

ON SOME TREMATODES FROM DARJILING DISTRICT, WEST BENGAL, INDIA

By

T. D. SOOTA and R. K. GHOSH,

Zoological Survey of India, Calcutta.

(With 1 Text-fig.)

INTRODUCTION

During the periods June-July 1974 and May-June 1975, the senior author conducted faunistic surveys of certain areas in Darjiling district (West Bengal) and collected some helminths from vertebrates. The present paper deals with the trematode component of this collection which comprises nine species belonging to nine genera and five families. Of these, one species is new, while others show interesting variations hitherto unrecorded. All measurements are in millimeters.

SYSTEMATIC ACCOUNT

Family DICROCOELIIDAE (LOOSS, 1899) Odhner, 1910

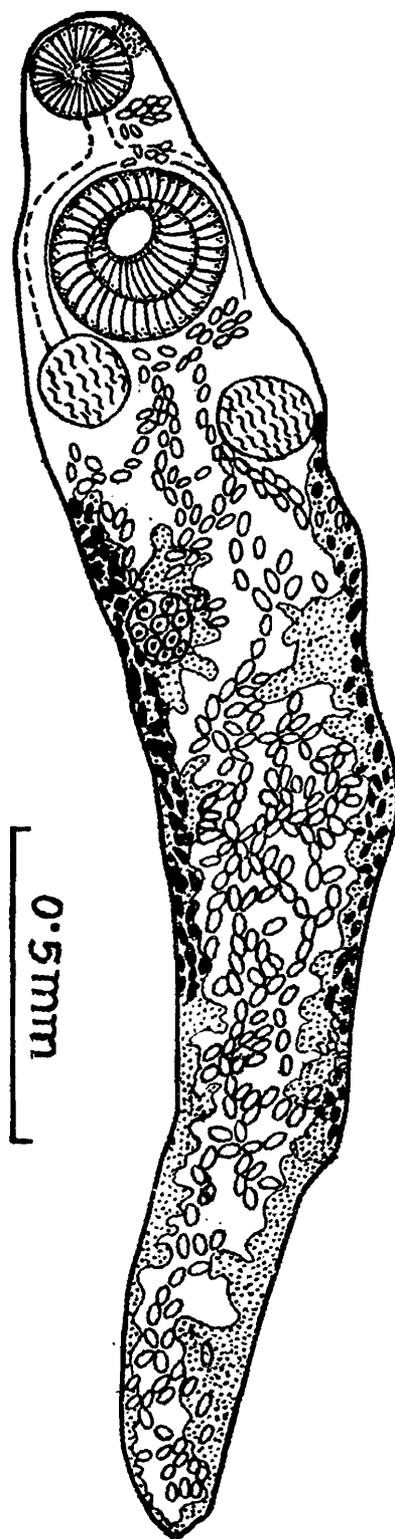
Subfamily DICROCOELIINAE LOOSS, 1899

Lypersomum (Lypersomum) reangensis sp. n.

(Text-fig. 1)

Material.—1 ex.; Z.S.I. reg. no. W 7260/1; host—Wood pecker (*Picus flavinucha flavinucha*); location-?; locality-Reang; 7.vii.1974; Coll. T. D. Soota.

Description.—Body elongated, bluntly rounded anteriorly and gradually tapering posteriorly, 4.34 × 0.75, with maximum width in testicular zone; cuticle smooth; oral sucker sub-terminal, 0.23 × 0.27 followed by a small pharynx; oesophagus 0.09 long, bifurcating into intestinal caeca which appear to be somewhat atrophied and run upto the caudal end of the body where their blind ends are obscured; acetabulum 0.45 × 0.49, larger than oral sucker, almost 1:2 in ratio and situated within anterior third of body 0.47 from anterior end; testes rounded, oblique and just behind acetabulum; right 0.27 × 0.26, left



Text-fig. 1. *Lypersomum (Lypersomum) reangensis* sp. n.

0.23 × 0.24; cirrus sac opens to the exterior just below oral sucker; ovary 0.19 × 0.14 and 0.38 behind right testis; receptaculum seminis and Mehlis gland complex present on the postero-lateral side of ovary; vitellaria confined roughly to mid-third of body, asymmetrical in extension extending from behind the posterior testis; uterus extensive with ascending and descending loops packed with eggs, extending posteriorly up to the hinder end of the body and anteriorly up to pharyngeal level running in between testes; eggs yellowish, elliptical, 0.36—0.48 × 0.22—0.26.

