

# Opportunity Title: USFS Postdoctoral Fellowship in Quantitative Ecology on

### Pollinators

Opportunity Reference Code: USDA-USFS-PNWRS-2024-0131

Organization U.S. Department of Agriculture (USDA)

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A complete application package consists of:

- An application
- Transcript(s) For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Click <u>Here</u> for detailed information about acceptable transcripts.
- A current resume/CV
- An abstract or reprint of an article
- Two educational or professional recommendations.

All documents must be in English or include an official English translation.

#### Application Deadline 7/5/2024 3:00:00 PM Eastern Time Zone

### Description \*Applications will be reviewed on a rolling-basis.

**USFS Office/Lab and Location:** A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (USFS) within the Pacific Northwest Research Station (PNWRS) located in La Grande, Oregon.

At the heart of the U.S. Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the U.S. Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.

**Research Project:** The PNWRS seeks a postdoctoral fellow with strong quantitative and communication skills and experience with large datasets to collaborate with a team of scientists and other collaborators at the USFS Forestry and Range Sciences Laboratory in La Grande, OR. The fellow will also collaborate with scientists at the Oregon State University Hermiston Agricultural Research and Extension Center. Office space is available in both locations, with opportunity to participate remotely and attend regional and national meetings, conferences and workshops.

Native bees provide billions of dollars in pollinating services across the

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U.S., yet little is known about their habitat requirements and community dynamics, especially in semi-arid landscapes of the interior Northwest. A decade of multi-partner research conducted at the USFS Starkey Experimental Forest and Range (Starkey) in eastern Oregon and adjacent Blue Mountains Ecoregion landscapes has identified more than 300 bee and 150 flowering species and specific bee-flower associations. These diverse data provide an unparalleled opportunity to investigate key questions about effects of ungulate and habitat management, restoration, and climate change on native bees. The goal of this postdoctoral scholar opportunity is to leverage this rich dataset to learn and be involved in a broad range of experiences to meet four objectives:

- Evaluate how management and climate affect bee communities, sensitive species, and bee habitat requirements;
- Identify indicators of bumble bees that are declining or highly sensitive to management;
- Develop lists of flowering species that benefit pollinators in restoration plantings; and
- Document pre-treatment conditions for native bees before an upcoming large-scale restoration in the Meadow Creek watershed within and beyond Starkey.

Findings will also be highly relevant to a USDA partner, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), providing new information about bee species pollinating plants that serve as First Foods for CTUIR and sharpening the focus of on-going research. Mentored by a diverse team, the scholar will participate in the full research cycle from analysis to publication and presentations while interacting closely with the Starkey scientists, geospatial staff, and Oregon State University collaborators to further their research and collaboration skills.

Learning Objectives: Learning activities include:

- Help develop, design, and implement analyses to quantify effects of riparian restoration and ungulate management on native bee communities in a restored riparian system;
- Develop models to evaluate effects of climate on seasonal and annual bee abundance and diversity;
- Perform data analysis using appropriate time series, spatial, and statistical models and techniques to assess current status, trends, and effects of restoration, ungulates, and climate on native bee communities and associated floral resources;
- Assist in production of peer-reviewed publications of key scientific results;
- Synthesize and archive datasets spanning 10 years of insect pollinators and associated floral resources;
- · Participate in inter-agency groups;
- Participate in meetings with research collaborators, managers, and stakeholders to present details of the analyses.

Mentor: The mentors for this opportunity are Mary Rowland



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(<u>mary.rowland@usda.gov</u>), Sandra DeBano (<u>sandy.debano@oregonstate.edu</u>), and Michael Wisdom (<u>michael.wisdom@usda.gov</u>). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: July/August 2024. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year but may be extended upon recommendation of USFS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. Annual stipend range is \$60,000-\$75,000 depending on qualifications, plus coverage for 75% of health insurance costs.

**Citizenship Requirements:** This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the <u>Guidelines for Non-U.S. Citizens</u> <u>Details page</u> of the program website for information about the valid immigration statuses that are acceptable for program participation.

**ORISE Information:** This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and USFS. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

**Questions:** Please visit our <u>Program Website</u>. After reading, if you have additional questions about the application process please email <u>ORISE.USFS.PNWRS@orau.org</u> and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

### Preferred skills:

- Excellent quantitative skills
- Strong publication record
- Experience with large datasets
- Excellent written and oral communication skills
- Experience with mixed-effects modelling and path analyses/structural equation modeling
- Experience with data structuring and management
- Skills in pollinator network analyses



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- Research experience with native bees or other pollinators
- Eligibility Degree: Doctoral Degree received within the last 60 month(s).
- Requirements Discipline(s):
  - Environmental and Marine Sciences (4.)

  - Mathematics and Statistics (2. (2.)