

KEANEKARAGAMAN BURUNG PADA MUSIM DAN STRUKTUR VEGETASI YANG BERBEDA DI KAWASAN HUTAN LINDUNG GUNUNG BALAK, KABUPATEN LAMPUNG TIMUR

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INTISARI

Perubahan struktur vegetasi terutama pada hutan yang terganggu berdampak pada keanekaragaman jenis burung, sebagai bentuk respon burung terhadap penurunan kemampuan habitat dalam menyediakan dukungan dan sumber daya. Kasus nyata yang terjadi, yaitu perambahan terhadap kawasan hutan lindung Gunung Balak, Lampung Timur, untukalihfungsikan menjadi lahan pertanian dan pemukiman masyarakat. Penelitian ini bertujuan untuk mengetahui keanekaragaman burung serta mengetahui respon keanekaragaman jenis burung terhadap berbagai kondisi struktur vegetasi di kawasan hutan Gunung Balak.

Data keanekaragaman burung diperoleh menggunakan metode *point count*. Pengamatan variabel struktur vegetasi menggunakan metode *nested sampling* dan *protocol sampling*. Kondisi kerapatan vegetasi juga dianalisis dengan data makro menggunakan *Normalized Difference Vegetation Index* (NDVI). Uji beda dilakukan dengan metode Mann-Whitney terhadap keanekaragaman burung pada kondisi vegetasi berbeda. Respon komunitas burung terhadap berbagai variabel struktur vegetasi dianalisis dengan *Canonical Correspondence Analysis* (CCA) dan *Generalized Linear Model* (GLM). Semua analisis statistik dilakukan menggunakan perangkat lunak *R Studio 2023.06.1*.

Berdasarkan hasil dari dua waktu pengambilan data, ditemukan total 1280 individu dari 32 jenis burung pada musim kemarau, dan 734 individu dari 27 jenis burung pada musim penghujan. Komunitas burung di kedua musim dengan variasi kondisi vegetasi tidak terlalu berbeda, secara umum spesies-spesies burung generalis mendominasi di area penelitian. Pada musim penghujan, variabel jumlah tumbuhan bawah, kekayaan jenis tumbuhan bawah, tutupan tumbuhan bawah, dan kepadatan daun (200-300 cm) menunjukkan pengaruh positif, sedangkan variabel kepadatan daun (100-200 cm) berpengaruh negatif terhadap keanekaragaman jenis burung. Berdasarkan hasil tersebut, perlu adanya penanaman jenis pohon secara berkala untuk meningkatkan stratifikasi vegetasi yang lebih kompleks. Ditambah dengan pengayaan jenis vegetasi sehingga mampu menyediakan relung yang lebih luas bagi berbagai jenis burung.

Kata Kunci: Keanekaragaman Burung, Spesies Generalis, Struktur Vegetasi, Gunung Balak.

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DIVERSITY OF BIRDS ACROSS DIFFERENT SEASONS AND VEGETATION STRUCTURES IN THE GUNUNG BALAK PROTECTED FOREST AREA, EAST LAMPUNG DISTRICT

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ABSTRACT

The alterations in vegetation structure, particularly in disturbed forests, significantly impact bird species diversity, reflecting a response to the diminishing ability of habitats to provide necessary support and resources. A concrete example is the encroachment upon the forest area of Gunung Balak in Lampung Timur, justified under the guise of converting it into agricultural land and settlements. This study seeks to comprehensively understand bird diversity and how bird species respond to various conditions of vegetation structure in the Gunung Balak forest area.

Bird diversity data were obtained using the point count method. Observations of vegetation structure variables were conducted using nested sampling and protocol sampling methods. Vegetation cover density was also analyzed with macro data using the Normalized Difference Vegetation Index (NDVI). The difference in bird diversity between diverse conditions was determined using the Mann-Whitney test. The bird community's reaction to a spectrum of vegetation structure variables underwent thorough analysis using Canonical Correspondence Analysis (CCA) and Generalized Linear Model (GLM). All statistical analyses were executed using R Studio 2023.06.1 software.

Based on the results of two data collection periods, a total of 1280 individuals representing 32 bird species were identified during the dry season, and 734 individuals from 27 bird species were recorded during the rainy season. The bird communities in both seasons, despite variations in vegetation conditions, exhibited no significant differences, it generally being dominated by generalist bird species. Bird diversity during the dry season is influenced by sapling abundance and percentage of slope. During the rainy season, variables such as the abundance of understory vegetations, the richness of understory vegetations, ground vegetation cover, and foliage density (200-300 cm) exhibit positive influences, while foliage density (100-200 cm) demonstrate negative influences on bird diversity. Based on these findings, it is necessary to gradually plant tree species to enhance the complexity of vegetation stratification, combined with the enrichment of vegetation species, thereby offering a more expansive niche for a diverse array of bird species.

Keywords: Bird Diversity, Generalist Species, Vegetation Structure, Gunung Balak.

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