Bio

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My PhD work is focused on symbiotic interactions between land plants and soil fungi. Specifically, I am interested in the ectomycorrhizal symbiosis, an obligate, intimate mutualism between dominant woody plants in the temperate zones (Pinacea, Fagaceae, Salicaceae, etc.) and soil fungi in the Asco- and Basidiomycota. This relationship, in which plants trade fixed carbon (sugars) to the fungi in exchange for soil resources like nitrogen, has arisen dozens of times independently in the fungal lineages. I am interested in how this interaction functions on a physiological and genetic level, particularly with respect to compatibility between diverse plants and fungi, and how variation in symbiotic function across fungal lineages and environmental conditions contributes to the stability of the interaction over evolutionary time.

Publications

PUBLICATIONS

- Plant-mediated partner discrimination in ectomycorrhizal mutualisms. *Mycorrhiza*
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- Processes maintaining the coexistence of ectomycorrhizal fungi at a fine spatial scale. *Biogeography of Mycorrhizal Symbiosis*
  Bogar, L. M., Peay, K. G.
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- Testing the co-invasion hypothesis: ectomycorrhizal fungal communities on Alnus glutinosa and Salix fragilis in New Zealand. *Diversity and Distributions*
  Bogar, L. M., Dickie, I. A., Kennedy, P. G.
  2015; 21 (3): 268-278

- Interspecific mycorrhizal networks and non-networking hosts: exploring the ecology of the host genus Alnus. *Mycorrhizal Networks*
  Kennedy, P. G., Walker, J. M., Bogar, L. M.
  Springer.2015

- New wrinkles in an old paradigm: neighborhood effects can modify the structure and specificity of Alnus-associated ectomycorrhizal fungal communities. *FEMS Microbiology Ecology*
  Bogar, L. M., Kennedy, P. G.
  2013; 83 (3): 767-777