

## KEANEKARAGAMAN JENIS DAN DISTRIBUSI SPASIAL HERPETOFAUNA DI CAGAR ALAM PULAU SEMPU, KABUPATEN MALANG PROVINSI JAWA TIMUR

### INTISARI

Oleh:

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Cagar Alam Pulau Sempu merupakan kawasan hutan yang memiliki empat tipe ekosistem, terdiri dari ekosistem hutan tropis dataran rendah, mangrove, danau, dan hutan pantai. Didalam kawasan CA Pulau Sempu sendiri masih ditemukan gangguan yang berupa aktivitas manusia dalam bentuk wisata. Aktivitas manusia tersebut dapat menimbulkan kerusakan salah satunya akan berimplikasi pada keberadaan herpetofauna karena dapat mengganggu kelangsungan hidup herpetofauna. Penelitian ini bertujuan untuk mengetahui keanekaragaman jenis dan distribusi spasial herpetofauna di CA Pulau Sempu.

Penelitian dilakukan pada empat tipe ekosistem di CA Pulau Sempu. Data keanekaragaman jenis diambil menggunakan metode *Visual Encountering Survey (VES) with transect*. Analisis data keanekaragaman jenis menggunakan *Indeks Shannon-Wiener*. Distribusi herpetofauna secara spasial diperoleh dari koordinat-koordinat tanda bekas aktivitas berupa jejak atau perjumpaan langsung herpetofauna yang kemudian di overlay ke dalam peta CA Pulau Sempu dengan menggunakan software ArcGIS 10.1. Pola distribusi diketahui dengan menggunakan Indeks Dispersi (ID).

Berdasarkan hasil penelitian yang dilakukan, diperoleh 16 jenis herpetofauna yang terdiri dari 9 jenis reptil dan 7 jenis amfibi, dengan jumlah 99 individu. Berdasarkan *Indeks Shannon-Wiener*, keanekaragaman jenis herpetofauna di kawasan CA Pulau Sempu termasuk dalam kategori sedang ( $ID=2,36$ ). Distribusi spasial ditampilkan dalam bentuk peta distribusi herpetofauna di CA Pulau Sempu. Hutan tropis dataran rendah pola distribusi cenderung mengelompok, pada mangrove tidak memiliki pola distribusi, pada danau dan hutan pantai menunjukkan pola distribusi masing-masing cenderung acak.

**Kata kunci:** Herpetofauna, keanekaragaman jenis, distribusi spasial, Cagar Alam Pulau Sempu

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## SPECIES DIVERSITY AND SPATIAL DISTRIBUTION OF HERPETOFAUNA IN SEMPU ISLAND NATURE RESERVE, MALANG REGENCY, EAST JAVA

### ABSTRACT

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Sempu Island Nature Reserve is a conservation area that has four types of ecosystems, consisting of lowland tropical forest ecosystems, mangroves, lakes, and coastal forests. In the Sempu Island Nature Reserve area itself, there are still some disturbances from human activities in the form of tourism. Mentioned human activities could cause several damages, such as the implications for the existence of herpetofauna because this activities can interfere with the survival of herpetofauna. This study aims to identify the diversity and spatial distribution of herpetofauna in Sempu Island Nature Reserve.

This research was conducted on four types of ecosystems on the Nature Reserve area. Species diversity data was taken using the Visual Encountering Survey (VES) with transect methods. Analysis of species diversity data using the Shannon-Wiener Index. The spatial distribution of herpetofauna data was obtained of signs of previous activity in the form of a trace or direct encounters with herpetofauna which were then overlaid into the Sempu Island Nature Reserve area map using ArcGIS 10.1 software. The distribution pattern is obtained by using the ratio of the mean variance or the *Dispersion Index* (ID).

Based on the results of the study, 16 types of herpetofauna consisting of 9 types of reptiles and 7 types of amphibians, with a total of 99 individuals were obtained. According to the *Shannon-Wiener Index*, the diversity of herpetofauna species in the Sempu Island Nature Reserve area is included in the medium category (ID=2,36). The spatial distribution is displayed in the form of a map of herpetofauna distribution in Sempu Island Nature Reserve. Lowland tropical forests show the distribution patterns tend to be clustered, mangroves area do not have a distribution pattern, lakes and coastal forests shows the distributions patterns tend to be randomized.

**Keywords:** Herpetofauna, species diversity, spatial distribution, Sempu Island Nature Reserve

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