

HABITAT SELECTION AND BURROW CHARACTERIZATION OF INDIAN PANGOLIN (*MANIS CRASSICAUDATA*) IN A TROPICAL LOWLAND RAINFOREST HABITAT IN SOUTH-WEST SRI LANKA

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ABSTRACT

Also known as the thick-tailed pangolin, *M. crassicaudata* is a medium-sized mammal that is largely fossorial and myrmecophagous. At present, it is mainly confined to India, Nepal, Pakistan and Sri Lanka, and believed to be extirpated or occurring in very low numbers in Bangladesh and China. The species is under threat due to hunting for local consumption and illegal trafficking of scales, flesh and skins. The dearth of scientific studies on the ecology of the Indian pangolin has impaired the accurate assessment of its conservation needs. Hence, this study investigated the habitat preference, utilization and burrow characteristics of Indian pangolins in the Yagirala Forest Reserve; a tropical lowland rainforest in Southwest Sri Lanka. A total of 75 burrows (54 feeding burrows and 21 living burrows) of Indian pangolins in four different habitat types i.e. Secondary forest, Pine-dominated forest, Rubber cultivations and Tea-dominated home gardens bordering the forest were observed using fixed-width transects for the characterization of living and feeding burrows. Burrow features of depth, burrow opening width, burrow opening height, midday temperature and relative humidity inside the burrow, as well as habitat features such as % canopy cover, slope, % undergrowth, distance to the closest human habitation, and distance to the closest water source were evaluated to distinguish feeding and living burrows. Highest density of living burrows was recorded from the Secondary forest (4ha⁻¹), followed by Rubber cultivations (2.5ha⁻¹) while no living burrows were recorded from Pine-dominated forest and Tea-dominated home gardens. In contrast, feeding burrows were more abundant in Pine-dominated forest (5.7ha⁻¹), followed by Rubber cultivations (2.5ha⁻¹), Secondary forest (2.3ha⁻¹) and Tea-dominated home gardens (2ha⁻¹). The features; burrow depth ($t=13.53$, $p<0.05$) burrow opening height ($t=6.40$, $p<0.05$) and burrow opening width ($t=4.97$, $p<0.05$) were significantly higher compared to those of feeding burrows. Living burrows were located in higher elevations (75-100m) with moderately high slopes (45°-60°), dense canopy cover (>75%) and away from human habitations (200-400m). Feeding burrows showed a greater variability in terms of associated environmental features with feeding burrows locating even in home gardens. The study further revealed that Indian pangolins exclusively prefer areas with rock boulders to dig living burrows while location of feeding burrows largely overlapping with the distribution of the prey species.

KEY WORDS: Indian Pangolin, Habitat preference, Burrows, Yagirala, Sri Lanka