

**SPECIES COMPOSITION AND DIVERSITY OF TERRESTRIAL  
INSECTS ASSOCIATED WITH MANDATHIVU MANGROVE  
ECOSYSTEM, NORTHERN PROVINCE, SRI LANKA.**

G.W.A.L.K.Wijewantha\* and R.Gnaneswaran

Department of Zoology, University of Jaffna

\*kusal94wijewantha@gmail.com

**ABSTRACT**

Mangrove ecosystem is one of the most productive ecosystems with a hard environment that supports the survival of both terrestrial and aquatic inhabitants of various vertebrates and invertebrates including insects. Insects are one of the important biotic components in the dynamics of mangrove ecosystems. Diversity and abundance of insects are considered as the tools to evaluate the health and the value of their respective ecosystem. This study was performed to assess the diversity of terrestrial insects in the Mandathivu mangrove ecosystem (9°36'48"N 79°59'44"E), Northern Province, Sri Lanka. The field insect survey was done in three locations (L<sub>1</sub>, L<sub>2</sub> and L<sub>3</sub>) which was selected based on the vegetation and adjoining ecosystem(s). In each location, a 10 x 10 m transect was demarked to sample the terrestrial insects from 0070h to 0930h since 27/ 08/ 2020 to 01/ 09/ 2020. The insects were collected by sweep netting, hand picking and aspiration methods. The diversity of those insects was assessed using Shannon diversity index. This study found 41 different insect species belong to 09 orders. In the present study, the Shannon diversity index (H') varied from 2.359 to 3.149. The lowest species diversity (2.359) was recorded in L<sub>3</sub> whilst the highest (3.149) was in L<sub>1</sub>. The minimum species richness (12) was observed in L<sub>3</sub> and the maximum (29) was recorded in L<sub>1</sub> where *Avicennia marina* was dominant in patches with *Suaeda maritime*, *Salicornia brachiata* and does not adjoin with other ecosystems. This short survey showed that the Mandathivu mangrove ecosystem is rich in insect diversity (S = 41) and that can be used for future sustainable management of this ecosystem.

**Keywords:** Insect diversity, Mangrove ecosystem, Diversity indices