

NOTES ON SOME NEMATODES NEW TO INDIA.

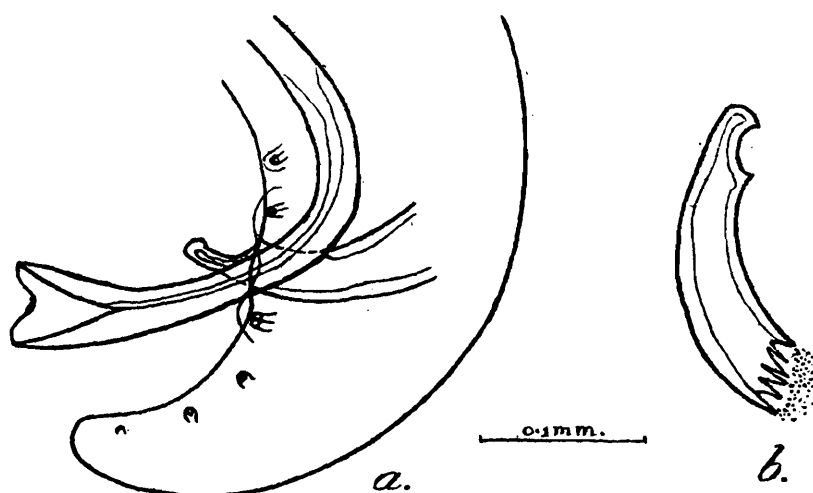
By P. A. MAPLESTONE, D.S.O., D.Sc., M.B., B.S., D.T.M.

(From the Helminthological Research Laboratory, School of Tropical Medicine, Calcutta.)

1. *Echinuria uncinata* (Rudolphi, 1819) Soloviev, 1912.

A collection of worms, which has been referred to this species, was recovered from the gizzard of a Garganey or Blue-winged Teal, *Querquedula querquedula* (Linn.), which died in the Calcutta Zoological Gardens. This worm has been found previously in several anseriform birds, including the domestic duck, and has been recorded from Europe, Africa and North America, but as far as the writer is aware this is the first occasion on which the species has been found in India.

The length given by Cram¹ is 9-10 mm. for males and 12-18.5 for females. In the present collection the males measured 7.4-8 mm. and the females 8.4-9 mm. and other dimensions were proportionately smaller.



TEXT-FIG. 1.—*Echinuria uncinata* (Rudolphi).

a. Tail of male, lateral view showing end of long spicule; b. Short spicule.

There is therefore a considerable difference especially in the case of the females, but the type of cordons, the arrangement of the spines anteriorly, the position of the vulva and the type of ovejector are all the same as are described for *E. uncinata*. In addition, the papillae on the tail of the male appear to be the same as figured by Schneider, except that one papilla of the most anterior pair on each side could not be seen, and the spicules, as far as can be judged from their inadequate description, appear to be similar. In view of these facts it is considered the difference in size is of no importance.

The spicules present very distinctive characters and as no detailed drawing of them ever appears to have been made a figure is given (text-

¹ Cram, E. B., U. S. Nat. Mus. Bull., 140, p. 246 (1927).

fig. 1). This is considered worth while because Cram expresses the opinion that it is possible *E. uncinata* and *E. jugadornata* Soloviev, 1912, the type of the genus, are identical so the accurate determination of the anatomical characters is all the more important.

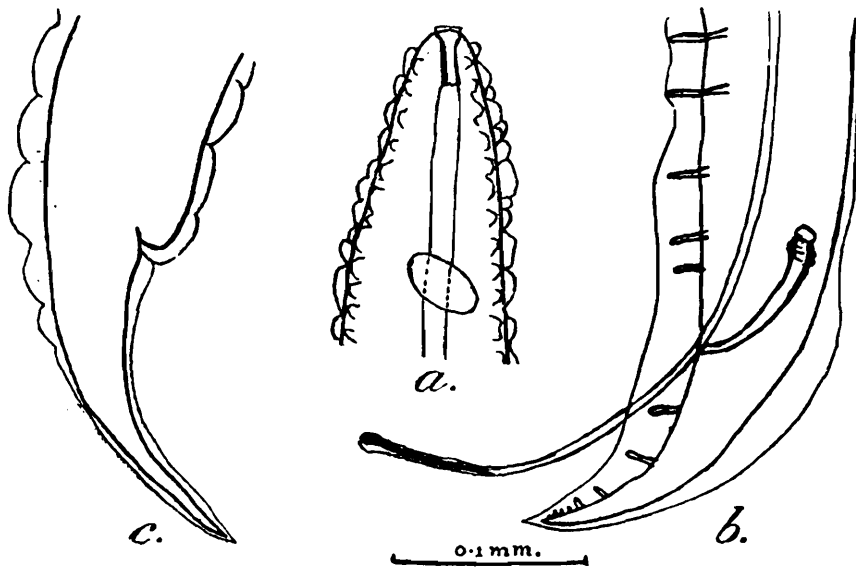
2. TWO NEMATODES FROM *CEBUS CAPUCINUS* (LINN.).

