

A Study on the Species Diversity and Similarity of Autogenous *Abies Koreana* Forest

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This research was aimed at figuring out the maturity and stability and its own qualities of each crown-story of *Abies Koreana* forests autogenously growing in Halla, Chiri, Duckyu, and Kaya mountains. For that result, we have analyzed the colony similarities of those four areas. Including all the species detected in those areas, the maximum possible diversity, evenness(J'), dominance, *inter-species competition*(Δ_1), *intraspecific competition* ($1-\Delta_1$), and the similarity coefficient by Sørensen coefficient(CC_s) were each measured.

The result could be summarized as follows:

1. Chiri mountain community's species diversity was estimated at 1.0764, Duckyu's at 1.1204, Kaya's at 1.0847, Halla piedmont's at 0.7716, and Halla crater area's at 0.8368. At the crown story, the Kaya's diversity of arborescent layer was at the highest, 0.9126, and the Halla's at the lowest, 0.1246. The Chiri's of sub-arborescent layer was at the highest, 1.0118, and The Duckyu's of shrub layer at the highest, 1.0476.
2. In the inter-species competition, Halla crater area was assessed at 0.8185, Duckyu was at 0.7872, Kaya was at 0.7867, Chiri was at 0.7824, and Halla piedmont was at 0.7452. And in the case of each layers inter-species competition, Halla's arborescent layer, Chri's sub-arborescent layer, and Duckyu's shrub layer was separately at the highest.
3. In the case of similarity coefficient, Chri community and Duckyu was each at the highest. Also Halla community came to next level, and Kaya was at the lowest.