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Short Communication

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Report of Lungworm (*Dictyocaulus* sp.) Infection in Captive Spotted Deer (*Axis axis*) at Raj Bhawan Deer Park, Bhubaneswar

Tapaswini Nayak[1], Mitra Ranjan Panda[2], Bijayendranath Mohanty[3], Manaswini Dehuri[4*] and Roshnibala Nayak[5]

[1]Veterinary Assistant Surgeon, Fisheries and Animal Resource Department, Government of Odisha
[2]Professor and Head, [3]Associate Professor, [4]Asst Professor,
Department of Veterinary Parasitology, Orissa University of Agriculture and Technology, Bhubaneswar, Odisha
[5]Scientist, Krishi Vikas Kendra, Dhenkanal, OUAT, Bhubaneswar
*Corresponding Author E-mail: manaswini2003@yahoo.com

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ABSTRACT

The coprological study of captive spotted deer conducted at Raj Bhawan Deer Park, Bhubaneswar from October- 2015to May- 2016 revealed the presence of lungworm (Dictyocaulus sp.) which was identified based on morphological characteristics after faecal culture. This is the first report of lung worm in spotted deer in the region.

Key words: *Spotted deer, Lungworm, Faecal Culture*

INTRODUCTION

India is rich in wildlife resources. In Odisha, there are 2 National Parks, 18 wildlife Sanctuaries and 8 Deer Parks (mini zoos) which have been notified for both in-situ and ex-situ conservation and management of wildlife. Raj Bhawan Deer Park is one of the popular deer park situated in Bhubaneswar. Captivity of wild animals creates an unnatural system and disrupts the balance between the parasite and host. It makes a stressful environment due to which animals are prone to diseases, and can even die due to heavy parasitic load, while they would have survived under natural conditions[6]. Helminthic Infections are a major health issue in captive and wild deer[1] mainly in those cases where herds of animals are kept in relatively small enclosures.

This study records the presence of lungworm infection in captive Spotted Deer (*Axis axis*) reared at Raj Bhawan Deer Park, Bhubaneswar. Fresh faecal droppings from captive Deer were collected during the study period of October- 2015to May- 2016 from different locations (especially around grazing places and near water points) of the deer park. Out of 95 faecal samples 75 samples were found positive for helminthic infection. The faecal sample highly positive for nematode eggs were selected for culture. The faeces were broken up and mixed with charcoal and placed in a glass jar with a lid and stored at a temperature of 26^0C for seven days. After seven days of incubation the sample was transferred to Baermann's Apparatus.

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The larvae were recovered from the Baermann's Apparatus and identified as *Dictyocaulus sp.* (Fig. 1-4) of lungworm by their morphological features like brown intestinal granules, protruding knob at head and bluntly pointed tail [5]. The finding of the study has been documented earlier by Nashiruddullah *et al.*[2], in Kashmir red deer and Ruta *et al.*[4], who had reported the prevalence of *Dictyocauls sp.* in spotted deer and also recovered the lungworm parasites from the lungs of deer through post-mortem of dead ones. Earlier observations by Puttanaiah *et al.*[3], who had reported the presence of *Dictyocaulussp*. in deer, causing verminous pneumonia in deer also supports the present finding.

The prevalence of Lungworm (*Dictyocaulus sp.)* infection in the captive spotted deer, even in those animals that appeared apparently healthy although they were harbouring the parasites suggested that infections routinely are sub-clinical in these animals and they may serve as carriers or reservoir host for these infections. So, proper investigation needs to be undertaken, as well as the presence of vectors and intermediate hosts of the prevailing helminthic parasites should be eliminated in order to control parasites in these captive animals.

FIGURES

Fig. 1: Dictyocaulus larvae in the concerntrated feacal specimen by floatation technique (10X)

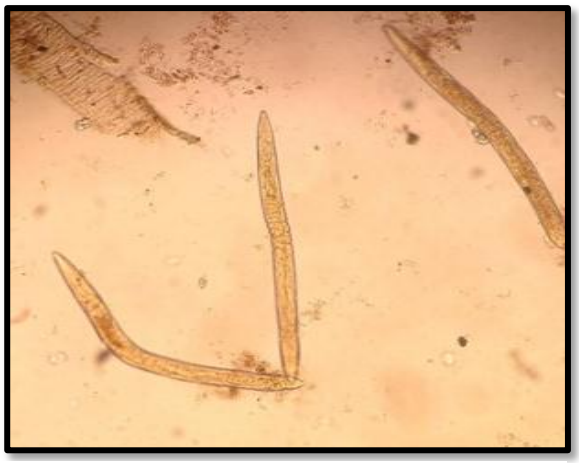

Fig. 2: Dictyocauluslarvae after staining (10X)

Fig. 3: Anterior end of Dictyocaulus larva (40 X)

Fig. 4: Posterior end of Dictyocaulus larva (40X)

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