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RESEARCH COMMUNICATION

NEMATODIRUS ABNORMALIS (MAY, 1920) IN SHEEP IN THE SOUTH-WESTERN PART OF THE CAPE PROVINCE

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ABSTRACT

LOUW, J. P., 1989. *Nematodirus abnormalis* (May, 1920) in sheep in the south-western part of the Cape Province. *Onderstepoort Journal of Veterinary Research*, 56, 141–142 (1989)

Nematodirus abnormalis is a common nematode parasite of sheep on several farms in the Caledon district of the south-western Cape and is the major species of *Nematodirus* on a farm in the Riviersonderend mountains of this region, yet it has never before been recorded from domestic animals in South Africa.

Nematodirus abnormalis has never before been recorded from domestic animals in the south-western Cape (Reinecke, Kirkpatrick, Swart, Kriel & Frank, 1987) or surrounding areas (Barrow, 1964; Horak, 1981; Muller, 1968; Rossiter, 1961; Viljoen, 1964; 1969), nor does it appear on the most recent host-parasite checklist compiled for sheep in the Republic of South Africa (Horak, 1988).

The only reference to the incidence of *Nematodirus abnormalis* in South Africa is by Boomker, Keep & Horak (1987), who recorded it from grey duiker, *Sylvicapra grimmia*.

This record of *N. abnormalis* in sheep of the south-western Cape may serve to update the host-parasite checklist for sheep and to map the area where this nematode parasite was found.

N. abnormalis has a cosmopolitan distribution and occurs in sheep, goats and other ruminants (Lichtenfels & Pilitt, 1983; Soulsby, 1982).

After *Nematodirus spathiger, N. abnormalis* is the most common species of *Nematodirus* in sheep in the United States of America (Becklund & Walker, 1967).

In sheep in South Australia, *Nematodirus abnormalis* is frequently the dominant species of *Nematodirus* and may even occur as monospecific infections (Beveridge & Ford, 1982).

Beveridge, Martin & Pullman (1985) regard *N. abnormalis* as a common nematode parasite in areas with a Mediterranean type climate. It is reasonable, therefore, to expect that *N. abnormalis* will also be endemic in the Mediterranean climatic zone of South Africa, as global imports of sheep to South Africa (Anon., 1970) were likely to have spread nematode parasites locally to habitats similar to the endemic areas of origin. The fact that *N. abnormalis* were never recorded from the areas surrounding this climatic zone in South Africa, may indicate its restricted distribution in this country.

During a sheep helminth survey carried out on the farms Boontjieskraal, Dunghye Park and Elandskloof (Fig. 1) in the Caledon district of the south-western Cape region of South Africa, *N. abnormalis* and *N. spathiger* were commonly found, while *N. filicollis* were rare. At Elandskloof, which is situated in the Riversonderend mountains, *N. abnormalis* was the major species of this genus.

For identification of the *Nematodirus* males, the key of Becklund & Walker (1967) was used, while the key of Lichtenfels & Pilitt (1983) was used to identify the females at specific level.

N. abnormalis was distinguished from the other species by the twisted and asymmetrical spicule tips of the male (Fig. 2) and by the discontinuities in the cervical region of the lateral cuticular ridge pairs 2 and 8 (Fig. 3).

FIG. 1 *Nematodirus abnormalis* foci: Bk=Boontjieskraal, Dp=Dunghye Park, Ek=Elandskloof

