FAUNA OF THE CHILKA LAKE.

ON A LARVAL CESTODE FROM THE UMBRELLA OF A JELLY-FISH.

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(With 1 text-figure).

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Dr. Annandale, Director of the Zoological Survey of India, has been kind enough to place at my disposal a number of parasites obtained from the umbrella of a Rhizostomous medusa (*Acromitus rabanchatu*) collected from near Barkuda Island in Lake Chilka on August 21st, 1920.

I had previously seen these parasites during inspections made of the fish fauna in the Chilka Lake, but no opportunity occurred of examining them carefully. The material was contained in three phials, preserved respectively in corrosive acetic, formalin and absolute alcohol. All the material was in excellent condition, that preserved in corrosive acetic being by far the best, and that preserved in absolute alcohol the least satisfactory of the three.

Technique.—Seven specimens were stained for two days in very dilute acetic-alum-carmine. Four of these were mounted whole, two were serially sectioned transversely, and one serially sectioned longitudinally.

Two unstained specimens were sectioned as above and afterwards stained with haematoxylin and eosin. Two unstained specimens were mounted whole.

Structural Details.—The larvae are cylindrical, with broad rounded extremities, and they measure from 2 mm. to 2.5 mm. long; the diameter is 340μ (figs. *a* and *b*). They lie in cavities in the host, but are not surrounded by a definite adventitious cyst, although there is a slightly marked condensation of host-tissue round them.

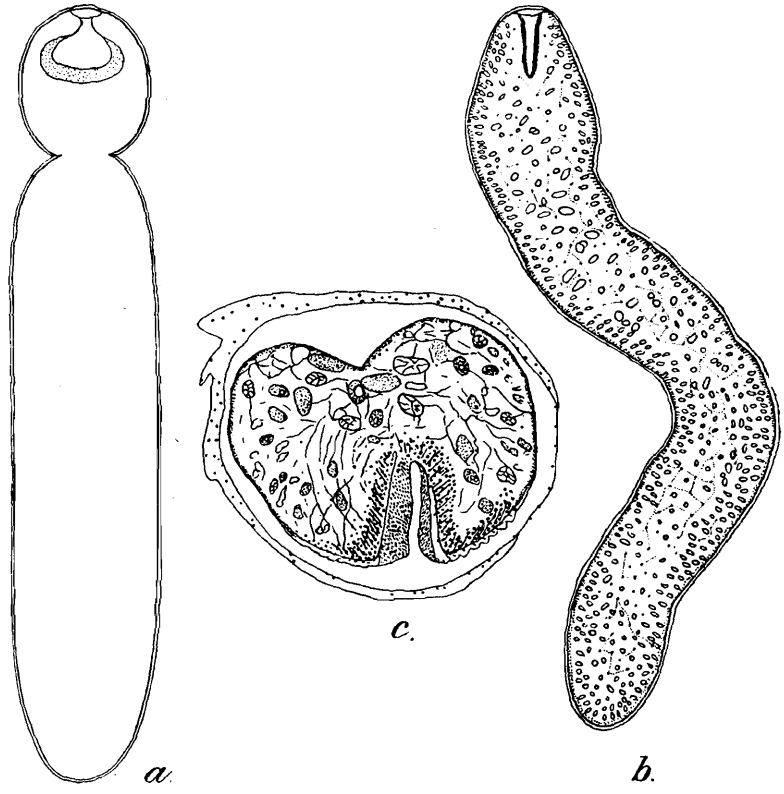
Both fresh and preserved specimens have a milky-white colour and can be seen easily with the naked eye, especially in the fresh condition. The larva is solid and is covered with a definite cuticle. There is a very definite sub-cuticular tissue made up of a series of small spindle-shaped cells, closely packed together, the nuclei of which stain deeply (fig. *c*). Internally the larva consists of a stroma framework enclosing a few large cells which in cross section measure about 38μ by 25μ. Their antero-posterior length was not determined.

These cells are at first granular, but, later on, calcareous corpuscles develop within them and gradually fill the cell. Eventually the calcareous corpuscles (which are very large and numerous) become free, and the cells which secreted them are no longer visible, being replaced by others apparently from the sub-cuticular layer.

The anterior extremity is marked by a deep pit, lined with extremely small spinules. The base of this pit is thickened, the thickened area consisting of very numerous small elongated cells with well defined nuclei. As in other Cestoda the head develops from the base of this pit. In our specimens development had not proceeded beyond the formation of this pit and no trace of the head was to be seen.

The differences noted in the specimens were confined to the size and shape of the pit. In one or two specimens a constriction appeared immediately behind the *anlage* of the head, separating the worm into two parts (fig. *a*).

Remarks.—There can be no doubt that the parasites are Plerocercoid larvae. It is impossible to identify or classify them at this stage of their development.



TEXT-FIGURE. 1.—Plerocercoid larva from *Acromitus rabanchatu*.
a. Outline of a larva showing construction behind the head × 69.
b. Entire worm in optical section × 69.
c. Oblique section through anterior region of larva × 143.

As far as I am aware, no Cestode larvae have been recorded previously from animals so low in the zoological scale as Medusae.

It would appear probable that the chances of these larvae becoming adult worms are practically nil, for I know of no animal which feeds on jelly-fish. We may thus regard their occurrence in Medusae as representing a cul-de-sac in their life-history.