Remarks.—Yamaguti (1971) on the basis of the position of acetabulum and body shape divided the genus *Lypersomum* Looss, 1899 into two subgenera viz., *Lypersomum* and *Lypersomoides*. The present species on account of its closer proximity of acetabulum and body shape is placed under the subgenus *Lypersomum*. Yamaguti (1971) included 25 species under it, of which only two viz., *L. kavini* Fotedar and Raina, 1965 and *L. stunkardi* Agrawal, 1964 are reported from India.

The present specimen comes close to *L. clathratum* (Deslongschamps, 1824) in respect of asymmetrical extension of vitellaria and in size of ova, but differs in body size (being much larger in the present specimen), in ratio of oral sucker and acetabulum and in topography of gonads.

It also comes close to *L. kavini* Fotedar and Raina, 1965 in position of ovary and in size of ova, but differs greatly in body size, in extension of vitellaria and in ratio of oral sucker and acetabulum.

Further, the present specimen can be distinguished from all other species by smaller body size and in relative size of oral sucker and acetabulum. Hence, the specimen is described as a new species under the name *Lypersomum (Lypersomum) reangensis* n.sp.

***Dicrocoelium dendriticum* (Rudolphi, 1819)**

Material.—3 exs.; Z.S.I. reg. no. W 7261/1; host-goat (*Copra* sp.); location—bile duct; locality—Ghoom; 21.vi.1974; Coll. *T. D. Soota*.

Description.—Body 6.75—6.84 long, 2.16—2.25 wide; oral sucker 0.46—0.49 × 0.43; pharynx 0.15—0.2 × 0.18—0.2; oesophagus 0.41—0.45 long; ventral sucker in anterior third of body, 0.72—0.76 × 0.54—0.57; testes lobate, almost symmetrical; cirrus sac 0.9—0.99 × 0.13—0.22; ovary lobate, just behind testes and 0.4—0.54 × 0.31—0.45; vitellaria extending from testicular level to some distance beyond equatorial zone; eggs 0.036—0.045 × 0.024—0.031.

Remarks.—This species is cosmopolitan in distribution and shows a lot of intra-specific variations in such characters as body size, position and shape of testes and of ovary, relative size of suckers, extension of vitellaria etc. The present specimens also show variations in lobulation and position of testes which may be symmetrical or obliquely tandem and also in the distribution of vitelline glands.

Family FASCIOLIDAE Railliet, 1895

Subfamily FASCIOLINAE Stiles et Hassall, 1898

***Fasciola gigantica* Cobbold, 1855**

Material.—Several ex.; Z.S.I. reg. no. W 7262/1; host-buffalo (*Bubalus* sp.); location—liver; locality—Ghoom; 22.vi.1974 & 23.v.1975; Z.S...15

Coll. *T. D. Soota*. Several ex.; Z.S.I. reg. no. W 7263/1; host-cow (*Bos* sp.); location—liver; 21.vi.1974 & 23.v.1975; collector and locality same.

Description.—Body 73-76 long, short cephalic cone present; oral sucker 0.54—0.98 × 0.86—0.98; intestinal caeca with diverticula on both sides; ventral sucker 0.14—0.16 × 0.14—0.15; testes and ovary much branched; uterus in between ovary and acetabulum; eggs 0.13—0.15 × 0.07—0.09.

Remarks.—As this is a common liver fluke, a detailed description is not given. Roy (1954) observed that 50 to 75% of the buffaloes brought to Kalimpong abattoir were infected with this species. The present surveys revealed higher incidence of infection in buffaloes than in cows in Ghoom.

Subfamily FASCIOLOPSINAE Odhner, 1910.

Fasciolopsis buski (Lankester, 1857) Stiles, 1901

Material.—12 ex.; Z.S.I. reg. no. W 7264/1; host—pig (*Sus* sp.); location—intestine; locality—Ghoom; 13.vi.1974 & 25.v.1975; Coll. *T. D. Soota*.

Description.—Body 24—32 long; oral sucker 0.54—0.67 × 0.57—0.72; pharynx 0.43—0.49 × 0.54—0.62; intestinal caeca simple and reaching posterior extremity; acetabulum close to oral sucker, 2.25—3.12; testes and ovary branched; eggs 0.21—0.25 × 0.07—0.09.

