



RESEARCH COMMUNICATION

Helminth parasites of domestic pigeons (*Columba livia domestica*) in Sebele, Gaborone, Botswana

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ABSTRACT

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Twelve adult domestic pigeons from Sebele, Gaborone, Botswana, were examined for the presence of helminth parasites. The cestode genus *Raillietina* and two species of nematodes, *Dispharynx spiralis* and *Ascaridia columbae* were recovered. Most pigeons (75 %) were infected with *Raillietina* spp. often in concurrence with *A. columbae*.

Keywords: Botswana, helminths, pigeons

INTRODUCTION

During a survey of parasites of backyard poultry at Sebele near Gaborone, many households were found to keep domestic pigeons (*Columba livia domestica*) (Mushi, Binta, Chabo, Mathaio & Ndebele 1999). The birds were mainly used as a source of protein, and kept in small wire mesh enclosures, fed on left-over human food and occasionally some grains. Internal and external parasites are very common, for these pigeons are usually not treated (Kaminjolo, Tikasingh & Ferdinand 1988; Zwart 1986). As no information was available on the occurrence of helminth infections of domestic pigeons in Botswana a small number of pigeons were examined. The present paper records the helminth parasites recovered from these birds.

MATERIALS AND METHODS

Twelve adult domestic pigeons purchased from 3 different households during the winter months of May and June 1999, were examined. Although the birds were housed in wire mesh enclosures, they managed to escape readily and may thus be considered as free-range. The pigeons were starved for one day before they were killed by ether inhalation and a necropsy was performed. The respiratory and digestive tracts were examined systematically, the latter after being separated into oesophagus, crop, proventriculus, gizzard, small intestine, caeca and large intestine. The contents of each were emptied separately into petri dishes and mucosa was washed thoroughly with tap water and later on was scraped off with the blunt edge of a scalpel blade. The material was preserved in 5% formalin and the parasites were collected, identified and counted.

RESULTS

Two nematode parasites, *Dispharynx spiralis* and *Ascaridia columbae* and a cestode *Raillietina* were found (Table 1). No worms were present in the tracheas, oesophagi, crops and caeca. *Dispharynx spiralis* was found in the contents of the proventriculus

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TABLE 1 Helminths recovered from 12 domestic pigeons in Botswana

Organ	Species	No. of pigeons infected
Trachea	–	0
Oesophagus	–	0
Crop	–	0
Proventriculus	<i>Dispharynx spiralis</i>	1
Gizzard	–	0
Small intestine	<i>Ascaridia columbae</i>	3
	<i>Raillietina</i>	9
Large intestine	<i>Ascaridia columbae</i>	1
	<i>Raillietina</i>	4

but they were not associated with any mucosal lesions. *Ascaridia columbae* were mainly found in the small intestine and occurred singly or in pairs. *Raillietina* spp. were most common and occurring in both the small and large intestines in 75% of the pigeons. Those pigeons with *A. columbae* were concurrently infected with *Raillietina* spp.

DISCUSSION

The helminth species collected from domestic pigeons may be considered as the first records in Botswana. The *Raillietina* spp. were most common

because the pigeons were free-ranging and thus having access to the intermediate host of the tapeworm. The worm burdens were generally low as the birds were examined during the dry and cold winter months, when worm activity is low. Helminth eggs develop faster in a warm and humid environment (Soulsby 1986) which was lacking at the time of the present study. All of these helminths may infest chickens and pigeons should not be raised together with chickens (Soulsby 1986; Jansen & Pandey 1989).

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