

A Comparative Study of Odonate Diversity in Lentic and Lotic Habitatsof Wayanad, the Western Ghats, India

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Abstract: Two sites, one pond and a stream in Wayanad district, Kerala, India were monitored for a period of three months. The diversity of Odonata (dragonflies and damselflies) in the sites was studied using visual encounter surveys (VES). A total of 29 species of odonates from eight families were recorded during the study and the lentic system (pond) was more diverse in terms of odonate species. The pond ecosystem supports more generalist (eurytopic) species while the stream has many specialist (stenotopic) species.

Key words: Endemic, biodiversity, insect ecology, conservation

Introduction

The life history of odonates is closely linked with water bodies. They use a wide range of flowing and stagnant water bodies. Even though most species of odonates are highly specific to a habitat, some have adapted to urban areas and make use of man-made water bodies. Habitat specificity has an important bearing on the distribution and ecology of odonates (Clark & Samways 1996). Odonates lay their eggs in all type of aquatic habitats, from still stagnant water to fast flowing rivers to water collected in tree-holes. The larvae are completely aquatic and effective predators. Newly emerged odonates leave their emergence site and inhabit nearby landscape. Adult dragonflies are aerial predators and catch insects like mosquitoes, midges, butterflies, moths, bees and odonates on flight. Adult odonates feed on mosquitoes, blackflies and other blood-sucking flies and act as an important biocontrol agent of these harmful insects. Long term conservation of odonates and other freshwater biota can only be assured through appropriate national level policy interventions and definite freshwater biodiversity conservation programmes (Francisco & Wyckhuys 2019). The study of biodiversity of odonates in different habitats help us to get an idea about characteristics and functioning of the ecosystem. Also, such odonatological studies provide information about their suitability as bioindicators and their relationship with the environment (Hassal 2005). There has been a renewed interest in the study of odonates in Kerala after the publication of many field guides. Adarsh et al. (2014) studied the odonate diversity of Kerala Agricultural University campus and Chandran et al. (2020, 2021) reported 30 species from the man-made ponds of Irinjalakuda and 44 species from the Kole wetlands