Postdoctoral Researcher in Predator-Prey Dynamics and Climate
Wildlife Biology Program, University of Montana

Background:
Global climate change and anthropogenic disturbance are rapidly altering ecosystems around the world. It is important to understand how cougars (*Puma concolor*) and other carnivores will shift their predation patterns, movement, space use, and other aspects of their ecology to adapt to these changes in order to conserve these species in the future.

Position Summary:
The University of Montana and Panthera are seeking applicants for a two-year postdoctoral scholar position with the Wildlife Biology program in the W.A. Franke College of Forestry and Conservation.

The selected researcher will work with Dr. Hugh Robinson (University of Montana and Panthera), Dr. Tavis Forrester (US Forest Service), and Dr. Mark Elbroch (Panthera) to develop predation risk models for cougars using data from across their range in the USA. The researcher will compare a variety of methods for modeling the probability of predation by cougars with the goal of building a predation model that can be successfully applied across different ecosystems and ideally also to other species of cats that use similar ambush predation techniques (e.g., jaguars, leopards). Depending on data availability predation risk to ungulates would also be modeled using location data of mule deer and/or elk. The researcher will also model how drought and summer temperature affect the spatial variation of cougar predation probability and home range overlap with the aim of predicting the effects of climate change on cougar predation patterns. The starting date for the position is flexible but would ideally be in the winter of 2023/2024.

Required Qualifications:
- A PhD degree in wildlife biology, ecology, statistics, or similar fields
- A record of publishing in peer-reviewed scientific journals.
- Proficiency with coding languages of data analysis, including R but possibly also Python, BUGS/JAGS, Stan, etc.
- Desire to produce science that is relevant to conservation.
- Desire and ability to build a positive, team oriented, and safe working environment for all backgrounds and identities.

Preferred Qualifications:
- Experience working with large datasets, cleaning, and combining data from multiple collaborators, and creating databases.
- Experience conducting complex statistical analyses using frequentist and Bayesian statistics including generalized linear mixed models, time to event models, hierarchical models, and/or machine learning models.
- Experience collecting and using large scale spatial data (e.g., raster and vector datasets in ArcGIS or R) for spatial analysis using R, ArcGIS, Google Earth Engine, and/or Python.
- A record of producing conservation relevant research products and engaging stakeholders with research results.

Responsibilities
- Integrate available data including existing GPS collar data, as well as spatial and environmental data to model cougar predation risk.
- Publish results as a peer reviewed manuscript

Salary
$62000/year + benefits for 1st year, $65,000/year + benefits for 2nd year

Employment period
Spring 2024 – Spring 2026

Location
University of Montana, Missoula MT. https://www.umt.edu/about/

How to Apply:
Applicants should send an email containing in a single pdf document: (1) a cover letter, (2) curriculum vitae, and (3) the names and contact information (phone and email) of 3 references to Hugh Robinson (hugh.robinson@umontana.edu).
For further information contact: Hugh Robinson.

Application Deadline: December 31st, 2023