

Local conditions shape plant communities

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Credit: Florida International University

The local environment plays a key role in determining what kinds of plants grow there, according to a new study that could change how threatened species are managed.

Florida International University botanist Christopher Baraloto and a

team of researchers found local conditions, including soil, the interaction of [plants](#) and animals, and disturbances, are more important than climate and other landscape conditions in the development of plant size, leaf size, leaf shape and other traits. The information refines scientists' ability to predict where plants can grow and how they might respond to [climate change](#), deforestation and other global changes.

"The study is exciting because it confirms, at a large scale, the need to consider local [conditions](#) when decoding what drives local plant community composition," said Baraloto, co-author of the study and director of the International Center for Tropical Botany at The Kampong.

The study was led by Martin Luther University of Halle-Wittenberg and the German Centre for Integrative Biodiversity Research in Germany. The [research team](#) included 105 researchers from more than 90 universities. They relied on data from more than 1.1 million vegetation plots spanning 50,000 plant species.

The International Center for Tropical Botany at The Kampong, a collaboration between FIU and the National Tropical Botanical Garden, is dedicated to the conservation and sustainable use of tropical plants through research, education and outreach.

More information: Helge Bruelheide et al. Global trait–environment relationships of plant communities, *Nature Ecology & Evolution* (2018). [DOI: 10.1038/s41559-018-0699-8](https://doi.org/10.1038/s41559-018-0699-8)

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