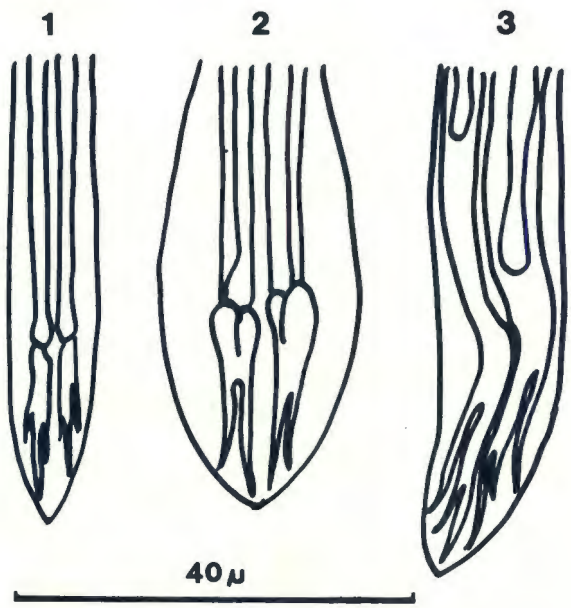

FIG. 2 *Spicule* tips of: 1. *Nematodirus filicollis*, 2. *Nematodirus spathiger*, 3. *Nematodirus abnormalis*.

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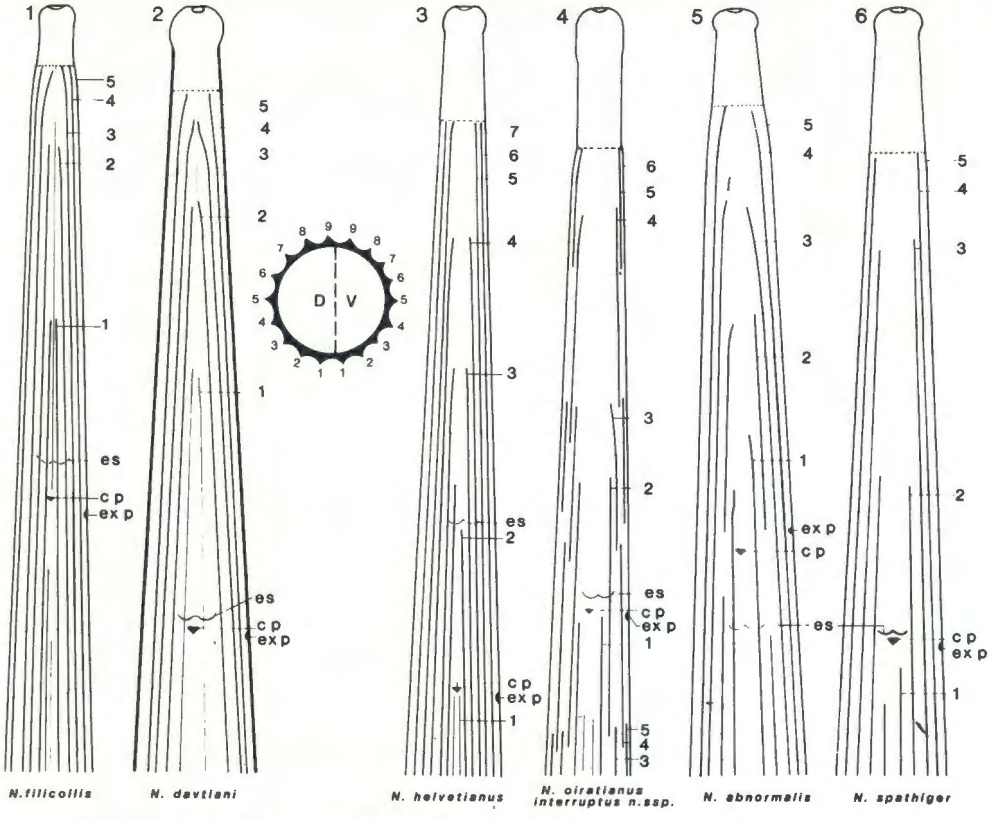

FIG. 3 Diagrammatic drawings by Lichtenfels & Pilitt (1983), showing lateral views of cephalic expansions, number and pattern of cuticular ridges, and positions of cervical papillae (cp), excretory pore (exp), and distal end of oesophagus (es).

1. *N. filicollis*
2. *N. davtiani*
3. *N. helvetianus*
4. *N. oiratianus interruptus spp.*
5. *N. abnormalis*
6. *N. spathiger*

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