

# Increasing Undergraduate Exposure to Novel Soil Types through a "Virtual" Regional Soil Judging Contest

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## What is soil judging?

- Competitive soil morphology and classification
- Hands-on learning opportunity in pedology and soil classification
- Regional and national contests for undergraduates



## Motivation to host a "Virtual" Regional Contest

- Exposure to diverse soils & parent materials is critical for students' understanding of pedology
- Participating in soil judging & attending regional and national contests increases student exposure to novel soil types
- Funding constrains universities' ability to attend regional and/or national contests
- Virtual regional is one approach to exposing students to new soils without funding travel



## Colorado State University

**Team members:** Josh Padilla, Melissa Miller, Billy Kinn, Jake Makens  
**Regional Soil Profile:** Environmental Learning Center Stream Cut  
 MAT = 50°F MAP = 16 inches



## A1 A2 "Virtual" Regional Approach

- Each team created a set of soil judging materials including:
  - Soil samples by horizon from a local profile
  - Modified official series description with pertinent information removed
  - Photos of soil profile and local landscape
  - Representative official soil series descriptions from the region



*Samples used in the virtual contest from Colorado State (left), Oregon State (center), and University of Wyoming (right).*

- C1** Materials were shipped to other teams in the region
- C2** Students completed a soil profile description sheet from each of the competitors local areas



## Oregon State University

**Team members:** Amanda Pennino, Zoe Ash-Kropf, Josh Greenwald, & Jasmine Brooks  
**Regional Soil Profile:** McDonald-Dunn Research Forest  
 MAT = 53°F MAP = 45 inches



## Learning Outcomes & Applications

- A** Hands-on active learning of pedological concepts from regions outside their immediate locale
- AB** Broadened perspective of diversity and variability of soils
- Bt1** Collaboration between pedology professors could allow for virtual regional approach to be used in pedology courses
- Bt2** The western region will host another "virtual" regional contest this year, 2016, between Colorado State University, Oregon State University, University of Wyoming, Montana State University, and Utah State University
- Bt3**



## University of Wyoming

**Team members:** Sam Singleton, Casey Boyer, Stephen Schierman, & Alex Foulk  
**Regional Soil Profile:** UWYO Paradise Farm Rangeland  
 MAT = 41°F MAP = 12 inches



## Get to Know our Soils through Virtual Reality

- Each team captured images of their regional soil profile using the Google Cardboard App
- New virtual reality technology allows students to explore soil profiles without visiting them directly
- This is an innovative way to increase student exposure to novel soil types that can be applied in pedology courses



**JOIN US WEDNESDAY  
 NOV. 9<sup>th</sup> 2:30-4:30PM  
 TO "VISIT" OUR SOILS!**

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