

Komposisi dan struktur komunitas tumbuhan bawah di areal kebakaran Gunung Masigit dan studi awal regenerasi alam di areal kebakaran Gunung Masigit, Taman Nasional Gunung Gede Pangrango

Siagian, Reinhard, author

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Abstrak

ABSTRAK

Penelitian bertujuan untuk mengetahui struktur dan komposisi komunitas jenis tumbuhan bawah di areal Taman Nasional Gunung Gede Pangrango. Penelitian dilakukan di tiga lokasi yaitu lereng bawah, lereng atas, dan punggung bukit. Pengumpulan data dilakukan dari bulan April hingga September 1999.

Pencacahan flora menggunakan metode berpetak dengan 2 buah transek sepanjang 275 m. Pada setiap transek dibuat 25 petak berukuran 1x1 m dengan jarak 10 m antar petak.

Hasil pencacahan tumbuhan bawah pada 150 petak 1x1 m² di tiga lokasi penelitian Gunung Masigit mencatat 43 jenis tumbuhan yang tergolong ke dalam 39 marga dan 35 suku, dengan jenis-jenis utama *Dipteris conjugata*, *Blechnum finlaysonianum*, *Impatiens javensis*, *Trema lobata*, *Reds sp*, *Elatostemma sp*, *Smilax zeylanica*, *Schima wallrehr*, *Phaius sp*, *Vitis adnanta*, *Dendrochylum sp*, *Cyperus sp*.

Sebaran jenis tumbuhan bawah di lokasi penelitian, khususnya di Lereng Bawah dan Punggung Bukit, sangat heterogen. Penyebaran jenis-jenis tertentu umumnya tidak terkait dengan sebaran jenis-jenis lainnya. Komunitas tumbuhan bawah di Lereng Bawah dan Lereng Atas dapat disebut sebagai komunitas *Dipteris conjugata*, sedangkan di Punggung Bukit disebut asosiasi *D.conjugata*-*B.finlaysonianum*. Karakteristik tumbuhan bawah di lokasi penelitian menunjukkan bahwa komunitas tumbuhan di sana telah mengalami gangguan. Kadar air lapangan yang dimiliki jenis-jenis dominan seperti *Dipteris conjugata* dan *Blechnum finlaysonianum*, yang hanya sekitar 30 %, memiliki resiko tinggi terhadap bahaya kebakaran.

ABSTRACT

Composition and Structures Community Lowland Fires in Gunung Masigit and Preliminary Study of Natural Regeneration Forest Fire Gunung Masigit, G. Gede-Pangrango National Park Gunung Gede Pangrango National Park, is one of the Long-term Ecological Research Site in Indonesia. In the late 1997, the fires have burnt and destroyed nearly 300 ha forest in this park . Of nine location of hot spots recognized G.Masigit was the largest burnt area with the total of 250 ha . Undergrowth vegetation got the most severe impacts. Almost undergrowth vegetation in various location in study site were totally burnt. However, within three months following burning new seedlings such as *Omalanthus populneus*, *Macaranga tanarius* , *Trema orientalis* appeared in the forest floor.

Abdulhadi et al. (1999) reported that those species were found as the component of seed bank in a permanent plot of this forest. Thus, it is believed that those seedlings might be recruited from seed bank or seed rain.

The objective of the research is to find out the composition and structure of undergrowth forest a community after forest fire in Gunung Masigit, G. Gede-Pangrango National Park.

Data collection were carried out between April and September 1999 at three areas, i.e. upper slope, lower slope, ridge. Four transects of 275 m were established within each site; each two transects established in burnt and unburnt forest. A long the each 275 m transect 25 plots of 1 x1 m were established with the interval of 10 m.

A total of 43 species belong to 39 genera and 35 families were recorded within 150 plots of unburnt sites. The dominant species of the unburnt sites were *Dipteris conjugata*, *Blechnum finlaysonianum*, *Impatiens javensis*, *Urena lobalata*, *Pteris* sp, *Elatostemma* sp, *Smilax zeylanica*, *Schima wallichii*, *Phaius* sp, *Vitis adnanta*, *Dendrochylum* sp, *Cyperus* sp.

Based on their important value indices (I V I) the plant communities in lower and upper slopes were called *Dipteris conjugata* community, while in ridge site was an association of *D. conjugata* and *Blechnum finlaysonianum*. The composition of undergrowth forest community observed during this study clearly indicated that G. Masigit has experienced some kind of disturbance before the fire in the late 1997.

Field water capacities of the dominant plants of the undergrowth forest were about 30 %. It is believed that this condition makes the forest is under high risk of fires.

The species richness of burnt sites was higher than in unburnt sites due to occurrence of the secondary species such as *Melastoma balatrichum* and *Omalanthus populneus*, that were not found in the unburnt site. There were 38 species found on the ridge, as the richest site, followed by upper slope 33 species , and the lower slope 21 species. Based on the life form, the undergrowth species in burning area can be classified to 18 species of trees, 6 species of shrubs, 9 species of lianas, 15 species of herbs, and 5 species of ferns.

The undergrowth forest community in burnt sites was dominated by herbs and ferns indicated that the community was still in an early succession. The LVI of plant communities in burnt site showed that the lower slope was the association of *Pteris* sp-*Elatostemma* sp., the upper slope was a community of *Cyperus* sp, and the ridge was the association of *Cyperus* sp-*Pteris* sp.

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