

V. Conclusions and Suggestions

5.1 Conclusions

The conclusion of this study are as follows.

1. The study conducted in West Sumatera using Insect-Net Sweeping Method and Cylindrical Gauze bait method discovered a diverse range of butterfly species, with a total of 63 species from 34 genera, five families and 263 individuals identified across three study sites. The results indicated that the highest number of butterfly species, with Nymphalidae being the most commonly collected family across all sites. These findings provide valuable insights into the butterfly diversity of West Sumatera, highlighting the significance of Nymphalid butterflies in the region.
2. The diversity index was categorized as moderate in each study sites, but when considering the total number of species across all study sites, the diversity index could be assumed as high ($H' = 3.6$). Additionally, the evenness index was higher in each study sites and it indicated that there was no dominant species in each study sites. These results suggest that the butterfly biodiversity in Atsiri Organic farm, Bukit Nobita and Sungkai Green Park is sustainable and conducive to butterfly habitats.
3. Based on the survey results, it was found that a majority of respondents in West Sumatera possesses a strong knowledge in ecotourism and butterflies. The study also revealed that Bukit Nobita has the highest diversity of butterfly species compared with the other two study sites, and is home to many attractive species that was chosen by respondents in the survey.

Therefore, it is recommended that Bukit Nobita be maintained and developed as an ecotourism destination to preserve the region's biodiversity and to increase social welfare. Moreover, the survey results indicate that there are several other ecotourism places in West Sumatera. Therefore, ecotourism projects centered on these areas' beautiful Wildlife and flora could be performed through collaborations between locals, government agencies, and researchers to attract visitors and maintain the natural resources in the region.

Overall, these findings highlight the potential for ecotourism to benefit both the local community and the environment in West Sumatera.

5.2 Suggestions

- Future research should focus on studying butterfly behavior and feeding habits, and updating the inventory of butterfly species based on morphological characteristics: To fully understand the ecology of butterflies in the study areas, more detailed studies are needed to investigate their behavior and feeding habits. This will help to provide a more complete picture of their ecological roles and the factors that influence their survival. Additionally, updating the inventory of butterfly species based on morphological characteristics will provide a more accurate record of the biodiversity in the ecosystem.

Similar research should be conducted in other ecotourism places in West Sumatra to promote eco-tourism: The study highlights the potential for ecotourism in West Sumatra and the importance of promoting the region's biodiversity. Similar research could be carried out in other ecotourism places in the region to enrich information on the biodiversity and to promote travelling programs with ecotourism objects. This

will not only raise awareness about the importance of biodiversity conservation but also provide opportunities for locals to benefit from ecotourism

