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Microhabitat Requirements and Utilisation of *Cophotis Ceylanica* in Cloud Forests in Horton Plains National Park

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Abstract

The pigmy lizard (*Cophotis ceylanica*) is an endangered and rare lizard species endemic to Sri Lanka, yet no studies exist on its microhabitat requirements and utilisation. The present study was carried out in the Cloud Forest habitat of the Horton Plains National Park (HPNP) with the aim of addressing this knowledge gap in their ecology. Microhabitat variables were measured by placing 1x1 m quadrates making the point of each lizard sighting as the center. Microhabitat details including perch plant characteristics, soil characteristics and environmental parameters were recorded. Highest number of individuals were seen on *Sarcococca brevifolia* (1.167±0.937) plant species. Total of 78.13%, *C. ceylanica* were observed perching on branches and 9.38% were observed perching on trunks and 6.25% were observed perching on leaves and ground. Total of 48.87% of *C. ceylanica* was recorded where the lichen cover was between 50%-75%, 25.00% of *C. ceylanica* was recorded where the lichen cover was between 25%-50% and 15.62% of *C. ceylanica* was recorded where it was >75% where 12.50% of *C. ceylanica* was recorded where the lichen cover was less than 25%. Total of 71.87% *C. ceylanica* were recorded where branch diameter was between 1-2 cm, 3.12% *C. ceylanica* were observed where branch diameter was more than 3 cm, 9.37% *C. ceylanica* were recorded where it was less than 1cm and 15.62% *C. ceylanica* was recorded in branches where diameter was between 2-3 cm. Total of 71.88% of *C. ceylanica* were recorded perching in the height category of 2-3 m of perching plants. 15.63% was recorded in the height category of 1-2 m heights. 12.50% was recorded perching in the height category of more than 3 m. No individuals were recorded up to 1m from ground level. *C. ceylanica* preferred microhabitat where mean ambient temperature was 20.36±3.68° C and mean substrate temperature was 16.89±2.67° C. Relative humidity ranged from 61.40% to 100.00. Results show that this species prefer unique microhabitats in endemic plant species in HPNP with particular branch sizes in certain heights which are covered with lichens. Since these agamid populations are already low, more conservation focus should be given to protect these specific microhabitats in HPNP in order to conserve the existing populations.

Keywords: Microhabitat, Perch plants, Conservation