

RESEARCH NOTE.....

The flame cell pattern of the Metacercariae of *Heterophyes heterophyes nocens* ONJI et NISHIO, 1916 and *Stellantchasmus falcatus* ONJI et NISHIO, 1916 (Heterophyidae; Trematoda)

The excretory system of the metacercariae of *Heterophyes heterophyes nocens* and *Stellantchasmus falcatus* had been described by ONJI (1915) and ONJI and NISHIO (1915, 1916a, b, c). However, their descriptions are not yet available to elucidate the flame cell pattern of the flukes.

The purpose of this work is to describe the excretory system, with reference to the flame cell pattern of these metacercariae.

The metacercariae were obtained from the muscle of *Mugil cephalus* (L.) and *Tridentiger obscurus* (TEMMINCK et SCHLEGEL) collected from Yamaguchi Prefecture, Japan. The observation of the excretory system was made on the living specimen.

Heterophyes heterophyes nocens ONJI et NISHIO, 1916 (Fig. 1)

The excretory vesicle is large, V-form in shape and contains numerous excretory corpuscles, spherical, 4.7-6.3 μ in diameter.

The main excretory canal starts from the upper lateral corner of the excretory vesicle and runs forwards in a winding course to about the middle line of the body. At approximately the level of the upper margin of the acetabulum it divides into an anterior and a posterior collecting tube.

The former proceeds still further upwards and then divides into three branches, each of which has three flame cells with their respective excretory capillaries. The posterior collecting tube proceeds downwards and then divides into three branches. Each of these three branches

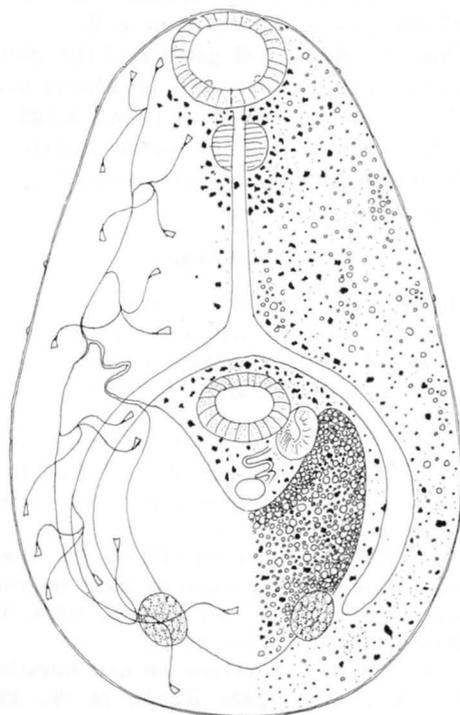


Fig. 1 *Heterophyes h. nocens*

has three flame cells with their respective excretory capillaries.

Thus the flame cell pattern is represented by the following formula:

$$2 \times [(3+3+3) + (3+3+3)] = 36.$$

Stellantchasmus falcatus ONJI et NISHIO, 1916 (Fig. 2)

The excretory vesicle is V-formed, lying median at posterior end of the body. Excretory granules in it are variable in size (3.2-34.5 μ in diameter).

The main excretory canal starts from the upper lateral corner of the excretory vesicle and proceeds with several coils. It divides into an anterior and a posterior collecting tube at a level between the intestinal bifurcation and the upper margin of the genital sucker. Both the anterior and posterior collecting tubes divide into three branches. Each branch has three capillaries, each with a flame cell.

Thus the flame cell pattern of the metacercaria of *S. falcatus* can be represented as $2 \times [(3+3+3) + (3+3+3)] = 36$, which is just the same as that of metacercariae of *Heterophyes nocens* and *Metagonimus yokogawai* (KOMIYA, 1966).

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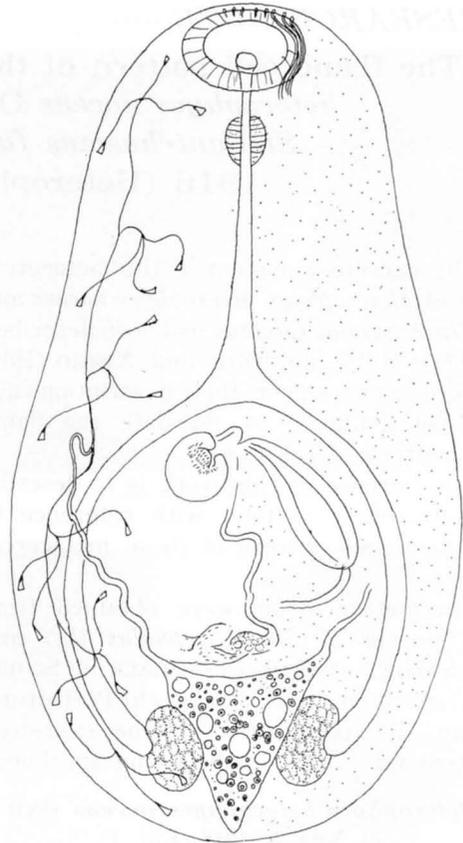


Fig. 2 *Stellantchasmus falcatus*