

Job description: Laboratory assistant for project assessing urban arthropod diversity

Description of research: Although they are often viewed as monolithic ‘concrete forests,’ cities actually include a complex mosaic of different types of habitats. Whether intentionally constructed to provide habitat for non-human animals and plants (such as parks), a patch of green space in the middle of a busy road (such as roadside medians), or even a single tree along a residential street, these habitat mosaics are home to a diversity of non-human organisms. However, we know very little about the diversity, ecology and evolution of the organisms that live in these human-dominated urban habitats. In one study, we sampled arthropod communities in parks and roadside medians in Manhattan, NYC. In a related study, we sampled arthropods from red maple street trees in the hottest and coolest locations within Raleigh, Baltimore, Queens (NYC) and Boston. The primary goal of these projects is to assess the composition, abundance and diversity of arthropod communities across different urban habitat types and temperature gradients.

Duties: The person hired for this position will sort arthropods from mixed samples, curate type specimens for each unique group, and identify the sorted specimens. S/he will also have the opportunity to learn about multivariate analyses of complex, community-level data. Finally, there is the potential for motivated individuals to be included as authors on the scientific journal article(s) that will be generated from these data.

Project Lead Investigators: Dr. Amy Savage (<http://www.ecologyofmutualism.com/>) & Dr. Elsa Youngsteadt (<http://elsakristen.com/research>)

Primary Supervisor: Dr. Amy Savage

Laboratory: This work will be conducted in the laboratory of Dr. Rob R. Dunn

Work Plan: The student laboratory assistant will initially meet with Drs. Savage and Youngsteadt to establish personal and project goals, together with a timeline for completion of project tasks. After an initial training period, the laboratory assistant will start by sorting and identifying ants to the species level. After completion of ant processing, s/he will begin processing other arthropods.

Progress toward personal and project goals will be made weekly, in one-on-one meetings with Dr. Savage and monthly meetings with both Drs. Savage and Youngsteadt. These meetings will include assessment of the student’s progress-to-date (through direct inspection of specimens that have been sorted/curated/identified). If problems arise that need immediate attention, the student laboratory assistant should contact Dr. Savage in person (office DCL 381) or via email (amy_savage@ncsu.edu).

After specimens have been sorted, curated and identified, the student laboratory assistant will enter the data (identity and abundance) from the samples into MSExcel. S/he will then meet with Dr. Savage to learn about appropriate statistical analyses of complex community data. After the data have been appropriately analyzed (and checked by Drs. Savage and Youngsteadt), the student laboratory assistant and Drs. Savage and Youngsteadt will discuss publication options and a timeline for manuscript preparation.

Compensation & hours: This position will require a commitment of 8-10 hours/week, and the laboratory assistant will be paid \$8-10/hour, depending upon experience

Interested applicants should send a letter of interest that includes (i) a description of your background and previous laboratory and/or biological experience (including relevant coursework); (ii) your reasons for applying for this position and (iii) the names and contact information (phone number & email address) of two references to Dr. Amy Savage via email (amy_savage@ncsu.edu).