POSTDOCTORAL RESEARCHER IN
WILDLIFE LANDSCAPE GENETICS

A post-doctoral research position (Postdoc; position #4740”) is available to work on wildlife landscape genetics and population genetics at the University of Wyoming (UW) in Laramie. The position will be primarily lab-based within the Ernest Wildlife Genomics and Disease Ecology Laboratory in the Department of Veterinary Sciences which has affiliations with the UW Program in Ecology and the University of California, Davis Wildlife Health Center. Research will use genetic (microsatellite) and genomic (next gen sequencing) DNA data (including non/less-invasive sampling, such as fecal samples), GIS analysis, and quantitative analytic analysis using spatially explicit capture–recapture and other models, and software such as MARK, SECR, CAPWIRE, and others to examine population ecology, relatedness, and estimate population sizes of wildlife species in the Rocky Mountain West and California. Species of focus will mainly involve mountain lions, and also contribute to work on pronghorn, bighorn sheep, hummingbirds and other species.

The Postdoc will be involved in laboratory work, data analysis, manuscript writing for peer-reviewed publication, grant-writing, development of oral and poster presentations of research. They will gain valuable exposure to a collegial academic environment, as well as exciting collaborative work with state, federal, and non-governmental agencies such as the Wyoming Game and Fish Department, California Department of Fish and Wildlife, and more. The Ernest Wildlife Genomics and Disease Ecology Laboratory is a new exciting lab at UW and the Postdoc will apply and gain experience and knowledge in a vibrant dynamic wildlife genetics, genomics and disease ecology research environment. The Postdoc will have opportunities to work with leaders in the scientific field and applying excellence in science toward wildlife conservation and management. Quality mentorship of trainees of all educational levels, including this postdoctoral position, is a priority for the laboratory.

There will be opportunities to gain experience with genomic and disease ecology data analysis from other lab personnel and teaching and mentoring undergraduate and graduate students. There will be shared duties involving laboratory upkeep. The work includes reading and interpreting very small print and subtle visual differences such as in data readouts. Lifting of objects up to 30 pounds, rabies vaccination, and occasional field work involving hiking and work in potentially harsh outdoors environments will be required (see below, under requirements).

Qualifications: The successful candidate will have:
1) A recent Ph.D. wildlife biology, ecology, genetics, bioinformatics, or related field; and with PhD work that involved laboratory and data analysis in wildlife genetics. (required)
2) Knowledge, skills, and abilities in the following areas: laboratory and computational analysis of genotypic DNA data (such as microsatellites, SNPs, and genotyping by sequencing), non-invasive DNA laboratory techniques and equipment, DNA extraction, gel electrophoresis, PCR, capillary electrophoresis data analysis. (required)
3) Quantitative skills as demonstrated through documented knowledge, skills, and abilities with mark-recapture analysis (such as MARK, SECR, and/or CAPWIRE and similar programs), statistics, computational modeling, R software environment, and software that are used in population genetic analysis, noninvasive DNA mark-recapture analysis, and estimation of animal numbers using DNA data. (required)
4) Geographic Informations Systems (GIS) knowledge, skills, and abilities including ESRI Inc. programs such as ArcGIS and/or other geospatial analysis packages in R; data analysis, map and publication-quality figure creation using GIS. (required).
5) Documented keen interests in applied conservation-oriented research in mammalian and bird wildlife genetics, non-invasive DNA analysis, population genomics, and ecology of wildlife and their pathogens. (required)
6) Demonstrated track record of collegiality, interpersonal skills, communication, creative leadership and problem-solving abilities that promote a positive team work atmosphere. Documented ability to work both independently and in teams, and ability to respond and adjust to difficult situations. Demonstrated ability to work with and communicate with wide diversity of stakeholders, staff, students, field biologists, and members of the public. (required)
7) Documented evidence of conference research presentations and peer-review science publication in wildlife population genetics. (required)
8) Demonstrated ability to conduct occasional wildlife field work that may involve harsh environmental conditions (cold, hot, windy, steep, rocky, etc.), sampling wildlife (blood, tissues, feces, potential for exposure to disease organisms that can cause illness in people, etc.), and hiking over rough terrain with heavy gear. (required)

Additional preferred documented skills, knowledge, and abilities include any of the following:

1. Bioinformatics; Linux-based computing and programing; programming language used in genetic and/or genomic data analysis (such as Perl). (preferred).
2. Wild mammalian carnivore mark-recapture study design, field work, telemetry data analysis, tracking, and/or non-invasive DNA analysis. (preferred).
3. Quantitative (real time) and/or digital PCR. (preferred).
4. Bayesian statistics. (preferred)
5. Traditional Sanger DNA sequence, mitochondrial DNA, and/or immunogenetics. (preferred).
6. Next Generation Sequencing DNA library preparation and construction techniques and equipment (such as sonicator, DNA fragment analyzer, etc.), and next generation sequencing (NGS; Illumina or similar) data. (preferred).
7. Hands-on wildlife field work that involved repeated handling of free-ranging wildlife animals in challenging environmental conditions. (preferred).
8. Excellent communication with the public and wildlife professionals and abilities to translate complex genomic and/or disease ecology concepts to every day understandable language. (preferred).

University of Wyoming hosts excellent wildlife and ecology science and a collegial academic atmosphere. Laramie offers easy access to the Rocky Mountains and outdoor activities including skiing and hiking. The University of Wyoming is an Equal Employment Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability or protected veteran status or any other characteristic protected by law and University policy. Please see www.uwyo.edu/diversity/fairness. We conduct background investigations for all final candidates being considered for employment. Offers of employment are contingent upon the completion of the background check.

To apply for this position please submit an electronic application via email in PDF format (preferably as a single pdf file) by email to hernest@uwyo.edu with subject line including “postdoc application position #4740” and include a cover letter stating research interests, C.V., specifically list how the “required” and any of the “preferred” qualifications are met, and the contact information (name, position, email, phone, institutional affiliation, and research area) for at least three work-related references to Dr. Holly Ernest, Professor and Wyoming Excellence Chair in Disease Ecology, Department of Veterinary Sciences, University of Wyoming. Preferred start date is by Dec 1, 2015 or as soon as possible. Applications will be reviewed on or before Oct 25, 2015 and the position will remain open until filled.