

Encouraging scientists to collaborate on the tropics

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Timothy Perez, a biology Ph.D. student at the University of Miami. Credit: Barry V. Williams for the University of Miami College of Arts & Sciences

Timothy Perez, a biology Ph.D. student at the University of Miami, left snowflakes behind to pursue his dream of becoming a tropical botanist

in the Sunshine State. His latest study, "The changing nature of collaboration in tropical ecology and conservation," recently published in *Biotropica*, investigates collaboration among scientists, researchers, and other figures whose work advances the field of tropical ecology.

It is the fifth-year Ph.D. student's first published study conducted outside the guidance of a professor.

"A lot of tropical ecology and [conservation science](#) is actually published by [scientists](#) who are outside of, or not from, the tropics," says Perez, an alumnus of the University of Vermont. "One motivation for this study was to see if scientists outside of the tropics are starting to collaborate with scientists within the tropics."

Perez's study does not undermine the hard work that scientists do in the tropics, but rather seeks to determine if that work is happening in a bubble. If so, he notes, important information could go unshared.

"Collaboration with local scientists just ensures that any science produced is more effectively translated into conservation policy or management plans," says Perez. "Given that there is a global interest in tropical conservation, linking the work that scientists do in labs all across the globe to those on the ground with an intimate knowledge of [tropical environments](#) is key."

For his study, Perez reviewed years' worth of articles to look for changes in the number of authors contributing to individual publications. In another important variable, he documented the country of affiliation where authors were living. *Biotropica* and the *Journal of Tropical Ecology*, the quintessential tropical conservation and ecology research journals, were the sources of the raw data that the study analyzed.

Perez and his co-author, J. Aaron Hogan at Florida International

University's Department of Biological Sciences, took hundreds of articles published between 2000 and 2015 to reach their conclusions. For those like Perez who dedicate their lives to finding breakthroughs in the science of tropical ecology, their findings bring some relief. Overall, [international collaboration](#), including collaboration between tropical and non-tropical authors, is increasing. In part, this is good news, because more scientists from [tropical countries](#) are being represented in the scientific literature. However, Perez and Hogan's data indicate that without the pattern of rising authors per publication, representation of tropically based scientists would not increase.

"The trend across science that there is going to be more authors per paper is hopeful because I think it indicates increased lines of communication," says Perez. "Science should be inclusive by nature, and I think our study shows we are moving in the right direction in tropical [ecology](#)."

Aside from increased collaboration, the study also reveals some disparities, such as disproportionately lower numbers of authors from tropical countries. Ironically, most of the countries that contribute the most to this body of research are not tropical.

Although this study is a diversion from Perez's main research—investigating how tropical rainforests respond to climate change—it is very relevant to his daily work. For starters, this study could be a bellwether for conservation efforts that impact his field, but Perez notes, "a paper is just one way that people can collaborate and do science that will hopefully translate into policy on some level."

While this research does not directly explore conservation efforts and outcomes, the study, and those like it, give conservation and policy stakeholders a glimpse into the future of their efforts.

Even though the study findings are positive, Perez believes that "we could be doing a much better job" when it comes to international collaboration. He hopes the study can be a springboard for further enquiry into the mechanisms of [collaboration](#). As for what happens next, Perez plans to focus on writing the remaining chapters for his dissertation. He is also working on other collaborative projects, including one that looks at plant species survival in the Himalayas.

More information: Timothy M. Perez et al, The changing nature of collaboration in tropical ecology and conservation, *Biotropica* (2018). [DOI: 10.1111/btp.12573](https://doi.org/10.1111/btp.12573)

Provided by University of Miami

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