Finding Work/life Balance When the Work is Hard to Balance

Sara Klopf, M.S.

Research Associate

School of Plant and Environmental Sciences and The Department of Forest Resources and Environmental Conservation

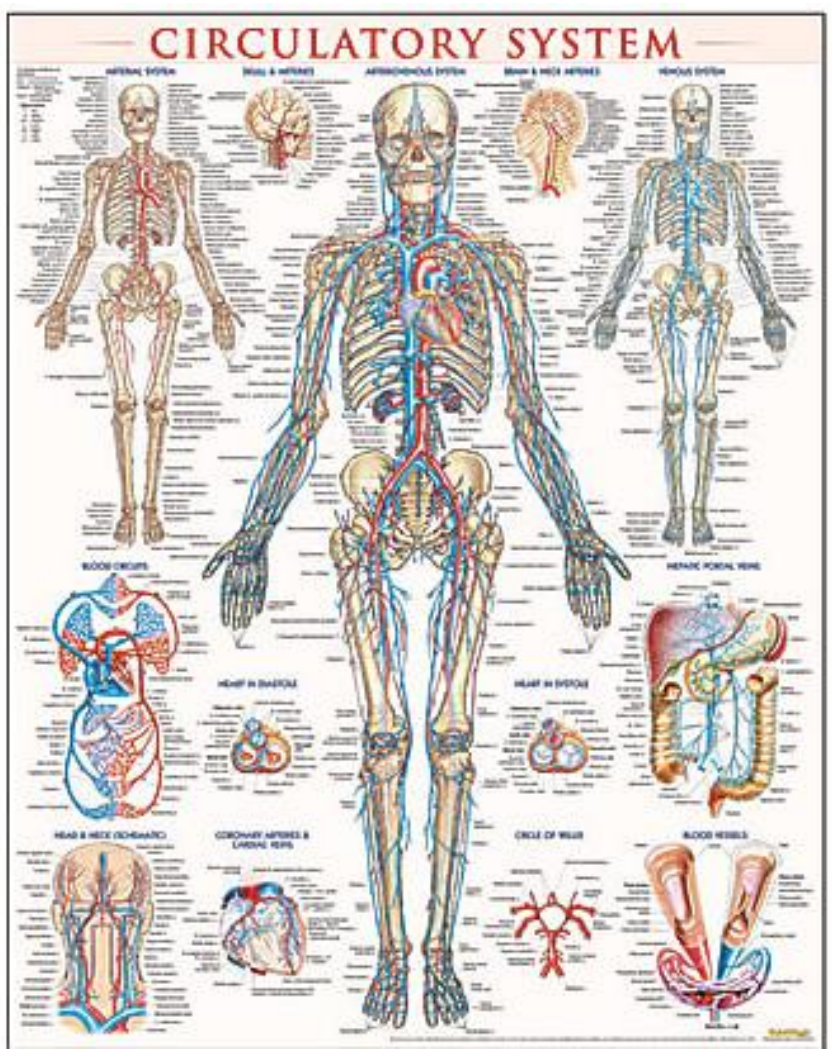
Virginia Tech

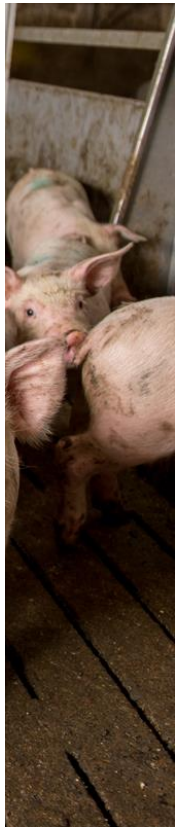
CV Me

- Born and raised in Carbondale, IL
- University of Illinois Urbana-Champaign B.S. in Integrative Biology
- Southern Illinois University Carbondale M.S. in Plant Biology
  - *"Carex aquatilis* as a Pioneer Species For Boreal Wetland Reclamation in Northern Alberta"
  - Managed peatland ecology lab after graduation
- Moved to Virginia, began working at Virginia Tech in 2012
  - Work as a research technician managing projects related to American chestnut restoration, forest genetics, coal mine reclamation/reforestation, mineral sands mine revegetation, wetland rehabilitation…etc
- First ASRS/ASMR meeting in 2013 (Laramie) – became a member (and a Wild Woman)
  - Elected to NEC in 2020

CVs Hide the Zig-zags!

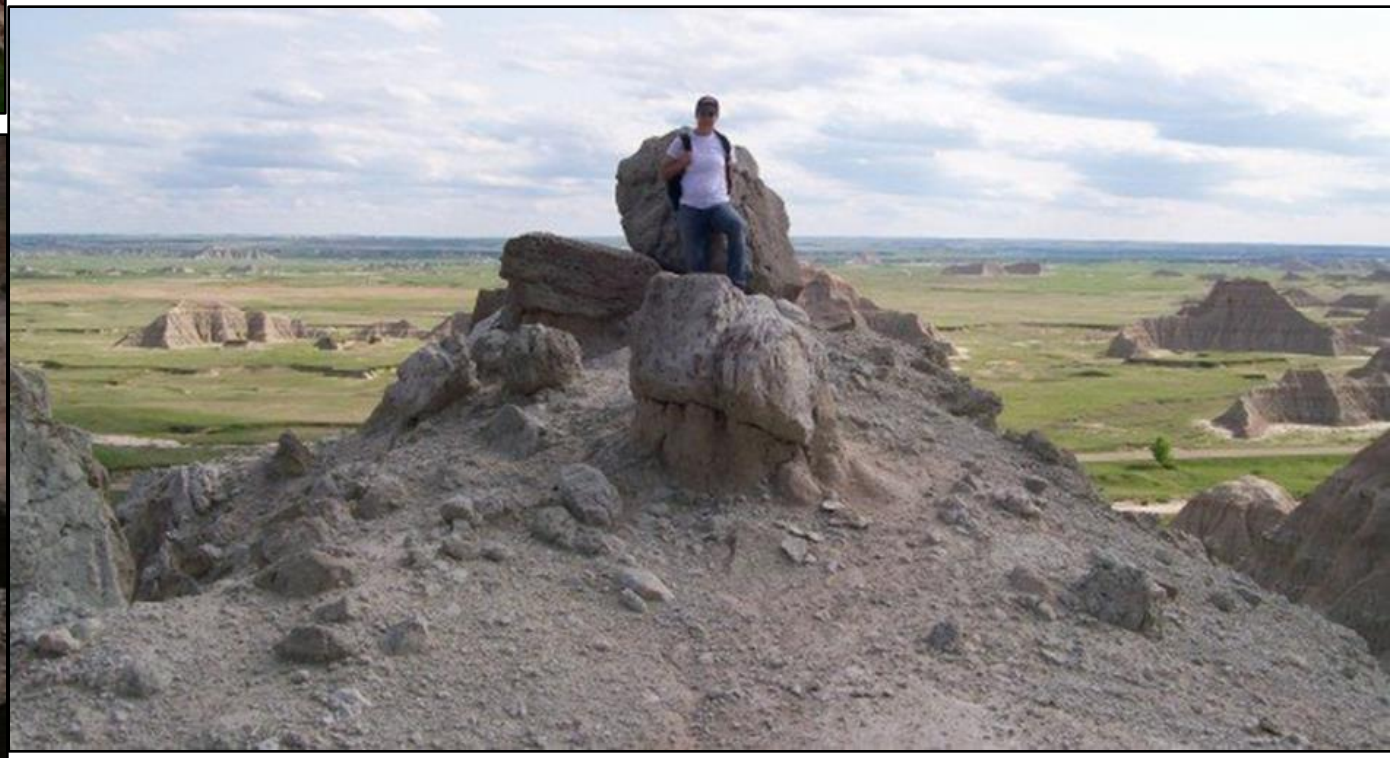
University of Illinois Urbana-Champaign





- Started out as an Animal Sciences major – planned to become a vet
- Changed major to Integrative Biology – planned to go to PA school
- Senior year, Field Ecology course

