

Rare endemic species conservation in Ulleungdo, Republic of Korea

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Ulleungdo Island, 72.86 km² in size and situated near the Dokdo Islet, lies approximately 140 km off the east coast of Korea. It emerged from volcanic activity roughly 3 million years ago, fostering unique ecological conditions conducive to independent evolution from scratch. Owing to the distance barrier that prevents transfer of species from the mainland and its distinguished climate characterised by heavy snow and warm winter, the island's flora has diverged significantly from their mainland counterparts. Of the island's 494 plant species, 33 have evolved exclusively on Ulleungdo according to the research conducted in 2015. However, contemporary challenges such as construction, development, and climate change threaten the survival of numerous species native to the island. To counteract this trend, the majority of Ulleungdo's endemic plants are safeguarded ex situ at the KeyChungsan Botanic Garden, conveniently located in proximity to the island. Over the years, the KeyChungsan Botanic Garden has assumed a pivotal role in conserving endangered vascular plants native to Ulleungdo, including *Spiraea insularis* (Nakai) H.Shin, Y.D.Kim & S.H.Oh (Rosaceae) and *Bupleurum latissimum* Nakai (Umbelliferae). Through diligent monitoring and inspection on the island, its research team endeavours to develop mass-production techniques for these species. Notably, the garden has spearheaded successful conservation and restoration initiatives for endangered species like *Cotoneaster wilsonii* Nakai (Rosaceae) and *Scrophularia takesimensis* Nakai (Scrophulariaceae) on Ulleungdo. As a symbolic gesture, the organisation has created the Ulleungdo and Dokdo Islet gardens within its premises, mirroring the geographic contours of the actual islands. Furthermore, the KeyChungsan Botanic Garden actively engages the public through educational programs and awareness campaigns focused on the conservation of Ulleungdo's unique flora and fauna. Through these concerted efforts, the garden endeavours to preserve the ecological integrity of Ulleungdo and its surrounding areas for future generations.