Remarks.—This species occurs widely in pigs and has also been reported from man. In the present surveys, only two host animals showed infection by this species. Enquiries made at local piggeries revealed that the species is rarely found in the indigenous pigs.

Family ISOPARORCHIIDAE (Travassos, 1922) Poche, 1926.

Isoparorchis hypselobagri (Billet, 1898) Ejsmont, 1932

Material.—Several ex.; Z.S.I. reg. no. W 7265/1; host-*Wallago attu*; location—air bladder; locality—Siliguri; 12.vii.1974 & 18.vii.1974; Coll. *T. D. Soota*. Several ex.; Z.S.I. reg. no. W 7266/1; host-*Channa punctatus*; 14.vii.1974; location, locality and collector—same as above. Several ex.; Z.S.I. reg. no. W 7267/1; host-*Mastacembalus* sp.; 14.vii.1974; location, locality and collector—same as above.

Description.—Body 6.2-8.8 long, 2.3—4.9 wide; oral sucker subterminal, 0.7—1.2; pharynx 0.4—0.45; acetabulum almost equatorial in position, 2.07—3.7; eggs minute.

Remarks.—As this is a widely occurring and well described species, a detailed description is not necessary.

Family PARAMPHISTOMIDAE Fiscoeder, 1901

Subfamily DIPLODISCINAE Cohn, 1904

Diplodiscus amphichrus Tubangui, 1933

Material.—1 ex. (damaged); Z.S.I.; reg. no. W 7268/1; host-frog, location—intestine; locality-Sukna; 16.vii.1974. Coll. *T D. Soota*.

Description.—Body 2.34 long, 0.99 wide; oesophagus with a bulb, 0.24 long; testis single, 0.41×0.47 ; genital pore median, some distance beyond caecal bifurcation; vitelline follicles contiguous both anteriorly and posteriorly; eggs few, $0.9-0.99 \times 0.45-0.54$.

Remarks.—As this species is well-known, a detailed description is redundant.

Subfamily PARAMPHISTOMINAE Fiscoeder, 1901

Paramphistomum (Explanatum) explanatum (Creplin, 1847) Fiscoeder 1904

Material.—Several exs.; Z.S.I. reg. no. W 7269/1; host-buffalo (*Bubalus* sp.); location—intestine; locality—Ghoom; 22.vi.1974; Coll. *T D. Soota*.

Description.—Body 3.3—6.78 long, 2.3—3.33 wide; oral sucker 0.9—0.99 long; oesophagus 0.5—0.52 long; genital pore at level of caecal bifurcation; eggs $0.12-0.14 \times 0.07-0.08$.

Remarks.—As this species is quite well-known, a detailed description is not given.

Subfamily GASTRODISCINAE Monticelli, 1892

Gastrodiscoides hominis (Lewis and Mc Connell, 1876) Leiper, 1913.

Material.—Several exs.; Z.S.I. reg. no. W 7270/1; host Pig (*Sus* sp.) location—intestine; locality—Ghoom; 22.vi.1974 & 25.v.1975; Coll. *T D. Soota*.

Description.—Body 11.6—13.4 long and divided into two parts; ventral sucker almost three times the size of oral sucker; vitelline glands extending from level of ventral sucker to posterior testis; eggs $0.135-0.144 \times 0.045-0.054$.

Remarks.—This species commonly occurs in pigs throughout the Indian region.

Verma (1954) opined that the swine form differ from the human form and so erected the new variety *G. hominis* var. *suis*.

Family GASTROTHYLACIDAE Stiles et Goldberger, 1910

Subfamily GASTROTHYLACINAE Stiles et Goldberger, 1910

Gastrothylax crumenifer (Creplin, 1847) Otto, 1896.

Material.—Several exs.; Z.S.I. reg. no, W 7271/1; host-buffalo (*Bubalus* sp.); location—rumen; locality—Ghoom; 21.vi.1974. Coll. T D. Soota.

Description.—Body 8.3—11.5 long; oesophagus 'S' shaped; testes symmetrically placed on anterior side of ventral sucker; eggs 0.125—0.139 × 0.062—0.069.

Remarks.—As this species occurs widely, a detailed description is omitted.

SUMMARY

The paper deals with trematodes collected from vertebrates from Darjiling district during June-July 1974, and May-June 1975, and describes one new species and records interesting variations in others.

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