

SCI-TECH

High intestinal parasite levels in bonnet macaques



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Relocating monkeys could spread infection

Bonnet macaques living near people have more intestinal parasites than those living in forests, shows a study recently published in *PLOS ONE*. So monkeying around by relocating such commensal macaques could spread parasites to wild macaques and other forest species, suggest scientists.

Just like big cats or jumbos, monkeys too are sometimes relocated to forests from human-dominated areas. Yet does this measure – aimed at reducing human-wildlife conflict –

Instances of relocation

To find out, researchers from Coimbatore's Bharathiar University and Sálim Ali Centre for Ornithology and Natural History first compiled information on instances of primate relocation in India and found that of the 25 relocations between 1998 and 2017 (none of which attempted to relocate the entire group or screen the monkeys for diseases or endoparasite infections), 13 were of bonnet macaques across south India.

Focusing on bonnet macaques and their gastrointestinal parasites (endoparasites, which can be transmitted to other macaques in the vicinity through faeces or water), the team followed 20 macaque troops across Karnataka, Tamil Nadu and Kerala in 2014-15 and collected 161 macaque poop samples to study parasites levels. For comparison, they also followed macaques in the forests of Karnataka's Sirsi-Honnava between 2015 and 2016 and collected 205 poop samples. They quantified parasite eggs and cysts in these samples.

They found as many as 24 endoparasites (19 taxa of helminths or worms and five taxa of protozoans) in both urban (commensal monkeys living near humans) and forest macaques. Almost all macaque groups had at least one endoparasite in them. They found that the amount of food that an urban macaque group availed from human-dominated areas determined the number of endoparasite taxa and levels of endoparasites in them. Macaque groups that accessed such food from dumps and other areas had more species of endoparasites. Immature macaques had the highest levels of endoparasites. Endoparasite levels across seasons revealed that the parasites persisted in the monkeys every month. The species richness of endoparasites was highest in summer.

Parasite transfer

Relocating such infected monkeys to the wild as part of conflict mitigation measures could transfer new parasites into wild populations in the area, write the authors. Just like in people, higher parasite loads in animals can affect physiological functions. This could make their survival in the wild difficult, said co-author of the study Palanisamy Sundararaj, assistant professor at the Bharathiar University.

"Macaques should be screened for parasites before relocation," he added.



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