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On a new trematode, Haplorchis solus, from the intestine of a green tree snake Dryophis mycterizans, from Hyderabad, India

by

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In 1899, Looss (7) created the genus *Haplorchis* for *H. cahirinus* Looss, 1899, and *H. pumilio* Looss, 1896. YAMAGUTI (10) listed the following nine species and a sub-species under this genus.

Type species: *H. pumilio* (Looss, 1896) Looss, 1899.
H. plaurolophocerca (Sonsino, 1896).
H. taichui (Nishigori, 1924).
H. yokogawai (Katsuta, 1932).
H. pearsoni (Fernando, 1933).
H. milvi (Gohar, 1934).
H. vanissimus (Africa, 1938).
H. yokogawai var *ellipticus* (Kobayasi, 1942).
H. butei Chatterji, 1948. (2).
H. tagoreai Chatterji, 1948.

The following account of the tenth species is based on material collected by the author, for the first time from a reptilian host.

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HETEROPHYIDAE Odhner, 1914.
Haplorchiinae (Looss, 1899) Poche, 1926.
Haplorchis Looss, 1899.
Haplorchis solus n. sp.

In December 1954, the writer collected a solitary specimen of this parasite, from the intestine of a green tree snake, *Dryophis mycterizans*. A detailed study of the fluke revealed the fact that it constitutes a new species.

The fluke (Fig. 1) has a flattened, pear shaped body, measuring 1.22 mm in length, and 0.44 mm in maximum width attained at the region of the ovary. The cuticle covering the body surface ir armed with minute backwardly directed spines (Fig. 2). The oral sucker is sub-terminal and measures 0.096 mm in diameter; the acetabulum is rudimentary and is closely associated with the genital sucker forming a ventro-genital sucker complex. The ventro-genital-sucker complex, measuring 0.134 × 0.109 mm is armed with many pointed spines at the genital orifice.

The mouth, enclosed by the oral sucker leads into a short pre-pharynx 0.025 mm in length. The pharynx is globular measuring 0.050 mm in diameter, opens into the oesophagus measuring 0.32 mm in length. The latter bifurcates into intestinal diverticula, which extend into the third quarter of the body. The bifurcation is 0.08 mm anterior to the ventro-genital-sucker complex.

A single large testis, measuring 0.23 × 0.19 mm is placed at the posterior part of the body. The seminal vesicle is large and consists of a broad posterior portion which is continued into a narrow tubular prostate duct, which continues forward as an ejaculatory duct which opens at the ventro-genital-sucker complex. A very interesting feature about this new fluke is that the seminal vesicle is enclosed in a thin walled sac. Immediately anterior to the testis, is a comparatively small ovary measuring 0.10 × 0.12 mm. A large receptaculum seminis measuring 0.09 × 0.12 mm is found closely anterior to the ovary; the ootype surrounded by the defined Mehlis' gland, receives the common vitelline duct, posterior to the ovary.

The vitellaria consist of numerous small follicles distributed roughly from the anterior border of the testis to the caudal region of the body. The oviduct emerging from the ovary is continued as the uterus, having descending and ascending limbs and is much coiled.

After a sinuous course it opens into the ejaculatory duct to form the hermaphrodite duct. This duct opens at the ventro-genital-sucker complex. The eggs are oval, operculated and measure 0.034-0.042 × 0.012-0.020 mm.

DISCUSSION: The new species is closely akin to *Haplorchis pumilio* Looss, 1896; *H. taichui* Nishigori, 1924; *H. yokawi* Katsuta, 1932; *H. vanissimus* Africa, 1938; H. *pleurolophocerca* Sonsino, 1896; *H. pearsoni* Fernando, 1933; and *H. milvi* Gohar, 1934, (1, 3, 4, 5, 6, 8, 9) in general appearance of the body and in disposition of the gonads; but differs from them markedly in the following main characters.

The new species has a simple seminal vesicle, enclosed in a sac, whereas the seminal vesicle is bilobed in all the known species and is not enclosed in a sac. Further, in *Haplorchis solus* n.sp. there are large number of pointed spines on the ventro-genital-sucker complex, but in all the other species, the spines are limited. This is the first case of the genus *Haplorchis* being reported from a reptilian host.

In view of the above differences shown by the parasite, the writer feels justified in establishing a new species. It is proposed to name the fluke as *Haplorchis solus* n.sp.

SPECIFIC DIAGNOSIS: Body pear-shaped measuring 1.22 × 0.44 mm; oral sucker 0.096 mm in diameter; pre-pharynx 0.025 mm; pharynx 0.05 mm in diameter; oesophagus long, 0.32 mm; testis 0.23 × 0.19 mm; ovary 0.10 × 0.12 mm; receptaculum seminis 0.09 × 0.12 mm; egg 0.034-0.042 × 0.012-0.020 mm.

HOST: The green tree snake, *Dryophis mycterizans.*
LOCATION: Intestine.
LOCALITY: Hyderabad, India.

Type specimen will be deposited in the Zoological Museum of the Osmania University.

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SUMMARY

Haplorchis solus n.sp. has been described in detail and compared with related species.

RESUMEN

Se describe una nueva especie, *Haplorchis solus,* del intestino de la serpiente verde de árbol, *Dryophis mycterizans,* de la India. Constituye este el primer hallazgo de un tremátodo de este género en un huésped reptil.

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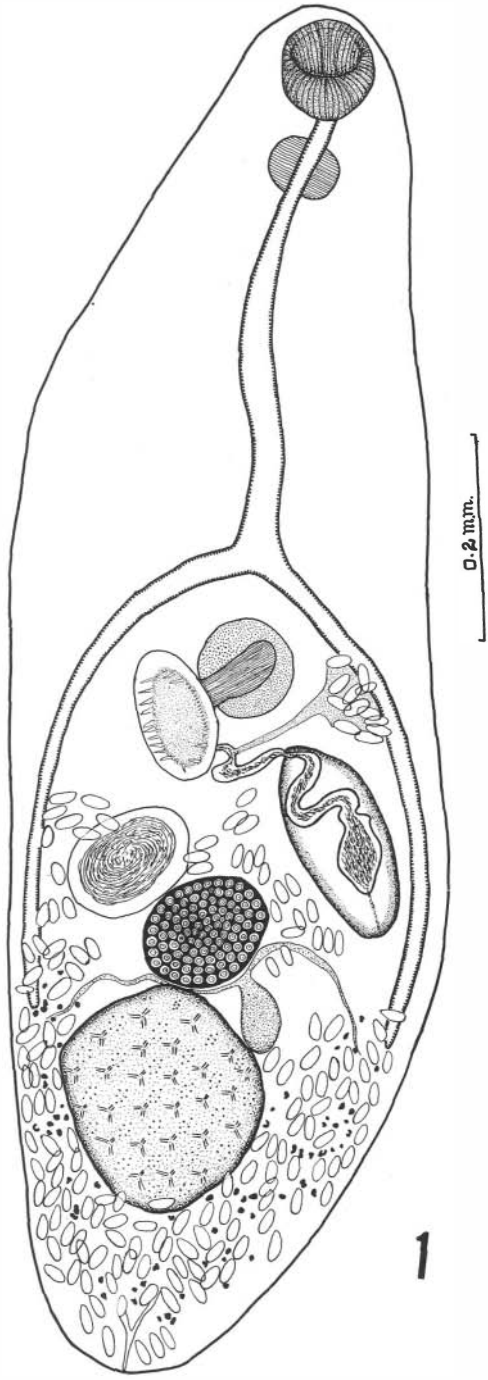
Fig. 1. *Haplorchis solus* n. sp., ventral view.



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