**Population Dynamics of the Korean Endemic Monotypic Genus *Coreanomecon hylomeconoides* Nakai Using an Integral Projection Model**

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*Coreanomecon hylomeconoides* Nakai is a perennial herb of a monotypic genus, found only in the southern regions of Korea. Its small population size, restricted geographic range, and unique taxonomic status make it more vulnerable to habitat disturbance, climate change, and other anthropogenic impacts than other comparable species. Therefore, understanding population dynamics of *C. hylomeconoides* is critical for revealing underlying mechanisms of population responses to varying environmental conditions and informing conservation strategies. Here, we characterize the population dynamics of *C. hylomeconoides* using an Integral Projection Model (IPM) and Life Table Response Experiment (LTRE), based on demographic data collected from 2022 to 2024 at seven sites covering its entire distribution range. Vital rates (survival, growth, and fecundity) were modeled as size-dependent functions to construct the IPMs. We then calculated population growth rates (λ) and elasticities. Furthermore, population outcomes were decomposed into the contributions of each vital rate to determine which parameters were responsible for spatial and temporal variation. Our results showed an overall decrease in the population size of *C. hylomeconoides* (λ < 1), suggesting that conservation efforts and management are urgently needed. Growth and survival made the largest contributions to the variation in λ, and survival was negatively correlated with summer precipitation, which may reflect physical disturbance caused by the summer monsoon in Korea. The negative correlation between survival and summer precipitation may be attributed to their tendency to inhabit steep slopes near ravines, where individuals were often observed being dislodged and swept away during intense rainfall in the field. In addition, elasticity analysis highlighted that population viability largely depends on medium- and large-sized individuals, implying that actions to enhance their survival against heavy summer rain are necessary as a key component of conservation strategies.

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