

**On a new species of *Haplocaecum* Simha, 1958,
(Trematoda, Digenea) from a water snake
*Tropidonotus piscator***

by

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During September, October and November, 1964, the author dissected a large number of water snakes *Tropidonotus piscator*. Along with the infection of *Encylometra* sp., eighteen worms belonging to the genus *Haplocaecum* Simha, 1958 were collected. They all contained a single intestinal ramus, which was confirmed on sectioning two worms. On further study they were found to be new, and are here described under the name of *Haplocaecum proctophorum* n. sp.

Family: ACANTHOSTOMIDAE Poche, 1926
Subfamily: Acanthostominae Nicoll, 1914
Genus: *Haplocaecum* Simha, 1958

Haplocaecum proctophorum n. sp.

Body elongated, the anterior end flat and the posterior end round. It measures 1.98 - 2.85 mm in length and 0.18 - 0.21 mm in breadth from the level of the ventral sucker to that of the ovary. Body surface covered by minute spines. The oral sucker is funnel-like, anteriorly directed, surrounds the mouth and measures 0.135 - 0.150 mm in length and 0.105 - 0.130 mm in breadth. It is

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armed with a circlet of 20 to 22 spines which measure 0.052 - 0.054 mm in length and 0.0134 - 0.0141 mm in breadth. The ventral sucker is smaller than the oral sucker; it is situated 1/6 of the body length from the anterior end, in the median line or slightly towards the left, and measures 0.075 - 0.090 mm in length and 0.060 - 0.075 mm in breadth, nearly spherical.

The oral sucker communicates with the pharynx through a long, convoluted prepharynx which measures 0.075 - 0.150 mm. The pharynx is muscular, globular, and measures 0.060 - 0.090 mm in length and 0.060 - 0.075 mm in breadth. The esophagus is small, 0.018 - 0.021 mm in length, and leads into a single caecum which opens in the posterior end of the body through an anus.

The gonads lie in the posterior region of the body. The testes are tandem situated dorsally above the cecal ramus, almost in contact with each other or with an intertesticular space of 0.017 mm. Both testes are entire, round, and spherical. The anterior testis measures 0.090 - 0.135 mm in length and 0.090 - 0.105 mm in breadth. The posterior testis measures 0.112 - 0.165 mm in length and 0.090 - 0.105 mm in breadth, i. e., it is a little larger than the anterior. The cirrus sac is absent. The vesicula seminalis is coiled below the ventral sucker, and shows a prominent basal sac. The common genital aperture lies immediately above the ventral sucker.

The ovary is smooth, round, pretesticular, situated slightly to the right of the median line, and measures 0.080 - 0.100 mm in length and 0.064 - 0.080 mm in breadth. The receptaculum seminis is almost as big as the ovary and measures 0.076 - 0.084 mm in length and 0.076 - 0.080 mm in breadth. The shell gland complex is situated close to the left internal margin of the ovary. The vitellaria are distributed laterally in the body from the lower margin of the vesicula seminalis up to the posterior level of the ovary. They do not form a lattice in front of the ovary, such as SIMHA (1) reported in *Haplocaecum asymmetricum*. The uterus forms transverse coils between the ovary and the basal sac of the vesicula seminalis, and opens through the common genital opening in front of the ventral sucker.

Eggs are operculate, numerous in mature forms, and measure 0.032×0.012 mm. A long Laurer's canal is present, which opens above the ovary by a minute opening. The excretory opening lies on the posterior end of the body. The excretory bladder is tubular and long, extending to the upper margin of the ovary where it divides into two long cornua which reach to the level of the pharynx.

DISCUSSION

The genus *Haplocaecum* Simha, 1958 until now includes only the type species *H. asymmetricum*. A second species is here added to it, *H. proctophorum* n. sp., recorded from *Tropidonotus piscator*. *H. proctophorum* differs from the type species in having a narrower, more elongated body; a smaller oral sucker; a more elongated prepharynx; a smaller pharynx; a receptaculum seminis as large

as the ovary; no converging lattice of vitelline follicles immediately above the ovary, and lastly, in having an anus. The inclusion of *H. proctophorum* n. sp. necessitates the amendment of the generic diagnosis proposed by SIMHA (1).

AMENDED DIAGNOSIS OF THE GENUS *HAPLOCAECUM* SIMHA, 1958

Acanthostomidae: Acanthostominae: Distomes with flattened and elongated bodies covered with spines; oral sucker armed with 20—28 spines; ventral sucker median or slightly asymmetrical. Prepharynx small or long (0.044 - 0.150 mm); esophagus small. Single caecum present, with or without an anus. Excretory bladder tubular, opening at the level of the posterior end, and running forward to the anterior end, of the ovary where it bifurcates into two cornua; the collecting ducts extend up to the side of the pharynx; terminal opening slightly asymmetrical. Gonads lie in the posterior region of the body closely packed in a line. Ovary pretesticular; testes tandem; receptaculum seminis small, or voluminous, as large as the ovary. Laurer's canal present. Vitellaria restricted to the middle third of the body, converging or not in front of the ovary.

TYPE SPECIES: *Haplocaecum asymmetricum* Simha, 1958.

KEY TO THE SPECIES OF THE GENUS *HAPLOCAECUM* SIMHA, 1958

- A. Single caecum present *Haplocaecum* Simha, 1958
 B Anus absent; vitellaria converging above the ovary; receptaculum seminis small; oral sucker armed with 24 - 28 spines *H. asymmetricum* Simha, 1958
- BB. Anus present; vitellaria do not converge above the ovary; receptaculum seminis voluminous, almost the size of the ovary; oral sucker armed with 20 - 22 spines *H. proctophorum* sp. nov.

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SUMMARY

A new species of *Haplocaecum* Simha, 1958 is described, *H. proctophorum*, characterized by the single caecum ending in an anus. The generic diagnosis is amended to include this and other peculiarities of the new species, and a key to the species of *Haplocaecum* is presented.

RESUMEN

Se describe una nueva especie de *Haplocaecum* Simha, 1958, *H. proctophorum*, de la culebra de agua *Tropidonotus piscator* de la India. La nueva especie se caracteriza principalmente por terminar su único ciego en un ano. Se enmienda la diagnosis genérica para tomar en cuenta las peculiaridades de esta especie, y se ofrece una clave para el género *Haplocaecum*.

REFERENCE

1. SIMHA, S. S.
1958. Studies on the trematode parasites of reptiles found in Hyderabad state. *Z. f. Parasitenkunde*, 18: 161-218.

Figs. 1-3. *Haplocaecum proctophorum* n. sp.

Fig. 1. Dorsal view, showing internal anatomy.

Fig. 2. Total specimen. a, anus; at, anterior testis; c, caeca; e, egg; es, esophagus; ex. bl., excretory bladder; ex. o., excretory opening; g. o., genital opening; L. c., Laurer's canal; o. s., oral sucker; ov., ovary; ph., pharynx; pph., prepharynx; p. t., posterior testis; r. s., receptaculum seminis; s., spines; ut., uterus; vit., vitellaria; v. s., ventral sucker; v. sem., vesicula seminalis.

Fig. 3. A specimen, passing through anus.

