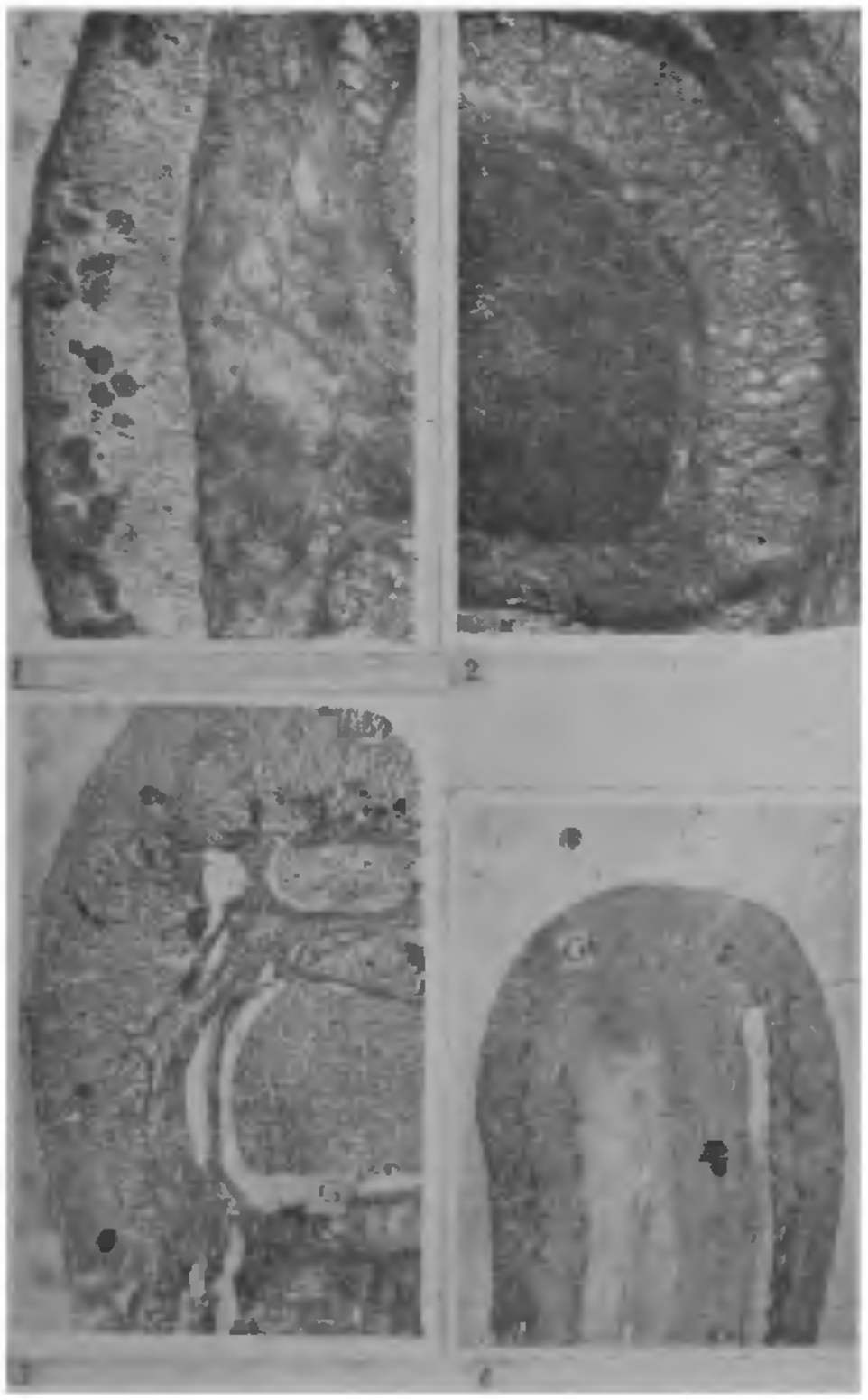

FIG. 1–4. Fig. 1. A magnified part of T.S. of normal barber showing glycogen (G) in epidermis (× 280). Fig. 2. A magnified part of T.S. of normal barbel showing glycogen in dermis (× 280). Fig. 3. A magnified part of T S. of regenerated barbel showing glycogen (× 150). Fig. 4. L.S. of barbel showing glycogen in blastema (× 100)

Epidermis of the regenerated barbel is PAS positive. Taste-buds and basement membrane are less intensely stained as compared to those of the normal barbel. Connective tissue of the dermis shows moderate response. The blood vessel and nerve fibres show moderate PAS response, while the cartillage and perichondrium are deeply responsive (Fig. 3).

There is very little reduction in the glycogen of the apical epithelium, although globules of glycogen are visible in the epidermis. Blastema tissue (mainly the extended perichondrium) is uniformly stained with PAS showing very little quantity of glycogen. Regrowing nerve fibres also show moderate reactivity with PAS stain (Fig. 4).

The presence of glycogen in all the cases has been confirmed by incubating the sections with salivary-amylase and malt-diastase.

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TAXONOMIC VALUE OF TORI LONGITUDINALES AND VALVULA CEREBELLI IN *CHANNA PUNCTATUS* (BLOCH) AND *CHANNA MARULIUS* (HAM.)

KUHLENBECK[2] observed, "the configuration of the Ganoid and Teleostean mesencephalon displays more (Taxonomically related) variations than that of Elasmobranchs. Particularly in Teleosts, wide differences *qua* external morphology and in details of internal structural arrangements are manifested."

Tandon[3] showed that the configurations of the tori longitudinales and valvula cerebelli, at the level where the tractus mesencephalo-cerebellaris posterior establishes a full connection with the granular valvula, are of some taxonomic importance. According to Ariens Kappers *et al.*[1], this tract arises in the nucleus lateralis valvulae.