



The University of Vermont

## Aura Alonso-Rodríguez, Presenter

Ph.D. Candidate | NSF [QuEST](#) Trainee | [Gund](#) Graduate Fellow

[Rubenstein](#) School of Environment and Natural Resources

University of Vermont, Burlington, VT

[Aura.Alonso-Rodriguez@uvm.edu](mailto:Aura.Alonso-Rodriguez@uvm.edu) | [@AuraAlonsoRodz](#) | [ResearchGate](#)



### UVM Student Research Conference 2022

**Session:** (2022) Special Session: Highlighting research of the UVM SACNAS community

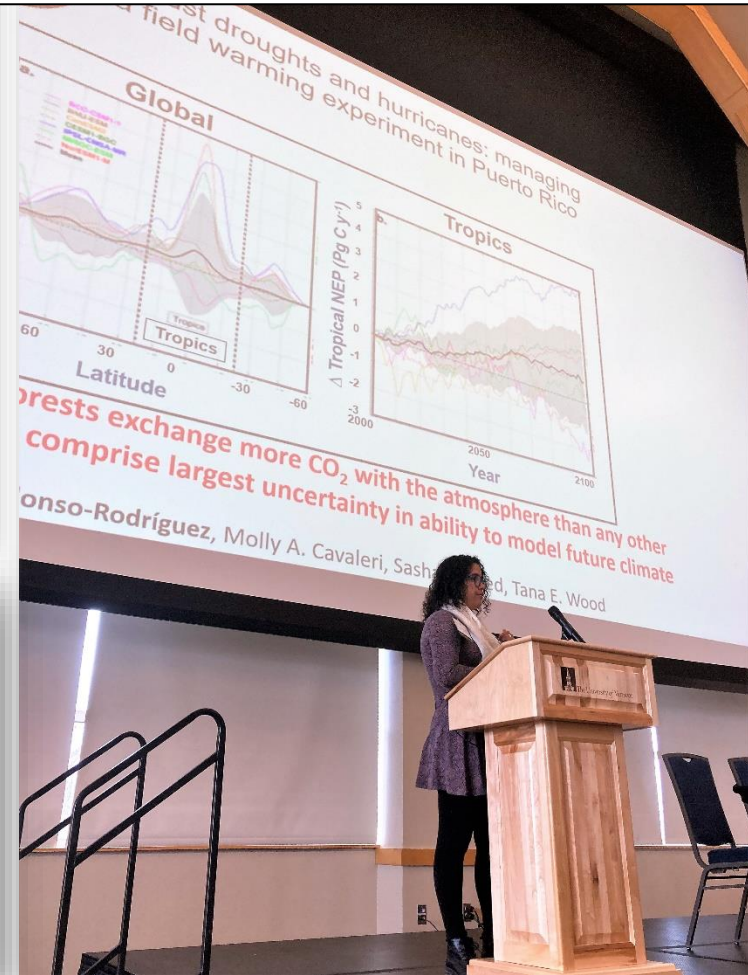
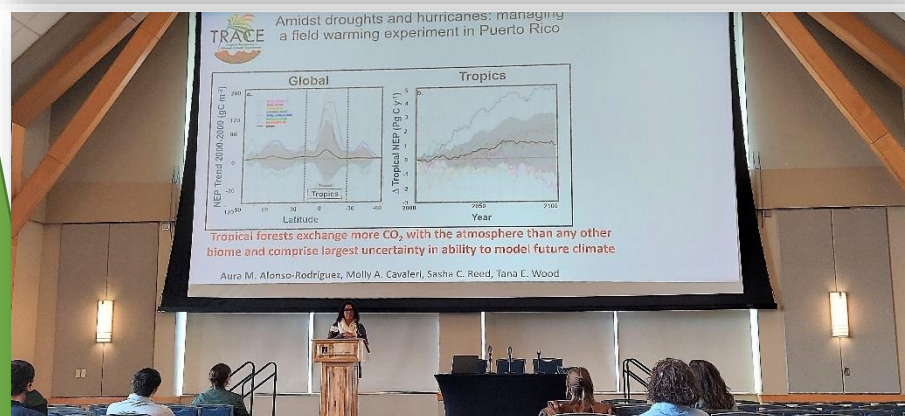
Thursday, April 21, 2022, 10:00 – 11:00 a.m., Dudley H. Davis Center, Burlington, Vermont

