



Abundance and diversity of adult Odonates in Dunumadalawa forest reserve, Kandy

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Abstract: Species richness and abundance of adult Odonates in Dunumadalawa forest reserve in Kandy, were observed. The samplings of Odonates were carried out by visual encounter surveys by walking within the area on hourly basis in a period of one year. A total of 91 Odonates species represented by 45 Dragonfly and 46 Damselfly with two endemic Damselfly species, *Euphaea splendens* belongs to suborder Zygoptera, (family Euphaeidae) and Dragonfly species, *Paragomphus henryi* belongs to suborder Anisoptera (family Gomphidae) have identified. The suborder Anisoptera which comprises with 45 Dragonfly species belonging to two families contributed 49% of total Odonates were recorded. Among the suborder Zygoptera (Damselfly), the family Calopterygidae was widely distributed with high percentage 27% (n=14) while the family Platycnemididae and Lestidae both were equally distributed with a percentage composition of 11% (n=10). The observed distribution of the families of Coenagrionidae and Euphaeidae were 9% (n=8) and 4% (n=4) respectively. Highest relative abundance values showed 9% *Orthetrum triangulare* belongs to family Libellulidae in suborder Anisoptera followed by *Lestes elatus* belongs to family Lestidae with 7%. Highest Sorenson coefficient value (0.43) indicated locations near "Roseneath Tank" in the middle of the site and the fresh water streams nearby it have high overlapping of similarity of Odonates. The highest species diversity (Shannon index 0.85) is found in the locations near the "Dunumadalawa weva" area. The highest species richness observed in the same locations as with the highest Margalef's index (3.67). The lowest diversity was observed with a Shannon index (0.10) in the forest area with no water bodies.

Keywords: Damselfly, Dragonfly, Visual encounter survey