

**An assessment of status of small carnivore species and feeding
ecology of large carnivores in Biligiri Rangaswamy Temple Wildlife
Sanctuary**

Technical Report

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Karnataka Forest Department
Government of Karnataka



Salim Ali Centre for Ornithology
and Natural History

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Submitted to Karnataka Forest Department

Chamarajanagara

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Executive summary

Small carnivore species: Among 10 small carnivore species known from BRT WLS, we recorded nine species during this study viz. Jungle cat *Felis chaus*, Rusty spotted cat *Prionailurus rubiginosus*, Leopard cat *Prionailurus bengalensis*, Small Indian civet *Viverricula indica*, Asian palm civet *Paradoxurus hermophroditus*, Striped-necked mongoose *Herpestes vitticollis*, Ruddy mongoose *H. smithii*, Common mongoose *H. edwardsi* and Smooth coated otter *Lutra perspicillata*. The only species that was not recorded was Malabar civet *Viverra civettina*. Jungle cat and rusty spotted cat were recorded in drier forests including dry deciduous and scrub forests of the foothills, whereas the leopard cat was recorded only in moist deciduous forests. Among the three species of civets, Malabar civet was earlier reported from the high elevated areas of the hills with evergreen forests. In the present study we were unable to get any information on this species; however, we suggest a proper exploration for the species in the estates and surrounding areas of the hills. Other two species were generalist species found in all the altitude and forests types, however, the Asian palm civet was recorded in association with good forest cover. Smooth coated otter was recorded from all the reservoirs around the sanctuary, often it was sighted at back waters of Suvarnavathi reservoir in small groups of two to three individuals. Among the three mongoose species found in the sanctuary, the stripe-necked mongoose was recorded from dry deciduous forests to shola forests, but predominantly in high elevation rather than low elevation forests, whereas common mongoose was more common in scrub, deciduous and moist deciduous forests of the sanctuary. But, surprisingly ruddy mongoose was recorded mostly from mid elevation and moist deciduous and evergreen forests. Habitat type and openness in each habitat type have highly influenced the presence and abundance of each species of small carnivores in the sanctuary. Among all the species, Asian palm civet was more abundant which was followed by small Indian civet. Compared to many other forests or regions in India, the sight record of rusty spotted cat was relatively good here. During our entire study we had 13 detections which may be due to the extensive sampling effort.

Ecology of large carnivores: Out of total scats of tiger (n=41), 59% of the scats had only one species and 36% species had two species and only 5% of the scats had more than two species. The major prey species include gaur, sambar, chital, wild pig, muntjac, four horned antelope,

Indian hare and domestic cattle, and also some other small mammals and birds. The tiger has preyed on various body sized prey species, analysis shows that there is a high preference for large body sized prey species over the small body size prey species. The wild prey species constituted 90.02% and remaining 9.98% was livestock especially domestic cattle. Of the wild prey species, sambar constituted 36.66% followed by gaur (23.33%), chital (15.00%), wild pig (10.00%), cattle (8.33%), muntjac (3.33%) and 1.66% each four horned antelope and hare. Gaur and sambar were observed to be the principal prey species for tigers in BRT WLS as reflected by the percentage occurrence of prey remains in scats. Gaur and sambar also contributed to the highest biomass of prey consumed by the tiger. On the other hand, the relative occurrence of chital in tiger scat was very low in BRT WLS when compared to Kanha, Bandipur and Nagarhole. This is probably due to very low density of chital in the BRT WLS. Though the density of Gaur and sambar remained almost same as in Bandipur and Nagarhole, the tiger might be more dependent on these two species where there is low density of chital.