

**GASTRO-INTESTINAL PARASITES OF WET AND DRY ZONE TOQUE
MACAQUES (*Macaca sinica*) AND THEIR ZOONOTIC AND ANTHROPONOTIC
POTENTIAL**

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Gastrointestinal (GI) parasites in non-human primates have a greater potential to become zoonotic as well as anthroponotic. This study examined the GI parasites in two subspecies of toque macaque: *Macaca sinica sinica* in the dry zone and *Macaca sinica aurifrons* in the wet zone of Sri Lanka. Fresh faecal samples were collected from Polonnaruwa Archaeological Reserve and Peradeniya University premises, and were analysed following a modified Sheather's sucrose floatation method. Further identification and differentiation of *Entamoeba* sp. were conducted by PCR using species specific primers. Of the 98 macaques examined, 89 (90.8%) were infected with GI parasites. Overall, there was no difference in the prevalence of GI parasites between the two subspecies in the wet (95.9%) and dry zones (85.7%; $\chi^2 = 3.059$, $p = 0.080$). A total of 16 parasite species were recorded including nine helminths and seven protozoans. Among the helminths observed, *Anatrichosoma* sp., *Ancylostoma* sp., *Capillaria* sp., *Oesophagostomum* sp., and *Physaloptera* sp. have been identified as zoonotic while *Ascaris* sp., *Enterobius* sp., *Strongyloides* sp., and *Trichuris* sp. have been identified as both zoonotic and anthroponotic. Among the protozoans, *Balantidium coli* and *Buxtonella* sp. have been reported to cause zoonoses while *Entamoeba* sp. and *Cryptosporidium* sp. have been reported to cause both anthroponoses and zoonoses. This study provides the first record of *Anatrichosoma* sp. and *Buxtonella* sp. in Sri Lanka and the first record of *Cryptosporidium* sp. in the wet zone macaques. The highest overall intensity of infection was eggs of *Oesophagostomum* sp. (EPG = 49.02 ± 40.30) in the wet zone macaques. The molecular data confirmed the presence of *E. nuttalli* and *E. coli*, that are known to be zoonotic and anthroponotic, respectively. Urban toque macaque populations and human monkey interactions are constantly increasing in Sri Lanka. Therefore, in-depth epidemiological studies of the zoonotic and anthroponotic pathogens in both monkeys and humans are important for better understanding of potential public health risks and implications for conservation of toque macaques.

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