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PARASITES OF THE BLACKBUCK ANTELOPE (*Antelope cervicapra*) IN TEXAS*

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Abstract: Three blackbuck antelope were examined for external and internal parasites. The latter were listed by location and number present. External parasite species found were as follows: *Amblyomma americanum*, larval Ixodidae and *Tricholipeurus parallelus*. Internal parasite species found were as follows: *Taenia hydatigena* (cysticercus), *Camelostrongylus mentulatus*, *Haemonchus cortortus*, *Trichostrongylus axei*, *Trichostrongylus colubriformis*, *Trichostrongylus probolurus*, *Nematodirus spathiger*, *Oesophagostomum* sp. and *Trichuris* sp. *C. mentulatus* and *T. probolurus* are two helminth species not indigenous to the United States which have survived translocation from India to parts of Texas.

INTRODUCTION

The blackbuck or Indian antelope, native to India, is one of several exotic game animal species frequently stocked by landowners in Texas. The ecology of the parasites of such big game species is fundamental to the management of that particular host species. Furthermore, such wildlife populations provide available and often significant reservoirs for parasites infective to domestic livestock.

Since the blackbuck antelope is a popular zoo specimen, its helminth parasites have been investigated in several other countries.^{1,2,3,4,5,6,7} There are no publications on parasites of blackbuck antelope in the United States.

MATERIALS AND METHODS

Three blackbuck antelope were collected for this study. Blackbuck I was a pregnant female killed in Kerr County, Texas in October, 1971. Blackbucks II and III were from Bexar County, Texas and died of malnutrition related to over-

crowding, food shortage and parasitism in January, 1972. Blackbuck II was a young adult male and blackbuck III was a pregnant female.

Thorough postmortem examinations were performed. External parasites, later to be mounted and identified, were preserved in 70% alcohol. Each gastrointestinal tract distal to the omasum was tied off and refrigerated to promote relaxation and release of worms from the mucosa. The tract was then stripped of its mesentery and separated into abomasum, small intestine and large intestine. The contents of these three organs were emptied into separate pails marked to indicate a volume of 10,000 ml. The mucosa of each organ was thoroughly washed under a slow-drip faucet and the washings collected with respective lumen contents. The total volume was diluted with water to a volume of 10,000 ml from which three samples totaling 1000 ml were removed. In this manner 0.1 aliquots were taken from the abomasum, small intestine and large intestine of each blackbuck antelope.

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Each aliquot was washed by sedimentation at 15-20 minute intervals until the supernatant became clear. The washed sediment was stained with iodine and examined with a stereoscope at 10X magnification. Helminths were mounted in lactophenol.

RESULTS AND DISCUSSION

Tricholipeurus parallelus, a louse frequently associated with wild deer populations, was found on all three blackbuck

specimens. *Amblyomma americanum* and several Ixodidae larvae were present on two of the three antelope.

Two cysticerci of *Taenia hydatigena* were found in the peritoneal cavity of each of two blackbuck, attached to the greater momentum and to the mesentery of the small intestine.

The gastrointestinal helminths are recorded by location and numbers present in Table 1. Many *C. mentulatus* and *T. probolurus* were found in the abomasa and small intestines respectively. Since

TABLE 1. Species and numbers of gastrointestinal helminths of blackbuck antelope in Texas.

	Blackbuck No.		
	I	II	III
Abomasum			
<i>Camelostrongylus mentulatus</i>	1,100	4,800	21,830
<i>Haemonchus contortus</i>	20	140	2,750
<i>Trichostrongylus axei</i>	470	0	200
Small Intestine			
<i>Nematodirus spathiger</i>	190	19,870	10,740
<i>T. axei</i>	200	0	0
<i>Trichostrongylus colubriformis</i>	340	2,600	3,540
<i>Trichostrongylus probolurus</i>	2,500	19,390	56,110
Large Intestine			
<i>Oesophagostomum sp.</i>	0	0	10
<i>Trichuris sp.</i>	0	120	80

these two nematodes are not indigenous to the United States, it is interesting that these species have survived translocation from India to parts of Texas.

Four trichostrongyles, *H. contortus*, *T. axei*, *T. colubriformis* and *N. spathiger*, commonly found in cattle, sheep and goats, were present in blackbuck. Because the parasite fauna of most ruminant

species depends in part upon the geographical location and the parasite species common to that area, most parasites of domestic ruminants and of native wild ruminants, such as white-tailed deer, should be considered potentially transmissible to blackbuck antelope and vice versa.

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