Field Ecology - Class trip to South Dakota



- The Black Hills
  - Visited first peatland

Getting to grad school

- Resistant to grad school but…
- …B.S. in biology not terribly hirable
- Took classes at SIUC in the fall after B.S. graduation
  - Thinking about my Field Ecology class, signed up for every ecology class I could find
  - Worked as a technician in a bryology/peatland ecology lab and caught the research and reclamation bug!

Contents lists available at ScienceDirect

Ecological Engineering

journal homepage: www.elsevier.com/locate/ecoleng

Peatland establishment on mineral soils: Effects of water level, amendments, and species after two growing seasons

Dale H. Vitt[a,*], R. Kelman Wieder[b], Bin Xu[a], Molly Kaskie[a], Sara Koropchak[a]

[a] Department of Plant Biology, Southern Illinois University, Carbondale, IL 62901, United States
[b] Department of Biology, Villanova University, Villanova, PA, United States


Peatlands & Climate Change: The Carbon Bomb
PREDICTING HOW PEATLANDS WILL RESPOND TO GLOBAL CLIMATE CHANGE: EVIDENCE FROM THE PAST
PREDICTING THE FUTURE OF PEATLANDS: EVIDENCE FROM TREE RINGS
FACTOIDS
· Fire is major disturbance in peatlands (Turetsky 2002)
· Black spruce is the dominant tree in bogs across boreal North America (in bogs, peatlands)
· Black spruce has serotinous seed cones and establishes directly after a fire (or other disturbance that opens canopies)
· Fires release large quantities of carbon
· Regeneration of the carbon sink takes about 20 years after fire
· Tree growth is not directly related to regeneration of the peatland carbon sink
ANALYZING TREE GROWTH PATTERNS
·Fire Scars
·Change in Growth Rates
·Layering

The New York Times

The World's Peatlands Are Climate Bombs Waiting to Detonate

Nov. 5, 2022

BBC

Home News Sport Business Innovation Culture Travel Earth Video Live

The mystery of Siberia's exploding craters

30 November 2020

Share

By Richard Gray, Features correspondent, @chalkmark

Researchers from th
(Credit: Evgeny Chu

Article | Published: 20 April 2023

Wildfire and degradation accelerate northern peatland carbon release

S. L. Wilkinson, R. Andersen, P. A. Moore, S. J. Davidson, G. Granath & J. M. Waddington

Nature Climate Change **13**, 456–461 (2

Smithsonian MAGAZINE

A burned peatland in the Fort McMurray wildfire. It is critical to keep our peatlands from burning up, (Mike Waddington), Author provided

SMART NEWS

Permafrost Thaw in Siberia Creates a Ticking 'Methane Bomb' of Greenhouse Gases, Scientists Warn

In 2020, temperatures in the region rose nearly 11 degrees Fahrenheit above nor
limestone to release ancient methane deposits

David Kindy

Correspondent

August 5, 2021

Forbes

EDITORS' PICK

Mysterious Explosions In Siberia Are Signs Of Galloping Climate Change

David Bressan Senior Contributor

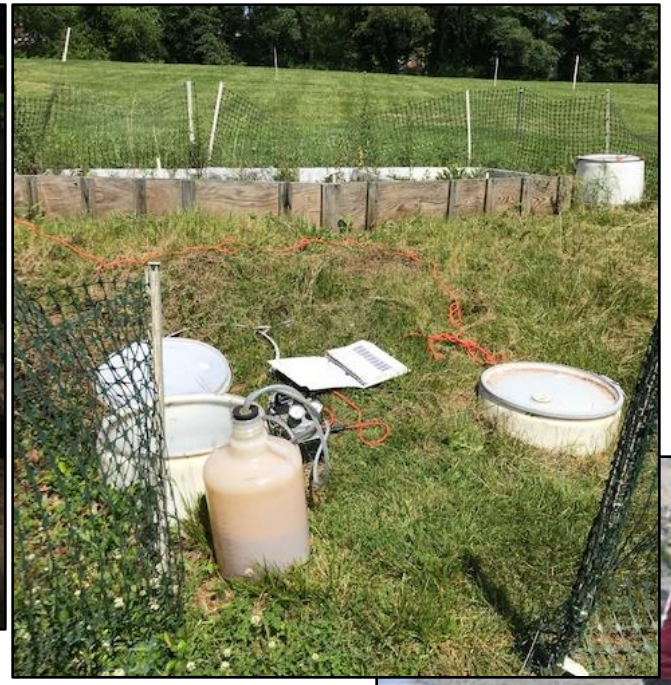
Wedding/moving to VA/starting at Virginia Tech

Starting at Virginia Tech

- Started out in a wage position working hourly for several months
- Said yes to as much as I could and offered to help others with their work
  - Asked lots of questions and developed many new skills
  - Built relationships with supervisors and colleagues

