

Table 1. Prevalence of parasitic infection in zoo birds

Groups of Birds	Scientific name	No. of Group Sample Examined	No. of Birds	No. of Positive	Percent Positive	Identification of egg/oocyst
1. Peafowl	<i>Pavo cristatus</i>	6	4	5	83.33	<i>Ascaridia</i> spp. (2), Mixed infection of <i>Ascaridia</i> spp. and <i>Capillaria</i> spp. (3)
2. Parakeets	<i>Psittacus</i> spp.	42	80	13	30.95	<i>Eimeria</i> spp. (8), <i>Ascaridia</i> (3), <i>Strongyloides</i> spp. (1), Mixed <i>Strongyloides</i> spp. and <i>Eimeria</i> spp. (1)
3. Pigeon	<i>Columbia</i> spp.	42	129	22	52.38	<i>Ascaridia</i> spp. (8), <i>Eimeria</i> spp. (6), Mixed - <i>Ascaridia</i> spp. And <i>Strongyloides</i> spp. (1), <i>Ascaridia</i> and <i>Eimeria</i> spp. (4), <i>Capillaria</i> and <i>Eimeria</i> spp. (1), <i>Capillaria</i> , <i>Eimeria</i> and <i>Ascaridia</i> spp. (1), <i>Capillaria</i> and <i>Ascaridia</i> spp. (1)
4. Pheasant	<i>Chrysolophus</i> spp.	24	13	0	0	—
5. Lorry	<i>Pistaciformes</i> spp.	36	65	16	44.44	<i>Ascaridia</i> spp. (4), <i>Eimeria</i> spp. (9), <i>Capillaria</i> spp. (1), <i>Strongyloides</i> spp. (1), Mixed - <i>Eimeria</i> spp. And <i>Ascaridia</i> spp. (1)
6. Love birds	<i>Agaporinis</i> spp.	6	19	3	50.00	<i>Capillaria</i> spp. (1), <i>Ascaridia</i> spp. (1), <i>Strongyloides</i> spp. (1)
7. Duck	<i>Todona</i> spp.	12	7	3	25.00	<i>Ascaridia</i> spp. (2), <i>Eimeria</i> spp. (1)
8. Cockatoo	<i>Cacatoe</i> spp.	18	5	3	16.66	<i>Eimeria</i> spp. (1), <i>Capillaria</i> spp. (2)
9. Rossella	<i>Platycepus</i> spp.	12	2	4	33.33	<i>Ascaridia</i> spp. (3), <i>Strongyloides</i> spp. (1)
10. Macaw	<i>Ara</i> spp.	18	3	7	38.88	<i>Ascaridia</i> spp. (4), <i>Eimeria</i> spp. (3)
11. Dove	<i>Oeopelia</i> spp.	12	18-	3	25.00	<i>Capillaria</i> spp. (2), <i>Eimeria</i> spp. (1)
12. Emu	<i>Dromiceins</i> spp.	6	5	0	0	—
13. Conur	<i>Arotina</i> spp.	12	4	5	41.66	<i>Capillaria</i> spp. (2), <i>Eimeria</i> spp. (1), Mixed <i>Capillaria</i> spp. and <i>Eimeria</i> spp. (1), <i>Ascaridia</i> spp. And <i>Eimeria</i> spp. (1)
14. Koel	<i>Endynoms</i> spp.	6	2	0	0	—
15. Indian Pied Hornbill		1 2	4	4	33.33	<i>Eimeria</i> spp. (3), <i>Ascaridia</i> spp. (1)
16. Flamingo	<i>Phoebicopterus</i> spp.	6	3	2	33.33	<i>Capillaria</i> spp. (1) and <i>Ascaridia</i> spp. (1)
17. Cockatiel	<i>Mymphirus</i> spp.	12	17	1	8.33	<i>Ascaridia</i> spp. (1)
Total		282	437	101	35.81	

