MS Graduate Assistantship in Soil Science

BLM Pacific Northwest (PNW) Tribal Forest Restoration and Native Seed Project

The Oregon State University (OSU) College of Forestry (CoF) is pleased to announce a graduate research assistantship to support one MS student in conducting research on soil science, to work in the Department of Forest Ecosystems and Society within the Traditional Ecological Knowledge (TEK) Lab (https://tek.forestry.oregonstate.edu/home). The student will be co-advised by CoF Dean and Professor Thomas H. DeLuca (https://directory.forestry.oregonstate.edu/people/deluca-thomas-h), and California State University Sacramento Assistant Professor and CoF affiliate faculty Dr. Si Gao (https://www.csus.edu/college/social-sciences-interdisciplinary-studies/environmental-studies/meet-us/), who have partnered for years on research on pyrogenic carbon (PyC) in soils and the effects of fire and agricultural practices on soil biophysical and biogeochemical dynamics. The assistantship can start as early as Fall 2023. This position is a fully funded 12-month position that includes a monthly stipend.

The MS student's work would be part of the BLM Pacific Northwest (PNW) Tribal Forest Restoration and Native Seed Project. In this three-year PNW ethnobotany, seed collection, and Tribal conservation corps ecocultural restoration project, we are helping create forests more resilient to climate change, working in southwest Oregon on BLM Oregon & California (O&C) land and Tribal land, using TEK, in partnership with Tribal Nations in this. The project is part of the BLM Native Plant Conservation and Restoration Program Oregon Native Seed and Forest Restoration Project. The student will conduct research on the effects of traditional fire stewardship practices and forest management practices on soil biogeochemistry, including quantifying the relative abundance of PyC, C and nutrient pools and fluxes, microbial biomass, basal respiration, bacterial and fungal relative abundance, and enzyme activities associated with soil C and nutrient cycling.

About the TEK Lab: Our goal is to create sustainable and resilient natural systems in which people engage with the Earth with reciprocity. Indigenous peoples have stewarded natural resources for millennia through their knowledge and traditional practices. The TEK Lab explores, facilitates, and honors the synergies between TEK, Western science, and other ways of knowing. By creating partnerships with Tribal Nations that honor sovereignty rights and nation-to-nation relationships, we are helping decolonize and re-Indigenize the practice of science and advance holistic, systems-based thinking. By braiding together multiple ways of knowing, we help empower Tribal Nations to make meaning, and create opportunities for Tribal youth in higher education to find solutions to some of humanity's most pressing conservation challenges.

Qualifications:

We seek an applicant with a high level of enthusiasm for field and lab research that contributes to understanding soil ecology and the role of TEK and cultural fire stewardship in supporting soil health. The student will have access to silvicultural and ethnobotany data from ongoing research in Oregon on O&C lands. A successful applicant will be expected to work independently as well as collaboratively as a member of the research group, conduct field work in remote locations, help lead a field crew, perform detailed laboratory analyses with a high level of precision, and publish research findings.

Minimum Qualifications:

- A bachelor's degree in plant/forest ecology, forestry, soil science, botany or a related field. Previously attained and maintained exceptional academic standing
- Strong communication skills (verbal and written)

- Experience in report-writing or drafting research articles
- Self-motivated, well-organized, adaptive to collaborative work

Preference will be given to applicants with:

- Experience working respectfully in Native American communities with Indigenous people
- Familiarity with TEK
- Experience with running labwork and conducting statistical analyses
- Peer-reviewed publications
- Cultural humility

How to Apply:
If interested, please apply to the OSU Graduate School (https://gradschool.oregonstate.edu/admissions/process) and Dean Thomas H. DeLuca at tom.deluca@oregonstate.edu. Instruction for applicants are at this link: https://fes.forestry.oregonstate.edu/graduate-programs/how-apply-fes-graduate-program#am
For full consideration, please apply by Feb. 1, 2023.