

Plant diversity in Yunnan: Current status and future directions

October 14 2020, by Zhang Nannan

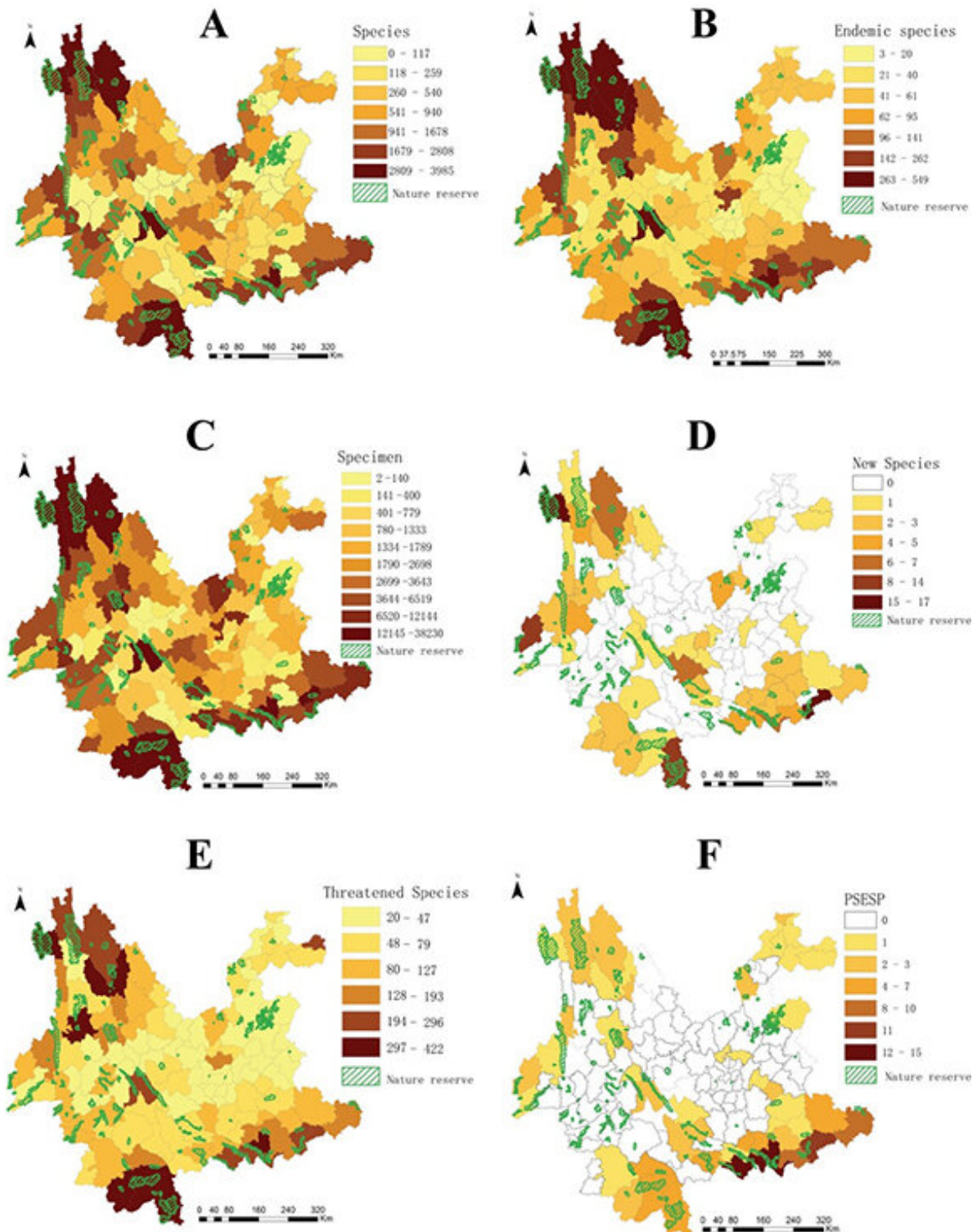


Fig.1: County-level distribution of plant diversity in Yunnan. (A) Total species

distribution patterns. (B) Endemic species distribution patterns. (C) Specimen distribution patterns. (D) New species distribution patterns (from 2013 to 2019). (E) Threatened species distribution patterns. (F) Distribution patterns of Plant Species with Extremely Small Populations (PSESP). Credit: KIB

Yunnan, located in the southwest border of China, has a complex natural environment and breeds extremely rich biological resources. It is known as the "Kingdom of Animals and Plants."

It is one of the 17 biodiversity hot spots in China and one of the 34 biodiversity hot spots in the world. Although the [land area](#) only accounts for 4.1% of China, it nearly harbors half of the total number of higher plant species of China (about 19,000 species), which has always attracted the attention of researchers all over the world.

The research groups for Plant Diversity and Evolution of the Qinghai-Tibet Plateau and Himalayas from the Kunming Institute of Botany has been continuously focused plant diversity of Yunnan. Based on the available data from latest released publications and [online resources](#), the researchers analyzed the current situation of plant diversity in Yunnan Province.

They found that the northwest, south and southeast of Yunnan are the areas with the largest number of species, endemic species, specimens collected, new species published in recent seven years and endangered species, while the southeast of Yunnan are the hot spot of plant species with extreme small population.

In addition, combined with the data of nature reserve, result showed that although there are currently 160 protected areas in Yunnan, only 109 of the 129 county-level administrative units have protected areas.



Fig.2. Type specimens and recent photographs of re-discovered 'type-only' species. (A) *Hemilophia serpens* (published in 1915). (B) *Ranunculus melanogynus* (published in 1960). (C) *Carex polymascula* (published in 1983). (D) *Delphinium oxycentrum* (published in 1937). Credit: KIB

Moreover, the [protected areas](#) in the central and eastern Yunnan are low grade (County and Municipal Level), with small area and relatively fragmented distribution, which may be related to the frequent human activities in central and eastern Yunnan

On this basis, in order to better protect biodiversity resources and achieve [sustainable development](#) in the future, the researchers put

forward many suggestions for the future development of [plant diversity](#) in Yunnan, such as: [government support](#) is needed for [scientific research](#), the need to investigate the plant resources of Yunnan (especially in the weakly investigated area), and support the qualified monographs, flora and the other biodiversity databases.

The related studies, titled "Plant diversity in Yunnan: Current status and future directions," were recently published in *Plant Diversity's* special issue "Safeguarding Our Future by Protecting Biodiversity."

More information: Li-Shen Qian et al. Plant diversity in Yunnan: Current status and future directions, *Plant Diversity* (2020). [DOI: 10.1016/j.pld.2020.07.006](#)

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