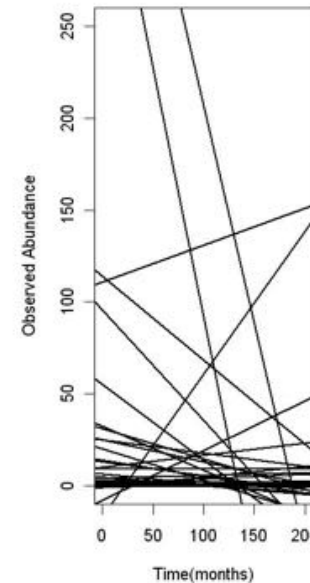
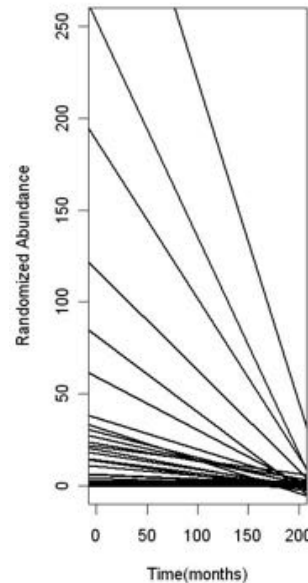
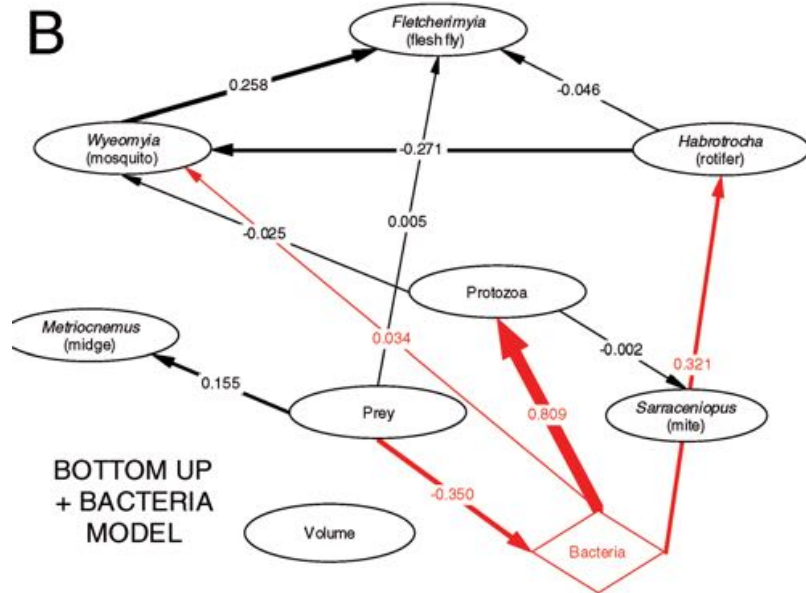




# NICHOLAS J. GOTELLI, Professor of Biology

Department of Biology, University of Vermont, Burlington,  
VT 05405 ngotelli@uvm.edu

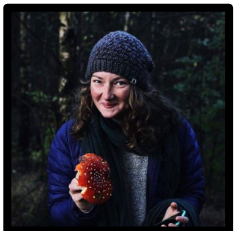
Community Ecology: My research focuses on the processes of community assembly in plant and invertebrate assemblages. I use both experimental field manipulations and statistical modeling to understand community structure. Current projects include responses of terrestrial invertebrates to global climate change, proteomic characterization of ecosystem services in aquatic food webs, and null model analyses of species co-occurrence and biodiversity metrics.



Temporal trends in relative abundance of simulated (left) and empirical (right) assemblages of stream fishes.

Gotelli, Dorazio, Ellison, and Grossman 2010

Fun Fact: I play acoustic guitar in airport terminals and city streets around the world.



# Kenna Rewcastle, PhD Student

Carbon cycling  
dynamics in a  
boreal bog |  
SPRUCE



Impact of reindeer  
grazing on  
microbial function |  
Sweden



Nitrogen cycling  
with climate change  
in alpine systems |  
WaRM



Influence of  
rhizosphere on  
carbon cycling in  
the tropics | Costa  
Rica



# Biodiversity and Ecosystem MultiFunctionality

Xin Jing

Postdoctoral Associate from Nate and Aimee's lab

## Central goal

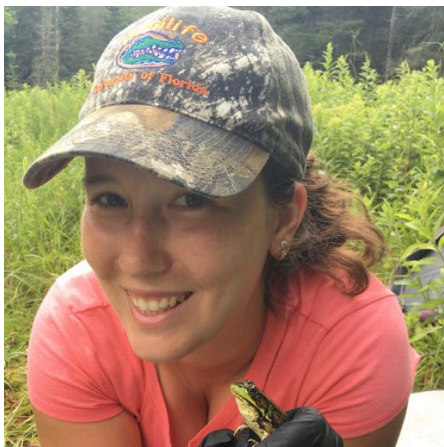
How biodiversity both in above- and belowground affect EMF?