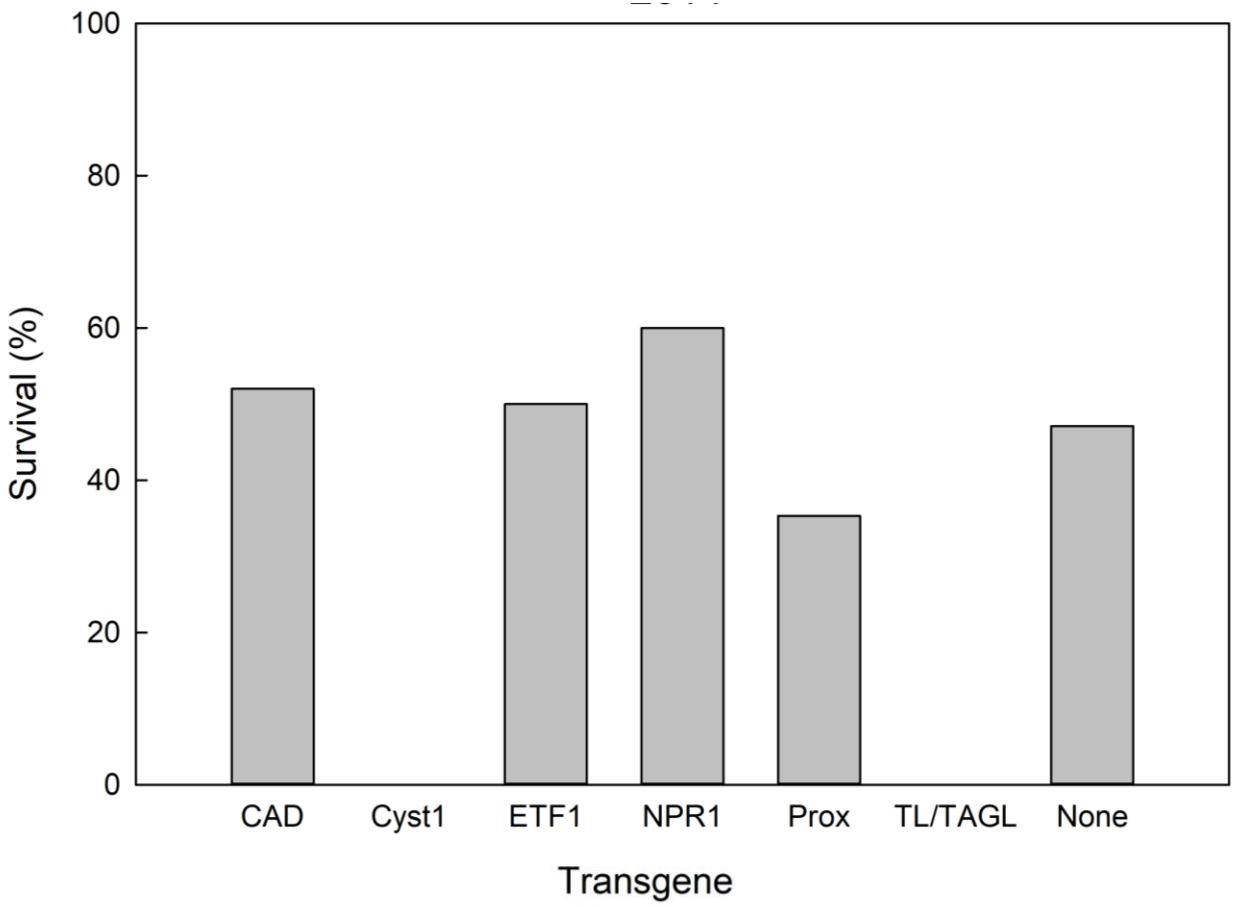
Coal Mine Reforestation-WV

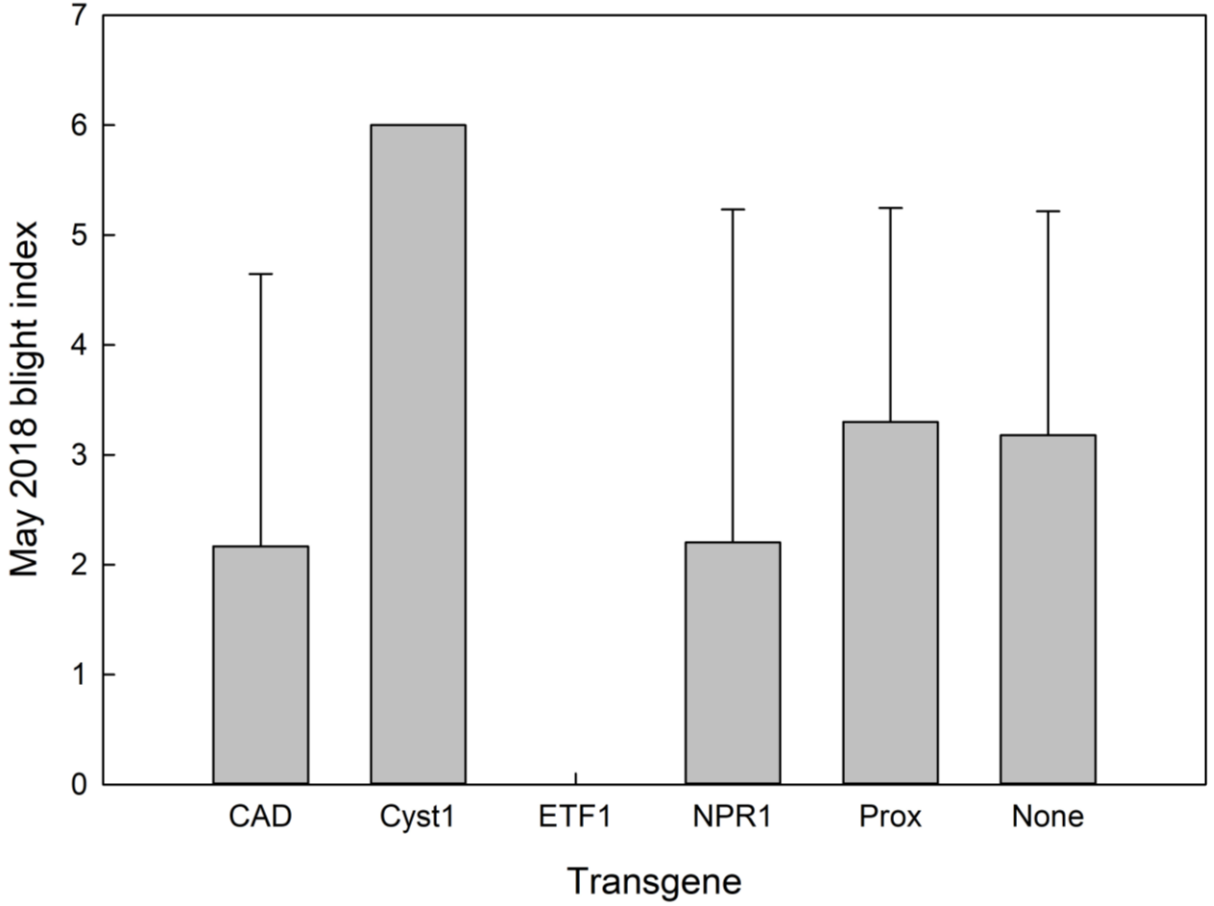
Mesocosm Mine Spoil Leaching Study at VT