<https://voicethread.com/myvoice/thread/19834587/125974122/125974122>; Collaborators: Molly A. Cavaleri, Sasha C. Reed, Tana E. Wood;

Moderator: Sarah Morris

**Title:** Amidst droughts and hurricanes: managing a field warming experiment in Puerto Rico

**Abstract:** Climate change models predict that temperature in the tropics will increase by 3-5°C within the next 20 years, but there is high uncertainty on how this will affect tropical forests. The Tropical Responses to Altered Climate Experiment (TRACE), a novel field warming experiment in a Puerto Rican rainforest, is attempting to address this question. TRACE is now the first experiment to evaluate how tropical forests respond to warming and large-scale hurricane disturbance. This presentation will summarize the most important results of this experiment to date as well as some of the challenges that we have faced along the way.





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## Natalia Aristizábal, Presenter

Ph.D. Candidate | NSF [QuEST](#) Trainee | [Gund](#) Graduate Fellow  
[Rubenstein](#) School of Environment and Natural Resources  
 University of Vermont, Burlington, VT  
[Natalia.Aristizabal@uvm.edu](mailto:Natalia.Aristizabal@uvm.edu) | [@AristiNati](#) | [ResearchGate](#)



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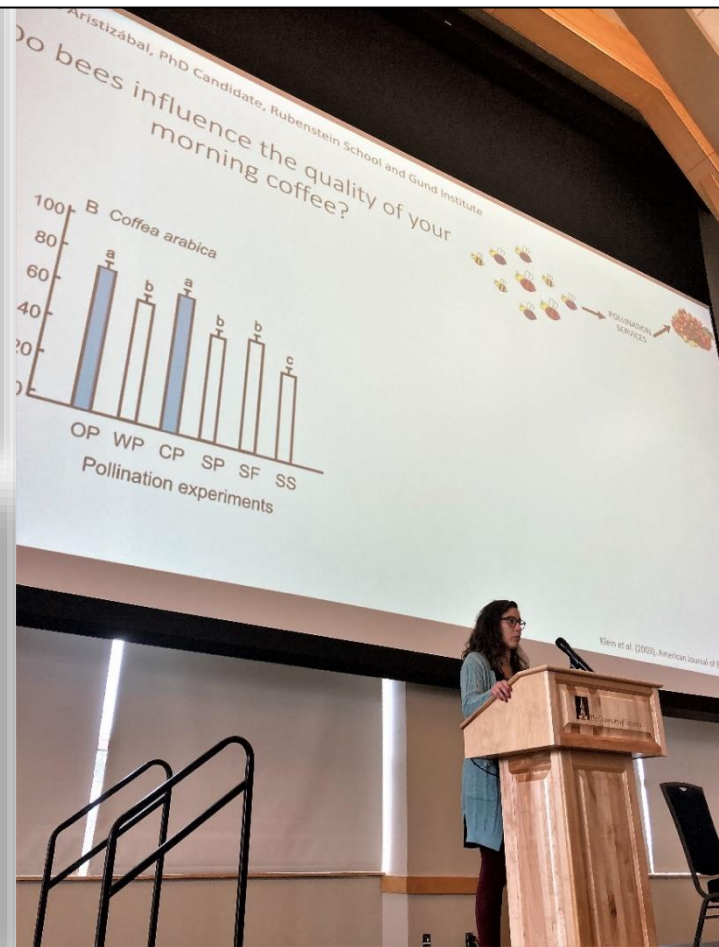
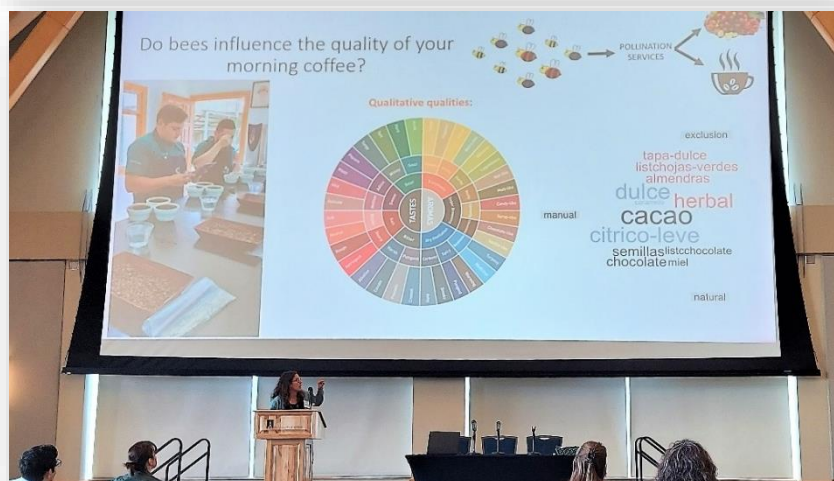
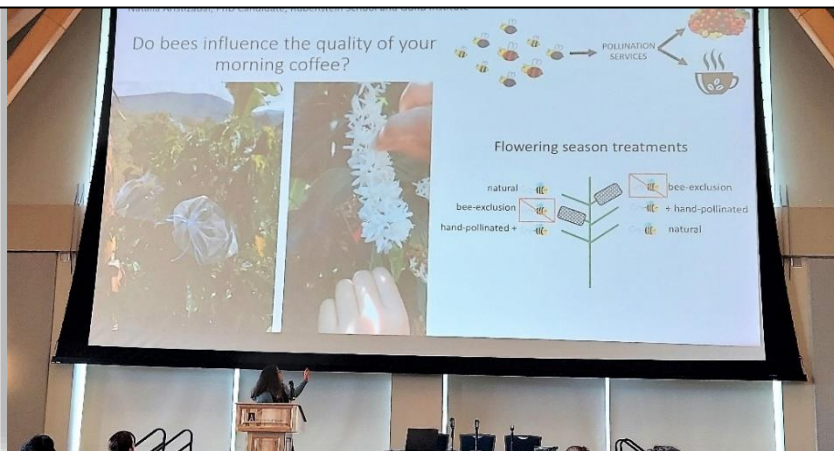
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<https://voicethread.com/myvoice/thread/19910197>; Collaborators: Taylor Ricketts, CoopeTarrazú, Adina Chain-Guadarrama, Alejandra Martínez-Salinas, Danny Castillo, Juan Bosco Murillo, and Silvia Mora; Moderator: Sarah Morris

