

2 to 4 lie on the carapace; the dorsal teeth are moveable, and a pair of setae are set between successive teeth. The ventral margin of the rostrum bears 6 to 15 teeth (usually 9-11); the distal part of the ventral border is unarmed; the ventral teeth are immovable, laterally compressed and without any setae between them.

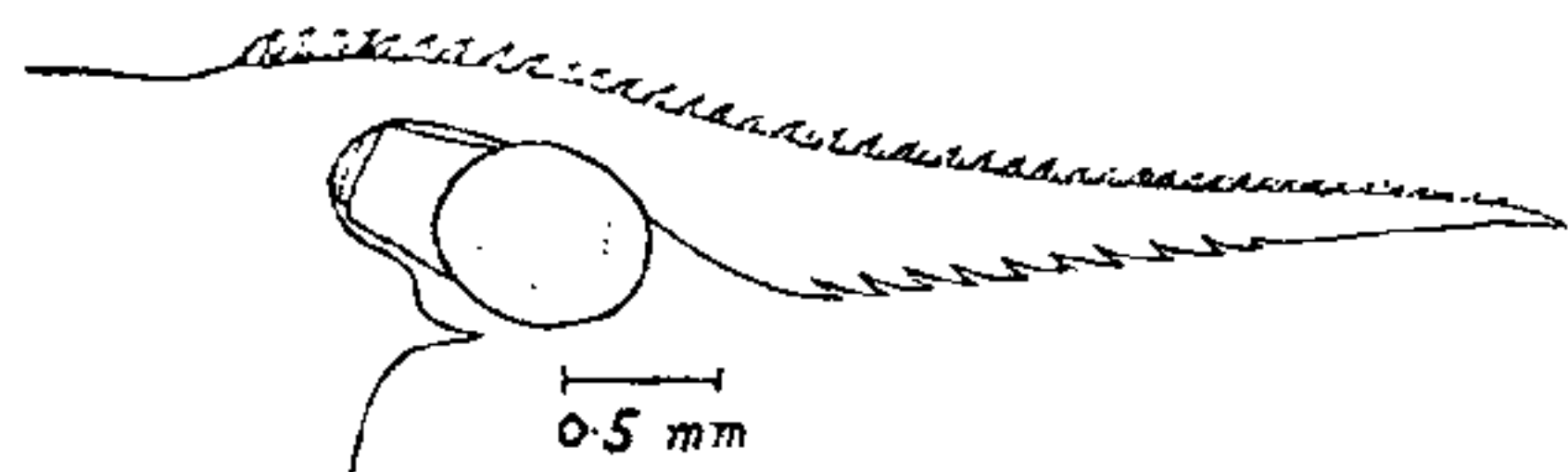


FIG. 1. *Caridina brachydactyla peninsularis* Kemp, 1918; rostrum (CL = 3.5 mm).

Body in general translucent; while minute orange, maroon and green chromatophores are scattered over the entire body, they are closer together along the posterior borders of the somites, on the telson and on uropods. Antennular peduncles and eye-stalks have larger green and deep maroon chromatophores.

The nominate subspecies *Caridina brachydactyla brachydactyla* De Man has been recorded from Indonesian Islands and Andaman Islands (Tiwari and Pillai<sup>2</sup>), from brackish as well as freshwaters. The subspecies *peninsularis* Kemp has been until now known only from the Malayan peninsula. The type material of Kemp<sup>1</sup> was from near Patani in Thailand and from a stream of clear water in the Botanic Gardens of Penang Island. Johnson<sup>3-5</sup> recorded it from Singapore, from some mainland streams as well as from tidal but non-saline waters.

It is of interest to note that near Guntur, the subspecies *peninsularis* has established itself in lentic bodies of freshwater not connected to an estuary. We have so far not come across this subspecies in the lower reaches of river Krishna. The shallow pond and pools which the subspecies inhabits are overgrown with *Typha*, *Vallisneria*, *Ottelia*, *Ceratophyllum* and other macrophytes; the shrimps occur among the vegetation.

We thank M/s. M. K. Durga Prasad and Y. Ranga Reddy, Research Fellows in this Department, for initially drawing our attention to the material. We are indebted to Dr. R. W. Ingle of British Museum (NH), London, for sending us relevant data of the syntypes. One of us (K. R.) thanks the authorities of CSIR, New Delhi, for the award of a Research Fellowship.

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1. Kemp, S., *Mem. Asiatic Soc. Bengal*, 1918, 6 (5), 279.
2. Tiwari, K. K. and Pillai, R. S., *Crustaceana*, 1971, 21 (1), 80.
3. Johnson, D. S., *Bull. National Mus. Singapore*, 1964, 32, 22.
4. —, *Ibid.*, 1965, 33, 9.
5. —, *Second Symp. Scientific and Technological Res. in Malaysia and Singapore, Kuala Lumpur*, 1967, p. 110.

