

Soil judging is a unique opportunity for students to work on their field soil morphology skills in situ for two major reasons. One, there is no better way to learn how to describe a soil and the landscape than soil judging. The reinforcement of entering a new soil pit several times in one day allows students to hone their skills as soils scientists, learn from their mistakes, and begin to formulate a stronger understanding of the soil environment. Secondly, the overall effect of being surrounded by other individuals from across the country who are as interested and excited about soil science as they are is powerful. Soil science is a small but mighty community that is receiving more and more attention as we focus on climate adaptation strategies, food & fiber production, and conservation of natural resources. The students who participate in soil judging are well situated for careers with federal and state agencies, private consulting companies, and other natural resource-oriented entities.

The UWYO soil judging team has been practicing since the beginning of the fall 2019 semester by working in the lab on concepts and visiting field sites on the prairie east of town and soil pits in the Laramie Range of the Medicine Bow-Routt National Forest. Despite the short time period for preparation, these students did an exemplary job at learning the concepts and applying them to a new region, northeast Utah.

Soil judging consists of students entering a large, excavated hole in the ground and examining the soil profile marked off by a tape measure and flagging tape (to provide a reference area where students can't dig). They are responsible for describing the soil by pedogenic horizon (different layers). For each of these horizons/layers, they note the Munsell color, texture (sand, silt loam, clay, etc.), percent rock fragments, structure, presence of soil features (redox, carbonates, clay films), etc. They then move out of the pit to describe landscape features and use their overall description to make soil interpretations (water movement and storage, building site suitability, etc.). Lastly, they use the information they have collected about the soil morphology and classify the soil using soil taxonomy. Soil judging is a timed event and students only have 60 minutes to complete the entire description.

Above all, the biggest take away from this experience is the opportunity for students to quite literally, "apply their knowledge". Although they spend a whole semester learning soil morphological concepts and skills, in Laramie, we only have a limited time-frame to go into the field and limited resources to apply this knowledge to. While in Utah, aside from the overload of new soils and time restrictions, the students explicitly took the time to repeatedly show their gratitude for the opportunity to see and describe a wide variety of soils first-hand, noting: "We learn so much in class, but actually being here, actually seeing and feeling the soil properties

we talk about in lecture helps us to better understand the course material - I feel so lucky to have this amazingly unique opportunity."

Coming away from this successful experience, the students are already asking when our first practice is for nationals. This is the first year UWYO has come in first-place at the Region VII regional competition and the first time we have had eight students on the team. In just a few years, this program has grown immensely and we are excited to see where this particular group of determined intellectuals takes it next!