### Title: Do bees influence the quality of our morning coffee?

**Abstract:** Bees provide valuable pollination services that can increase crop yields. However, the impact of pollinators on crop quality remains poorly understood even though quality traits can determine nutrient content and prices. Here we test how bees influence coffee quality and any trade-offs between yield and quality. We conducted bee-exclusion and hand-pollination experiments on a Costa Rican coffee farm, controlling for factors usually associated with quality. After harvest, we evaluated coffee yield and nine quality attributes (e.g., aroma, taste) under standardized roasting and certified tasting protocols. Preliminary results show cross-pollination does not affect yield as previously reported – indicating potential trade-offs in resource allocation during berry production.





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## Bailey Kretzler, Presenter

Ph.D. Candidate | NSF [QuEST](#) Trainee | [Gund](#) Graduate Fellow  
College of Agriculture and Life Sciences, [Plant and Soil Science](#)  
University of Vermont, Burlington, VT  
[Bailey.Kretzler@uvm.edu](mailto:Bailey.Kretzler@uvm.edu) | [ResearchGate](#)



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<https://voicethread.com/myvoice/thread/19841055/126018616/126018616>;

Collaborators: Eric Bishop von Wettberg, Edward Marques, Heather Darby, and Jana Kraft; Moderator: Sarah Morris

### Title: Assessing the Rotational Value of the USDA Pea Minicore

**Abstract:** *Pisum sativum* (pea) is important for humans and livestock and benefits subsequently planted crops through nitrogen fixation and recruitment of soil microbes that support crop productivity. Since pea genotypes recruit different microbial species, we suspect the benefit to subsequent crops also differs. We grew 108 pea genotypes in pots for 5 weeks then collected plant biomass and rhizosphere soil for microbial identity analysis. Subsequently planted corn was grown for 12 weeks then harvested for plant biomass. We anticipate corn biomass will differ depending on the pea genotype grown before due to differences in soil microbial diversity and nutrient status.

