Proposal Status | MAIN

Organization: University of Florida

Review #2

Proposal Number:	1754741
NSF Program:	POP & COMMUNITY ECOL PROG
Principal Investigator:	Bruna, Emilio M
Proposal Title:	SG: Are there synergistic effects of habitat fragmentation and drought on tropical plant demography?
Rating:	Excellent

REVIEW:

In the context of the five review elements, please
evaluate the strengths and weaknesses of the proposal with respect to intellectual merit.

Project proposes to use an existing long-term database to test the Fragmentation-Drought Hypothesis (FDH) that posits that the effect of drought on reproduction, survival and population growth are impacted by fragment size. The existence of a database from a long-term study in a tropical system in which fragment sizes were experimentally varies and data on herbaceous plants were also collected.
All data needed to test this hypothesis exist, the mathematical tools to analyze the data exist. Simulations will be used to evaluate effects on vegetation of climate change under various drought frequency scenarios making this work particularly relevant for predicting effects of environmental change on tropical rainforest systems.
The PI and his team are clearly well qualified and productive.

In the context of the five review elements, please
evaluate the strengths and weaknesses of the proposal with respect to broader impacts.

broader impact are excellent and diverse

Please evaluate the strengths and
weaknesses of the proposal with respect to any additional solicitation-specific review criteria, if applicable

Summary Statement

Project proposes to use an existing unique long-term database to test the Fragmentation-Drought Hypothesis that posits that the effect of drought on reproduction, survival and population growth are impacted by fragment size. testing this hypothesis using experimental data is particularly important to predict effects of environmental change on tropical rainforest systems.

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