

## **Dragonfly diversity at Henarathgoda botanical garden in Gampaha District**

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The increase in anthropogenic pressures has impacted the equilibrium of natural ecosystems and has severely influenced the biotic components. The dragonfly population has become one of the endangered species at present. Therefore, an attempt was made to study the dragonfly population and their diversity in Henerathgodada botanical garden as a measure towards environmental conservation. A total of 23 samples were located based on the land use heterogeneity including 4 from ponds, 3 from play grounds, 2 from forest areas, 3 from the boat service and other samples from the built up gardens. A field survey was carried out to collect data on dragonflies from May to November in 2019. *Alpha*, *Beta*, *Gamma* diversities and Shannon diversity index were used as a method of data analysis. A total of 16 dragonfly species were identified during this study. Among them, 14 were from Anisoptera suborder and 2 were from Zygoptera suborder. The dragonfly species in the garden belonged to LIBELLULIDAE Chasers, GOMPHIDAE Clubtails and COENAGRIONIDAE Bluets families. The highest Alfa diversity was recorded as 8 at the botanical garden. The lowest Alpha diversity was recorded as 1. The highest Beta diversity was recorded as 11 around the pond close to the entrance and from the 2<sup>nd</sup> sample in the boat service. The lowest Beta diversity was recorded as 1. The diversity of the dragonfly according to Shannon diversity index was reported as 1.7910 at the total area of the botanical garden. When the individual samples were considered, the highest Shannon diversity index was recorded as 1.6129 in the playground near the boat service. The lowest Shannon diversity was recorded as 0.4195 in the flower garden. Overall, the distribution of dragonfly species was spatially clustered towards the south of the garden especially in the boat service area.

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