

TWO NEW NEMATODES FROM THE NICOBAR PIGEON AND THE COMMON SANDPIPER.

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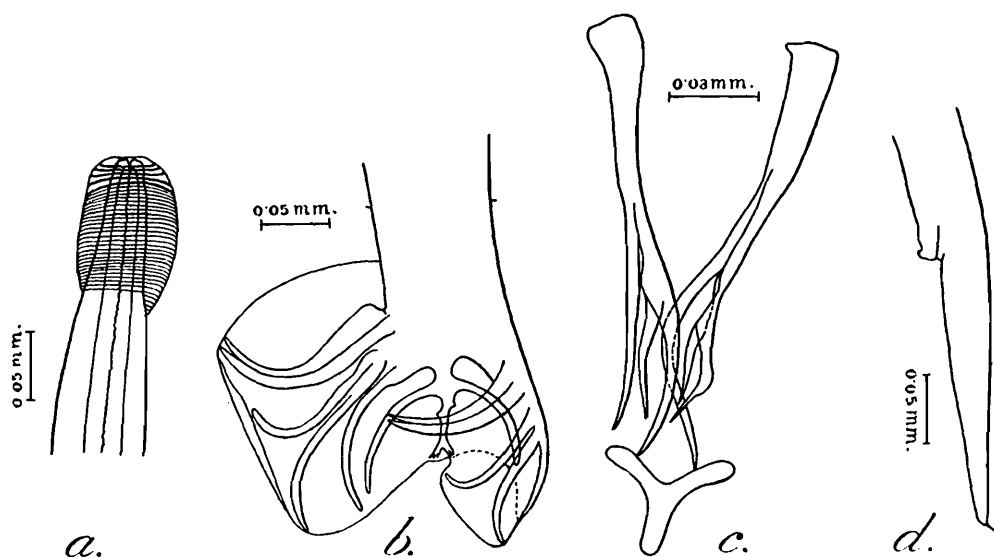
(From the Helminthological Research Laboratory, School of Tropical Medicine, Calcutta.)

Ornithostrongylus nicobarica, sp. nov.

A number of examples of the species described below were found in the intestine of a Nicobar pigeon (*Caloenas nicobarica nicobarica* Linn.) which died in the Calcutta Zoological Gardens.

The small head is surrounded by a relatively prominent cephalic inflation which is slightly asymmetrical. It shows distinct transverse striations four of which behind the first at the anterior end are much coarser than the remainder (text-fig. 1a).

The male bursal rays are typical except for two small lateral branches arising asymmetrically from the lateral borders of the dorsal ray; there



TEXT-FIG. 1.—*Ornithostrongylus nicobarica*, sp. nov.

a. Anterior region showing the cephalic inflation and the transverse striations. b. Posterior region showing bursa. c. Spicules showing tripplepointed ends and Y-shaped gubernaculum. d. Tail end of the female.

are pre-bursal papillae. It was not possible to get both sides of the bursa expanded at the same time, but it appears to be bilaterally symmetrical and the unequal appearance in text-figure 1b is caused by the foreshortening of the side which is rolled under. The spicules are equal and end in the usual three points, and there is a Y-shaped gubernaculum (text-fig. 1c).

In the female there is a typical ovejector with divergent equal limbs. The tail ends in a long tapering point surmounted by a cuticular spine, and the anterior lip of the anus is prominent (text-fig. 1d).

Table of measurements in (millimetres).

	Male	Female
Length	6.5—7.75	9.9—10.8
Maximum diameter .. .. .	...	0.118
Excretory pore from anterior end	0.32	0.34
Head, diameter	0.028	0.028
Cephalic inflation, diameter	0.05—0.07	0.06—0.07
Nerve ring from anterior end .. .. .	...	0.28
Oesophagus, length	0.33	0.39—0.45
Spicules, length	0.164—0.168	...
Gubernaculum, length	0.038	...
Distance from vulva to anus .. .. .	...	2.0—2.36
Ovejectors, length .. .. .	...	0.23
Anus to tip of tail .. .. .	...	0.20—0.21

A comparison of this table with that given by Maplestone (1932) for *O. travassosi* shows that the present species is slightly larger. This alone is not sufficient for the creation of a new species, but it exhibits certain anatomical characters which justify this step.

