

From: Morehouse, Nathan (morehonn)
Subject: 2 PhD positions on jumping spider color/color vision

Hi all,

I am recruiting two PhD students to join my research group at the University of Cincinnati in the summer or fall of 2017. I am particularly interested in recruiting new students to join our research on the coevolution of jumping spider color vision and coloration.

One available PhD position, funded through an active NSF grant, will investigate the role of female visual attention/gaze in driving the evolution of complex male displays in the North American jumping spider genus *Habronattus*. This research project combines intensive field work with lab-based video characterization of male displays and eye-tracking of female gaze responses to video playback of displaying males (the latter in collaboration with Beth Jakob at the University of Massachusetts, Amherst).

The second doctoral position will support a new research initiative in my group to understand the repeated evolution of color vision across jumping spiders. Thus far, we have identified two independent and functionally distinct transitions from dichromacy to tri-/tetrachromacy in jumping spiders, which are tightly associated with subsequent rapid diversification of male color ornamentation. We are now interested in identifying any additional evolutionary transitions in color vision, characterizing when and why they occurred, and investigating their “downstream” consequences for biodiversity in this group of animals. This work will leverage international field work with molecular, microspectrophotometric, and hyperspectral imaging approaches.

In addition to these new research initiatives, we have a number of other research projects that could provide opportunities for incoming students. I am currently adding more information about these on my lab website: www.morehouselab.com.

Students interested in joining the lab should contact me as soon as possible to discuss their interests and fit for the lab. Please include a brief statement of your research interests, how they connect with our current research, and your CV, academic transcripts, and GRE scores if available.

The University of Cincinnati is emerging as an international center of excellence in sensory ecology. With a strong and growing faculty concentration in Sensory Biology, Behavior, and Evolution (<http://www.artsci.uc.edu/departments/biology/research/Sbbe.html>) and an NSF-funded REU program in Sensory Ecology, UC provides a vibrant intellectual environment for research and student training. Plans are afoot for the development of a regional consortium of sensory biologists, including researchers at Purdue and Case Western. Matching research strengths in sensing and sensor technologies in UC's nationally-renowned College of Engineering offer a number of cross-disciplinary training opportunities. In addition, UC's strengths in design and the fine and performing arts provide exciting opportunities for my lab's ongoing involvement in art-science collaborations, including the College of Design, Architecture, Art, and Planning (ranked 3rd internationally) and the Cincinnati Conservatory of Music (ranked 6th nationally). The University of Cincinnati and my lab also have a strong commitment to diversity in science and graduate education. Students from underrepresented ethnic or racial minorities will be considered for the new Provost Graduate Fellowship (https://grad.uc.edu/content/dam/grad/docs/awards/Provost_Fellow_Program_Description_2017.pdf), which provides a 3 year \$25,000 stipend plus tuition remission, and the Yates Fellowship, which awards grants to underrepresented minority candidates. Finally, Cincinnati is a culturally and economically vibrant city with a low cost of living, offering an unbeatable quality of life for our graduate students. Vogue just named Cincinnati as one of the “5 industrial cities making America's rust belt shine again”: <http://www.vogue.com/13506742/rust-belt-travel-guides-detroit-pittsburgh-chicago-cincinnati-covington-milwaukee/>

Graduate applications are due January 1, 2017. More information on the graduate program at the University of Cincinnati and associated application materials can be found here:
<http://www.artsci.uc.edu/departments/biology/graduate/future.html>.

All my best,

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"Il y a un autre monde mais il est dans celui-ci." - Paul Éluard