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On Two New Trematodes from *Kachuga kachuga* (Gray)

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Six specimens of fresh water tortoise, *Kachuga kachuga* (Gray), collected from suburbs of Lucknow District, were examined on April 2, 1975 for helminth parasites. Fortunately, only two were found infected with a plagiorchiid trematode of the genus *Bilorchis* Mehra, 1937. Three worms were collected from the gall bladder of the hosts. As the writer's form differs from other known species, it is described here as a new species.

Material and Method

The trematodes, studied in the work, were collected from *Kachuga kachuga* (Gray). Worms were fixed under pressure of coverslip, in 70% alcohol, stained with Aceteoalum carmine, cleared and mounted.

Bilorchis lali n. sp.

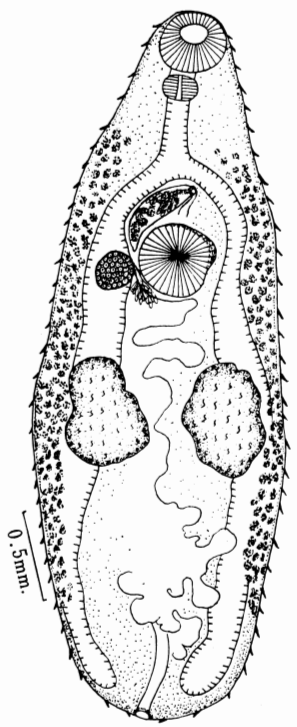
The spinose, elongate body (Fig. 1) has a blunt anterior and a broad posterior end, measuring 2.24–3.71 mm×0.76–1.25 mm, the maximum width being in the testicular region. The terminal oral sucker is circular and measures 0.22–0.34 mm. The circular ventral sucker is located in the anterior half of the body, nearly equal to oral sucker and measures 0.22–0.34 mm. The mouth leads into a short prepharynx measuring 0.02–0.06 mm in length, followed by a muscular pharynx of 0.11–0.39 mm. The intestinal caeca are simple and extend upto the hind end of the body.

The testes are crenated, lobed or slightly notched, roughly equal in size and located symmetrically behind the middle of the body. They measure 0.53–0.62 mm×0.38–0.42 mm. The elongate-oval cirrus sac (Fig. 1) is thin walled, disposed obliquely between the intestinal bifurcation and ventral sucker and measures 0.21–0.31 mm×0.07–0.13 mm. The vesicula seminalis is large, tubular and coiled. A short pars prostatica, an ejaculatory duct and small muscular cirrus are present. The ovary, with entire margin, is rounded in shape and pretesticular in position. It is located close behind or on the side of the ventral sucker and measures 0.11–0.21 mm. The short oviduct opens at the ootype complex which is located slightly behind the ovary. A Laurer's canal is present but the receptaculum seminis is absent. The uterus is mainly intercaecal or at places slightly overlapping intestinal caeca and extends upto the posterior extremity of the body. It opens to the outside by the genital pore, through a short metraterm. The genital pore is located behind the intestinal bifurcation. The vitellaria consist of small follicles and confined to the lateral fields of the body, extending from behind the pharynx upto a little anterior to the terminal ends of the intestinal caeca. The eggs are oval, few and measure 0.014–0.019 mm×0.010–0.012 mm. The excretory bladder is 'Y' shaped and opens outside by a terminal excretory pore.

Host: *Kachuga kachuga* Gray
Habitat: Gall bladder
Locality: Lucknow, India
Date: April 2, 1975

Discussion

Till now, the genus *Bilorchis* Mehra, 1937 includes only two species viz. *B. indicum* Mehra, 1937 and *B. mehrai* Dwivedi, 1965 from fresh water tortoises *Lissemys punctata* Malcolm and Smith and *Kachuga intermedia*



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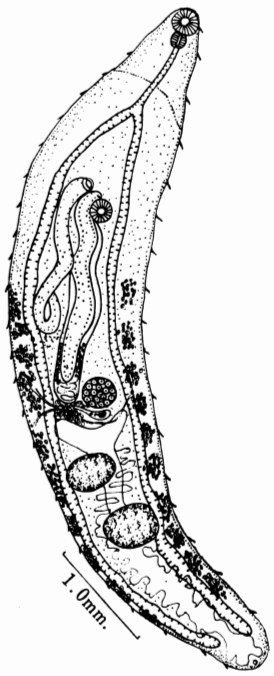

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Explanation of Figures

Fig. 1 *Bilorchis lali* n. sp. ventral view.
Fig. 2 *Spinometra thapari* n. sp. dorsal view.

