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Diversity and abundance of odonates (Order: Odonata) in Gurudeniya, Kandy District, Sri Lanka

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The previously unexplored Gurudeniya region in Kandy district was surveyed for adult odonate diversity and abundance. Three habitats, i.e., along the “Thalathuoya” tributary, adjacent forest cover and a home garden, were selected for the study. Sampling was conducted twice a week, during 8 am – 9 am and 4 pm – 5 pm for three months from October to December 2021, along a 200 m × 4 m belt transect. Altogether, 1933 odonate individuals belonging to eight families and fourteen species were recorded and they represented 43 % of the suborder Anisoptera and 57 % of Zygoptera, respectively. We detected eight endemic, three endangered and four vulnerable species. The *Libellulidae* was found to be the most diverse family, comprised of four species inhabiting only the tributary area. *Calopterygidae*, *Gomphidae* and *Platycnemididae* had two species in each. *Vestalis apicalis nigrescens*, *Euphaea splendens* and *Ceylonosticta bine*, were recorded as common inhabitants at all the study sites. *Vestalis apicalis nigrescens* and *Trithemis festiva* were the dominant Zygopteran and Anisopteran species with 37 % and 30 % relative abundance, respectively. The tributary had the most diverse and abundant odonate community, comprising fourteen species and 70 % relative abundance with a Shannon-Wiener diversity index of 1.94. At all of the study sites, the family *Calopterygidae* was abundant in terms of tributary 44 %, woodland 78 % and residential garden 89 %, respectively. In the majority of the odonate species, males outnumbered females. The findings of this study elucidated the odonates at Gurudeniya within a short period of time. An extensive study is underway to determine the larval and adult assemblages.

Keywords: *Abundance, Diversity, Species, Thalathuoya.*