

TWO TRICHOSTRONGYLE NEMATODES FROM A MARMOSET

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SUMMARY

A number of worms were taken from the small intestine of *Callithrix jacchus*, recently imported (from the Antwerp Zoo) for the Adelaide Zoological Gardens. They were collected and fixed in the Institute of Medical and Veterinary Science (Adelaide) and given to me through the courtesy of Alan W. Banks of that Institute. Mr. Banks noted that in life "the largest worms were red and more or less straight, the smaller ones coiled". The species have been identified as *Molineus elegans* Travassos (the larger) and *Longistriata dubia* Travassos (the coiled), both new records for the marmoset. Travassos noted (1937, p. 77) that these two species occurred together in the common type host, *Saimiri sciurea*.

Molineus elegans Travassos

Fig. 1.

Host and Locality.—*Callithrix jacchus*, Adelaide Zoological Gardens.

The measurements and appearance of the specimens from the marmoset agree generally with the description of the types, although the position of the cervical groove and the excretory pore, and of the cervical papillae, are more posterior compared to that of the nerve ring and to the length of the oesophagus. The arrangement of these resembles more that in *M. torulosus* (Molin). It is, however, distinguished from *M. torulosus* by the barbed inner branches of the spicules, the longer externo-dorsal ray, the presence of a patch of fine hooks on the inner surface of the lateral lobes of the bursa, and the shorter ovejectors.

Measurements are given in Table 1.

TABLE 1.

Measurements of *Molineus elegans* and *Longistriata dubia* from a marmoset

	<i>Molineus elegans</i>		<i>Longistriata dubia</i>	
	♂	♀	♂	♀
Length (mm)	4.0-5.5	4.4-6.9	2.7-2.8	2.9-3.5
Oesophagus (μ)	355-380	370-420	300-340	300-400
Anterior end—nerve ring (μ)	180-210	170-210	180	160-180
—cerv. pap. (μ)	220-240	240-270	250	250-280
—excr. pore (μ)	210-260	210-250	250	250-280
Length ceph. inflation (μ)	50-60	55-70	55-60	50-60
Spicules (μ)	110-130	—	180-190	—
Gubernaculum (μ)	60-70	—	720	—
Vulva—posterior end body (μ)	—	0.9-1.2	—	170-250
Tail (sans spike) (μ)	—	80-90	—	60-100
Tail spike (μ)	—	10-15	—	—
Eggs (μ)	45-50 x 25-30		—	70-80 x 40

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Longistriata (Brevispiculoides) dubia (Travassos)

Fig. 2-5.

Host and Locality.—*Callithrix jacchus*, Adelaide Zoological Gardens.

Longistriata dubia closely resembles *L. argentina* Freitas, Lent and Almeida. The latter has been recorded once, from a rodent, *Holochilus balnearum* (F, L, A 1937, p. 198), the former five times, three records from primates (Travassos, 1921, p. 367, from *Saimiri sciurea*; 1937, p. 329, from *Alouta caraya*; Cameron, 1923, p. 71, from *Saimiri sciurea*) and twice from a lagomorph, *Romerolagus diazi* (Bravo Hollis, 1950, p. 114; Aguillar, 1958, p. 45). A proper comparison of the descriptions given by these authors is impossible, as the positions of nerve ring, excretory pore and cervical papillae are not given in all cases. Moreover, I have unfortunately been unable to consult Aguillar's paper. The spicule tips

