TITLE	**SOIL BIOGEOCHEMICAL RESPONSES OF A TROPICAL FOREST TO WARMING AND HURRICANE DISTURBANCE**
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ABSTRACT	Tropical forests represent < 15% of Earth's terrestrial surface yet support > 50% of the planet's species and play a disproportionately large role in determining climate due to the vast amounts of carbon they store and exchange with the atmosphere. Currently, disturbance patterns in tropical ecosystems are changing due to factors such as increased land use pressure and altered patterns in hurricanes. At the same time, these regions are expected to experience unprecedented warming before 2100. Despite the importance of these ecosystems for forecasting the global consequences of multiple stressors, our understanding of how projected changes in climate and disturbance will affect the biogeochemical cycling of tropical forests remains in its infancy. Until now, no studies to our knowledge have evaluated forest recovery following hurricane disturbance within the context of concurrent climatic change. Here, we present soil biogeochemical results from a tropical forest field warming experiment in Puerto Rico where, a year after experimental warming began, Hurricanes Irma and María greatly altered the forest, allowing a unique opportunity to explore the interacting effects of hurricane disturbance and warming. We tracked post-hurricane forest recovery for a year without warming to assess legacy effects of prior warming on the disturbance response, and then reinitiated warming treatments to further evaluate interactions between forest recovery and warmer temperatures. The data showed that warming affected multiple aspects of soil biogeochemical cycling even in the first year of treatment, with particularly large positive effects on soil microbial biomass pools (e.g., increases of 54%, 33%, and 38% relative to the control plots were observed for microbial biomass carbon, nitrogen, and phosphorus, respectively after 6 months of warming). We also observed significant effects of the hurricanes on soil

	biogeochemical cycling, as well as interactive controls of warming and disturbance. Taken together, our results showed dynamic soil responses that suggest the future of biogeochemical cycling in this tropical wet forest will be strongly shaped by the directional effects of warming and the episodic effects of hurricanes.
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