RESEARCH COMMUNICATION

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

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ABSTRACT


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 Boomer, 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 Boontjeskraal, 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 Riviersonderend 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=Boontjeskraal, Dp= Dunghye Park, Ek=Elandskloof


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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. daviani  
3. N. helvetianus  
4. N. oviatianus interruptus spp.  
5. N. abnormalis  
6. N. spatihger

REFERENCES


