TREMATODES FROM INDIAN MARINE FISHES.

PART VI.[1] MONOGENETIC PARASITES OF THE FAMILY MAZOCRAEIDAE (DICLIDOPHOROIDEA): DESCRIPTION OF A NEW SPECIES OF THE GENUS *Mazocraes* HERMANN, 1782.

By B. S. CHAUHAN, *M.Sc., Ph.D., F.Z.S., F.Z.S.I., Offg. Director, Zoological Survey of India, Calcutta.*

So far there is no record of any parasite of this family from the Indian region except that of *Mazocraeoides prashadi* by the author. Five specimens of the material dealt with in this paper were obtained by Shri G. Ramakrishna and Dr. Miss Chandy from the gills of a clupeid fish, *Dussumieria* sp., at Puri, in February 1948. On a careful examination, these specimens were found to belong to the genus *Mazocraes* (Fam. Mazocraeidae) and as they do not seem to agree with any of the known species of this genus, they are described as *M. orientalis*, sp. nov.

Family MAZOCRAEIDAE Price, 1936.

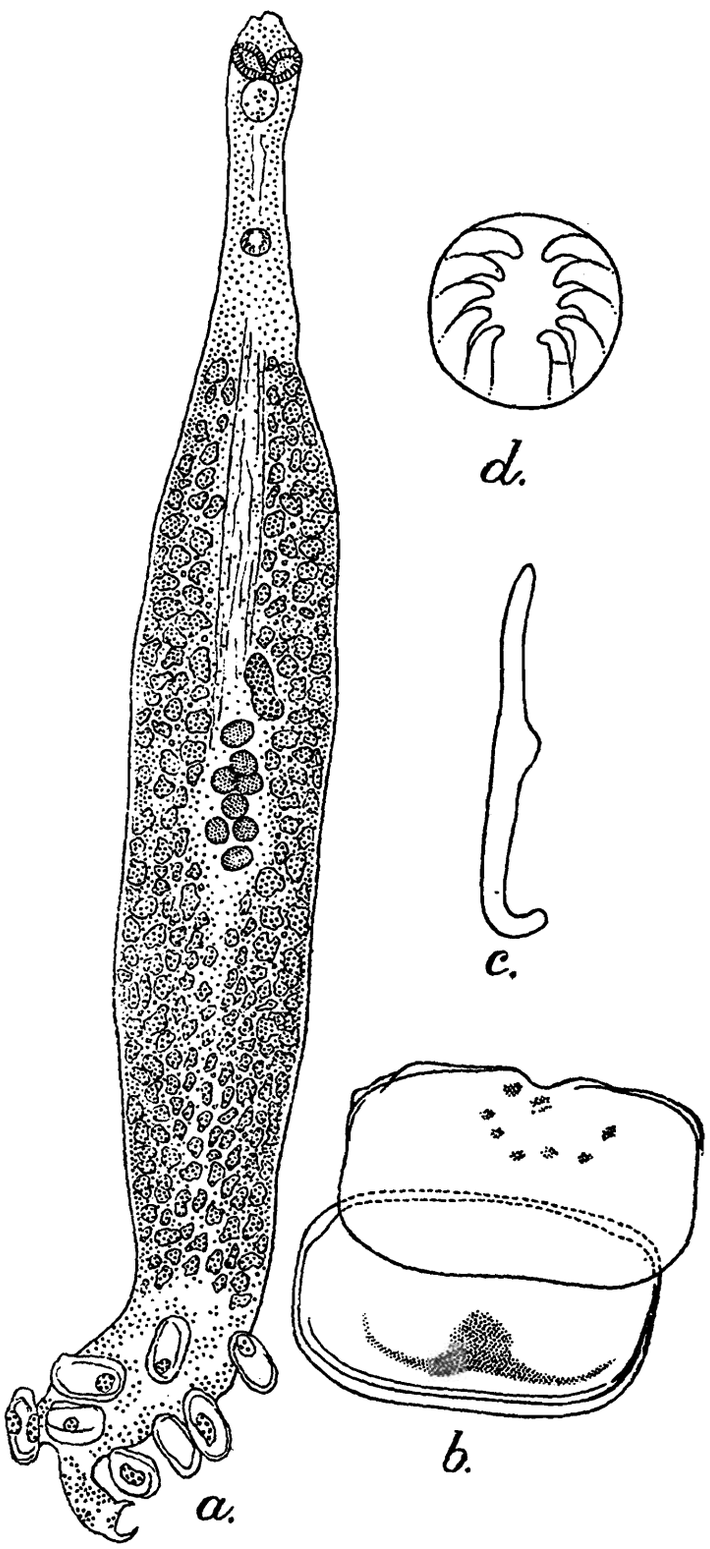
Genus **Mazocraes** Hermann, 1782.

