DIVERSITY OF STINGLESS BEES (HYMENOPTERA: MELIPONINI) IN SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

Stingless bees (Hymenoptera: Meliponini) are eusocial insects that live together in a nest. The stingless bees play an important role in the process of plants pollination, producing honey and propolis. Study on stingless bees diversity in Special Region of Yogyakarta has never been done. This study aims to identify species of stingless bees found in Yogyakarta using morphological, morphometric and molecular characters and measures the diversity of stingless bees in Special Region of Yogyakarta Province. The research found that there are 7 species of stingless bees namely *Tetragonula laeviceps, T. iridipennis, T. biroi, T. sapiens, T. sarawakensis, Lepidotrigona terminata*, and *Heterotrigona itama* found in Special Region of Yogyakarta Province. The study also showed that the types of habitats differences in a particular area affect the index of diversity of The stingless bee. The Shannon-Wiener (H'), Shannon-Evenness (E) and Simpson's (D) species diversity indexes for several habitat types in the Special Region of Yogyakarta Province from the lowest of the lowest values are: rural habitat with a value of H' = 1.21, E = 0.58 and D = 0.38, secondary forests with values H' = 0.89, E = 0.44 and D = 0.58, and urban habitats with values H' = 0.84, E = 0.39 and D = 0.57, respectively. Meanwhile, the overall value of Shannon-Wiener (H'), Shannon-Evenness (E) and Simpson's (D) species diversity in the Special Region of Yogyakarta Province are 0.84 - 1.21 (moderate diversity), 0.39 - 0.58 (moderate evenness) and 0.38 - 0.58 (moderate dominance), respectively. The results of this study are the first report on the stingless bees (Hymenoptera: Meliponini) diversity in Special Region of Yogyakarta Province and should contributing to the preservation and utilisation of one of Indonesia's important biodiversity resources.

Keywords: Diversity, stingless bees, Special Region of Yogyakarta.