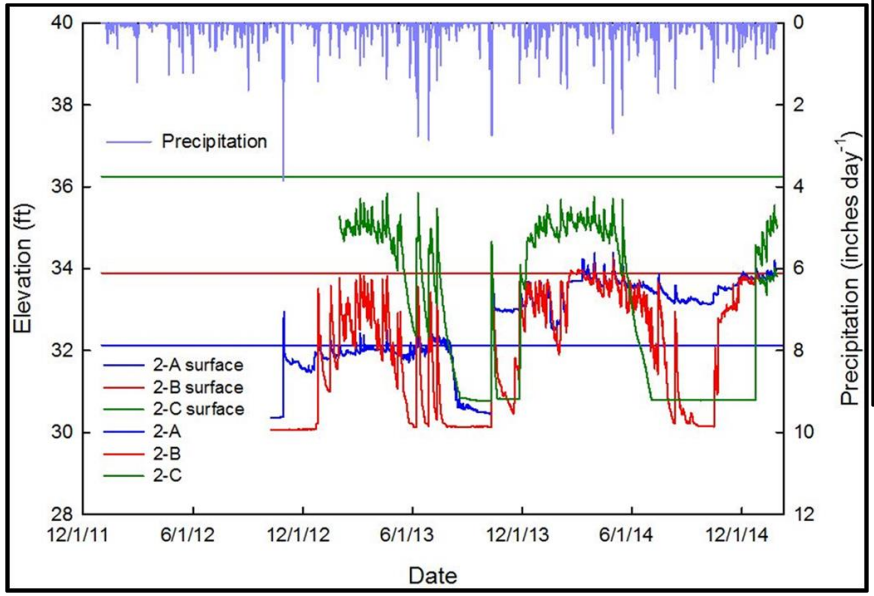
American chestnuts

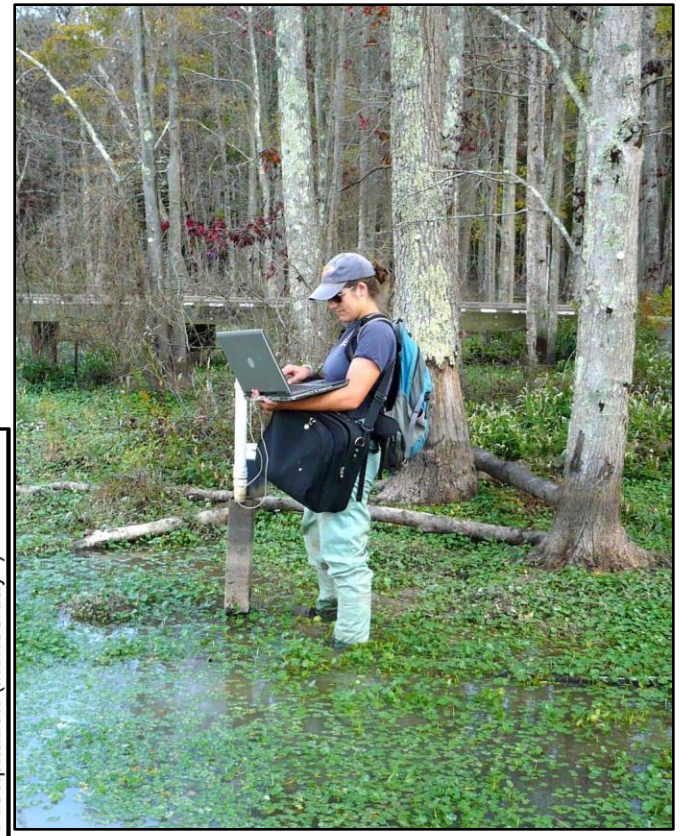
Transgenic Chestnuts - Survival and Blight Symptoms



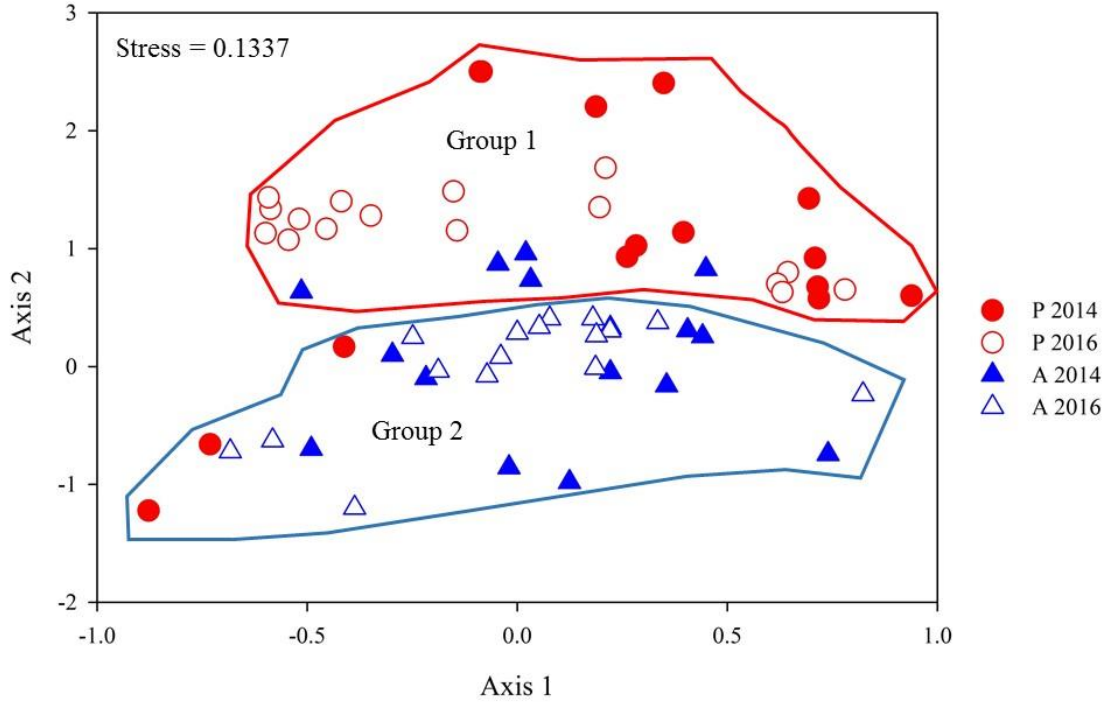


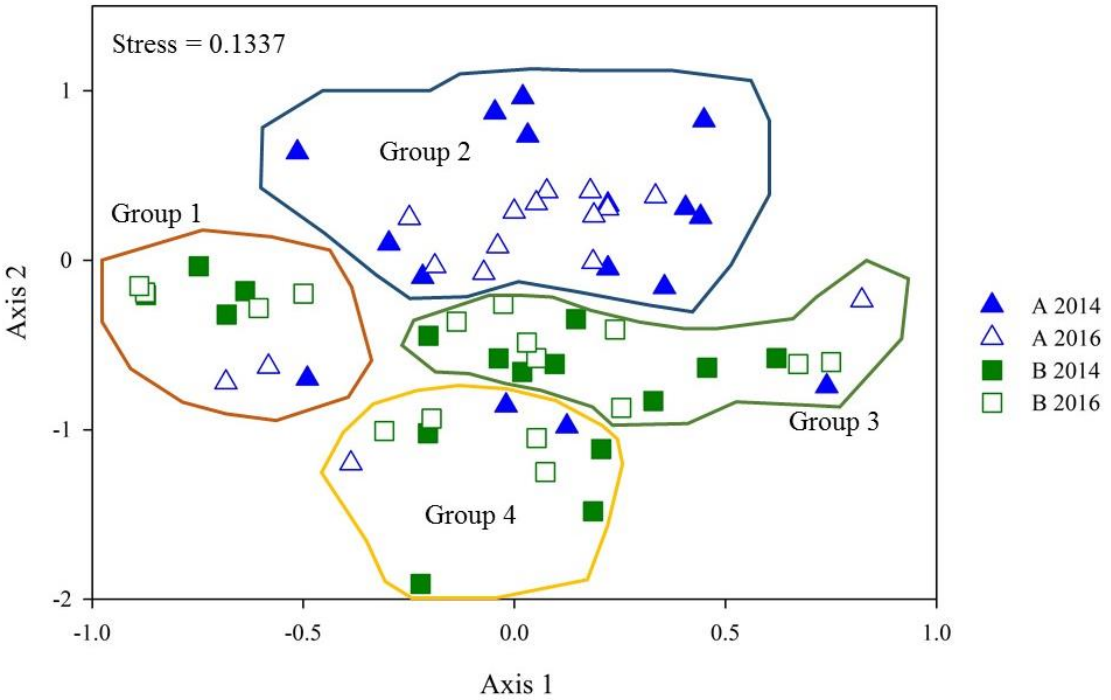
Urban Wetland Rehabilitation – Hydrology and Vegetation Study



