

KEANEKARAGAMAN LABA-LABA (Arachnida: Araneae) DI DAERAH ALIRAN SUNGAI OPAK YOGYAKARTA

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INTISARI

Indonesia disebut sebagai negara *Mega-biodiversity* karena memiliki keanekaragaman hayati yang tinggi. Setiap organisme memiliki peran penting di lingkungan. Laba-laba salah satu hewan Arthropoda yang mempunyai keanekaragaman tinggi dan dalam sistem ekologi berperan sebagai predator. Peran laba-laba dapat mengendalikan populasi serangga dan invertebrata lainnya. Keanekaragaman dan kelimpahan laba-laba di ekosistem sungai merupakan salah satu indikator keseimbangan ekosistem. Penelitian ini mengkaji sistematika dan ekologi laba-laba di ekosistem sungai. Penelitian ini dilakukan di Daerah Aliran Sungai Opak. Sampel diambil di area hulu, tengah, hilir dengan jumlah 15 titik sampling. Metode yang digunakan dengan membuat 10x10m plot di kanan dan kiri sungai. Pengambilan sampel menggunakan metode *hand collection*, *pitfall traps*, dan metode *beating*. Data yang dianalisis meliputi keanekaragaman, struktur komunitas laba-laba dan data pendukung parameter lingkungan. Data dianalisis dengan indeks Shannon-Wiener, indeks similaritas dan data kelimpahan. Hasil yang didapat ditampilkan bentuk tabel dan histogram. Hasil penelitian menunjukkan bahwa nilai keanekaragaman laba-laba di Sungai Opak pada hulu $H' = 3,83$, tengah $H' = 3,01$, dan hilir $H' = 3,16$. Indeks kumulatif keseluruhan $H' = 3,68$ dengan kategori keanekaragaman tinggi. Indeks Similaritas cenderung rendah. Area hulu dan tengah memiliki kemiripan yang lebih tinggi apabila keduanya dibandingkan dengan area hilir. Struktur komunitas di area hulu, tengah dan hilir yang mendominasi berdasarkan kelimpahan individu yaitu Famili Oxyopidae, Salticidae, Lycosidae, Tetragnathidae. Parameter lingkungan biotik dan abiotik yang berpengaruh adalah keberadaan vegetasi berkanopi, intensitas cahaya, suhu udara, dan kelembaban tanah.

Kata Kunci : Keanekaragaman, Laba-laba, Struktur Komunitas, Sungai Opak

The Diversity of Spiders (Arachnida: Araneae) in Opak River Basin Yogyakarta

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ABSTRACT

Indonesia is commonly referred to as a megadiverse country due to its high level of biodiversity. Every organism has an important role in the environment. Spiders are one of the Arthropod animals which has high diversity and acts as predators. They play a role in the ecosystem as a control for populations of insects and other invertebrates. Diversity and abundance of spiders in the ecosystem of the river is one of the indicators of the balance of the ecosystem. This research examines the systematics and ecology of spiders in river ecosystems. Research was conducted in the Opak River Basin. Samples were taken in the upstream, middle, downstream areas with a total of 15 sampling points. Plod-based sampling was used by creating 10x10m plots on both sides of the river. Spider samples were collected using the methods of hand collection, pitfall trapping, and vegetation beating. The data analyzed included diversity, spider community structure and supporting data for environmental parameters. Data were analyzed using the Shannon-Wiener index, similarity index and abundance data. The results obtained are displayed in the form of a table and histogram. Results of the study showed that the value of the diversity of spiders in the River Opak on upstream $H' = 3.83$, the middle $H' = 3.01$, and downstream $H' = 3.16$. The index for all areas equals $H' = 3.68$ with shows a high category of diversity. Similarity index between the three parts of the river tends to be low. The upstream and middle areas have a relatively higher similarity when they are compared to the downstream area. The structure of the community in the upstream, middle and downstream areas are dominated by the families Oxyopidae, Salticidae, Lycosidae, Tetragnathidae according to the number of individuals found. The biotic and abiotic environmental parameters that influence include presence of canopy vegetation, light intensity, air temperature, and soil moisture.

Keywords: *Community Structure, Diversity, Opak River, Spider*