

## Pengaruh efek tepi terhadap komunitas herba Terrestrial di Hutan Kota Universitas Indonesia, Depok = Edge effects on terrestrial herb community in urban forest of Universitas Indonesia, Depok

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### Abstrak

#### <b>ABSTRACT</b><br>

Keberadaan kawasan tepi pada suatu habitat hutan dapat menimbulkan efek tepi yang memengaruhi respons berbagai organisme berupa pergeseran habitat atau pola persebaran, salah satunya ialah herba terestrial. Berbagai penelitian terdahulu mengenai efek tepi terhadap herba terestrial memberikan hasil yang berbeda-beda. Penelitian yang bertujuan untuk mengetahui pengaruh efek tepi terhadap komunitas herba terestrial di hutan kota Universitas Indonesia telah dilakukan. Pengukuran parameter efek tepi dilakukan dengan mengetahui komposisi spesies pada tiap plot penelitian, perhitungan Indeks Nilai Kepentingan (INK), indeks keanekaragaman dan pemerataan Shannon-Wiener, dan pengukuran parameter lingkungan. Komposisi spesies menunjukkan kecenderungan respons positif terhadap efek tepi. Berdasarkan perhitungan INK diketahui spesies dominan *Axonopus compressus* pada kawasan tepi, *Centotheca lappacea* pada kawasan tengah, dan *Amorphophallus variabilis* pada kawasan inti. Hasil uji t pada indeks keanekaragaman Shannon-Wiener menunjukkan terdapat perbedaan yang signifikan pada pasangan plot tepi-inti dan tengah-inti, sementara itu tidak terdapat perbedaan yang signifikan pada pasangan plot tepi-tengah. Tidak terdapat pola respons tertentu terhadap efek tepi berdasarkan indeks Shannon-Wiener. Hasil uji Kruskal-Wallis menunjukkan terdapat perbedaan yang signifikan pada pengukuran parameter suhu udara, kelembapan udara dan intensitas cahaya. Tidak terdapat perbedaan pada pengukuran parameter pH tanah. Uji korelasi menunjukkan terdapat korelasi positif antara parameter suhu udara dan intensitas cahaya matahari terhadap penambahan jumlah spesies. Sementara itu tidak ada korelasi antara kelembapan udara dan pH tanah terhadap jumlah spesies. Terdapat dua belas spesies yang memiliki potensi sebagai spesialis kawasan tepi, namun tidak ditemukan spesies yang memiliki potensi sebagai spesialis kawasan inti.

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#### <b>ABSTRACT</b><br>

The existence of edges in a forest habitat can cause edge effects that affect the response of various organisms in the form of habitat or distribution pattern shifts, one of which is terrestrial herbs. Previous studies on the effects of edges on terrestrial herbs have had different results. The study aimed to determine the effect of edge effects on terrestrial herb communities in urban forests of Universitas Indonesia was conducted. Measurement of the edge effect parameters was done by investigating the composition of species in each research plot, calculating the Importance Value Index (IVI), Shannon-Wiener's index of diversity and evenness, and measuring environmental parameters. The species composition showed a tendency towards a positive response to edge effects. Based on the calculation of IVI it was known that the dominant species at each area namely *Axonopus compressus* at the edge, *Centotheca lappacea* at the middle, and *Amorphophallus variabilis* at the core. The results of t test on the Shannon-Wieners diversity index show that there were significant differences between edge-core and middle-core pair plots, while there were no significant differences between edge-middle pair plot. There were no specific response patterns for edge

effects based on the Shannon-Wieners index. The Kruskal-Wallis test results showed that there were significant differences in the measured air temperature, humidity, and intensity of sunlight parameters. There werent any differences in the measured soil pH parameter. Correlation test shows there were positive correlations between the parameters of air temperature and the intensity of sunlight on the addition of species number. Meanwhile there were no correlation between air humidity and soil pH on the addition of species number. There were twelve potential species categorized as edge area specialists, while there werent any species that have potential as core area specialists.