**Focus 1** Multi-dimensional BEMF (taxa, functional and phylogenetic diversity at alpha- and beta-scales)

**Focus 2** BEMF dissimilarity (spatial turnover both in biodiversity and ecosystem multiple functions)







# LAUREN V. ASH, Ph.D. Candidate

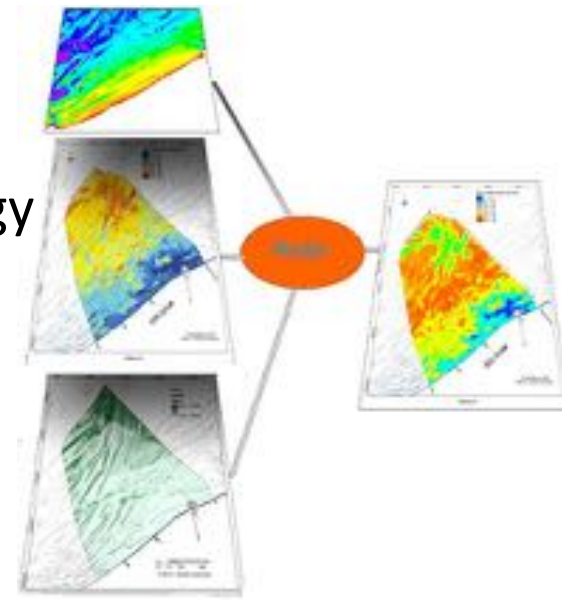
Department of Biology, University of Vermont, Burlington,  
VT 05405 [lvash@uvm.edu](mailto:lvash@uvm.edu) [lvash.github.io](https://lvash.github.io)

Disease Ecology: I am broadly interested in disease ecology, or the interactions between pathogens and their hosts. I study the emerging infectious disease Ranavirus in amphibian communities of New England to address the topics of pathogen distribution, prevalence, and transmission, as well as the influence of environmental and anthropogenic stressors on the virus.



I graduated from the University of Florida with a BSc in Wildlife Ecology and Conservation.

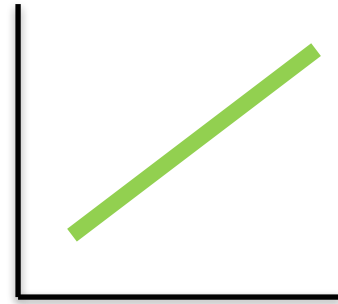
MRes at University College London where I completed 2 species distribution modeling projects



Case Prager, Postdoc (w/ Aimee and Nate)  
 Rubenstein School of the Environment, University of Vermont  
 case.prager@uvm.edu



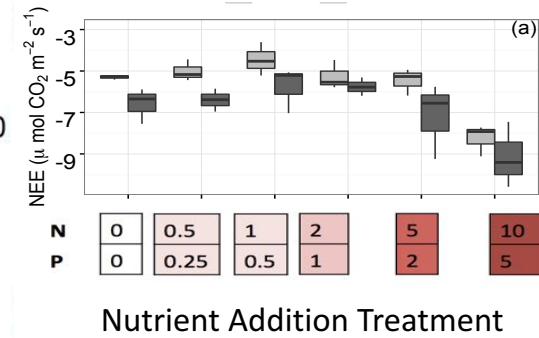
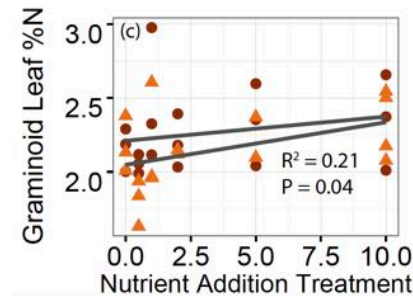
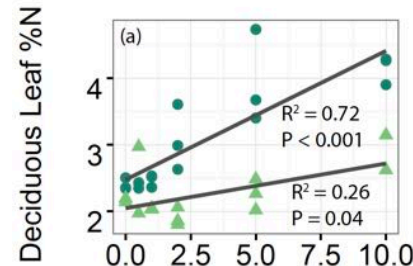
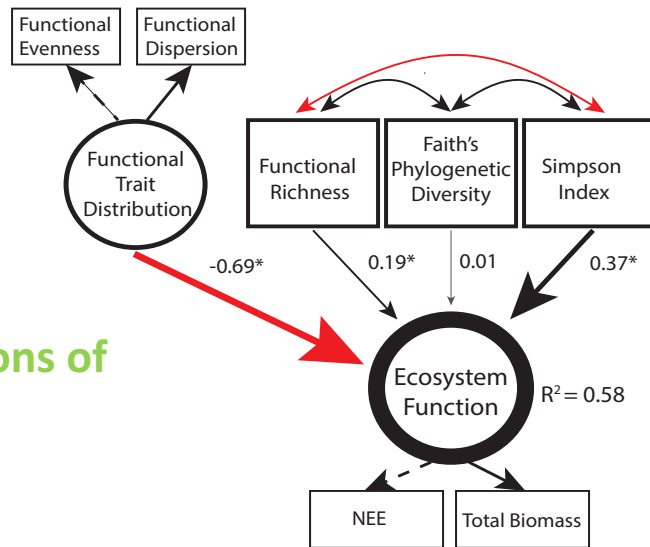
Ecosystem function  
 (e.g., carbon/nutrient  
 cycling)



