

## 멸종위기 털복주머니란 현지 외 보전 및 고랭지 적응성 검토

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### *Ex situ* Conservation of the *Cypripedium guttatum* SW. Seedlings from Asymbiotically Germination and Adaption on High Land in Korea

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**Background :** The genus *Cypripediums* are typically adapted to the low temperature and cold climates of the high land in Korea. The species which were reported in Korean peninsula are *C.japonicum*, *C.macranthos*, *C.calceolus* and *C.guttatum*. We had already reported the successful germination of the *C.macranthos* and *C.guttatum*. The small spotted lady's slipper orchid(*C.guttatum*) is most endangered plants to extinction of which population was reported less than 100 in Korea. The objective of the present research is restoration of the *C.guttatum* in *ex situ* and adaptation in high land and nursery.

**Methods and Results :** The 350 seedlings of *C.guttatum* were transplanted in soil at alpine area(altitude 750m) and the nursery of Korea National Arboretum(KNA) in YangPyeong city on May 2019 and 2020 in order to verify the possibility of *ex situ* restoration. The sprouted ratio of the seedlings were less than 10% in the alpine area and 83% in the nursery of KNA. The reasons of the diverse survival ratio are presumed as the low moisture content in the soil and heavy shade of the alpine area. The 15 *cypripedium* species and 29 hybrids were also effectively adapted in the KNA rare plant garden.

**Conclusion :** These results demonstrated the difficulties of the restoration for small spotted lady's slipper orchid in the natural habitation. From the above results, we may conclude that the critical factors of the genus *Cypripedium* are intensive care for the fragile seedlings during the 1<sup>st</sup> year acclimatization.

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[본 연구는 국립수목원 「희귀 특산식물 보전 및 복원 인프라 구축」의 위탁연구과제 「*Cypripedium*속 희귀 식물 대량증식 및 육묘법 개발 연구」(과제번호 KNA-20-CG-8) 사업의 지원을 받아 수행되었습니다.]