

## Incidence of Gastrointestinal Helminthiasis in Captive Deers at Nagpur

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### Abstract

Out of 60 Samples of deer from Maharajbag Zoo, Nagpur, 30 were positive for eggs and larvae of helminthic parasites. The encountered parasitic species were *Haemonchus spp.*, *Dicrocoelium spp.*, *Paramphistomum spp.*, *Oesophagostomum spp.* and *Bunostomum spp.* etc. Direct smear method together with sedimentation technique were used for the purpose.

**Keywords:** Captive, Deer, Gastro-intestinal, Helminth.

### Introduction

A wide range of parasitic spp. were recorded in zoo animals these parasites not only affect the animal help adversely but some time cause mortality, morbidity or both incidence of parasitism in wild animals have been reported from number of places (Chouhan, *et.al.*, 1973, Kashid *et.al.* 2002, and Maske *et.al.* 1990). This article focuses on the observation found on parasitism of captive deers of Maharajbag Zoo, Nagpur (Maharashtra).

### Materials and methods

The study was conducted on 60 captive deer (30 male+30 female) maintained under semi-intensive system at Maharajbag Zoo Nagpur during the month of June-July 2008. Freshly collected faecal samples of all animals were processed and examined grossly and microscopically for microscopic evaluation. Sedimentation technique of faecal examination was performed and identification of parasitic ova was done by morphological criteria as described by Soulsbey (1982).

### Results and Discussion

Out of 60 samples examined 31 found positive for ova of various Helminthes (Table 1). The parasitic species recorded from deer were *Haemonchus sp.*, *Dicrocoelium dendriticum*, *Paramphistomum cervi*, *Oesophagostomum sp.* and *Bunostomum sp.* No tapeworms or coccidian infection was recorded in this investigation.

Incidence of nematodes was found higher than the trematodes in this survey. Occurrence of these helminthes in deer is in accordance with the findings of Bordoloi (1991), Gaur *et.al.* (1979), Chakraborty & Islam (1996) and Patel *et.al.* (2003). Apart from regular health managemental practices those are being carried out routinely at zoos, the occurrence of parasitic infection in animals would be from environmental route or through contaminated fodder or water (Dakshinkar *et.al.* 1983)

Since park animals are of great social and epidemiological importance, the regular health check

Table-1. Incidence of parasitic fauna in deer of Maharajbag Zoo.

Sr.no.	Parasitic spp.	No. of sample found +ve		Incidence rate.
		Male	Female	
1.	<i>Haemonchus sp.</i>	9	6	25 %
2.	<i>Dicrocoelium sp.</i>	5	-	8.33%
3.	<i>Bunostomum sp.</i>	1	5	10%
4.	<i>Paramphistomum sp.</i>	1	-	1.6%
5.	<i>Oesophagostomum sp.</i>	1	3	6.66%
	Total	17	14	51.66%

up and treatments should be followed. The most of helminthic infection are through food and water contamination, hence while feeding; stringent hygienic measures would be beneficial to prevent infection. Also regular deworming and vitamin and mineral supplementation is helpful for restoring the health status of the endangered species of animals.

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#### References

1. Bardoloi, (1991) Incidence of Intestinal helminth infection of Deer in captivity *Zoo's Print J.*, 6 (11): 17.
2. Chakraborty and Islam (1996) A survey of gastrointestinal parasite infection in living herbivores in Kaziranga National Park, *Zoo's Print J.*, 11(3): 3-5.
3. Dakshinkar et.al. (1983) Occurrence of Trichuris sp. in deer (*Axis axis*) *Veterinarian*, 7(11): 9.
4. Gour et.al. (1979) A note on the occurrence of helminth parasites in wild and zoo animals in Uttar Pradesh. *Indian J. Ani. Sci.*, 49(2): 159-161.
5. Kashid K.P., Shrikhande G.B. and Bhojne G.R. (2002) *Zoo's Print J.* 18: 1053-1054.
6. Patel et.al. (2003) Helminthic infection in wild herbivores. Abstr. Souviner- National Symposium and XXI ISVM Convention 2003, Anand Session 4(5), Pg 179.
7. Soulsby (1982) Helminths, Arthropods, and Protozoa of Domesticated animals. 7<sup>th</sup> Ed. ELBS & Bailliere Tindall, London.

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