

PERMUDAAN ALAM DAN KOMPOSISI JENIS EDELWEIS (*Anaphalis* spp.) PADA BERBAGAI ELEVASI DI JALUR PENDAKIAN SELO, RESORT SEMUNCAR, TAMAN NASIONAL GUNUNG MERBABU

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INTISARI

Edelweis (*Anaphalis* spp.) di pegunungan merupakan jenis tumbuhan pionir yang mampu tumbuh pada lahan bekas kebakaran, bekas tanah longsor, maupun material vulkanik bekas letusan gunung berapi. Gunung Merbabu mengalami kerusakan akibat salah satu dari tiga gangguan tersebut yaitu kebakaran. Populasi edelweis yang berada di Gunung Merbabu ikut terdampak karena kebakaran dan gangguan lain seperti aktivitas wisata pendakian. Saat ini, potensi dan persebaran permudaan edelweis di Gunung Merbabu belum diketahui sementara gangguan tersebut masih mungkin terus terjadi. Penelitian ini bertujuan untuk mengetahui potensi dan persebaran edelweis serta komposisi jenis edelweis pada rentang elevasi habitatnya di Gunung Merbabu.

Titik pengamatan diletakkan secara sistematis, unit sampel berupa petak ukur persegi dengan ukuran 5 m x 5 m untuk individu dewasa (diameter > 1 cm) dan ukuran 2 m x 2 m untuk individu muda (diameter ≤ 1 cm). Petak ukur diletakkan masing-masing dua di kanan dan kiri jalur pendakian. Analisis dilakukan pada tiga zona elevasi yang berbeda yaitu pada ketinggian 2.387 m dpl – 2.500 m dpl (Elevasi E1), 2.500 m dpl – 2.800 m dpl (Elevasi E2), dan 2.800 m dpl – 3.142 m dpl atau Puncak Gunung Merbabu (Elevasi E3). Potensi permudaan alam diketahui melalui analisis vegetasi dengan menghitung kerapatan dan frekuensi, sedangkan pola persebarannya diketahui menggunakan Indeks Dispersi Poisson. Komposisi jenis diketahui dengan identifikasi jenis di lapangan dan mencatat kisaran tempat tumbuhnya.

Hasil penelitian menunjukkan potensi permudaan alam tertinggi dimiliki jenis *Anaphalis javanica* pada Elevasi E2 dengan kerapatan untuk individu dewasa 1.762 individu per hektar dan 5.000 individu per hektar untuk individu muda. Pola persebaran edelweis di jalur pendakian adalah mengelompok. Terdapat dua jenis edelweis yaitu *Anaphalis javanica* yang ditemukan dari ketinggian 2.404 m dpl sampai 3.142 m dpl dan *Anaphalis longifolia* yang ditemukan pada ketinggian 2.387 m dpl sampai 2.774 m dpl.

Kata kunci: Permudaan alam, komposisi jenis, elevasi, *Anaphalis*, Gunung Merbabu

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**NATURAL REGENERATION AND COMPOSITION OF EDELWEISS
(*Anaphalis* spp.) IN VARIOUS ELEVATION OF SELO HIKING TRACK,
SEMUNCAR RESORT, GUNUNG MERBABU NATIONAL PARK**

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ABSTRACT

Edelweiss (*Anaphalis* spp.) in the mountains is a pioneer species which is had the ability to grow at burned, slided, even in the volcanic material land from volcano eruption. Mount Merbabu was affected by one of them, which is wildfire. Edelweiss in Mount Merbabu also threatened by wildfires and another disturbance like hiking activity for tourism. Nowadays, edelweiss regeneration potential and distribution had not known yet while the disturbance is still possible occur. This research is aimed to determine the potential, distribution, and species composition at elevation range of edelweiss habitat in Mount Merbabu.

Observation points were placed systematically, sample units were using the 5 m x 5 m and 2 m x 2 m square plot for the older individuals (diameter > 1 cm) and the younger individuals (diameter ≤ 1 cm) respectively. Two plots were placed both in the left and the right of hiking track, the analysis is applied for three elevation range that is 2.387 m asl – 2.500 m asl (Elevation E1), 2.500 m asl – 2.800 m asl (Elevation E2), and 2.800 m asl – 3.142 m asl (Elevation E3). Natural regeneration potential of edelweiss was known through vegetation analysis by calculating the density and frequency, while its distribution pattern was known by using Poisson's Dispersion Index. Species composition was known by species identification on field and records its growth site range.

The results showed that the highest natural regeneration potential refers to *Anaphalis javanica* at Elevation E2 with the density for older individuals were 1.762 individuals per hectare and 5.000 individuals per hectare for younger individuals. Distribution pattern in the hiking track was clumped. Two species of edelweiss were found in Selo Hiking Track, they are *Anaphalis javanica* found from 2.404 m asl to 3.142 m asl and *Anaphalis longifolia* from 2.387 m asl to 2.774 m asl.

Keywords: Natural regeneration, species composition, elevation, *Anaphalis*,
Mount Merbabu

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