





Faculty Member Contact Information

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Contact Info	
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Department	Biological Sciences

1 Funded, 3 Unfunded URCA Assistant

	This position is ONLY open to students who have declared a major in this discipline.	M
	This project deals with social justice issues.	
	This project deals with sustainability (green) issues.	
	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
	This mentor's project is interdisciplinary in nature.	I

Are you willing to work with students from outside of your discipline? If yes, which other disciplines?

- No

How many hours per week will your student(s) be required to work in this position?

(Minimum is 6 hours per week; typical is 9)

- 6-8

Will it be possible for your student(s) to earn course credit?

- Yes, 0-1 credit hour of BIOL 493 or BIOL 492M

Location of research/creative activities:

- Science West, wetlands on/near campus, Cougar Lake

Brief description of the nature of the research/creative activity?

My research focuses on two related things. First, students in my lab will get to participate in monitoring of natural populations of a variety of organisms, with the main species being amphibians (frogs and salamanders), zooplankton and other aquatic invertebrates. This work will contribute to long-term data sets on these organisms to better understand why populations fluctuate in numbers across the season as well as across year. Second, my work investigates species interactions, such as interspecific competition and predation, and the factors that influence the outcomes of those interactions. The work will be testing hypotheses on species interactions through a combination of lab-based experiments and field experiments. Students will also participate in lab meetings, where we will discuss scientific papers and topics related to the lab's research.

Brief description of student responsibilities?

Students will help with a combination of inside/lab-based work, outdoor experiments, and sampling/surveying of natural populations. All work will focus on amphibians and/or aquatic invertebrates. Inside/lab work will potentially include some experiments, microscope work (e.g., identifying and counting zooplankton), as well as computer-based work (e.g., measuring body size of amphibians, sorting trail camera photographs, listening to recordings of frog calls). Outdoor experiments will include helping set up experimental units, collecting and rearing amphibians, and collection of data. Field surveys will include working at nearby ponds to document the number of individuals of different species for amphibians, and working out of a boat to collect zooplankton samples on Cougar Lake.

URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

Students will learn how to: design and execute experimental research; sample aquatic habitats for a variety of organisms; use a microscope; identify amphibians and other aquatic organisms; carry out animal husbandry techniques for amphibians; collect scientific data and use computer software for data entry/quality control.

Requirements of Students

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours) please indicate all required days and times:

- Students need to have several days a week available in the mornings (~8 am) for amphibian surveys. Some weekend and night work is also expected though can be scheduled in advance around other commitments (e.g., outside jobs). Having one large

block of time available at least one day a week would also be helpful. All other hours would be somewhat flexible.

If the location of the research/creative activities involves off campus work, must students provide their own transportation?

- Having a car/transportation would be very helpful though all work would be on or close to campus so could be manageable without a car.

Must students have taken any prerequisite classes? Please list classes and preferred grades:

- Having had at least BIOL 151 (or an equivalent transfer course) would help though not required.

Other requirements or notes to applicants:

- An ability to maintain a positive attitude while working in sometimes cold, rainy weather is desired. My lab also emphasizes an inclusive and anti-racist environment for all students.