#### A NEW SANGUINICOLID CERCARIA FROM *AMNICOLA TRAVANCORICA* IN ANDHRA PRADESH

WHILE studying the infestation of freshwater snails with intra-molluscan stages, a cercaria belonging to a rare and little known group, viz., 'Sanguinicolid cercariae' was recorded from Balacheruvu in Kakinada, Andhra Pradesh. The cercaria was found emerging from one out of 37 snails belonging to the species *Amnicola travancorica* (Benson). This is the first report of a freshwater sanguinicolid cercaria from this country.

The methods of study were the same as suggested by Cable<sup>1</sup>. Cercariae for measurement were killed in hot water. All measurements are in mm. Figures are camera lucida drawings of heat killed, well relaxed cercariae under coverslip, with the details added free hand.

The cercaria (Figs. 1 and 2) is small and the body is covered with small spines. The spines are larger at the anterior end. Tail is ventrally attached to the body, such that the body is almost at a right angle to the tail. Furcal rami are short, pointed and devoid of fin-folds. Both the tailstem and rami are covered with very small spines. Six to eight long bristles borne on conical elevations are present along the sides of the tailstem. There is no dorsal crest on the body. The tip of the body does not form an anterior penetrating organ as in the case of spirorchiid and schistosomatid cercariae, the oral sucker being absent. However, the spines at the anterior end are bigger and closely arranged. A pair of hollow piercing spines, characteristic of blood flukes are present at the tip of the body. Ventral sucker is absent. Ventral mouth leads into a long, club shaped oesophagus that extends to about one-half of the length of the body. Caeca are absent. There are a large number of unicellular glands in the body; whether these glands represent the penetration glands could not be ascertained, as the ducts were not clear.

Excretory system is mesostomate (Fig. 2). Excretory bladder is small. There are three pairs of flamecells in the body and none in tail. A single caudal excretory tubule has been observed in the present study, as also by several other workers in

closely related aporocotyloid cercariae (Sewell<sup>2</sup>, Mc Coy<sup>3</sup>, Holliman<sup>4</sup>, etc.), while Ejsmont<sup>5</sup> represented two caudal excretory tubules in the sanguinicolid cercaria studied by him.

