

ABSTRAK

ANALISIS KEANEKARAGAMAN ORDO DIPTERA DI KAWASAN KAMPUS UNIVERSITAS LAMPUNG

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Ordo Diptera memiliki berbagai peran ekologis seperti sebagai pengurai, polinator, predator, dan potensi sebagai vektor penyakit, serta menjadi bioindikator kualitas lingkungan. Kawasan Universitas Lampung dengan berbagai tipe habitat seperti Ruang Terbuka Hijau (RTH), area gedung, dan badan air (embung) menyediakan relung ekologi bagi berbagai jenis Diptera. Penelitian ini bertujuan untuk mengetahui jenis-jenis, indeks keanekaragaman, serta untuk mengetahui hubungan faktor lingkungan terhadap keanekaragaman ordo Diptera di Kawasan Universitas Lampung. Penelitian dilaksanakan pada bulan Desember 2025 hingga Januari 2026 menggunakan metode jelajah bebas (*free roaming*) dengan teknik tangkap langsung (*direct sweeping*). Pengambilan sampel dilakukan pada pagi pukul 08.00-10.00 WIB dan sore hari pukul 15.00-17.00 WIB menggunakan jaring serangga (*sweep net*), aspirator, dan gayung. Indeks keanekaragaman jenis dihitung berdasarkan rumus Shannon-Wiener (H'), indeks kemerataan dihitung dengan rumus *Evenness* (E), dan indeks dominansi dihitung menggunakan rumus Simpson (C). Hasil penelitian menunjukkan ditemukan sebanyak 835 individu yang terdiri dari 15 famili dan 22 jenis serangga ordo Diptera. Nilai indeks keanekaragaman (H') sebesar 1,868 tergolong sedang, nilai indeks kemerataan (E) sebesar 0,604 tergolong sedang, dan nilai indeks dominansi (C) sebesar 0,237 tergolong rendah. Hal ini menunjukkan bahwa komunitas Diptera di Universitas Lampung berada dalam kondisi yang cukup stabil tanpa adanya jenis yang mendominasi. Hasil pengukuran suhu udara pada kawasan Universitas Lampung berkisar 28,6 °C pada pagi hari, dan 28,7 °C pada sore hari. Sedangkan hasil pengukuran tingkat kelembapan udara berkisar 77,2 % pada pagi hari, dan 75,7% pada sore hari. Hasil pengukuran suhu dan kelembapan udara di kawasan Universitas Lampung tersebut mengindikasikan bahwa kondisi lingkungan ideal untuk perkembangan larva, aktivitas mencari pakan, aktivitas kawin, bertelur, dan proses metabolisme serangga ordo Diptera.

Kata kunci: Diptera, Keanekaragaman, Universitas Lampung, Bioindikator.

ABSTRACT

ANALYSIS OF DIPTERA ORDER DIVERSITY IN THE UNIVERSITY OF LAMPUNG CAMPUS AREA

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The Diptera order plays various ecological roles, such as acting as decomposers, pollinators, and predators, as well as serving as potential disease vectors and bioindicators of environmental quality. The University of Lampung campus, with its diverse habitat types including green open spaces (RTH), building areas, and water bodies (reservoirs) provides ecological niches for various Diptera species. This study aims to identify the species, calculate the diversity index, and determine the relationship between environmental factors and the diversity of the Diptera order within the University of Lampung campus. The study was conducted from December 2025 to January 2026 using the free-roaming method with the direct sweeping technique. Sampling was carried out in the morning from 08:00 to 10:00 WIB and in the afternoon from 15:00 to 17:00 WIB using an insect net (sweep net), an aspirator, and a scoop. The species diversity index was calculated using the Shannon-Wiener formula (H'), the evenness index was calculated using the Evenness formula (E), and the dominance index was calculated using the Simpson formula (C). The results of the study showed that 835 individuals were found, consisting of 15 families and 22 species of Diptera order insects. The diversity index (H') value of 1.868 was classified as moderate, the evenness index (E) value of 0.604 was classified as moderate, and the dominance index (C) value of 0.237 is considered low. This indicates that the Diptera community at the University of Lampung is in a fairly stable condition, with no single species dominating. Air temperature measurements in the University of Lampung area ranged from 28.6 °C in the morning to 28.7 °C in the afternoon. Meanwhile, air humidity measurements ranged from 77.2% in the morning to 75.7% in the afternoon. These temperature and humidity measurements at the University of Lampung indicate that the environmental conditions are ideal for larval development, foraging, mating, egg-laying, and metabolic processes in Diptera insects.

Keywords: Diptera, Biodiversity, University of Lampung, Bioindicators.