Note: Number in parentheses indicates the number of positive samples



VET BRIEF

ZOOS' PRINT JOURNAL 22(12): 2952

Endoparasitic infection of Spotted Deer *Axis axis* in Puducherry

M. Mohan¹ and K. Coumarane²

^{1,2} Veterinary Assistant Surgeons, Veterinary Dispensary, Puducherry 605001, India
Email: ¹ mohanpsp@yahoo.co.in

plus web supplement of 1 page

The Axis or Spotted Deer *Axis axis* is the most widely distributed and abundant cervid species in the Indian protected areas (Arora, 1982). Endoparasites play an important role in the health status of the wild animals. The effects of parasites on domestic animals are well studied and it is largely assumed that the same holds true for wild animals. This study records the endoparasitic infection of captive Spotted Deer reared at Department of Forests and Wildlife, Puducherry.

Eighteen stags (>1 yr) reared were used in this study. Fresh faecal droppings from them were collected during the month of October 2006 for the first time. Standard parasitologic techniques - direct smear, sedimentation and centrifugal floatation techniques were performed as per the method of Moredun Research Institute (2000). However, larval culture technique was not attempted using the faecal pellets.

Adult deer, wherever observations could be made, apparently looked healthy and active without any visible clinical signs of infection. Of 18 stags screened for endoparasitic infection, eight of them harboured either single or mixed parasitic eggs. Direct smear and centrifugal floatation technique revealed the presence of *Trichostrongylus axei*, *Cooperia punctata* and *Capillaria bovis* eggs (Image 1^w). Faecal pellets from five stags were positive for *Cooperia* spp and *Capillaria* spp eggs, two stags were positive

for *Trichostrongylus* spp egg and one stag was positive for *Trichostrongylus* spp and *Capillaria* spp eggs. The parasitic eggs were identified based on its morphology described by Soulsby (1982). Perusal of literature revealed that helminths of captive Spotted Deer in India are scanty.

Ramasamy & Arora (1991) recorded prevalence of *Mullerius capillaris* in free ranging Spotted Deer in India. Mckenzie & Davidson (1989) reported *Trichostrongylus axei*, *Cooperia punctata*, *Haemonchus contortus* and *Capillaria bovis* infected Axis Deer in island of Molokai, Hawaii. Our results are in agreement with the findings of Mckenzie & Davidson (1989). Identification of ova of these potentially dangerous parasites suggested that moderate infection of Spotted Deer had occurred.

References

Arora, B.M. (1982). *Bibliography on Microbiological, Pathological, Parasitological and Clinical Studies in Indian Wild fauna - Mammals, Aves and Reptiles*. Division of Epidemiology, Indian Veterinary Research Institute, Izatnagar, India. 236pp.
 Mckenzie, M.E. & W.R. Davidson (1989). Helminth parasites of intermingling Axis Deer, wild swine and domestic cattle from the island of Molokai, Hawaii. *Journal of Wildlife Diseases* 25(2): 252-257.
 Moredun Research Institute (2000). Laboratory Techniques for the Diagnosis, Culture and Identification of Nematodes Infecting small ruminants. U.K, 15pp.
 Ramasamy, K. & B.M. Arora (1991). Prevalence of *Mullerius capillaris* in free-ranging Spotted Deer *Cervus axis* in India and its experimental cross-transmission to goats. *Journal of Wildlife Diseases* 27(1): 102-106.
 Soulsby, E.J.L. (1982). *Helminths, Arthropods and Protozoa of Domesticated Animals*. 7th edition. The Williams and Wilkins Company. Baltimore, 603pp.

Acknowledgement: We wish to thank Dr. P. Devaraj, IFS, Deputy Conservator of Forests, Department of Forests and Wildlife, Puducherry and Dr. M.C. Rajamanickam, The Director, Department of Animal Husbandry and Animal Welfare Government of Puducherry for providing all the facilities for conducting this work. The authors are also thankful to Dr. R. Sreekrishnan, Assistant Professor for his kind help.



^w See Image 1^w in the websupplement at www.zoosprint.org