PhD Position Announcement:

"Movement Ecology of Bighorn Sheep in Hells Canyon"

Department of Fish and Wildlife Sciences
College of Natural Resources
University of Idaho



Photo: Frances Cassirer, Idaho Department of Fish & Game

Location: Moscow, ID

Salary: $27,000-32,000/year, plus tuition and health insurance

Start date: January 8th, 2023

Supervisor: Dr. Simona Picardi, Assistant Professor of Wildlife Ecology and Management

Position description: The Picardi Lab in the Department of Fish and Wildlife Sciences at the University of Idaho is recruiting a PhD student to research the determinants of bighorn sheep movement decisions in the Hells Canyon metapopulation in Idaho, Oregon, and Washington. Disease spillover from domestic sheep and between wild populations is a major management concern for bighorn sheep conservation. Encounter rates between infected and susceptible individuals emerge as a result of group associations and movements, and an understanding of how environmental factors, population dynamics, and individual status affect bighorn sheep movements can improve predictions of disease transmission. This project will be conducted in partnership with the Idaho Department of Fish & Game and the Oregon and Washington Departments of Fish & Wildlife with the goal of developing a predictive model of bighorn sheep movements in Hells Canyon. The anticipated duration of the project is 4 years.

The successful candidate will analyze a long-term dataset of VHF, GPS, and demographic data collected by our agency partners to identify the drivers of bighorn sheep exploratory and dispersal movements; participate in field data collection; coordinate communication among research partners;

and disseminate results of the research in both written (reports and peer-reviewed publications) and oral (conference and outreach presentations) form. To be successful in this position, a student must possess a solid foundation on tools for the analysis of movement data; demonstrate creativity, independence, and critical thinking; be familiar with foundational literature in animal space-use and movement ecology; be interested in developing expertise in advanced statistical analyses and, potentially, the development of novel analytical tools; be willing and able to work outdoors on rough terrain and in harsh weather conditions; and be effective at communicating and working collaboratively with academic and non-academic partners. Knowledge of bighorn sheep ecology, population modeling, and/or disease ecology are desirable but not required.

Qualifications:

Required:

- Master's degree in wildlife, biology, ecology, or closely related field (candidates with a Bachelor's degree but no Master's degree will only be considered in exceptional cases);
- GPA 3.0 or higher;
- Excellent written and oral communication skills;
- Experience with programming in R;
- Familiarity with the animal space-use and movement ecology literature;
- Familiarity with one or more statistical tools for the analysis of movement data (e.g., RSFs, SSFs, iSSA, HMMs).

Preferred:

- Experience with the peer-review publication process;
- Knowledge of bighorn sheep ecology, population modeling, and/or disease ecology.

Application instructions:

To apply, email Dr. Picardi at spicardi@uidaho.edu using the subject line "Hells Canyon bighorn sheep PhD application" and attach the following materials, combined into a single PDF:

- Cover letter describing research interests and how this position aligns with them; past experiences and how they address the required and preferred qualifications for this position; relevant skills and how they will help you succeed in this position; and career goals and how this position will help you make progress towards them.
- Curriculum vitae;
- Unofficial transcripts;
- Contact information (name, affiliation, phone, email address) for three professional references.

The deadline to apply is **October 15th, 2023.** For questions about the position, please contact Dr. Picardi at spicardi@uidaho.edu.