

Postdoctoral Scientist
Monitoring and Management for Invasive Brown Treesnakes in Guam
Washington Cooperative Fish and Wildlife Research Unit
University of Washington



Photo: Bjorn Lardner

POSITION: Postdoctoral Scientist

SALARY: \$55,000/year or more, commensurate with experience, plus benefits

EMPLOYMENT PERIOD: One year, with continuation likely conditional on project needs, progress, and funding availability

APPLICATION DEADLINE: 6/31/2018 or until filled

LOCATION: University of Washington, Seattle, Washington

TRAVEL: Occasional travel in the continental US, to Guam, and internationally

POSITION SUMMARY:

We anticipate hiring a postdoctoral scientist with a start date in autumn 2018. The position will be focused on development of methods for monitoring brown treesnakes on Guam. The postdoctoral scientist in this position will work closely with scientists and managers at the University of Washington, U.S. Geological Survey, USDA APHIS Wildlife Services, US Navy, and other agencies to identify optimal monitoring strategies, field methods, and statistical models applicable to brown treesnakes. The postdoctoral scientist will lead all aspects of the project on a day-to-day basis.

DUTIES:

The brown treesnake is an invasive species on the island of Guam and is responsible for the local extinction of much of Guam's avifauna. Control of brown treesnakes is critical to conservation of

the remaining native fauna and to the eventual reintroduction of many native species. Monitoring brown treesnake populations will be key to informing control and reintroduction activities. Multiple inter-linked questions about monitoring brown treesnake populations need to be addressed, including (1) what monitoring metrics will best inform management decisions, given considerations of effectiveness and cost; (2) what data collection methods will provide the information necessary for estimation of optimal monitoring metrics; (3) what statistical modeling methods will be most effective for analysis of monitoring data; and (4) how will precision and bias of estimates of monitoring metrics scale with monitoring effort.

In the first phase of this project, the post-doctoral scientist will investigate the feasibility of estimating brown treesnake density from camera trapping data. The post-doctoral scientist will be expected to evaluate various existing, hybrid, and novel statistical models for estimating density from camera trap data in a population of known size. Along with data analyses, the post-doctoral scientist is expected to publish results in the peer-reviewed literature. Completion of the first phase is likely to lead to additional work to address the questions outlined here, contingent on progress and funding availability.

MINIMUM REQUIREMENTS:

1. Ph.D. in biology, ecology, or related field, with a focus on quantitative methods in population ecology.
2. Experience with demographic studies.
3. Demonstrated proficiency with R.

DESIRED ABILITIES:

Competitive candidates will have a strong background in development of hierarchical models for analysis of demographic data. Excellent programming skills are required, including proficiency with R, and proficiency with JAGS/STAN/TMB or similar platforms for hierarchical modeling. Desirable skills and abilities include: experience designing and carrying out simulations to evaluate statistical models; experience with a variety of monitoring data types, including live captures and camera-trapping data; experience with spatial capture-recapture and/or animal movement models; experience with evaluation and identification of optimal management actions within a decision-theoretic framework; and experience working with management agencies. The successful candidate will have excellent written and personal communication skills, and a demonstrated desire and ability to publish in the peer-reviewed literature.

TO APPLY:

Applicants should email: (1) a letter describing background and interests – the letter should address specifically how the applicant meets both the minimum requirements and the desired abilities, (2) curriculum vitae, (3) a technical writing sample, and (4) the names and contact information (phone, email, address) for 3 references to Dr. Sarah Converse (sconver@uw.edu).

For further information, contact:

Sarah Converse (sconver@uw.edu)

(206) 221-5791

U.S. Geological Survey, Washington Cooperative Fish and Wildlife Research Unit, Box 355020, University of Washington, Seattle, WA 98195