Mazocraes orientalis, sp. nov.

Description.—Shape of body (Text-fig. 1*a*) in preserved specimens is flat, narrow and elongate, slightly tapering towards both ends. The type specimen measures 1·15 mm. in length and 0·15 mm. in maximum width which is in the region of posterior third of body. In other specimens the length varies from 0·7 mm. to 0·8 mm., breadth being nearly 0·15 mm. in all cases. Mouth is terminal, at the anterior end of body. Anterior suckers are paired, oval in shape and obliquely placed. They are lined by refractile, prismatic muscle fibres. Pharynx is round, comparatively large in size and situated just behind the anterior suckers. Prepharynx is absent. Oesophagus is thin and elongate. Intestinal caecae extend nearly up to the posterior end of the body. Posterior haptor is a somewhat triangular structure, slightly broader than the posterior end of body, but continuous with it. It carries a spatulate, terminal lappet bearing at posterior end, a pair of unequal anchors (Text-fig. 1*c*). The anchors have bifid roots and recurved tips. The haptor bears four pairs of oval clamps; symmetrically arranged in lateral rows of four on each side, on short but stout and retractile pedicels, which decrease slightly in length backwards. Clamps are of almost equal size and have pattern of framework as illustrated (Text-fig. 1*b*). Testes consist of eight oval follicles, irregularly arranged medially, in

[1] For Parts I-V see Chauhan, B. S., *Proc. Ind. Acad. Sci.* XXI, pp. 129-159 (1945); *Ibid.* XVII, pp. 97-117 (1943); *Ibid.* XVII, pp. 133-137 (1943); *Ibid.* XXV, pp. 160-173 (1945); *Ind. Journ. Helminthol.* I, pp. 63-66 (1950).

the middle third of the body, with a tendency to be in a double row. Ovary is elongate, oval, anterior to the testes and situated slightly towards the left side of the body. Vitellaria extend from the region near



TEXT-FIG. 1.—*Mazocraes orientalis*, sp. nov.

a. Entire specimen, ventral view : ×125 ; *b*. Chitinous framework of the clamp on the posterior haptor : ×693 ; *c*. One of the hooks on the terminal lappet of posterior haptor : ×693 ; *d*. Genital atrium, showing chitinous spines : ×700.

about the bifurcation of the oesophagus to almost upto the haptor. They consist of irregularly shaped but densely placed follicles. Irregularly scattered black pigment spots, particularly visible in the anterior region

and region of posterior haptor and the lappet, are observed in the body. Genital pore is oval, situated in the median line, nearly midway between the pharynx and oesophageal bifurcation. It is armed with five pairs of hooks with curved tips, arranged in two discontinuous rows (Tex-fig. 1*d*). Eggs are absent.

Discussion.—The genus *Mazocraes* Hermann contains the following valid species : *M. alosae* Hermann, 1782 (Genotype) ; *M. harengi* (van Beneden & Hesse, 1863) Nicoll, 1915 ; *M. pilchardi* (van Beneden & Hesse, 1863) Sproston, 1946. There are two *species inquirendae, viz., M. heterocotyle* (v. Ben. 1870) Sproston, 1946 and *M. cepedianum* Kimpel, 1938.

This new species is broadly distinguished from the other known species of the genus, by its pattern of framework of the clamps on haptor, shape and arrangement of genital hooks, number of terminal hooks on the posterior lappet of the haptor and structure of the lappet of haptor.