Postdoc position available

Project: Using Landscape, Climate and Environmental Risk Factors to Identify Priority Seed Collection Areas Across California

An 18-month post doc position is available at the University of California, Davis, working with Dr. Jim Thorne and a dynamic group of reforestation scientists and practitioners from the California Department of Forestry and Fire Protection and the US Forest Service. Salary of $69K/year + benefits. An extension is possible, pending further funding.

Description: This study builds on an ongoing project to support climate adaptation in forestry in the western US. Climate change is amplifying the impacts of droughts and wildfires on overstocked conifer forests. These impacts have been widely recognized and much work is ongoing to build resilience in remaining forests and identify optimal reforestation procedures in areas burned by wildfires. Research shows the that use of seed stocks from warmer locations for planting in burned areas can potentially improve growth rates as seedlings grow and climate warms at the planting location. However, there is a short supply of seed stocks relative to the extent of planting needed, particularly from areas that today contain the hot and dry expected future conditions and the potentially best-adapted trees. These lower elevation stands are also some of those at highest risk from wildfires and landuse.

This project aims to incorporate climate change into the process of scouting suitable conifer stands for cone crops. It will combine species distribution models, place-based climate risk metrics, and forest condition metrics with a range of GIS and remote sensing data to identify priority areas to scout for potential cone crops. The project will consider a process similar to triage operations because scouting & collection capacity is low, the risks are high, and the need is urgent. The intent is to build a spatially explicit framework that can be used by agencies to guide cone crop searches.

The project has extensive data and methods that have already been developed, which will allow the postdoc to engage with the process quickly. The project is predominantly office-based, with some travel to accompany seed collectors and observe the realities of actual scouting. A hybrid model of in-person and home-office can be arranged, but living in the vicinity would be necessary as funds for long-distance travel for in-person meetings is not included.

Desired qualifications:

Motivation to address climate change. Familiarity with the R programming environment, use of GIS & interest in App development. Background in Ecology, Forestry, or Geography. Comfortable in a variety of settings including field, group meetings, and an office environment.

Ability to evaluate and synthesize various types of data & models, using an assortment of analytical approaches. Interest in development of digital tools to support climate-adaptive forestry practices, and in advancing climate adaptation capacity through documenting the science in peer-review publications.

To apply: Please send a letter of interest, resume and three references to Jim Thorne at: jhthorne@ucdavis.edu

The First review of applicants will be April 25th. The position can start as soon as May 1st, or in early summer.