These two species of worms were collected from the intestine of a Capuchin monkey that died in the Calcutta Zoological Gardens.

***Gongylonema capucini*, sp. nov.**

These worms have the typical, irregularly-disposed cuticular bosses on the anterior end which extend posteriorly for about 1 mm. There is a definite pharynx or vestibule which is slightly expanded anteriorly and which projects a short distance in front of the head (text-fig. 2*a*).

The males are 5.4-6.3 mm. in length and 0.13-0.19 mm. in maximum diameter. The pharynx is 0.045-0.052 mm. in depth, the first part of the oesophagus is 0.37-0.32 mm. and the second part 1.6 mm. in length, a total length of 1.91-1.97 mm., measuring from the anterior extremity. The caudal alae are 0.26-0.28 mm. in length and are supported by 5 pairs of precloacal and four pairs of postcloacal pedunculate papillae, and in addition there is a group of 5 or 6 small sessile papillae on the ventral surface of the tail near its tip. The cloaca is 0.13-0.14 mm. from the tip of the tail. The spicules are unequal and dissimilar.



TEXT-FIG. 2.—*Gongylonema capucini*, sp. nov.

a. Anterior extremity; *b.* Male, posterior extremity, semi-lateral view; *c.* Female, posterior extremity, lateral view.

The short spicule is relatively stout and slightly curved, its proximal end is marked by a thickening with transverse grooves and its length is from 0.080-0.088 mm. The long spicule is much more delicate, its tip is slightly spatulate and is surrounded by a delicate membranous expansion, and its length is about 0.52 mm. No gubernaculum could be definitely seen although there is a faint suggestion of a lightly-chitinized U-shaped structure just inside the cloaca (text-fig. 2*b*).

The single intact female measured 15.3 mm. in length and 0.19 mm. in maximum diameter. The vulva opens 2.06 mm. from the posterior extremity and the anus is 0.16 mm. from the same point. The tail narrows rapidly immediately behind the anus. The eggs are oval with thick shells and measure $40-48 \times 28-30 \mu$ (text-fig. 2c).

Two other species of *Gongylonema* have been recorded from monkeys, namely *G. macrogubernaculum* Lubimov¹, and *G. microgubernaculum* Gebauer². The first of these was recovered from the lungs, oesophagus or stomach of *Cebus hypoleucus*[=*C. capucinus* (Linn.)]³, *Macacus rhesus*[=*Macaca mulatta* (Zimm.)] and *Cercopithecus talapoin*[=*Miopithecus talapoin* (Schreber)], and the second from the lungs of a *Silenus rhesus*, which in all probability is the same species as *Macaca mulatta* (Zimm.).

Gebauer evidently considered that Lubimov was dealing with more than one species of *Gongylonema* because he gives *G. macrogubernaculum* as a synonym (*pro parte*) of his species *G. microgubernaculum*, but he makes no explanation of his action.

The other species of *Gongylonema* recorded from other animals have been differentiated from *G. macrogubernaculum* and *G. microgubernaculum* by Lubimov and Gebauer respectively, so it is only necessary to differentiate the present species from these two to establish its position as new.

The present worm is less than half the length of either of the above species, in both sexes. The length of the long spicule in proportion to the length of the males is different in all three species for in the case of *G. macrogubernaculum* it is approximately 1 : 2.5, in *G. microgubernaculum* 1 : 7, and in the present species 1 : 11. The large and characteristic gubernaculum in *G. macrogubernaculum* and its apparent absence in the present species is another point of difference. Finally in *G. microgubernaculum* the proximal portion of the short spicule is different from that of the other two species, which are alike. It is noteworthy that the caudal papillae in all three species are similar.

On account of the above differences it is considered justifiable to suggest for this worm a new species and it is accordingly named *Gongylonema capucini*, sp. nov. Host: *Cebus capucinus* (Linn.).

Type.—The type slide (Reg. No. W3427/1) is preserved in the collection of the Zoological Survey of India (*Ind. Mus.*), Calcutta.

***Molineus torulosus* (Molin, 1861) Yorke & Maplestone, 1926.**

This worm was originally found in the same host (*Cebus capucinus*). The present material agrees in all its anatomical details with the most recent description by Travassos⁴, the only discrepancy being that the males are smaller being 6.6-2 mm. in length whereas Travassos gives the size as 8.2-9 mm. ; the females agree with Travassos' measurements.

¹ Lubimov, M. P., *Parasitology* XXIII, p. 446 (1931).

² Gebauer, O., *Zeitschr. f. Parasit.* V, p. 730 (1933).

³ The latest scientific names of the species have been given within brackets.

⁴ Travassos, L., *Monograph. do Inst. Osw. Cruz*, No. 1, p. 75 (1937).