

*PEREIRAIA RAPHICERI* sp. nov. (NEMATODE: ASCAROPSINAE)  
FROM A STEENBUCK (*RAPHICERUS CAMPESTRIS*  
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This description is based on the examination of 14 male and 28 female worms collected from the abomasum of a steenbuck from Wallekraal, N.W. Cape. Practically all the specimens are well extended, especially the females. The posterior extremities of the males are spirally coiled, into two or three coils. They are creamy in colour. All are attenuated at the anterior end only.

It was not possible to determine the length of the males accurately because of the coiled nature of the posterior end, but it is estimated that they are from 13 to 15 mm long. The body thickens progressively from 0·07 to 0·84 mm anteriorly to a maximum thickness of 0·28 to 0·32 mm posteriorly. The females are from 34 to 39 mm long, 0·075 to 0·085 mm thick at the anterior end and 0·5 to 0·54 mm thick immediately anterior to the anus. Externally the cuticle shows fine annulations. Laterally the body is provided with a narrow ala on either side. These alae, about 0·015 mm wide, extend from behind the cervical papillae to the level of the posterior end of the oesophagus.

The cervical papillae are small, very inconspicuous and asymmetrically placed. In the males they are about 0·2 mm from the anterior end on one side, and 0·3 mm on the other side; in the females these distances are about 0·24 and 0·32 mm respectively. The excretory pore varies in position from 0·35 to 0·4 mm from the anterior end.

The mouth is bounded by two trilobed lateral lips, each about 0·015 mm high. Internally each central lobe carries a small, forwardly curved tooth and externally a prominent lateral papilla at its base. On the outer lobes the submedian papillae are nearer to the base. The mouth leads into a tubular, cuticular pharynx, 0·12 to 0·14 mm long in the males and 0·13 to 0·15 mm long in the females. The pharynx wall, about 0·012 mm thick, is strengthened internally by 15 to 20 somewhat irregular annular thickenings (Fig. 1); the transverse diameter is from 0·035 to 0·04 mm. The nerve ring encircles the pharynx at 0·225 to 0·25 mm from the anterior end. The relatively long oesophagus consists of two distinct parts: (1) a narrow muscular anterior portion, up to 0·34 mm long in the males and up to 0·45 mm long in the females, 0·06 mm thick at its anterior end and 0·09 mm at its junction with the posterior oesophageal portion; (2) a posterior glandular portion gradually increasing in thickness posteriorly; in the males it is from 2·2 to 2·4 mm long, with a terminal thickness of 0·13 to 0·14 mm; in the females it reaches a length of 3·0 mm with a maximum thickness of 0·18 mm.

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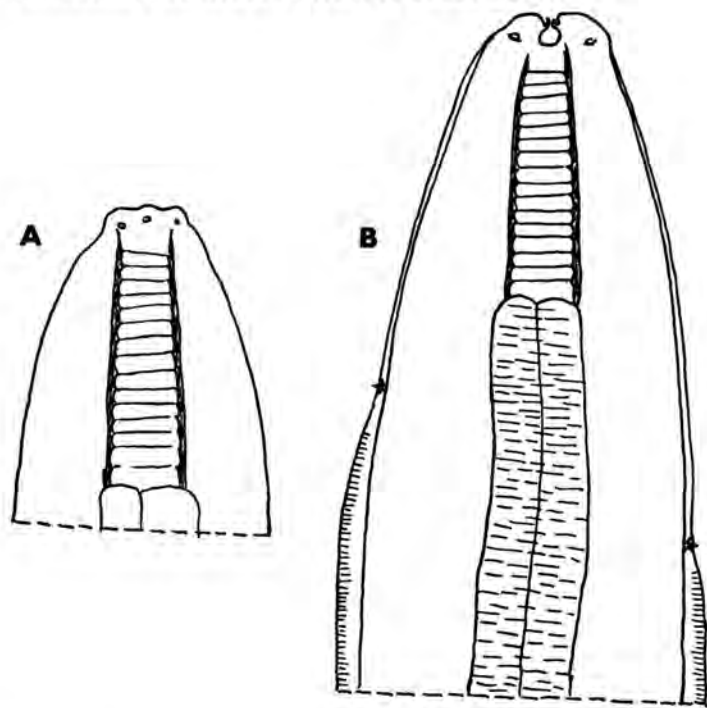


FIG. 1.—*Pereiraia raphiceri* sp. nov. Anterior portions of body. A = Lateral view, B = Dorsal view.

Male

The males are spirally coiled posteriorly and carry broad caudal alae, extending almost to the end of the tail. The alae are supported on each side by four precloacal, lateral, pedunculated papillae. Two pairs are situated close together just anterior of the cloaca, and two pairs further forwards and about 0.06 mm apart. Ventrally just behind the cloaca there are two pairs of much smaller papillae with short peduncles, one pair behind the other (Fig. 2). At the tip of the

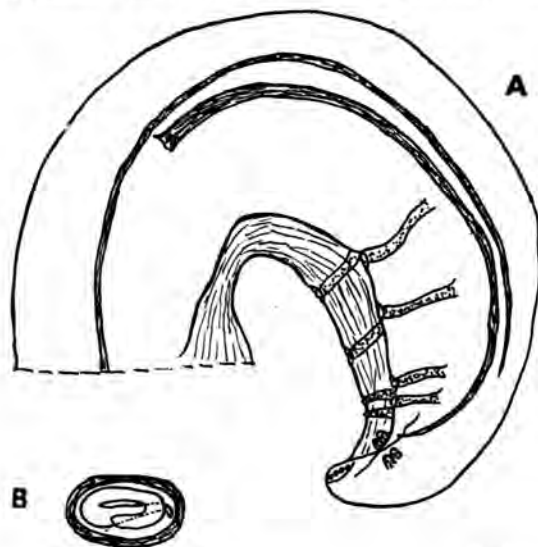


FIG. 2.—*Pereiraia raphiceri* sp. nov. A = Posterior extremity of male. B = Egg from uterus.

