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New record of the Endangered *Nymphaea candida* discovered in Xinjiang, China

Nymphaea candida J. Presl & C. Presl is a perennial aquatic plant of the Nymphaeaceae family. It is predominantly found in still or slow-flowing freshwater across Eurasia, including Central and Eastern Europe, north-west Asia, and Central Asia. Although it is widely distributed and categorized as Least Concern in Europe on the IUCN Red List, it faces significant threats in China, where it is classified as a wild plant under second-class state protection and is categorized as Endangered on the China Biodiversity Red List–Higher Plants. In China it is currently only recorded in the wild in Bosten Lake, Ili Valley Wetland and Irtysh River. The species is threatened by climate change, intensified eutrophication and habitat fragmentation. The wild population of *N. candida* in Gongliu County has decreased by 50% in the past 5 years.

With the support of the third Xinjiang comprehensive scientific expedition project, we surveyed for *N. candida* in August 2023 and August 2024, and identified a new population in Yining County, Xinjiang. We recorded the new population in the reeds of Kashgar Town in August 2024. It consists of c. 150 plants, distributed sparsely across the area. The main accompanying species include *Phragmites australis* and *Typha orientalis*. *Phragmites australis* is the dominant species in this community, with a coverage of > 75%, negatively affecting the growth and reproduction of *N. candida*. Additionally, human activities have caused significant damage to native plants in the area. The seed-set rate of this *N. candida* population is extremely low, and there is a risk of local extinction.

Given the conservation status of this species in China, we collected DNA samples to protect its genetic diversity. We collected tubers from 20 plants for ex situ conservation at the Yili Botanical Garden, and fruits for breeding experiments in the laboratory. Local authorities also need to develop in situ conservation strategies for the species. We will continue to investigate the wild distribution of *N. candida*, explore its conservation status and propose appropriate protection strategies.

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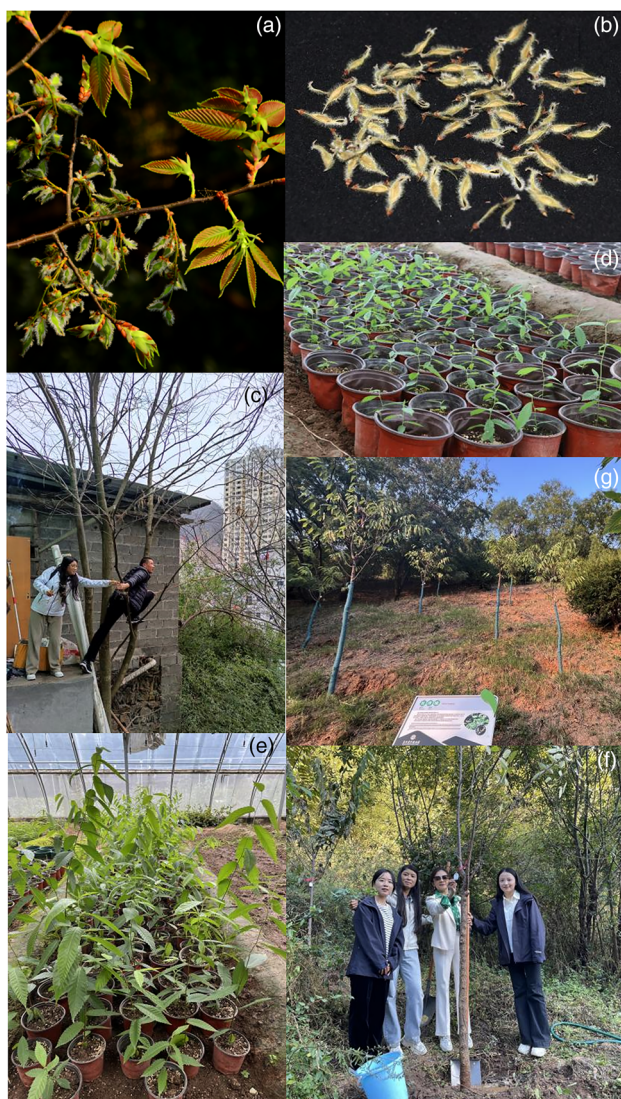
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Saving *Ulmus elongata*: an Endangered tree endemic to China

