

Letter

Identifying Areas of Need in Tropical Research: A Reply to Stroud and Feeley

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We appreciate the comments from Stroud and Feeley [1], and are pleased that our article on the lack of tropical studies on biodiversity-ecosystem function [2] has stimulated discussion on the topic. We agree that biodiversity-ecosystem function research is not the only area of ecology where tropical ecosystems have been understudied. Indeed, this has been an issue of notable importance for some time, and there have been calls for increased tropical research since the 1960s [3]. More recently there have been calls for more focus on the tropics on issues such as the impact of climate change on tropical forests and their role in climate change mitigation [4], taxonomic identification [5], and the importance of tropical forest research for conservation [6].

Bias towards temperate locations for ecological research, however, is not

homogenous across ecology. Some research areas are well represented in the tropics. As Stroud and Feeley point out [1], many ecological theories have been developed using tropical ecosystems. These theories are therefore likely to be more applicable to tropical ecosystems than those developed primarily in temperate zones. Therefore, a key to moving forward is to identify potential mismatches between theory development and tropical ecosystems. It is also important to acknowledge that bias even exists within tropical research, with some locations receiving more attention than others [2,7], and it may be necessary to conduct further evaluation of ecological theories within poorly studied tropical regions. Furthermore, tropical research often includes logistical limitations associated with the high complexity and species richness that are common in tropical ecosystems. Thus, a clear path forward must include methodologies adapted to tropical research [6]. Because ecological methodologies are often specific to particular areas of research, they must be considered separately for each research area.

In conclusion, while tropical regions are often under-represented in ecological research, the keys to moving forward are to (i) identify research areas that have been particularly understudied in the tropics, (ii) identify theories that may need to be adapted to tropical ecosystems,

and (iii) identify methodologies that allow the proposed research to accommodate logistical difficulties arising from the complexity of tropical ecosystems. We therefore agree with Stroud and Feeley [1] that biodiversity-ecosystem function research is not the only field in ecology where the tropics have been understudied. Given the importance of tropical ecosystems, we hope that ecologists will continue to confront these issues, as they have in the past [3–6].

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