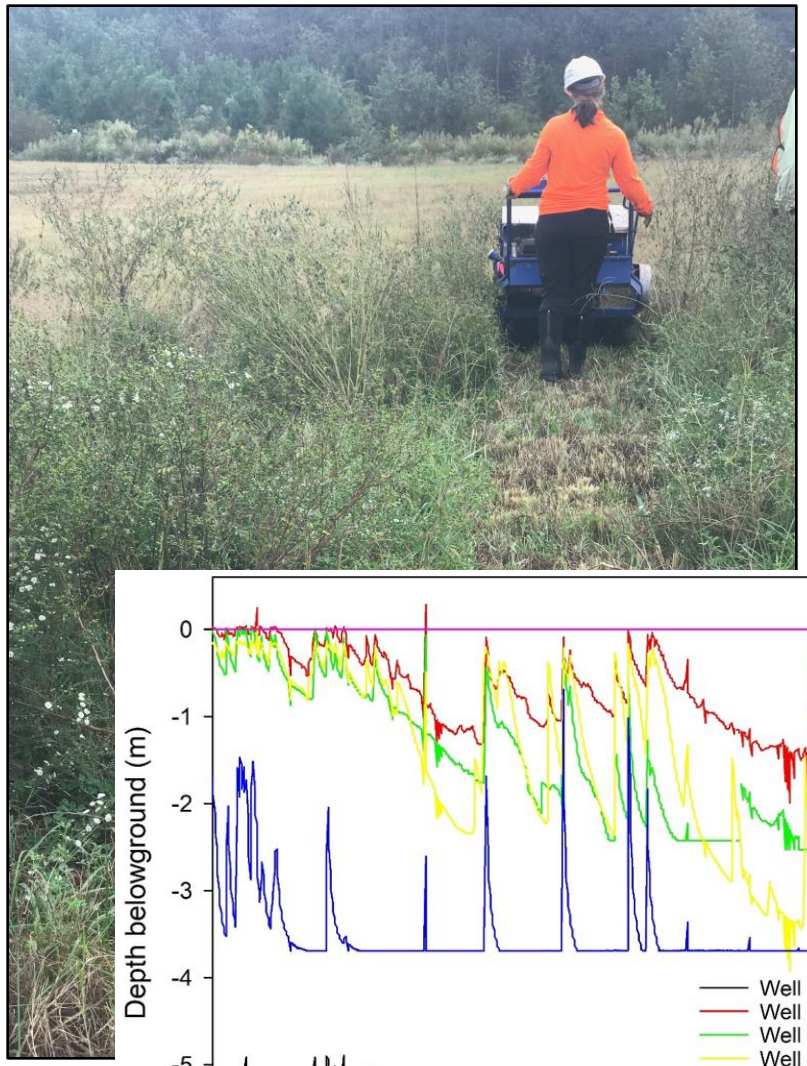


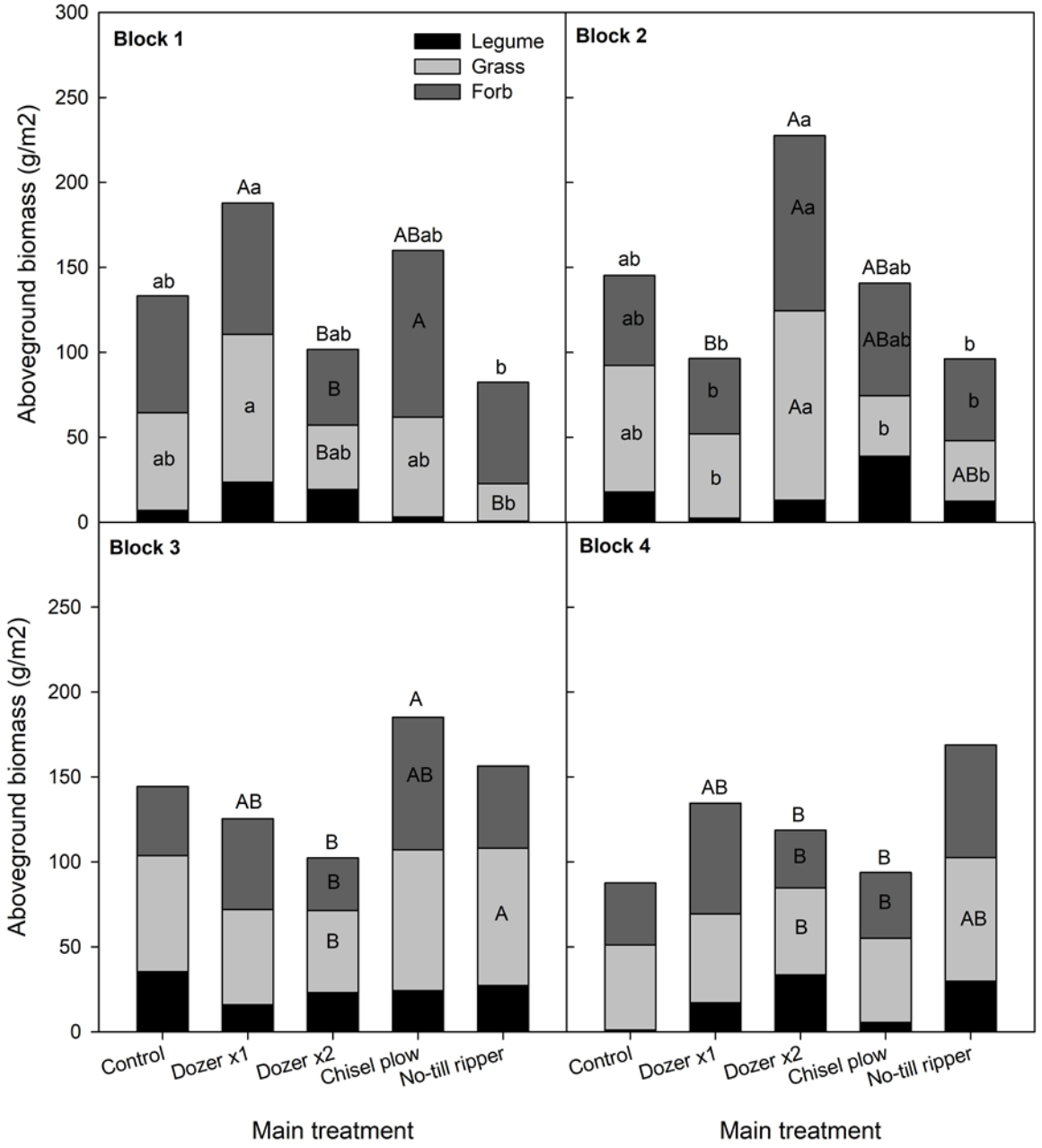
Urban Wetland Rehabilitation – Hydrology and Vegetation Study





