Ph.D. Graduate Student Assistantship, Cornell University, Moose Juvenile Survival and Parasitic Threats

A Ph.D. position is available with the New York Cooperative Fish and Wildlife Research Unit in the Department of Natural Resources at Cornell University. The candidate will be mentored by Drs. Angela Fuller and Krysten Schuler (Cornell), and Dr. Jacqueline Frair (SUNY ESF).

Background: Health metrics on adult moose indicate a high pregnancy rate and subsequent calf production. However, the majority (78%) of adult cow moose in New York have been exposed to deer brainworm, which has been implicated as a major pathogen for juvenile moose. Moose in New York may be exposed to brainworm as calves, which affects their ability to survive the first year and become breeding age animals. Maine, New Hampshire, and Vermont are experiencing significant juvenile mortality associated with winter ticks. Although overall moose density in the Adirondacks of New York is relatively low, high moose densities in preferred habitats may increase winter tick transmission potential. Initiating a research study at the beginning of an epizootic event will offer greater insights into mechanisms and allow for potential treatment alternatives.

The candidate will conduct field work to capture and fit juvenile moose with GPS radiocollars to estimate survival and collect tick density data, will implement a camera trapping study to monitor winter tick prevalence, will conduct white-tailed deer pellet surveys to estimate deer density, will collect gastropods and deer pellets to test for brainworm and liver fluke, and will develop a risk model for parasitic threats to moose in the northwestern Adirondacks. The project is in collaboration with the Cornell Wildlife Health Lab (Dr. Krysten Schuler), State University of New York, College of Environmental Science Forestry (Dr. Jacqueline Frair), The Wildlife Conservation Society (Dr. Heidi Kretser), and the New York State Department of Environmental Conservation.

Graduate stipend provided is approximately $37,300/year. The assistantship also provides tuition and health insurance. The student will be fully supported on a research assistantship for 4.5 years.

Qualifications: Successful applicants will have a thesis-based M.S. degree and an outstanding academic background in Ecology, Wildlife Biology, Natural Resources, or a closely related field. The student should be independent and motivated to work with a broad range of external collaborators. Successful applicants will possess strong writing and personal communication skills, as well as a desire to conduct quantitative science for applied resource management needs. Preference will be given to applicants with previous modeling and computational skills as well as previous experience leading field crews and conducting fieldwork. Proficiency with program R and knowledge of statistical modeling used to describe population dynamics from mark-recapture and analysis of survival data is desired. Minimum undergraduate GPA of 3.6.

Application: Potential candidates should send **in a single pdf** 1) a letter detailing your research interests and experience, an explanation of your academic interests and reasons for undertaking graduate work, including the relation to your professional goals 2) a CV 3) transcripts (unofficial is fine) 4) GRE scores, and 5) contact information for 3 references to Dr. Angela Fuller (angela.fuller@cornell.edu) by May 1, 2020. Shortlisted candidates will be contacted and will be required to apply for admission to Cornell University's Department of Natural Resources Graduate Program.

For additional information, please see:
Dr. Fuller's research profile: https://blogs.cornell.edu/fullerlab/
Dr. Schuler's research profile: https://cwhl.vet.cornell.edu/staff/krysten-schuler
Dr. Frair's research profile: https://frair.weebly.com/
Cornell University Department of Natural Resources: https://dnr.cals.cornell.edu/