Gray respectively. The present form differs from both the species in the size of eggs. Further, it differs from *B. indicum* in the size of oesophagus and number of eggs and from *B. mehari* in the extension of cirrus sac.

Spinometra thapari n. sp.

Single damaged specimen of the genus *Spinometra* Mehra, 1931, was collected from the intestine of a fresh water tortoise *Kachuga kachuga* Gray, out of four examined on Oct. 15, 1974 at Lucknow. As the present form differs considerably from the other known species of the genus, it is described here as a new species.

The elongate body (Fig. 2), with a narrow anterior and blunt posterior ends, measures 6.51 mm×1.25 mm, at the region of the ventral sucker. The cuticle is spinose, the spines being sparsely distributed in the posterior region of the body. The circular oral sucker is terminal and measures 0.26 mm×0.23 mm. The ventral sucker is equal to the oral sucker, located at the posterior region of the anterior third of the body and measures 0.21 mm×0.20 mm. A prepharynx is absent. The Pharynx measures 0.15 mm ×0.13 mm. The oesophagus measures 0.63 mm. The smooth intestinal caeca extend upto the hind region of the body.

The entire testes are located, slightly obliquely, one behind the other, in the posterior half of the body. The anterior testis measures 0.49×0.32 mm. The posterior testis is more or less equal to the anterior testis and measures 0.50 mm×0.39 mm. The elongated cirrus sac measures 1.95 mm×0.25 mm. It is slightly serpentine, extending from the ovary to slightly ahead of the ventral sucker. It encloses a coiled vesicula seminalis, a prominent pars prostatica and a

large ejaculatory duct. A true cirrus, without scales, is present. The genital pore is median and located anterior to the ventral sucker. The pretesticular ovary, with entire margin, is situated in the middle third of the body and measures 0.33 mm×0.30 mm. A well developed receptaculum seminis is present just anterior to the excretory bladder. The short oviduct opens at the ootype which also receives the common vitelline duct. A Laurer's canal seems to be absent. The ootype complex is median in position. The inter-testicular uterus with descending and ascending limbs, fills the post-testicular region of the body, at places overlapping the intestinal caeca. The metraterm is large and prominent. The lateral and follicular vitellaria are arranged in groups, extending from the middle of cirrus sac to the hind end of the body. A vitelline reservoir is absent. The eggs measure 0.041–0.045 mm. ×0.022–0.031 mm. The excretory bladder is 'Y' shaped and opens outside by a terminal excretory pore.

Host : *Kachuga kachuga* Gray
Habitat : Intestine
Locality : Lucknow, India
Date : Oct. 15, 1974

Discussion

Till now, only three species viz. *Spinometra kachugae* Mehra, 1931, *S. gangetica* Mehra, 1937 and *S. gigantica* Dwivedi, 1965 are known under the genus *Spinometra* Mehra, 1931. The present form differs from *S. kachugae* by ratio of suckers, by absence of prepharynx and position of gonads. It differs from *S. gangetica* by size of oesophagus, cirrus without scales and position of genital pore. The present form also differs from *S. gigantica* in smaller size of body, ratio of suckers and size of metraterm.

Summary

Bilorchis lali n. sp., collected from the gall bladder of a *Kachuga kachuga* is chiefly characterised by length of oesophagus, extension of cirrus sac and size and number of eggs. *Spinometra thapari* n. sp., collected from the intestine, is chiefly characterised by ratio of suckers, absence of prepharynx and position of gonads.

Acknowledgements

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