

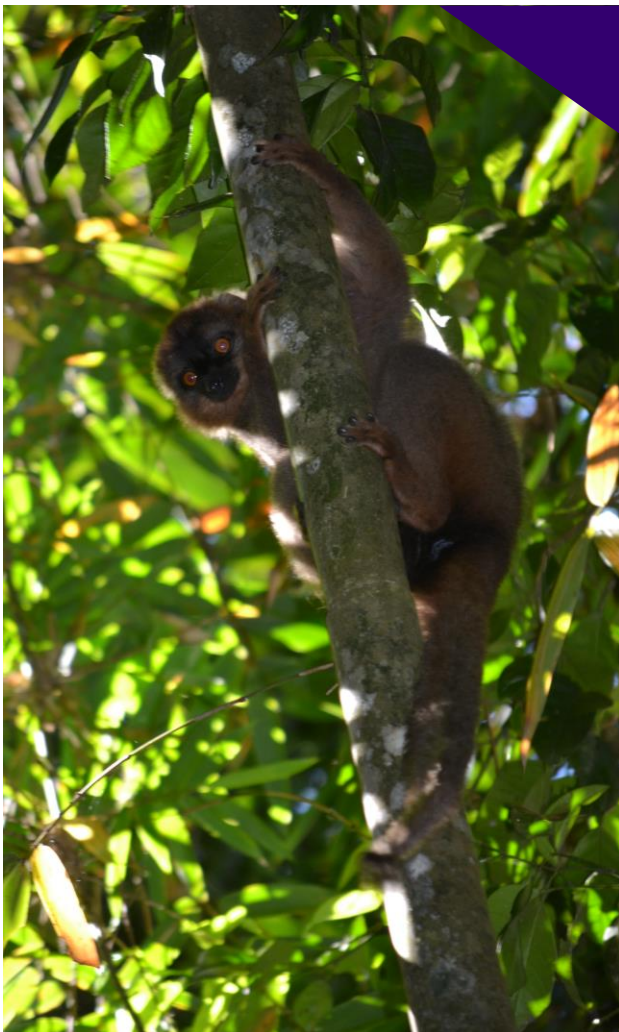


Biology Seminar

By: Onja Razafindratsima

University of California, Berkeley | Assistant Professor, Department of Integrative Biology
<https://www.razafindratsima.org/>

Frugivory and seed dispersal: insights from Madagascar's biodiverse ecosystems



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Many plant species rely on animal frugivores to disperse their seeds. Understanding the value of frugivore-mediated seed dispersal depends upon comprehending the interaction between animals' foraging behaviors and the patterns of seed dispersal services they provide. My research seeks to provide new insights to such an objective by focusing on the roles and impacts of nonrandom seed dispersal by lemur frugivores in biodiverse rainforests in Madagascar, where a majority of plants have traits adapted for seed dispersal by animals and the highly diverse plant communities are vying for a limited set of frugivore generalist taxa for seed dispersal services. My work demonstrated that nonrandom seed dispersal by frugivores could positively affect plant populations and structure the spatial associations and the interactions between plants within a community. Nonrandom dispersal of seeds, with respect to forest canopy cover, increased per-seed sapling recruitment fourfold, compared to no dispersal. Additionally, taking a phylogenetic and temporal approach, data showed that by using fruiting trees as seed-dispersal foci, lemur frugivores structure the spatial and phylogenetic patterns of early-stage plant-plant

associations, setting the template for post-dispersal processes that influence ultimate patterns of plant recruitment. These findings can have critical implications for understanding the dynamics and functioning of biodiverse plant communities, given that seed dispersal determines the ecological patterns of plant diversity.

Seminar Speaker Hosts: Therese Lamperty & Berry Brosi

