

DIVERSITY OF THE CAVE-DWELLING BAT (Chiroptera) IN THE NGOBARAN COASTAL AREA, KARST OF GUNUNG SEWU

by Tatag Bagus Putra Prakarsa, Rizka Apriani Putri, Yunita Fera Rahmawati

ABSTRACT

Bats (Chiroptera) are divided into two suborders (Yinpterochiroptera and Yangochiroptera). More than 50% of species of bats use caves as their roosting sites. Thus, they play a crucial role in the cave ecosystem. For that reason, they also exist as keystone species in the karst area. Gunung Sewu is one of the karst areas in Indonesia that best exemplifies tropical karst. Furthermore, Gunung Sewu is still at risk of habitat loss despite being designated as a Geopark. This study aims to understand the diversity of bats that live in caves in the karst region of Gunung Sewu, specifically in four caves near Ngobaran Beach between April and June 2020. A harpnet and misnet placed at the cave's entrance were used to capture bats for data collection. After they were captured, the bats were identified using Morphometry and the Shannon-Wiener index. Through another index, Margalef index, the bat diversity in the four cave habitats was expressed, with a discovery that there are many different species. Based on the Jaccard similarity index, bats were categorised again using cluster analysis and the unweighted pair-group method using arithmetic averages (UPGMA). A total of nine species across five families were identified. The diversity of existing species variety was also recognised by analysing the composition of the four cavern inhabitants. The four cave ecosystems' bat diversity was divided into three categories: moderate variety, low similarity, and high species diversity. Except for Cekelan 1 Cave and Gebyog Cave ($P=0.015$), other variations did not demonstrate a meaningful difference ($P0.05$). This demonstrates how different each ecosystem is. Therefore, they could be classified as potentially spoiled habitats, demanding additional conservation efforts.

Kata Kunci: Bat cave, Biospeleology, Chiroptera, Diversity, Gunung Sewu.