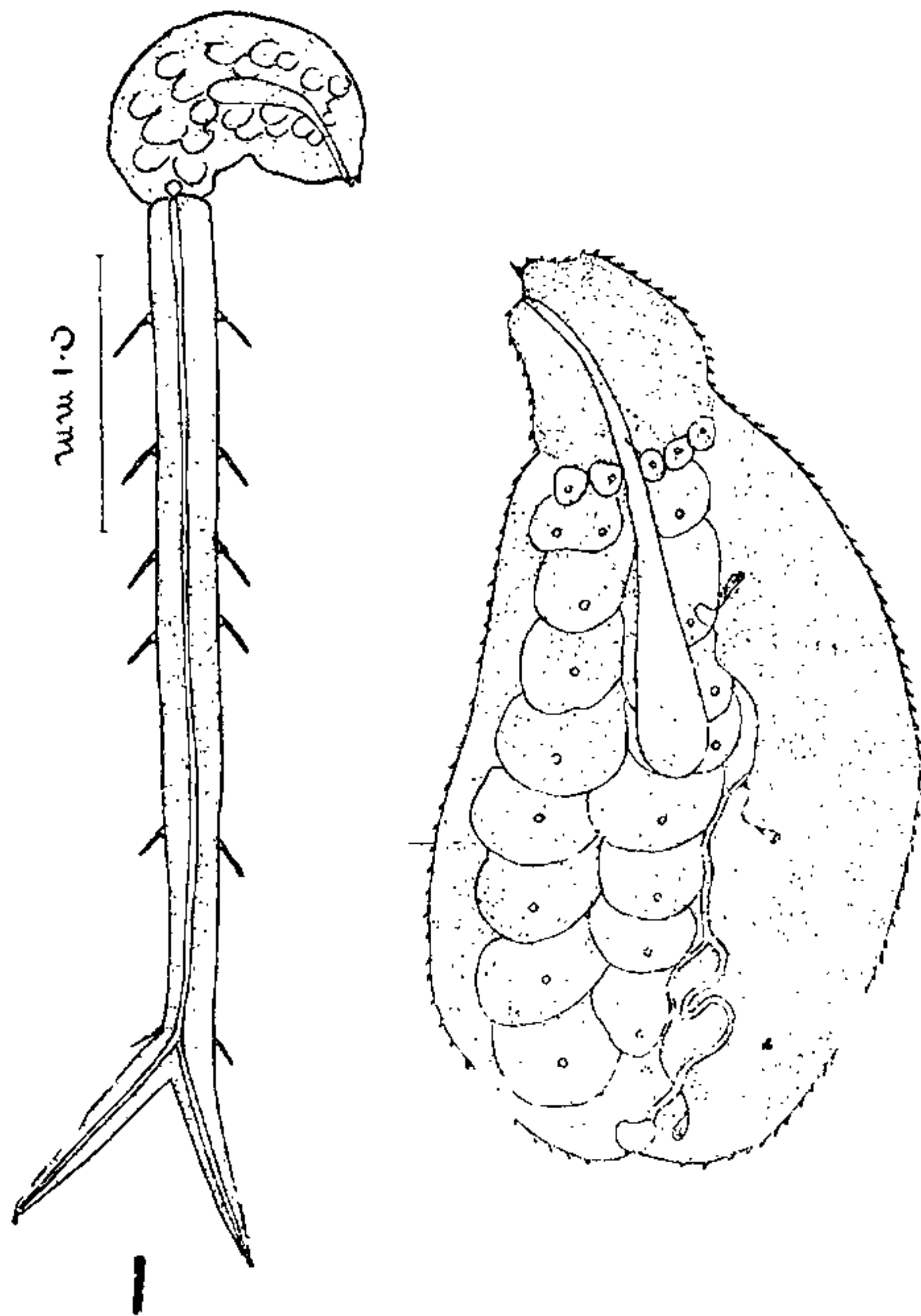


FIG. 1. *Cercaria indicae* LXVI, n.s.p., entire cercaria lateral view.

FIG. 2. Body of the cercaria, lateral view, showing excretory and digestive systems.

**Measurements.**—Body length 0.092–0.105 and width 0.05. Tailstem 0.29–0.312 × 0.02–0.026, rami 0.84 × 0.013.

Cercariae emerge in moderate numbers in a day. Swimming is sporadic. Prolonged periods of rest alternate with an occasional attempt to swim. Cercaria rests with the tailstem bent on itself, and the rami crossing the stem, forming a characteristic looped structure.

Intramolluscan stages could not be studied as the snail host perished while the cercaria was being studied.

*Sanguinicolid cercariae* can be characterised as follows: "Apharyngeate, brevifurcate, non-ocellate; dorsal fin-fold on body and furcal fin-folds may or may not be present, tail symmetrical or asymmetrical, anterior organ reduced or lacking; ventral sucker present or absent. Develop in

marine lamellibranchs or freshwater snails. Cercariae penetrate directly into fishes and develop into adults in the vascular system or rarely in the coelom".

The present species differs from all the described sanguinicolid cercariae except *C. hartmanae* Martin, 1952, *C. amphicteis* Oglesby, 1961, and cercaria of *Sanguinicola davisii* Wales, 1958 in the absence of a dorsal fin-fold on body and furcal fin-folds. The present species differs from *C. hartmanae* in the absence of an anterior organ and ventral sucker, from *C. amphicteis* in having a brevifurcate tail and from cercaria of *S. davisii* in being smaller and in the nature of the gut (intestine in the cercaria of *S. davisii* is four lobed) and in the attachment of the tail to the body (tail being posteriorly attached to the body in the cercaria of *S. davisii*).

The present species is named *Cercariae indicae* LXVI in continuation of the numbers used for Indian cercariae by Sewell<sup>2</sup>.

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1. Cable, R. M., *Sci. Survey of Puerte Rico and Virgin Is.*, 16, 491.
2. Sewell, R. B. S., *Ind. J. Med. Res.*, 1922, 10, Suppl. 1.
3. Mc Coy, O. R., *J. Parasit.*, 1929, 15, 199.
4. Holliman, R. B., *Tulane Studies in Zool.*, 1961, 9, 1.
5. Ejsmont, L., *Bull. Acad. Polonaise Sci. Letters, Series B.* 1925, p. 877.

#### CYPRIDOPSIS OCHRACEA SARS, 1924 (CRUSTACEA : OSTRACODA), A NEW RECORD FROM INDIA

WHILE studying the zooplankton fauna of Bihar, one of the authors (SAKN) came across Ostracoda, collected from a freshwater pond at Bhagalpur, Bihar. The specimens were identified as *Cypridopsis ochracea* Sars. These specimens have been deposited in the museum of the Zoological Survey of India, Calcutta, and the museum of the Post-Graduate Department of Zoology, Bhagalpur University.

A review of the literature reveals that the species is a rare one, and the only known record is by G. O. Sars from South Africa. This species is not recorded from the Indian sub-continent. The present note is intended to place on record the