

Inventarisasi belta dan tumbuhan bawah serta potensi pemanfaatan pada petak satu hektar di Taman Nasional Gunung Gede-Pangrango

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Abstrak

The Gunung Gede - Pangrango National Park is known as a reserve for protecting plant and animal diversity, and has been listed as a biosphere reserve by The United Nation for Educational, Scientific and Cultural Organization (UNESCO). The Floristic composition in this park is very diverse ranging from lowland and mountain forests to sub-alpine vegetation. The forest in the national park does not always have a closed canopy as gaps have been created by both natural forces such as death of trees or windblows and by human activities.

This study was designed to examine: 1) species richness and forest structure at the sapling level; 2) forest regeneration; and 3) potential uses of saplings and seedlings. The study area was located at the forest at Bodogol at the altitude of 800 m above sea level (asl). Saplings were recorded in 25 plots of 10 m x 10 m of each. The study site was located along the hill path. A sapling species inventory was conducted in one-hectare plot, which was divided into 25 subplots of 10 m x 10 m each, where enumeration, measurement of diameter and identification of each sapling were undertaken. Enumeration and identification of shrubs, tree seedlings, herbs and ferns were made in 25 subsubplots of 1 m x 1 m each.

The results indicated that the sapling species richness is remarkably high. The numbers of sapling (< 10 cm diameter at breast height) recorded in 25 plots with total area of 2500 m² was 1516, which belong to 83 species and 34 families with total basal area of 0.124 m². The highest density of 356 saplings per hectare were recorded in Rubiaceae, with two leading spesies *Urophyllum arboreum* and *Paederia foetida*.

Urophyllum arboreum was recorded as the most frequent sapling across 18 subplots of the total 25 subplots. *Lithocarpus elegans*, *Acer niveum*, *Villebrunea rubescens*, *Sterculia oblongata*, and *Cryptocarya tomentosa* were recorded as having the highest basal areas.

Five species were recorded with biggest Importance Value Indexes (INP); *Urophyllum arboreum* (INP=23.75%), *Paederia foetida* (INP=13.10%), *Villebrunea rubescens* (INP=8.94%), *Antidesma* sp (INP=8.51%), and *Persea excelsa* (INP=7.88%). Above ground vegetation showed remarkable high species richness with total count 68 species, belonging to 44 families representing 224 individuals recorded in 25 subsubplots with total area of 25 m². The highest frequency was recorded in *Diospyros frutescens*, which recorded in 7 subsubplots. *Schismatoglottis calyprata* from Araceae family was recorded as the most prominent species.

Twenty five subplots with a total area of 2500 m² at Bedogol in the national park, 126 species have been identified of having potential uses for traditional medicines, building material, food sources, fire wood, handy craft, and ornamental plants.