PhD Student Opening for Fall 2019 in
WILDLIFE POPULATION GENOMICS
and DISEASE ECOLOGY
http://www.wildlifegenetichealth.org/grad-wildlife-genomics/

PhD student position is available for research and training in wildlife population genomics, conservation genetics, and disease ecology at the University of Wyoming (UW) in Laramie. The position will be primarily lab-based and mentored within two labs: the Holly Ernest Wiledlife Genomics and Disease Ecology Lab http://www.wildlifegenetichealth.org/ and the Jennifer Malmberg Wildlife Pathology and Genomics Lab https://www.uwyo.edu/vetsci/department-directory/faculty-members/malmberg-jennifer.html in the Department of Veterinary Sciences https://www.uwyo.edu/vetsci and the UW Graduate Program in Ecology (PiE; http://www.uwyo.edu/pie/). Research will use genomic, genetic and diagnostic methods to study wildlife population ecology and disease ecology in the Rocky Mountain West and/or California, with project either in large mammal or avian species.

The Ernest and Malmberg Labs are dynamic and highly collaborative and maintain affiliations with Colorado State University, University of California Davis and other academic institutions, as well as state, federal, and non-governmental agencies. There are many opportunities to work with recognized leaders who apply excellence in science toward wildlife conservation and management. There are opportunities for an added academic minor in Environment and Natural Resources: http://www.uwyo.edu/haub/. In addition to research and course work, responsibilities may include teaching (TA-ing), lab maintenance tasks, and mentoring other students. Quality mentorship of trainees is a priority for us. University of Wyoming hosts excellent wildlife and ecology science and a collegial academic atmosphere. Laramie is a wonderful college town of ~ 30,000 and offers easy access to the Rocky Mountains and outdoor activities including skiing, hiking, climbing, birding, and fishing & hunting.

To apply for this position please do two things: 1) email a cover letter of introduction and C.V. to Holly.Ernest@uwyo.edu and 2) submit an electronic application to UW and note that your application is directed to Dr. Ernest and Dr. Malmberg: http://www.uwyo.edu/admissions/graduate/ then click “Graduate Application” to arrive at: http://www.uwyo.edu/admissions/apply-online.html. Applicants can temporarily upload documents without the need to pay the $50 application fee until notified that they are finalists for the position. At the UW application site, please upload your cover letter, C.V., unofficial transcripts for all college work, and everything you can upload short of paying the application fee. Finalists for the position will be notified and asked to finalize their UW online application with 3 letters of recommendation, and official transcripts, official GRE’s, etc. as well as $50 application fee.

The application cover letter should include educational and research background, PhD research and study interests as regards to wildlife population genomics, ecology, and disease ecology; career goals, specific interests in our labs, GPA (overall and science/math) and GRE (raw and percentile scores), your address, email, cell phone, and names for at least three research/academic-related references including MS adviser, with their contact information (name, position, email, phone, institutional affiliation, website, and research area). GRE’s must have been taken after Sep 2014, (within 5 years) and please include both percentiles and raw scores for all GRE’s taken. Applications reviews will begin as soon as received, position may remain open until filled. We are sorry but this position is not available for students outside the US and Canada. Feel free to email Dr. Ernest with inquiries – look forward to your application!

Over to next page for required qualifications
http://wildlifegenetichealth.org/
Qualifications: The successful PhD student candidate should have the following—please include details in your application:

1) **An MS degree** that includes genomics, bioinformatics, with research experience involving laboratory data generation and population-level data analysis. MS may have involved wildlife, domestic animals, plants, or humans. Population genetics and genomics course work and research experience. Next Generation Sequencing DNA library preparation techniques and equipment (such as RADseq, or similar techniques for SNPs or whole genome sequencing). Bioinformatics for genomics: familiarity and working knowledge of Linux-based computing and bash programming or analogous; RADseq analytic platforms such as STACKS and others; programming language used in genetic and/or genomic data analysis (such as Python, Perl).

2) **Good grades** (GPA above 3.3 desirable) and GRE scores (preferably >75%ile). GRE required taken after September 2014 (within 5 years).

3) **Demonstrated experience** in the following areas: sample handling and archiving, research laboratory skills, and skills with organization of files and data in a research setting.

4) **Quantitative skills** as demonstrated through documented experience with R software environment, and software such as for population genetic analysis and large genomic and GIS data sets.

5) **Passion for applied conservation-oriented research in wildlife** genetics, population genomics, and ecology of wildlife and their pathogens.

6) **Track record of collegiality and interpersonal skills**, effective communication, creative leadership, and problem-solving abilities that promote a positive team atmosphere. **Ability to work well both independently and in teams**, and ability to respond and adjust to difficult situations.

7) **Evidence of conference research presentations and peer-review science publication** (in press, submitted are desirable as well) in genomics.

8) **Demonstrated ability to conduct occasional 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. The work also includes reading and interpreting small print such as in data readouts, occasional lifting of objects up to 30 pounds.

9) **Ability to work or travel** occasionally for short periods of time (such as a few days or up to a week) and including weekends, holidays, and evenings; a valid driver’s license.

10) Willingness to receive vaccination for rabies if needed for the project, and/or blood test for adequate rabies titer if rabies-vaccinated prior. Funding for vaccination and blood test will be provided if necessary for student’s work after starting the position.

Desirable (not required) skills, knowledge, and abilities include any of the following—please include details in your application:

1. Geographic Informations Systems (GIS) 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.

2. Experience with wildlife field work involving repeated handling of free-ranging wildlife animals in challenging environmental conditions.

3. Wild mammalian mark-recapture study design, field work, telemetry data analysis, tracking, and/or non-invasive DNA analysis.

4. Quantitative skills in mark-recapture analysis (such as MARK, SECR, and/or CAPWIRE and similar programs), statistics, and computational modeling.

5. Demonstrated knowledge, skills, and abilities in any of the following areas: Quantitative (real time) and/or digital PCR, laboratory and computational analysis of genotypic DNA data, immunogenetics, non-invasive (fecal, hair, etc.) DNA laboratory techniques, and/or construction and maintenance of SQL/relational databases for large data sets.

6. Knowledge of ecological modeling, including Bayesian approaches.