

## **Postdoctoral position in Tongass temperate rainforest management and large herbivore nutritional ecology**

The Department of Fisheries, Wildlife, and Conservation Sciences at Oregon State University invites applications for a full-time (1.0 FTE) Postdoctoral Scholar position to work under the supervision of Dr. Taal Levi (Oregon State University) and Dr. Phil Manlick (USDA Forest Service, Pacific Northwest Research Station) on the effects of temperate rainforest management on wildlife in the Tongass National Forest, the largest National Forest in the United States. The Tongass provides significant economic and subsistence resources to Southeast Alaska. In particular, Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) are a critical food resource for both subsistence communities and endemic wildlife like the Alexander Archipelago wolf (*Canis lupus ligoni*; currently pending ESA listing). However, legacies of commercial logging and subsequent forest succession limit deer forage and habitat, with uncertain consequences for deer populations. Currently, TNF contains ~450,000 acres of young-growth forest that is actively managed to improve wildlife habitat and forage using silviculture prescriptions like pre-commercial thinning for stand improvement. The 2022 Bipartisan Infrastructure Law also allocated \$500M for “pre-commercial thinning in young growth stands for wildlife habitat benefits to provide subsistence resources.” Understanding the effects of thinning on wildlife like black-tailed deer is therefore imperative, but the effects of stand management on deer forage, habitat, and demography are currently unclear.

The preferred start date is flexible. Two years of funding are currently available, but the postdoctoral researcher will be hired on an annual basis and extended pending appropriate progress. The postdoctoral researcher is expected to explore diverse topics using existing datasets, but the research program must integrate two existing Pacific Northwest Research Station projects – TWYGS and FRESH – to develop nutritional landscapes for black-tailed deer in Southeast Alaska. The Tongass-Wide Young-Growth Studies (TWYGS) is a long-term project developed to evaluate the effects of experimental stand improvement treatments on forest understory production and composition. The Forest Resource Evaluation System for Habitat (FRESH) uses ungulate physiology and metabolism to calculate deer forage and was designed in parallel with TWYGS to understand the effects of management on deer carrying capacity. The postdoctoral scholar will use plant biomass data from TWYGS coupled with molecular diet analysis of deer feces to parameterize a spatiotemporally explicit foraging model in FRESH. The postdoctoral scholar will use data on forest succession from 20 years of TWYGS monitoring to predict future

deer habitat and forage availability under various forest management and planning scenarios (e.g., variable thinning, timing), with additional opportunities to connect nutritional landscapes to deer demography, movement, and habitat selection through state and federal partners. Collectively, this work will develop an empirically based nutritional model for Tongass deer to inform forest restoration, management, and planning.

The postdoctoral researcher will be based in the Department of Fisheries, Wildlife, and Conservation Sciences at Oregon State University in Corvallis, Oregon with options to spend substantial time at the Juneau, Alaska office of Pacific Northwest Research Station, USDA Forest Service. The postdoctoral researcher will 1) merge and analyze existing data sets, 2) lead field efforts as necessary, 3) present research results in written and oral formats for scientific and management audiences, and 4) contribute to pursuing new research questions and funding within the larger project objectives. An ability to work independently and collaboratively as part of a multi-faceted research team is critical.

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## **Qualifications**

Candidates must have earned a PhD or equivalent degree in ecology, wildlife science, or a closely related field by the start date of appointment. Advanced degrees in statistics, computer science, or molecular biology from applicants with ecological experience may also be considered. The candidate must have demonstrated strong quantitative skills (including statistics, GIS, database construction and management) and/or molecular skills (DNA metabarcoding, bioinformatics). Desirable skills include spatial analysis in R, development of R Shiny apps, and development of R packages. Preference will be given to candidates with a strong publication record and research interests aligned with the research team.

## **TO APPLY**

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Individuals interested in this position should submit a cover letter detailing how they meet the minimum and preferred qualifications as well as describing long term research objectives, electronic copies of a CV, and the names and contact information for a minimum of three individuals who can provide professional recommendations to support the application. Screening of applications will begin Dec 1, 2022 and applications will be received and considered until the position is

filled. The preferred start date is July 1, 2023 but is flexible for the preferred candidate. Please indicate your availability in your cover letter.

Please feel free to contact Dr. Taal Levi with any questions about the position at:  
Taal.Levi@oregonstate.edu

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