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URBAN GARDENS IN SUSTAINING BUTTERFLY POPULATION - A PRELIMINARY CHECKLIST OF RIPARIAN BUTTERFLIES AROUND THE MUSEUM LAKE IN GOVT. BOTANICAL GARDEN AND ZOO, THIRUVANANTHAPURAM KERALA

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ABSTRACT: Butterfly diversity around the Museum Lake and the riparian region along was studied. A total of 36 butterfly varieties belonging to the five families were observed during the study period from February 2013 to July 2015. Among them family Nymphalidae (brush-footed butterflies) dominated the butterfly fauna 15 species followed by Papilionidae (swallow-tails) 9 species, Lycaenidae (blues) 7 species, Pieridae (whites and yellows) 3 species and Hesperiidae (skippers) 2 species. *Danaid Eggfly* protected under schedule - I of Indian Wildlife Protection Act 1972 and Grey Count and Gram Blue included under Schedule – II are common varieties recorded from here. The study concludes the meaningful role of these conservation areas.

Key words: *Nymphalidae, Danaid Eggfly, Museum Lake, Conservation Areas, Grey Count.*

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Riparian zones are the most species rich and most productive systems. They are known as the secondary forest which consists of grasses, shrubs and small trees. In the recent times, biological diversity is increasingly being recognized as a vital parameter to assess global and local environmental changes and sustainability of developmental activities (Murugesan et al., 2013). Though the tropical region contains very rich and diverse butterfly fauna, the information on species found in different habitats is very poor particularly for the Indian region (Rajagopal et al., 2011). These butterflies are sensitive biota and they are severely affected by very small environmental alterations. They also respond to disturbances and changes in the quality of habitat, and are thus a good indicator species to evaluate changes in habitat and landscape structure variations (Kremen 1992; Kocher and Williams 2000). They present significant contribution in the ecological services in different ecosystems through herbivory and pollination services. Moreover, butterflies and moths (order Lepidoptera) can be used in studying the population and community ecology (Pollard, 1991). These unnoticed creatures play an important role in maintaining the balance of our ecosystem.

India has around 1,501 species of butterflies, out of which 334 species are reported from the Western Ghats and 37 species are endemic to the Western Ghats (Evans 1932; Kunte 2000). Of the 334 species of butterflies of Western Ghats, 316 species have been reported from Kerala (Palot et al., 2012).

There are very little works have been made on the butterfly diversity in Kerala particularly from protected areas. Some of the noteworthy works on butterfly fauna from Kerala and adjacent areas include Mathew and Rahamathulla (1993). He has documented about 100 species of butterflies from Silent Valley National Park. Sudheendrakumar et al., (2000) who reported 124 species of butterflies from Parambikulam Wildlife Sanctuary. Of late, Arun (2003), Ambrose and Raj (2005), Eswaran and Pramod (2005) has documented butterfly diversity from various geographic areas. Toms et al., (2010) reported 109 species from Mahatma Gandhi University campus, Kottayam. Prasad et al., (2010) has recorded 52 species from Kerala University campus, Thiruvananthapuram and Aneesh et al., (2013) has documented 139 species from Kerala Agricultural University campus.

Thiruvananthapuram botanical garden and zoo is well known for its vivid collection of plants and variety of animals in collection. The tropical trees, water body and its associated shores serve as a ground for many faunal species. Though various aspects of this lake ecosystem such as plantation biology (Ajayas & Kumar, 2017), water chemistry (Ajayas & Kumar, 2016) and microbial