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First international training course on conservation of Plant Species with Extremely Small Populations

Plant Species with Extremely Small Populations (PSESP) is a conservation concept that emerged in China in 2005. Species qualify if there are < 5,000 mature individuals in the wild and < 500 individuals in each population. To date, c. 100 such species have been effectively conserved and their habitats incorporated in China's Ecological Conservation Red Lines scheme, which prohibits or limits human impact in areas of ecological importance such as nature reserves, wetlands and public forests. After nearly 2 decades, the implementation and achievements of both regional and national PSESP conservation programmes has led to a broader recognition of this concept.

During 15–29 July 2023, supported by the Key Research and Development Programme of Yunnan Province (202103AL140002), the first International Training Course on Conservation and Utilization Techniques of PSESP was offered at Kunming Institute of Botany, Chinese Academy of Sciences, Kunming. The 20 participants came from Azerbaijan, Bangladesh, Brunei, India, Indonesia, Laos, Myanmar, Nepal, Pakistan, the Philippines, Uzbekistan and Viet Nam. During the 5-day indoor session, techniques, case analysis and theory of the PSESP conservation system were introduced. In the subsequent field session, the participants visited the Western Yunnan Provincial PSESP ex situ and



Transplanting *Firmiana major* at its reintroduction site, Fuming County, Yunnan Province, China, in July 2023. Photo: the authors.

near situ conservation garden, in situ conservation sites, and reinforced and reintroduced populations of *Acer yangbiense*, *Firmiana major* and *Poncirus polyandra* in Yunlong, Yuanmou and Fuming counties, respectively, in Yunnan. The implementation and challenges of these conservation programmes were discussed with the participants.

The training course achieved its aims to introduce and share knowledge and information about the PSESP programme and to demonstrate how its innovative approaches and strategies could be tailored and adopted to local conservation efforts across Asia.

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The slipper orchid *Paphiopedilum gratrixianum* requires priority conservation in Yunnan, China

With unique and beautiful flowers, the slipper orchids *Paphiopedilum* spp. have always been popular in horticulture. Conservation of the genus faces serious challenges, however, as they may be collected by orchid enthusiasts and the species are rare in the wild. *Paphiopedilum gratrixianum* Rolfe has a disjunct distribution in southern China, Laos, Thailand and Viet Nam. It is categorized as Endangered on the Red List of Biodiversity–Higher Plants of China, as Critically Endangered on the IUCN Red List of Threatened Species, as a first-rank plant for national key protection in China, and as a Plant Species with Extremely Small Populations by the Yunnan provincial government in 2021.

In 2021 a population of c. 150 mature individuals of *P. gratrixianum* was discovered in Zhenyuan County, Yunnan Province. With the support of the Yunnan Plant Species with Extremely Small Populations conservation programme (2021S14X-09), we carried out further surveys for the species in April 2022 and October 2023. We discovered the species in two additional localities: c. 200 individuals in Shiping County, Honghe Autonomous Prefecture (> 150 km from Zhenyuan) and c. 150 individuals in Mojiang County, Pu'er City (> 80 km from Zhenyuan). All of the c. 500 individuals now known in China occur outside protected areas. With a narrow distribution range and low numbers,