Rodent species diversity in relation to altitudinal gradient in Northern Serengeti, Tanzania

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Abstract

Rodents are among the successful small mammals in the world. In species richness, rodents outnumber other mammalian orders owing partly to their capability to exploit many different habitats. Their diversities have been influenced by many factors including the altitude. This study assessed rodent diversity across the two altitudinal zones, that is, lowland western zone and highland eastern zone, in the Serengeti ecosystem, Tanzania. Capture-Mark-Recapture studies were undertaken in November 2009 and April 2010 using live traps in the ecosystem to compare variations in species diversity of rodents in the two zones of the ecosystem. Eight (8) rodent species were recorded in each zone area. However, species richness was higher in crop land and woodland areas than in grasslands in each zone. The two zones comprised of different species diversities for which Rényi Diversity profiles indicated the higher diversity in the eastern zone than the western zone although the difference was not significant ($P > 0.05$). Differences between the eastern and western zones could be attributed to the altitudinal gradient whereby the east was at a higher elevation than the west. Maintenance and management of wildlife corridors will assist migration of rodents between the two zones and enhance continuous gene flow.