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The importance of plant exchanges in botanic gardens: The case of North Korean plant conservation

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North Korea plays a vital role in East Asian biodiversity by connecting the Korean Peninsula, China, and Far Eastern Russia. However, despite ongoing concerns about forest degradation in North Korea, information on plant diversity is limited to government-published resources and introductions to some rare and endemic plants. Research findings on the conservation status of native habitats or populations are almost non-existent. With the aim of preserving plant diversity on the Korean Peninsula, the Korea National Arboretum has established the DMZ Botanic Garden and is conserving plants from the DMZ and North Korea. According to a literature review, there are 486 taxonomic groups of North Korean plants distributed only in North Korea, with living collections, specimens, and seeds held by 332 institutions in 48 countries. Among them, BGCI's PlantSearch revealed that 70 institutions hold living collections and seeds for ex situ conservation and restoration, representing a total of 3,652 accessions across 327 taxa. Given the challenge of accessing these taxa directly from their native habitats, botanic gardens' living collections and seeds are indispensable tools for conserving North Korean plants. In addition, even if the plants are not native to North Korea, they can contribute to genetic diversity. It is clear that BGCI's PlantSearch and Index Seminum are crucial for efficiently collecting plants for ex situ conservation, especially in regions like North Korea with inaccessible plant diversity. Furthermore, in an environment where regulations on Access and Benefit Sharing (ABS) are tightening, plant exchanges between botanic gardens are poised to become vital to fulfil the mission of ex situ conservation.