



SPECIES DIVERSITY, SPECIES RICHNESS AND ABUNDANCE OF REPTILES AT THE YAGIRALA FOREST RESERVE OF SRI LANKA

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Although the wet zone of Sri Lanka is known to harbor a large number of endemic, vulnerable and threatened herpetofauna data related to their abundance, species richness and species diversity are scarce. Present study concentrated on the species specific data of the reptiles at Yagirala forest reserve situated in the wet zone of Sri Lanka. Data was collected monthly from January to December, 2014 by visual encounter surveys along three 200m linear transects marked in three habitat types namely degraded forest habitat, riverine forest habitat and natural forest habitat. Shannon-Weiner index of species diversity was calculated. Five hundred and eighty four reptiles belonging to the orders Squamata, Crocodylia and Testudines were recorded. These included five Agamidae species, nine Gekkonidae species, eight Scincidae species, two Varanidae species, eight Colubridae species, five Natricidae species, one Elapidae species, one Crocodylidae species and one Bataguridae species. Twenty two endemic reptile species were observed including Sri Lanka Kangaroo lizard (*Otocryptis wiegmanni*), Hump-nosed lizard (*Lyriocephalus scutatus*), Mollogoda's Daygecko (*Cnemaspis molligodai*), Forest Daygecko (*Cnemaspis silvula*), Catenated Lankaskink (*Lankascinus dorsicatenatus*), Common Lankaskin (*Lankascinus fallax*), Gans's Lankaskink (*Lankascinus gansi*), Three-toe Snakeskink (*Nasia burtonii*), Toeless Snakeskink (*Nassia monodactyla*), Small Snake (*Aspidura guentheri*), Flower krait (*Balanophis ceylonensis*), Sri Lankan keelback Water Snake (*Xenochrophis asperrimus*), Streaked Kukri Snake (*Oligodon sublineatus*) and Beddome's Cat Snake (*Boiga barnesii*). Contrary to the expectations highest diversity of 2.95 was recorded in the degraded forest habitat and the lowest diversity of 2.66 was recorded in the natural forest habitat respectively. The total number of reptiles recorded was highest in degraded forest habitat with 7.25±10.96 (Mean±SD) reptiles and the lowest number of reptiles was recorded in natural forest habitat with 2.1±2.99 (Mean±SD) reptiles. Riverine forest habitat had 4.35±6.77 (Mean±SD) reptile species. Highest species richness of 40 and lowest species richness of 24 were recorded in degraded and natural forest habitats respectively. Relative abundance indicated that *O. wiegmanni* (0.18) was the most common reptile species. *Chrysopelea ornata* and *Lycodon striatus* were the least abundant reptile species. The present study indicates a rich species diversity of reptiles in the Yagirala forest reserve and hence warrants protection for herpetofauna.

Keywords: *Herpetofauna, Reptile, Shannon diversity index*