Biodiversity

Global change

Multiple  
 dimensions of  
 diversity







# Emily Piché

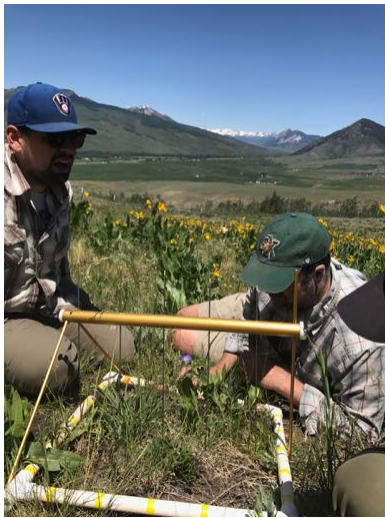
1<sup>st</sup> year Masters Student  
Rubenstein School  
epiche@uvm.edu

I'm interested in effects of global change on  
soil biodiversity and carbon cycling

Organizations I've worked for after undergrad:

Forest Inventory and Analysis  
Forest Ecosystem Monitoring Coop  
National Ecological Observatory Network  
Boston Area Climate Experiment  
University of New Hampshire  
US Forest Service






# Nate Sanders, Professor of Environmental Studies

Director of the Environmental Program, The Bittersweet,  
University of Vermont

**Community Ecology, Macroecology, Invasion Biology, Montane Ecology,  
Global Change Ecology, Ants, Plant-insect interactions**



 @Nate\_J\_Sanders



## Community disassembly by an invasive species

Nathan J. Sanders<sup>\*,†</sup>, Nicholas J. Gotelli<sup>‡</sup>, Nicole E. Heller<sup>§</sup>, and Deborah M. Gordon<sup>§</sup>

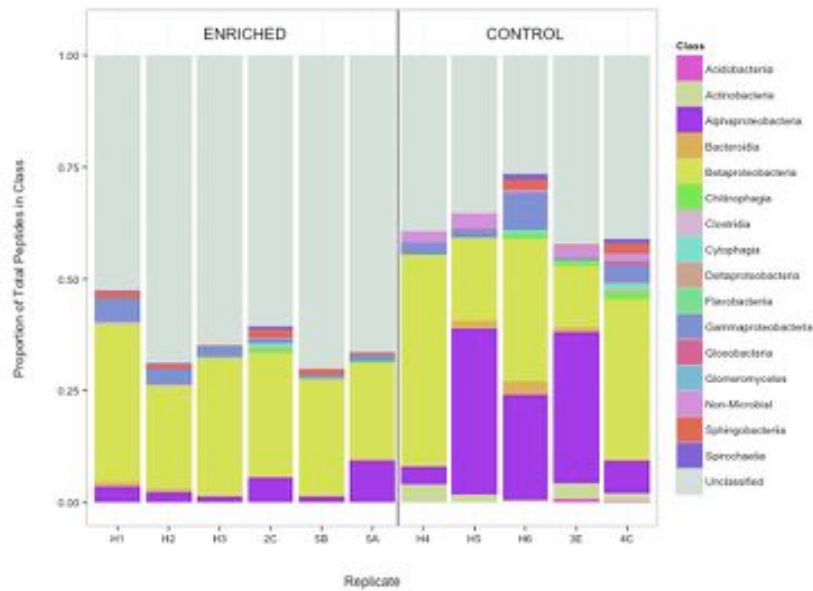
<sup>\*</sup>Department of Biological Sciences, Humboldt State University, Arcata, CA 95521; <sup>†</sup>Department of Biology, University of Vermont, Burlington, VT 05405; and <sup>§</sup>Department of Biological Sciences, Stanford University, Stanford, CA 94305