In the new species the cephalic inflation is much larger and its posterior end is sharply defined, whereas in *O. travassosi* it gradually becomes narrower until it is continuous with the cuticle.

In the male the dorsal ray is relatively longer and bears two lateral asymmetrically placed branches in the new species, and the gubernaculum has three approximately equal limbs whereas in *O. travassosi* the posterior limb is about twice as long as the other two.

In the female of the new species the ovejector is much shorter although the worms are larger. The tail is relatively much longer in the new species and the anus has a prominent anterior lip, which is not present in *O. travassosi*.

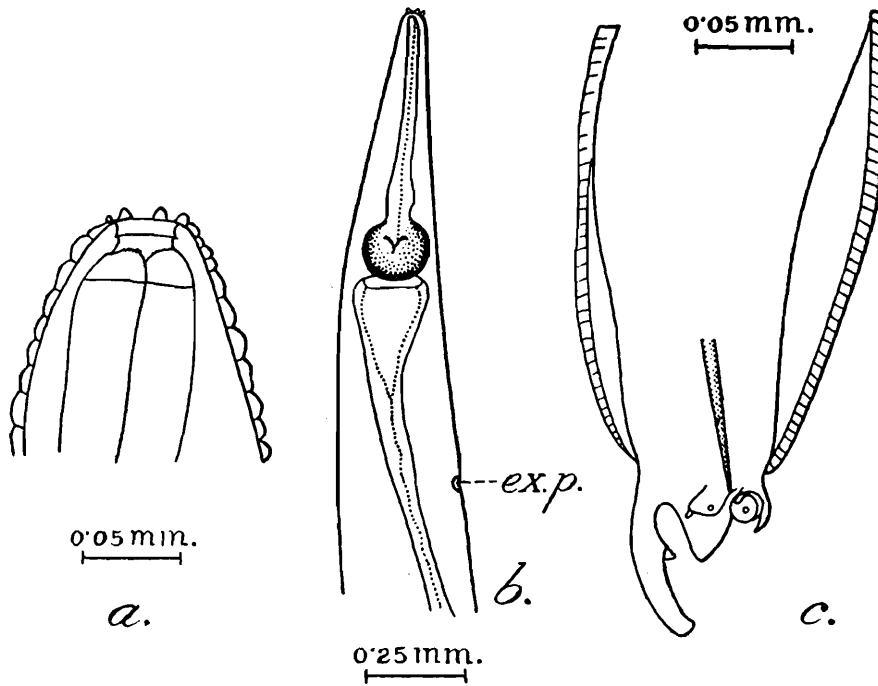
This worm also shows differences from all the other species of the genus listed by Travassos (1937), so it is proposed to name it *Ornithostrongylus nicobarica*, sp. nov.

Host.—The Nicobar Pigeon *Caloenas nicobarica nicobarica* Linn.

***Thelandros avis*, sp. nov.**

This worm is said to have been found in the intestine of a sand-piper (*Tringa hypoleucos* Linn.) which died in the Calcutta Zoological Garden,

The skin shows coarse transverse striations and there are no lateral alae. The mouth opening is circular and is surrounded by six prominent papillae, only three of which are visible at one time under the microscope. The mouth leads into a lightly-chitinised short vestibule (text-fig. 2*a*). The oesophagus is typical and ends in a large spherical



TEXT-FIG. 2.—*Thelandros avis*, sp. nov.

a. Anterior region showing the mouth and vestibule. *b.* Anterior region showing the oesophagus and excretory pore. *c.* Posterior region of male.

