

RANGES FAR AND HIGH: ON THE PHYTOGEOGRAPHICAL ORIGIN OF TAIWAN'S MONTANE PLANTS

橫斷臺灣：追尋臺灣高山植 物地理起源

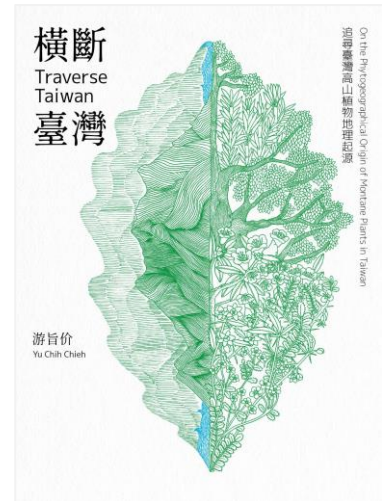
* 2024 Golden Tripod Award

* 2023 Openbook Award

A biogeographic exploration spanning millions of years, this book investigates the origins of Taiwan's flora and fauna and the island's incredible biodiversity. Fascinating information is interspersed with insights on the beauty of the natural world.

For two decades, the Hengduan Mountains on the eastern edge of the Pan-Tibetan Plateau have been a hot spot for global diversity research due to what might be the oldest mountain vegetation in the world. Although Taiwan's mountains formed much later than the Hengduan Mountains, they are home to many of the ancient montane plants from interior East Asia. Because the two places have similar altitudes and latitudes as well as vegetation with a shared biogeographic origin, they represent a "disjunct distribution" that has increasingly gained the attention of the natural science community.

The term "disjunction" means that closely related species of plants and animals appear in far-apart places separated by geographical barriers unsuitable for plant growth or spread. Because climate changes over the course of millions of years created land bridges at various times, however, plants and animals could expand into other



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areas by different routes. According to the author, these “dynamic” origins and paths of spread are the key to Taiwan’s endemic plants and animals.

In this book, Yu Chih-Chieh shares an account of his field research in Taiwan’s mountains, which is accompanied by his explanatory notes. The reader first learns about plant groups unique to East Asia, such as mountain rhododendrons, oaks, and barberry, then follows the author to the vast mountain regions of the Pan-Tibetan Highlands. There Yu investigates the geographical origins of Taiwan’s montane plants, attempting to clarify the relationships between alpine plant species of the Himalayas, the Hengduan Mountains, and Taiwan.

In chapters featuring information-packed montane plant case studies, *Ranges Far and High* draws on diverse fields, including geology, climate, fossils, and DNA research, to decode the ancient memories of distant places concealed in Taiwan’s alpine flora, while the author’s photos of ecosystems and mountains give readers additional insight into the plants’ past and present.

Text by Yu Chih-Chieh 游旨价

Naturalist and plant biologist Yu Chih-Chieh spent his early youth enjoying the wildernesses of Taiwan, and has dedicated his professional life to educate the world on global biogeography. His PhD dissertation won multiple awards; he is also the author of *The Odyssey of Taiwan’s Montane Plants*.

Illustration by Huang Han-Yau 黃瀚曉

Huang Han-Yau, a graduate of the School of Forestry at National Taiwan University, is currently a scientific illustrator specializing in ecology as well as a community university lecturer whose work has appeared in publications related to environmental education. He is the author of several books, including the ecological-themed children’s picture book *Little Black Dots on the Fence*, two illustrated guides, one on the environment and another on ecology, and a narrative non-fiction book, *The Lost River*, which won the Taiwan Literature Award in 2023.

Illustration by Ong Jin-Yao 王錦堯

Ong Jin-Yao, originally from Kluang, Johor, Malaysia, is a graduate of National Taiwan University's Department of Life Sciences whose interest in scientific drawing was first piqued in university. Currently a part-time graphic artist, he focuses mainly on botanical illustration.