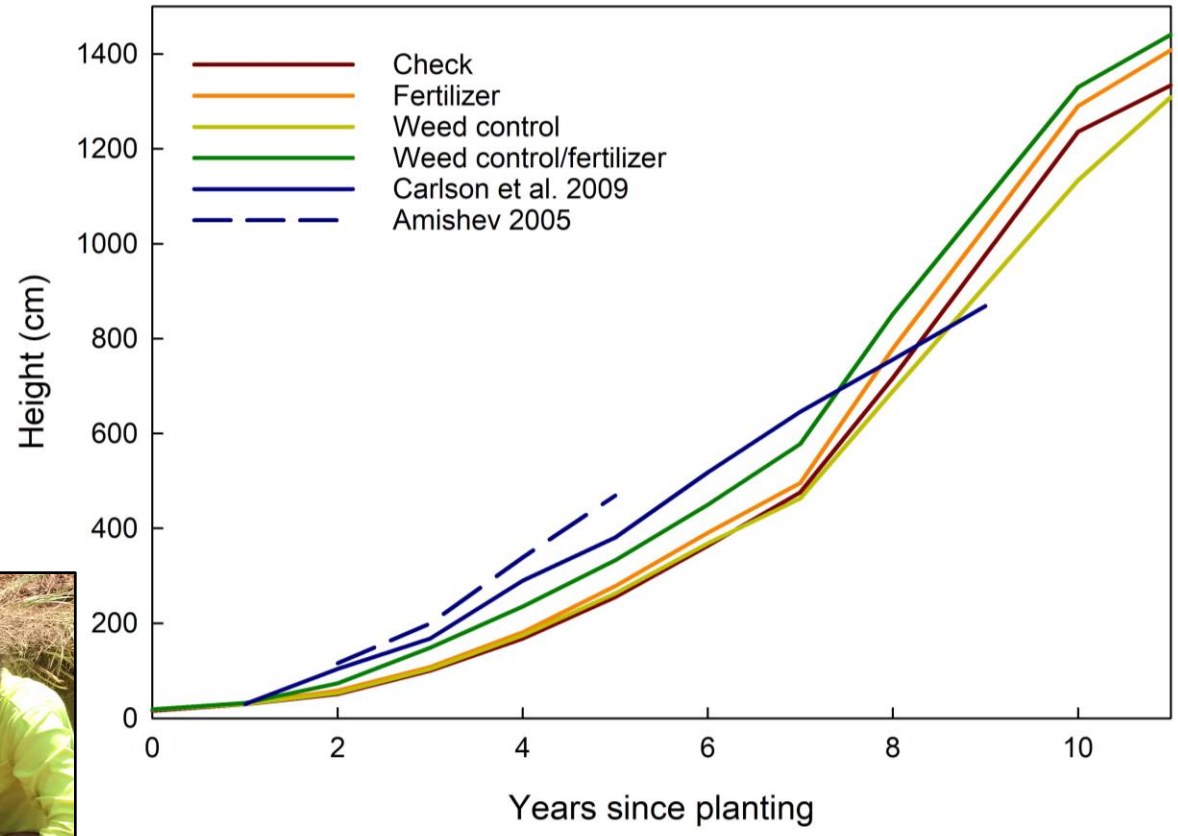
Iluka Mineral Sands – Ripping and Tillage Study



