MICHIGAN STATE UNIVERSITY

PhD Research Position

Deer Population Health Outcomes in Response to Management Interventions

Title: Evaluation of Deer Population and Disease Responses to Community-Based Deer Management Interventions

Description: We seek a motivated doctoral student to join the Christensen Lab in the Department of Fisheries and Wildlife at Michigan State University. The successful applicant will conduct research evaluating deer population responses to community-based deer management interventions in Michigan. This position is funded through a doctoral research assistantship for the four-year project period (January 2027 through September 2030). The selected candidate will work with a team of collaborators from Michigan State University and the Michigan Department of Natural Resources, and will contribute to the multi-state effort of the CWD Research Consortium.

Project Description: This position is part of Evaluating New Approaches to Deer Overabundance and Chronic Wasting Disease Management, a broader four-year project led by Michigan State University (MSU) in partnership with the Michigan Department of Natural Resources (DNR) Wildlife Division. The project tests whether coordinated, community-based deer management interventions can increase hunter harvest and change deer population and disease outcomes, using a treatment and control design in townships in the southern Lower Peninsula of Michigan. It contributes to a multi-state effort evaluating approaches to deer management in CWD-affected areas across the Midwest. The broad project combines assessments of hunter and landowner social and behavioral conditions with ecological outcomes such as deer harvest, density, demographics, and CWD prevalence. The project team includes Dr. Sonja Christensen (ecological and disease components) and Dr. Emily Pomeranz (human dimensions) of the MSU Department of Fisheries and Wildlife, and Dr. Dwayne Etter and Dr. Brent Rudolph of the Michigan DNR Wildlife Division. Dr. Sonja Christensen and the selected PhD student will focus on the ecological and disease components of the project.

Research Objective: Determine whether management interventions produce changes in hunter behavior and deer harvest, and result in associated changes in deer density, population demographics, and CWD prevalence, by comparing treatment and control townships before and after interventions.

Responsibilities: The selected Doctoral Research Assistant will be responsible for:

- Using baseline and follow-up assessments of deer populations, including roadside distance sampling, to estimate deer density in an experimental study.
- Evaluating changes in deer harvest (with an emphasis on antlerless deer), density, demographics, fawn recruitment, and CWD prevalence in treatment and control townships.
- Developing models and statistical analyses to address the research objectives, including the effects of interventions and other factors (e.g., epizootic hemorrhagic disease events) on deer populations.
- Collaborating with a multidisciplinary team of ecologists, social scientists, and agency partners, including the Michigan DNR and the MSU Veterinary Diagnostic Laboratory.
- Contributing to community engagement with landowners, hunters, and other stakeholders.
- Preparing research findings for publication in peer-reviewed journals, presenting results at conferences, and communicating findings to state wildlife agencies and the public.

Qualifications:

- A master's degree in a relevant field (e.g., wildlife biology, epidemiology, ecology, statistics, or related field).
- Experience with wildlife population estimation methods (e.g., distance sampling) preferred.
- Strong quantitative and analytical skills/aptitude.
- Experience with statistical software preferred (e.g., R, SAS, Python).
- Excellent communication skills, both written and oral.
- Ability to work independently and as part of a collaborative, interdisciplinary team.
- Interest in working with stakeholders and communities.
- Passion for wildlife conservation, management, and research.
- Experience working with state wildlife agencies and engagement with hunting populations is preferred.

Program Support: The selected Doctoral Research Assistant will receive:

- Full tuition remission, health benefits, and a bi-weekly stipend (see below); supported for the four-year project period, one semester of TA expected).
- Opportunities for professional development and networking.

Applications: Interested candidates should submit the following materials to Dr. Sonja Christensen (chris625@msu.edu). IMPORTANT: Submit applications with "Wildlife Health PhD Application" in the subject line (*single merged PDF file is preferred*):

1. A cover letter outlining your research interests and career goals.
2. A resume or curriculum vitae.
3. GRE scores preferred but not required
4. TOEFL scores (for non-native English speakers only).
5. Academic transcripts (unofficial copies are acceptable at this stage).
6. Contact information for three references.
7. One representative first-authored publication if any exist.

Application Deadline: Review of applications will begin immediately and the final deadline for submission is October 30th, 2026.

Salary and Start Date: Minimum annual stipend of $34,789, plus tuition covered and health benefits, and annual 3% raises. Some stipend flexibility available based on experience and degrees. Start date is January 2027. Funding is budgeted through the end of the project in September 2030 with options for Teaching Assistantships or Fellowships for the remaining academic program assuming positive academic progress.

Contact Information: For inquiries about the position or the research project, please contact Dr. Sonja Christensen (chris625@msu.edu) or reach out to members of my lab. Please allow time for email response.

More about The Christensen Lab: Join our team at the Christensen Lab and contribute to critical research that addresses the challenges posed by CWD and its impact on ungulate populations. We look forward to welcoming a dedicated PhD student to our project and our dynamic research group. Our lab focuses on evaluations of wildlife population health and understanding the dynamics of infectious diseases in wildlife populations to develop strategies for their management and conservation. We employ cutting-edge field research, quantitative modeling, and interdisciplinary approaches to address critical challenges in wildlife health. For more information about our lab, please visit our website: www.christensen-lab.org. Further, Michigan State University's Department of Fisheries and Wildlife is one of the largest programs of its kind, with 45 core faculty (http://canr.msu.edu/fw).

The Christensen Lab
For Wildlife Population Health