Ulmus elongata is a deciduous tree in the family Ulmaceae. It is classified as a second-level National Key Protected Wild Plant and is one of the 120 species of Plant Species with Extremely Small Populations in China. The species is endemic to China, growing in broadleaf forests at 700–900 m, in valleys, along stream banks or on lower slopes. Because of its fragmented population, the harsh growing environment and small winged seeds that are wind dispersed and eaten by birds, seed collection can be difficult. Furthermore, moth larvae feed on its young leaves, leading to significant consumption of seedlings after germination, hindering survival. The combination of these factors contributes to the poor reproductive capability of *U. elongata* in the wild, with < 100 mature trees remaining. It is categorized as Endangered on the China Biodiversity Red List, necessitating artificial propagation efforts to increase the number of seedlings and improve its conservation status.

During March 2022–November 2024 we successfully bred > 2,000 seedlings, developing a seed propagation and seedling cultivation plan that includes the optimal timings for harvesting and sowing. We collected mature fruits from Zhenping County and Ankang City, Shaanxi Province, and conducted sowing experiments in the seedling nursery of the Qinling National Botanical Garden. The successfully propagated seedlings are preserved in semi-natural habitats for reintroduction into the wild.

We determined the optimal harvesting period for *U. elongata* seeds to be early April, and timely sowing after collection is needed to ensure seed vitality. We selected well-drained, loose and fertile sandy loam as the seedbed, maintaining a temperature of 18–25 °C. Germination occurs c. 15 days after sowing, and when the average plant height reaches c. 150 cm, the seedlings can be transplanted. During 2022–2024 we introduced 400 seedlings to four locations with conditions similar



Ulmus elongata: (a) inflorescence, (b) seeds, (c) seed collection in its natural habitat, (d) germinated seedlings, (e) planting stock, (f) planting activities, and (g) following reintroduction. Photos: Yali Li.

to the species' natural range (an orchard at Bapi Mountain in Zhenping County, near the former primary school in Hongxing Village, Niutoudian Town, the Qinling National Botanical Garden, and Zhashui County in Shangluo City, Shaanxi Province), establishing new populations of *U. elongata*. Monitoring of seedling survival is ongoing.

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Ex situ planting movement for Indonesia's threatened trees

A recent IUCN press release (bit.ly/4ioZaJr) revealed that 16,425 of 47,282 assessed tree species are now categorized as threatened, comprising > 25% of species assessed on the IUCN Red List. The number of threatened trees surpasses that of all threatened birds, mammals, reptiles and amphibians, and spans 192 countries.

Indonesia is home to c. 5,918 tree species (BGCI, 2024, bit.ly/3D41zcz). A total of 5,261 (> 88%) of Indonesia's tree species have been assessed for the IUCN Red List, with 1,178 (22%) categorized as threatened. Based on the ex situ collection database of botanic gardens in Indonesia, managed by the National Research and Innovation Agency (makoyana.brin.go.id), only 180 (c. 15%) of threatened Indonesian tree species are represented in these ex situ collections.

To support the ex situ conservation of threatened Indonesian trees, Forum Pohon Langka Indonesia has developed the Ex-Situ Network Program, which is dedicated solely to providing seedlings of threatened tree species. The network currently consists of 15 local nurseries across nine provinces. Utilizing the seedlings available in these nurseries, we organized a simultaneous tree-planting movement on Indonesia's National Tree Planting Day, 28 November 2024. We successfully planted 402 individuals of 41 species, including eight Critically Endangered, seven Endangered and 17 Vulnerable species. A total of 21 institutions participated, representing 11 provinces from Sumatra to Papua.

We hope this movement, to be repeated annually, will ensure greater representation of threatened tree species in ex situ collections. We will coordinate with all participants to ensure proper maintenance of the seedlings planted in their institutions, and work to expand the ex situ network to guarantee the availability of threatened Indonesian trees seedlings for future planting initiatives.

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The last remaining southern muriquis *Brachyteles arachnoides* from the interior of São Paulo state, Brazil

The southern muriqui *Brachyteles arachnoides*, one of the largest primates in the Americas, is categorized as Critically Endangered on the IUCN Red List. It is endemic