

Preliminary Parasitic Survey of the Natural Primate Reservoirs of Potential Zoonoses in Sri Lanka

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Given the close genetic relatedness of non-human primates and humans, it has been reported that 25% of all micro- and macro-parasites known in wild primates have also been reported in humans. The goal of our study was to investigate the diversity of intestinal parasitic infections among Sri Lanka's three diurnal primate species (the toque macaque (*Macaca sinica*), purple-faced langur (*Trachypithecus vetulus*) and the gray langur (*Semnopithecus priam thersites*) across the country by sampling representative forest reserves and public areas of human - monkey cohabitation in order to evaluate the potential for zoonotic transmission.

The study was carried out during the rainy season in the months of February – March in 2007 and 2009 and in December of 2010. Ninety-three fecal samples were collected at 44 locations from representative altitudinal / climatic zones across the country where toque macaques (64 samples), grey langurs (21 samples) and purple face langurs (10 samples) are known to naturally occur. The cysts of *Entamoeba coli* and *Entamoeba histolytica / dispar* and the eggs of *Trichuris* sp. and hookworm were recovered. The two most prevalent species found from all samples was *Trichuris* sp. (28%) and *E. coli* (26%), and they were most commonly found in the two langur species. The least commonly found parasite in all three species was hookworm (23%), being totally absent from the mostly arboreal purple face langur and highest in the largely terrestrial toque macaque. Notably, hookworms were present in 23% of the grey langur samples and 33% of the toque macaque samples collected. Variability in prevalence levels across altitudinal/climatic zones was noted. For toque macaques, overall group prevalence values decreased with increasing altitude, with the highest values found in the intermediate to arid lowland zones, decreasing in the upland wet zone, with only *Trichuris* sp. and hookworm found in the highland / wet zone.

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