

1 **Prevalence and Co-occurrence of Gastrointestinal Parasites in Nilgiri Langur (*Trachypithecus***
2 ***johnii*) of Fragmented Landscape in Anamalai Hills, Western Ghats, India**

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13 **ABSTRACT:** Habitat fragmentation is known to alter species composition, influence infection risk and
14 disease emergence in the native species of fragmented landscapes. This study aimed to understand the
15 prevalence of gastrointestinal parasite in Nilgiri langur, an endemic primate species of the Western Ghats,
16 India. We collected 283 fecal samples from 8 rainforest fragments of Anamalai Hills, Western Ghats and
17 examined gastrointestinal parasites using fecal flotation and sedimentation techniques. A total of 13
18 gastrointestinal parasite taxa were recovered, which are known to infect humans and livestock. Parasite
19 species richness was higher in disturbed forest fragments than undisturbed ones. We found *Trichuris*
20 *trichiura* to be the most prevalent parasite taxa followed by *Strongyloides* sp. A negative association
21 between *Schistosoma* sp. and *Trichuris trichiura* was also observed. Fragment size, proximity to human
22 settlements and other habitat variables such as tree density, canopy cover and tree height did not show any
23 significant relationship with parasitism in Nilgiri langur, which might be attributed to their ability to
24 survive in a disturbed landscape.

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26 **Keywords:** Forest fragmentation É Nilgiri langur É Gut parasites É Positive/negative association É
27 *Trichuris* É *Strongyloides* É *Coccidia*

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