Postdoctoral Position: Consequences of urban and global warming for forest and human health

A postdoctoral position is available to work in the lab of Steve Frank (http://ecoipm.org/) in the Department of Entomology at North Carolina State University, in collaboration with Rob Dunn (http://www.robrdunn.com/) in the Department of Applied Ecology as well as a broader group of scholars studying cities at NCSU. Funding will be partially or fully to examine how urban heat islands and global climate change affect urban and natural forest health. We are interested in the influence of urban heat islands and, more generally, climate on tree pest physiology, symbionts (of diverse sorts), trophic interactions, and the distribution of tree associated taxa. We also consider how changes in urban tree health and density affect human health.

For context, the warmest parts of Raleigh, North Carolina and Manhattan, two current study areas, are up to 10 degrees C warmer than adjacent natural areas. Within urban heat islands tree pests become 300 times more abundant and tree health and services decline. Herbivore abundance increases due to greater fecundity, phenological mismatch with parasitoids, changes in plant quality, and many other reasons. We have also found herbivores respond similarly in natural areas due to climate warming so one of our goals is to predict the effects of climate change using cities as a proxy for future warming due to climate change. In this light, the postdoc can do new research based on large observational studies, metagenomic analyses (of herbivores, parasitoids or other taxa), or controlled experimental manipulations to uncover new ecological or health responses to warming and their mechanisms. Candidates should have documented experience acquiring and analyzing metagenomic data, landscape composition and climate data, or responses of human health to the environmental along with general ecological training.

Minimum Experience Education: Ph.D. in ecology, evolution, biology, entomology or related fields. The applicant’s CV should indicate evidence of strong scholarship, including peer-reviewed publications in high ranked journals. A valid driver’s license is required. NC Driver's license required within 30 days of hire.

Preferred Experience, Skills, & Training: Expertise in arthropods, urban ecology, or climate change of particular interest. The candidate should be able to take projects efficiently from conception to peer-reviewed papers and other products.

Length of appointment: Review of applications will begin January 29 though applications will be accepted until a suitable candidate is found. Appointment is planned for two years pending annual performance review.

Application Procedure: Submit CV, cover letter, and email addresses of three references to Steve Frank (sdfrank@ncsu.edu). Cover letter should include a description of research interests and experience and how they could contribute to the lab and project goals.

North Carolina State University is an Equal Opportunity and Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, national origin, religion, sex, age, veteran status, or disability. In addition, NC State welcomes all persons without regard to sexual orientation. The University strongly encourages all qualified applicants to apply. Individuals with disabilities desiring accommodations in the application process should contact Steven Frank sdfrank@ncsu.edu or (919) 818-4150.