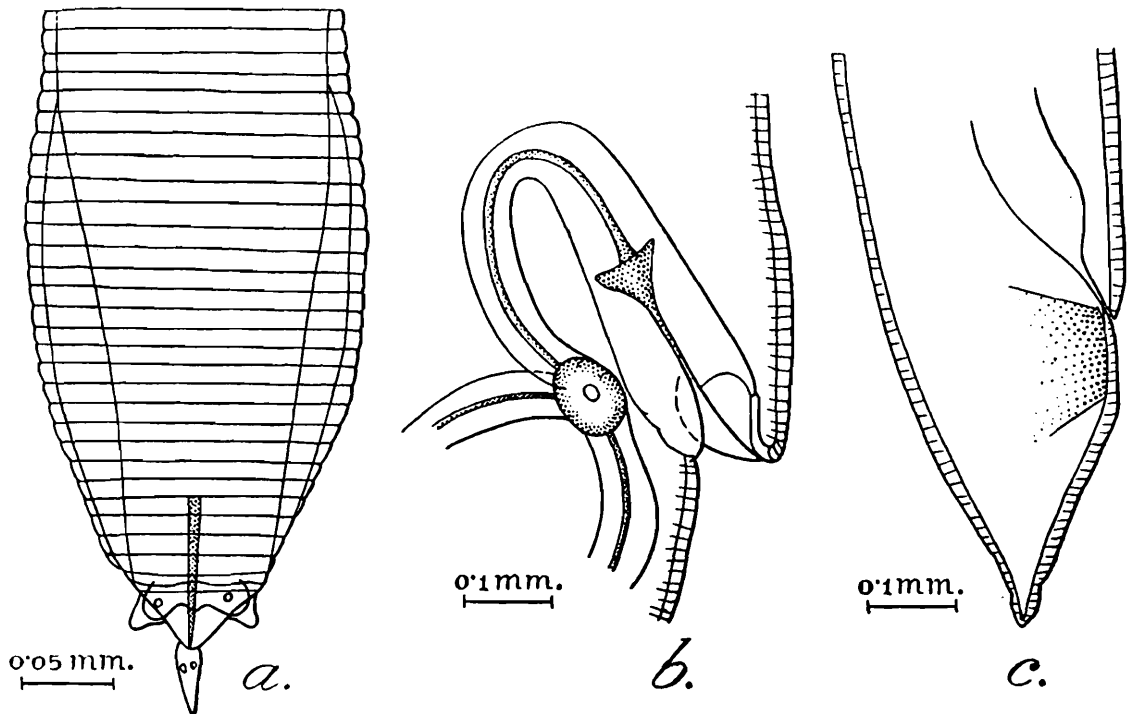
ex. p., excretory pore.

bulb which is preceded by an hour-glass constriction. The anterior end of the intestine is expanded at its junction with the oesophagus. The excretory pore is large and is situated some distance behind the oesophagus (text-fig. 2*b*).

The cuticle is swollen towards the posterior end of the male, and this, when viewed from the ventral aspect, gives a false impression of narrow caudal alae. There are two pairs of large papillae on each side of the cloaca, one just dorsal and the other just ventral to it, while there is a third pair of small papillae on the ventral surface of the caudal prolongation. The process ventral to the cloaca is in the form of a single point and is not fringed as in many members of the genus. There is a single, straight pointed spicule typical of the genus and there is no gubernaculum (text-figs. 2*c*, 3*a*).

In the female the vulva opens behind the middle of the body. It has a prominent anterior lip which gives the opening a somewhat funnel-shaped character, and it leads into a muscular ovejector. This organ runs slightly forwards at first and then curves posteriorly as the vagina, which soon divides into the two uterine stems (text-fig. 3*d*). The posterior end narrows abruptly a little behind the anus forming a short and

blunt tail (text-fig. 3c). The eggs are oval, asymmetrical and have an operculum at one end and are very similar to those figured by Sand-



TEXT-FIG. 3.—*Thelandros avis*, sp. nov.

a. Posterior region of male. b. Genital portion of female. c. Posterior end showing the anus and tail.

ground (1936) for *T seurati*; they are, however, much larger than in the latter species.

Table of measurements (in millimetres).

	Male	Female
Length	3.65—4.16	5.88—6.4
Diameter	0.35—0.38	0.59—0.63
Oesophagus, length	0.71—0.79	0.98—1.1
„ diameter of bulb ..	0.16—0.18	0.22—0.23
Excretory pore from anterior end	1.16—1.4	1.45—1.77
Spicule, length	0.084—0.096	...
Tail, length	0.072—0.08	0.35—0.36
Vulva from posterior end	...	2.39—2.48
Eggs .. ..	...	0.116—0.128
		× 0.068—0.072

Although this worm is quite typical in its anatomical characters it shows sufficiently marked differences from other species of the genus *Thelandros* to warrant its being separated as a new species, for which

the name *Thelandros avis*, sp. nov. is proposed thus indicating the unusual host in which it was found; all previous species having been recorded from reptiles.

Host.—The common sand piper *Tringa hypoleucos* Linn.

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