

**A Preliminary Study on Gastrointestinal Parasites of Captive Primates in the National Zoological Gardens Dehiwala, Sri Lanka**

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Fifteen different species of primates representing New World and Old World monkeys and apes from different countries are housed in the National Zoological Gardens, Dehiwala (NZGD). These are: *Symphalangus syndactylus*, *Semnopithecus entellus*, *Macaca sinica*, *Macaca fuscata*, *Macaca cyclopis*, *Presbytis cristata*, *Symphalanges syndactylus*, *Saimiri sciureus*, *Cebus capucinus*, *Cerco cebusatus*, *Pongo pygmaeus*, *Pan troglodyte*, *Papio hamadryas*, *Cebus paella*, *Cercopithecus ascanius*, and *Erythrocebus patas*

Previous studies in other countries have reported occurrence of many species of gastrointestinal parasites (e.g. *Entamoeba* spp., *Giardia* spp., *Endolimax nana*, *Chilomastix mesnili*, *Balantidium coli*, *Trichuris* spp., *Strongyloides fulleborni*, *Cryptosporidium* spp.) in both captive and non-captive primates. The objective of this study was to identify the gastrointestinal parasites of primates housed in NZGD.

A total of 85 freshly voided faecal samples were randomly collected during a seven month period from the cages where the primates are housed. Faecal samples were transferred to the laboratory in cool containers. The following tests were performed for all the faecal samples: direct faecal smear observation, formol ether technique, Shether's modified sugar floatation technique, modified salt flotation method, iodine stain and Ziehl-Neelsen staining. Furthermore, some of the protozoan cyst positive samples were cultured using Tanabe-Chiba medium. In addition, Polymerase Chain Reactions (PCR) were performed with species specific primers to amplify the 18S rRNA gene of *Entamoeba coli*, *Balantidium coli*, and *Entamoeba chattoni*. Results revealed the following: 4/15 positive for *Cryptosporidium* species, 3/15 positive for *Coccidial* oocysts, 4/15 positive for *Balantidium* spp., 2/15 positive for *Blastocyst* spp., 1/15 positive for *Giardia* spp. Unidentified protozoan cysts were detected in three species (Morpho 1, Morpho 2), *Ascaris* eggs were present in three species, nematode larvae and strongyle eggs were present in two species. Hook worm larvae and *Trichuris* eggs were present in three and two species respectively. We successfully amplified a 180 bp in length fragment with *Entamoeba coli* specific primers using PCR techniques. We were not able to amplify the partial sequence of *B. coli* and *E. chattoni*.

In the present study, primates did not show any clinical infections although they harboured many pathogenic gastrointestinal parasites. We suggest that further studies should determine the parasitic burden with relation to clinical infection. .