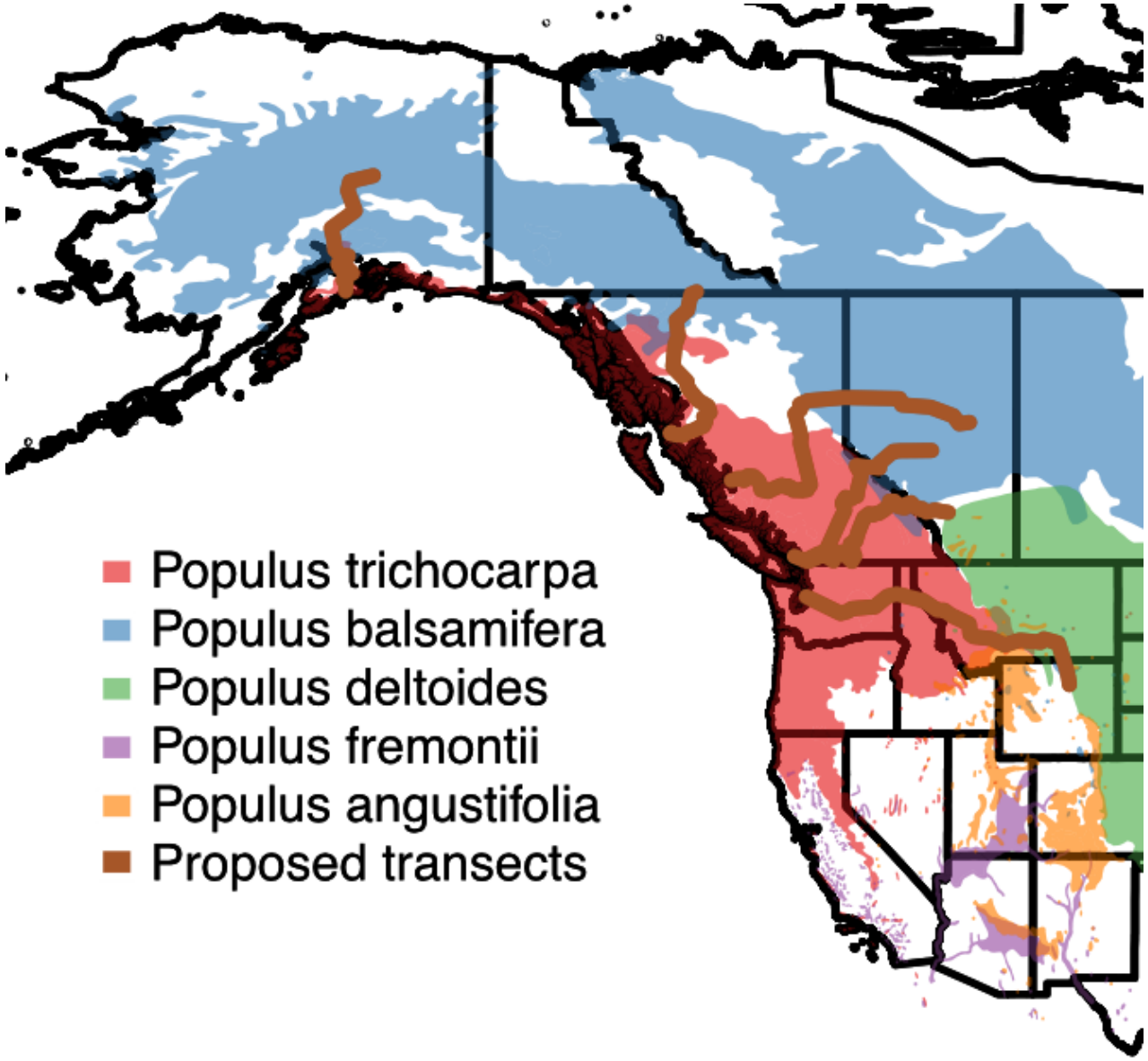


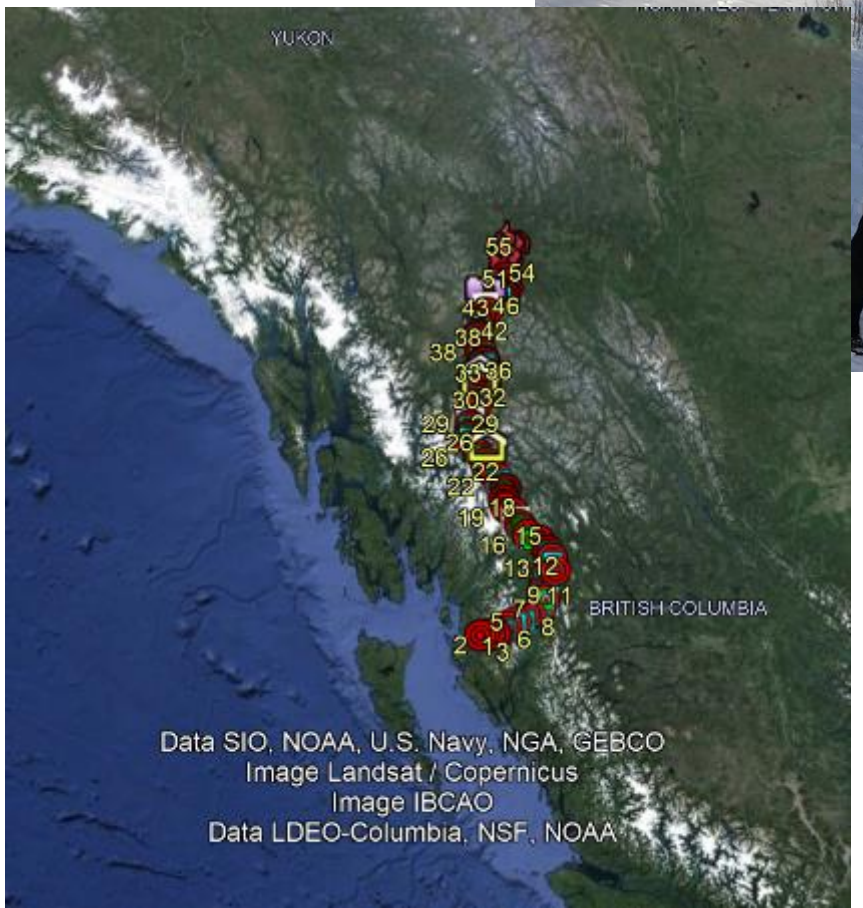
Iluka Mineral Sands – Native Upland Vegetation

Iluka Mineral Sands – Pine Tree Silviculture



Poplar hybridization genetics



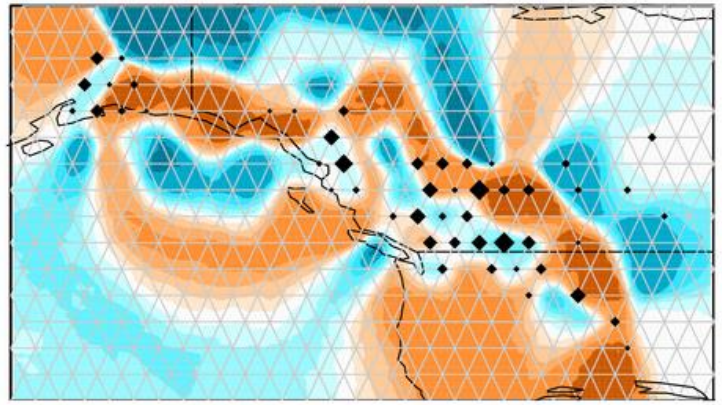


2019/2020

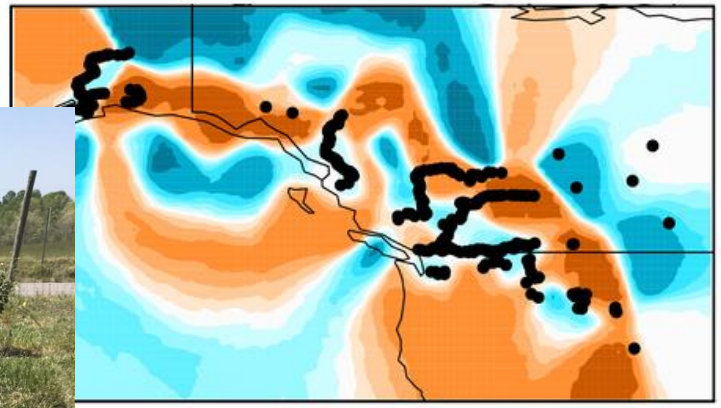
My second coldest field-work experience

Posterior mean migration rates m (on the log10 scale)

a) EEMS, overlay plot of demes (black diamonds)



b) EEMS, overlay plot of 546 samples (black dots)

