

Diversity and abundance of Small Mammals in Giritale Nature Reserve (North-Central Sri Lanka)

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Abstract

The composition of small mammal communities in forest, shrub land, grassland and anthropogenic habitats of the Giritale Nature Reserve of north central Sri Lanka was studied from June 2006 to August 2007 to estimate the abundance and diversity of small mammals inhabiting this nature reserve. Live trapping using Sherman traps and Pitfall traps were adopted to catch the small mammals. A total of 71 individuals representing two orders (Insectivora and Rodentia) and three families (Soricidae, Muridae, Scuridae) was captured. Species recorded included *Suncus murinus murinus* Linnaeus, 1766 (Common Indian Musk Shrew), *Mus cervicolor fulvidiventris* Blyth, 1852 (Ceylon Field Mouse), *Mus mus culuscastaneus* Waterhouse, 1843 (Indian Field Mouse), *Mus fernandoni* Phillips, 1932 (Ceylon Spiny Mouse), *Rattus blanfordi* Thomas, 1881 (White Tailed Rat), *Funambulus palmarum* Linnaeus, 1766 (Indian Palm Squirrel) and *Rattus rattus*. The species *Rattus rattus* consisted of two subspecies *Rattus attusrattus* Linnaeus, 1758 (Common House Rat) and *Rattus rattus rufescens* Gray, 1837 (Indian House Rat). Highest and lowest abundances were recorded in the grasslands (0.08) and shrub lands(0.01), respectively. Highest diversity index was recorded in anthropogenic habitats (1.62), which included paddy fields, home gardens and buildings, while lowest diversity index was recorded in shrub lands (0.67). The number of small mammals captured was significantly different in the four habitat types ($\chi^2 = 22.69$, df = 3, $p < 0.05$). This study, which is the first detailed examination of terrestrial small mammals in a dry zone forest of Sri Lanka, indicated that the Giritale Nature Reserve is home to six species of small mammals.

Key words: Abundance, Diversity, Evenness, Nature reserve, Small mammals