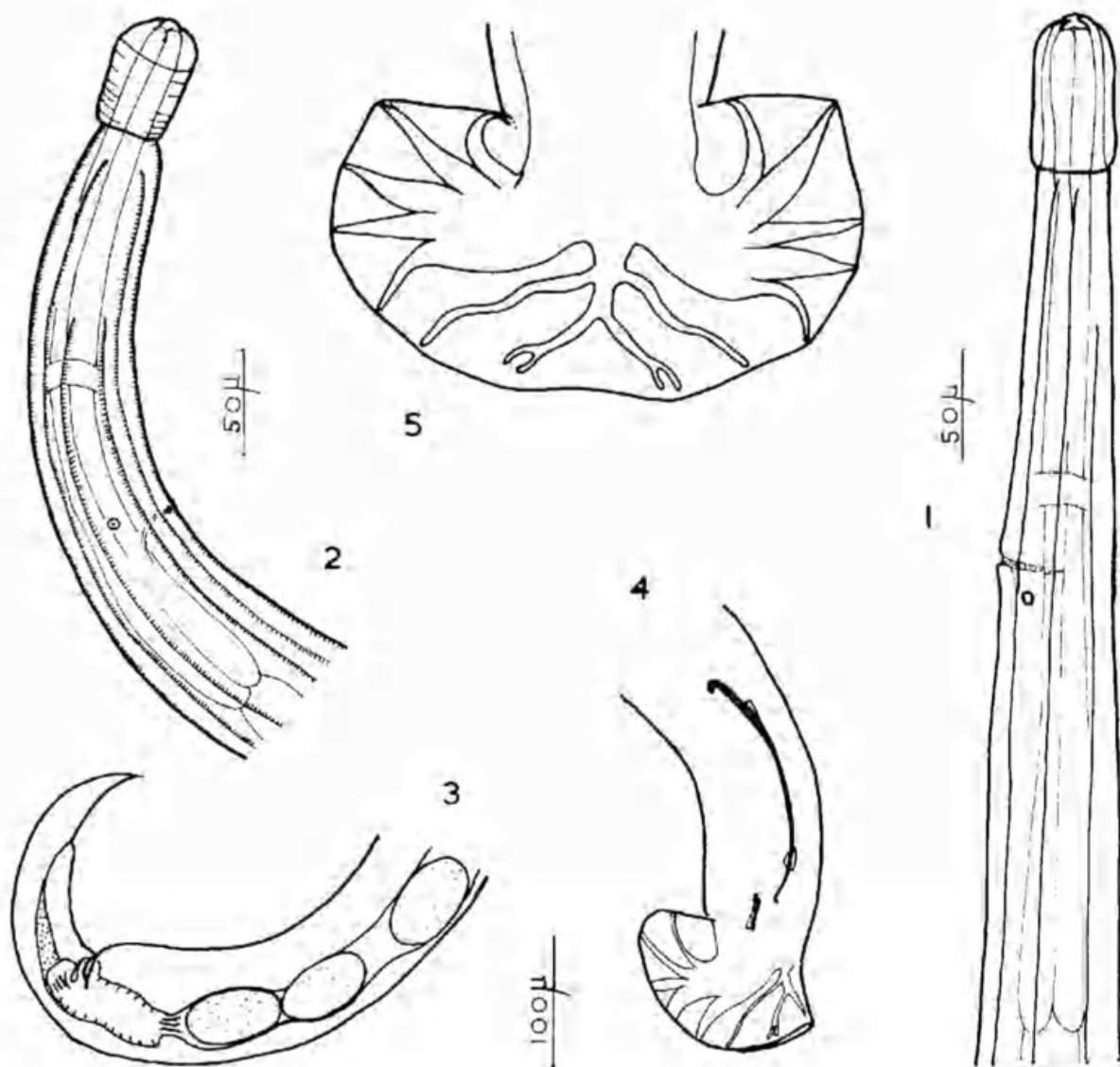


Fig. 1. *Molineus elegans*, oesophageal region. Figs. 2-5. *Longistriata dubia*: 2, oesophageal region; 3, *L. dubia*, tail of female; 4, *L. dubia*, posterior end of male; 5, *L. dubia*, bursa opened out. 1, 2, and 5 to same scale; 3 and 4 to same scale.

are described by Travassos as enlarged and enclosed in a membrane, but are shown by other authors as simple. *L. dubia* of Bravo Hollis is shown with the excretory pore in what seems to be a groove around the body. In the specimens now identified as *L. dubia* no such groove is present. The spicules each end in a tiny hook which in lateral view gives a swollen appearance to the tips. In some male specimens a very lightly chitinised gubernaculum and telamon, absent in *L. dubia*, are visible, as figured for *L. argentina*.

The tail of the female ends in a sharp point, whereas those figured in all records quoted above are rather rounded; the sub-cuticular tissue, however, shows subterminal knobs as figured by Travassos. The eggs are larger in relation to the body width than in other descriptions, but it has been noticed that in *Longistriata* spp. the posterior end of the female enlarges with age.

It is considered that the specimens from the marmoset belong to *L. dubia*. Whether *L. argentina* should be considered a synonym of *L. dubia*, and, if not, whether the specimens identified by Bravo Hollis and by Aguillar belong to *L. dubia* or to *L. argentina*, can only be ascertained by re-examination of the material in question.

Measurements of the specimens from the marmoset are given in Table I.

REFERENCES

- AGUILLAR, M. B. G. M., 1958. Estudio sobre algunos nematodos de mamíferos. Thesis, Univ. Nac. Auton. Mexico, 89 pp.
- BRAVO HOLLIS, M., 1950. Estudio de nematodos parásitos de los leporídeos del distrito Federal. An. Inst. Biol. Mexico, **21** (1), pp. 103-118.
- CAMERON, T. W. M., 1923. Studies on two new genera and some little known species of the nematode family Trichostrongylidae Leiper. J. Helminth, **1**, pp. 71-96.
- FREITAS, J. F., TEIXEIRA DE, LENT, H., and ALMEIDA, J. LINS DE, 1937. Pequena contribuição ao estudo da fauna helminthologica da Argentina. Mem. Inst. Osw. Cruz., **32**, pp. 195-210.
- TRAVASSOS, L., 1921. Contribuição ao conhecimento da fauna helminthologica brasileira. XIII. Ensaio monographico da familia Trichostrongylidae Leiper, 1912. Mem. Inst. Osw. Cruz, **13**, pp. 1-82.
- TRAVASSOS, L., 1937. Revisão da familia Trichostrongylidae Leiper, 1912. Monographias Inst. Osw. Cruz, **1**, 512 pp.
- TRAVASSOS, L., 1921. Nematodeos novos I. Brazil-Med., an. 35, vol. **2** (24), pp. 367-368.



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