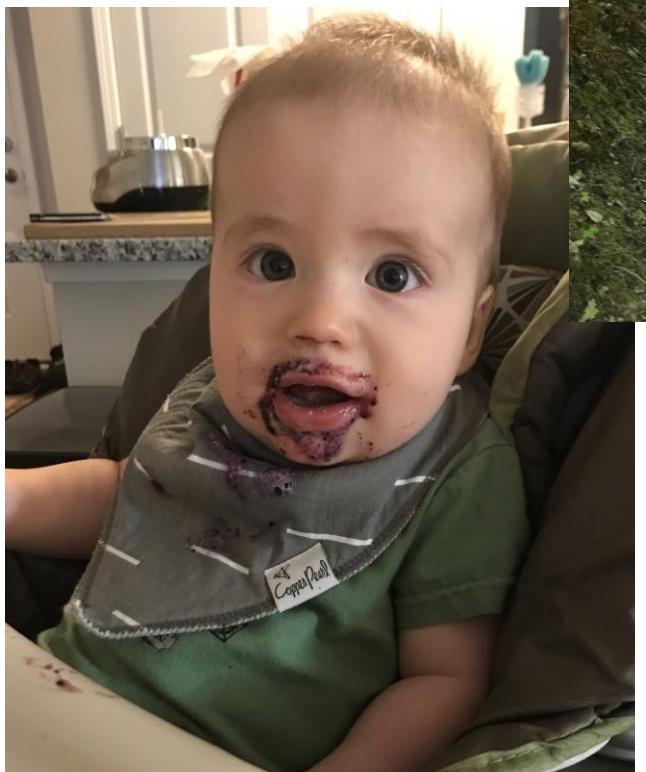


Rte 220 road widening/acid rock drainage

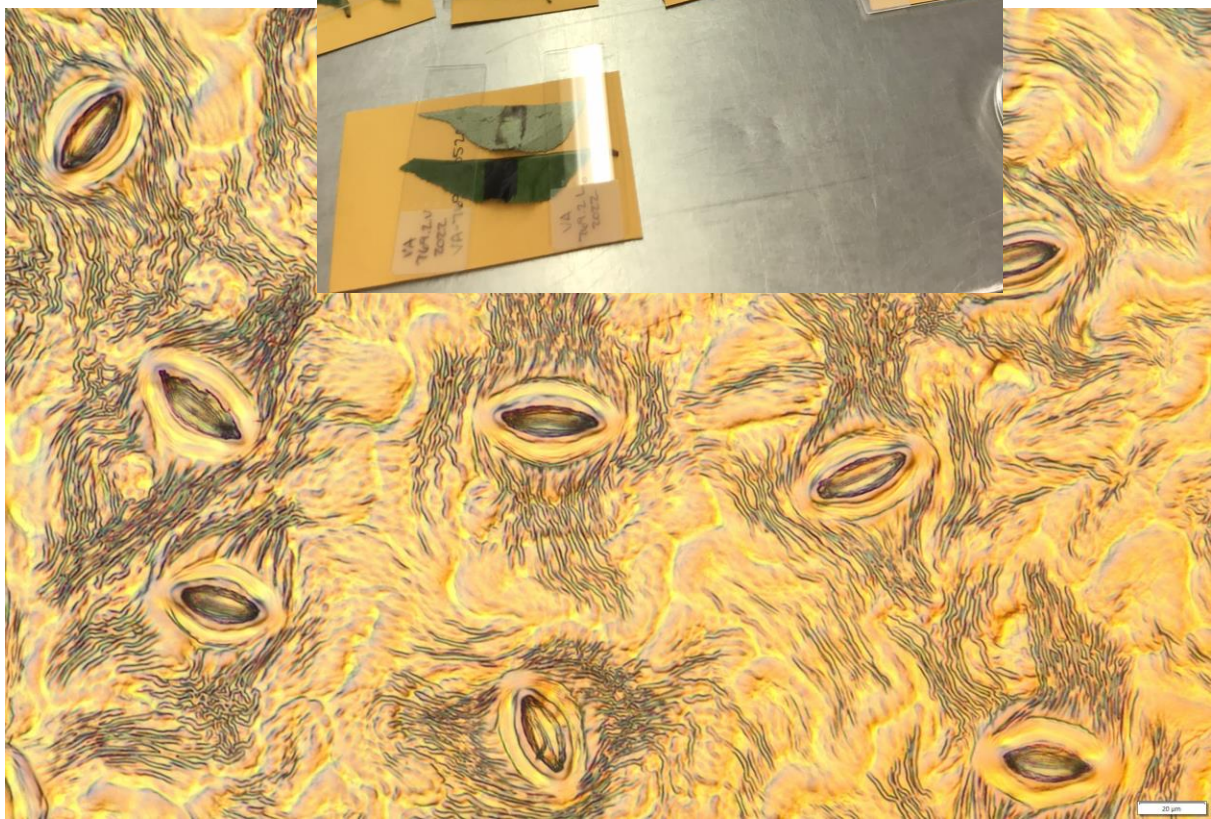
- Baby K coming!
- Field work until quarantine two weeks before due date

Henry born!

- Back to full time by mid-June



Poplar genetics - phenology, growth, phenotyping, and physiology measurements



Fairfax County Bioretention Soil Media

- How this project began
- Bioretention soil media characterization
  - Mesocosm field leaching study
  - Lab column leaching studies
- Tree pit characterization
  - Tree health x BSM
  - Tree pit hydrology


TRAIL COURTESY
YIELD TO
Be Alert for Bears

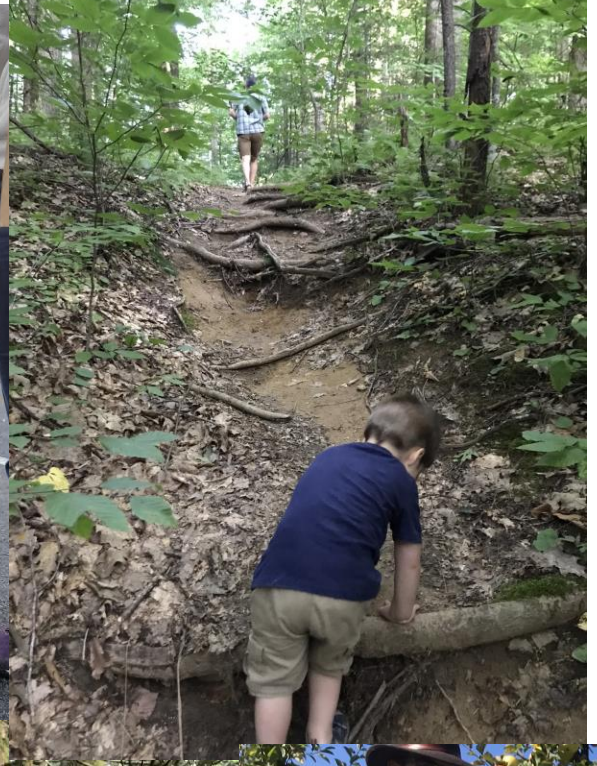
Powell River Chestnuts – Mycorrhizal Colonization

Utility scale solar

Consulting work

The “Moonscape”


84 LUMBER

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Volunteer Since 19

Closing Thoughts – On Building [illegible] Research

- An open mind, good work ethic, and positive attitude go a long way
  - Nothing is done alone
  - You can learn something from ANYONE
- Don’t be afraid to get your hands (or face) dirty
- Say yes to as much as you can while you have flexibility
  - In an age of specialization, broad field-based skills have created many opportunities for me

Closing Thoughts – For Those Thinking About a Family

- An open mind, good work ethic, and positive attitude go a long way
  - Nothing is done alone
- If you can, figure out how to say NO if/when you lose flexibility
- Be prepared for when unexpected things come up (they will)
- It will be hard – if you are anything like me, no matter where you are or what you're doing, you'll feel like you should be somewhere else

Any Questions?