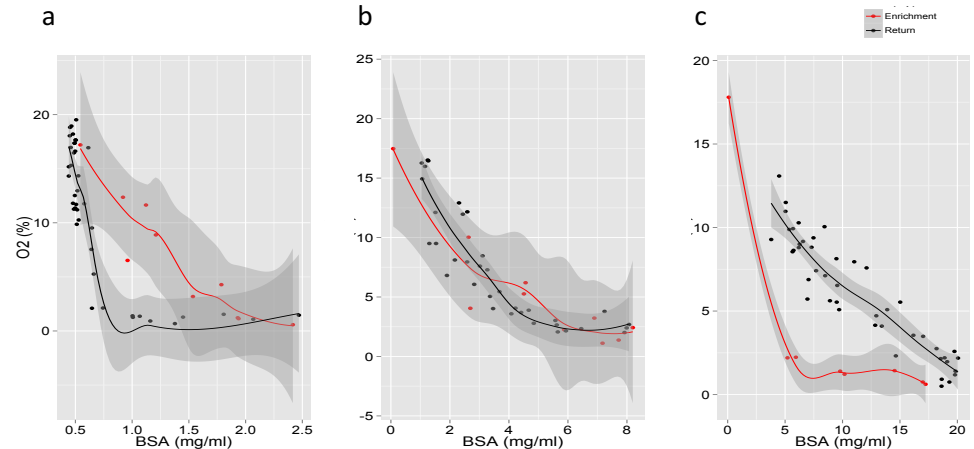


**Amanda Northrop, PhD Candidate**  
 Department of Biology, University of Vermont  
 anorthro@uvm.edu

My dissertation research focuses on aquatic ecosystem tipping points – the dynamics that drive them, how they alter microbial community function and composition, and how we can better predict them using proteins as biomarkers. I use the microecosystem housed inside pitchers of the Northern Pitcher Plant, *Sarracenia purpurea*, as a model system.



**Enriched pitcher bacterial communities contributing to protein expression are less diverse at the class level.** Bacterial classes contributing to protein expression in control vs. detritus-enriched pitchers.



**Hysteresis is present in low- and high-concentration BSA loading treatments and is “reversed” in high-concentration treatments.** Loess (span=0.5) curves fitted to state-space plots for all replicates in **a)** low, **b)** intermediate and **c)** high BSA concentration loading treatments. Confidence intervals (grey shading) around each curve represent goodness of fit for the loess curve to the data. Red and black points/lines denote data from the enrichment and recovery phases, respectively.

**Fun Fact:** I have an almost 2-year old daughter named after Rosalind Franklin.





# Lindsey Pett

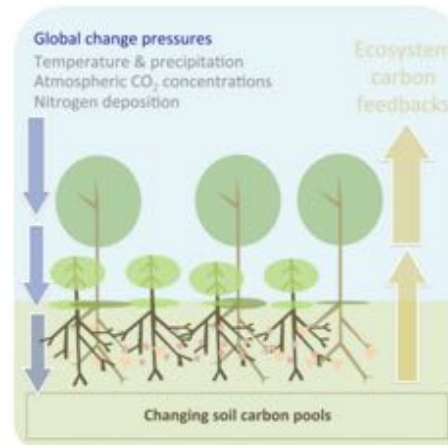
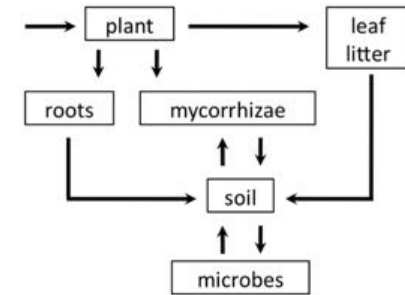
Research: My research has focused on community assemblage of both wetland vegetation and invertebrates. My masters work looked at the effects of wetland plant functional group diversity on biomass, nutrient storage, and invertebrate species richness (mesocosm complex). At UVM I hope to examine nutrient stoichiometry of pitcher plants.



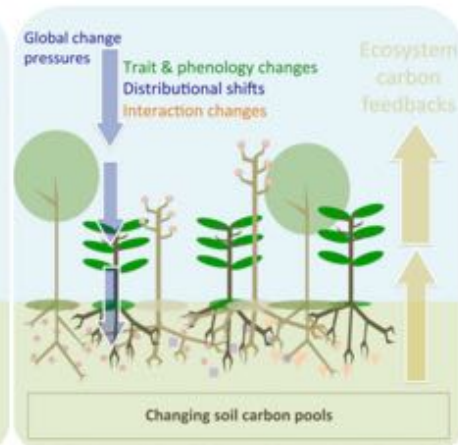
# Observations, experiments & models



Aimee Classen – Ecosystem & Global change ecologist



A. The direct effects of climate change act on organism process rates and inorganic resource availability to directly influence carbon pools and feedbacks to the atmosphere.



B. The indirect effects of climate change shift a number of above- and belowground properties (e.g., diversity, community composition, and functional traits of plants, microbes, and other organisms) as well as the interactions among organisms, thus indirectly influencing carbon pools and feedbacks.