tail there are eight very small papillae arranged in pairs, roughly one pair behind the other. The caudal ventral surface of the body and the caudal alae are covered by longitudinal ridges interrupted only by the cloacal aperture and by the terminations of the papillae. The two spicules are very unequal in length and dissimilar; the shorter and stouter right spicule attains a length of 0.38 to 0.4 mm and a thickness of 0.02 mm at its front end; the left one is 1.7 to 1.8 mm long and about 0.01 mm thick just behind its head. Both spicules end in sharp points. A small gubernaculum 0.035 to 0.04 mm long is present.

#### Female

The inconspicuous vulva is situated in the anterior half of the body at about the junction of the second and third fifths. It leads into a long, tubular, muscular vagina. The vagina 0.8 mm long and 0.066 mm thick in turn is joined by the two uteri which fill practically the whole body from 1.0 mm behind the oesophagus to the anal aperture. They are filled with numerous eggs containing embryos in varying stages of development. Mature eggs *in utero* are oval, 0.037 to 0.042 mm long and 0.016 to 0.021 mm thick. Each egg contains a coiled larva. The shell is

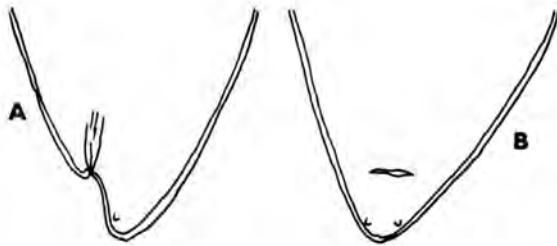


FIG. 3.—*Pereiraia raphiceri* sp. nov. Tail of female. A=Lateral view. B=Ventral view.

smooth and 0.003 mm thick. The tail of the female is short, stumpy and bluntly rounded (Fig. 3), 0.08 to 0.09 mm long, and carries two small ventral papillae 0.027 mm from its tip.

#### Affinities

The presence of two trilobed lips and a tubular pharynx with annular thickenings allies this species to the genus *Physocephalus*. The presence of only one lateral ala on either side, the non-inflation of the cephalic extremity and the position of the vulva in the anterior half of the body separate it from this genus. According to Yamaguti (1961) Travassos described a new species *Physocephalus lassancei* in 1921 from a Brazilian deer, *Mazama simplicicornis*. This deer is also found in the Southern United States and Trinidad where it is known locally as the Brown Wood-Brocket. Cuocola in 1943 placed this parasite in a new genus *Pereiraia*. According to the generic diagnosis, as summarised by Yamaguti, the species described above has all the characteristics of the genus *Pereiraia*, except that the cervical papillae are asymmetrically placed. Unfortunately Travassos' description and Cuocola's redescription are not available to the writer so that a closer comparison of the two species *lassancei* and *raphiceri* is not possible. However, the fact that both worms are harboured as natural infections by hosts from such widely separated areas as Brazil and the Cape, makes it highly probable that they are distinct, though closely related, species. For this reason it is deemed advisable to treat the Cape worms as a hitherto unknown species.

*PEREIRAIA RAPHCERI* FROM A STEENBUCK

*Specific Diagnosis*

Ascaropsinae, males up to 15 mm long, females 39 mm long; two lateral lips trilobed; pharynx tubular with from 15 to 20 internal annular thickenings; cervical papillae asymmetrical; two short, narrow cervical alae present; male caudal extremity spirally coiled and provided with prominent caudal alae; four pairs precloacal pedunculated papillae, the posterior two pairs close together; two pairs of small papillae immediately behind cloaca; four pairs of minute ventral papillae near tail tip; ventral surface of caudal extremity with longitudinal ridges; spicules dissimilar, the left slender up to 1·8 mm long, the right stouter, up to 0·4 mm long; small gubernaculum present; vulva in anterior half of body; two uteri with numerous eggs. Eggs oval, smooth, thick-shelled and fully embryonated when laid.

*Host:* *Raphicerus campestris* (Thunberg, 1811)

*Location:* Abomasum

*Locality:* Wallekraal, N.W. Cape

*Types:* In Onderstepoort collection

SUMMARY

A new species of ascaropsid nematode, *Pereiraia raphiceri*, is described from the abomasum of *Raphicerus campestris*, N.W. Cape. Its chief characteristics are the tubular pharynx with annular thickenings; asymmetrically placed cervical papillae, a short and narrow cervical ala on either side; coiled and alate posterior extremity of the male, presence of four pairs of lateral, stalked, precloacal papillae, two pairs of ventral sessile papillae behind cloaca, and four pairs of minute papillae near tip of tail. Spicules unequal, left 1·8 and right 0·4 mm long. Vulva in anterior half of body. Eggs oval, smooth, thick-shelled, and fully embryonated when laid.

REFERENCES

- YAMAGUTI, S., 1961. Systema helminthum. The Nematodes of Vertebrates. Vol. 3, (1 and 2). New York and London: Interscience Pub. Inc.