2012 Summer Research Institute Faculty Mentors

Note: All Faculty Mentors are affiliated with the University of Illinois at Urbana-Champaign

Aaron Benjamin  Professor  Psychology
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Dorothy Espelage  Professor  Educational Psychology
Susan Farner  Lecturer  Kinesiology and Community Health
Christopher Freeburg  Assistant Professor  Animal Biology
Rebecca Fuller  Associate Professor  Agriculture and Consumer Economics
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Robin Jarrett  Professor  Political Science
Michael Krassa  Associate Professor  Electrical and Computer Engineering
Philip Krein  Professor  Human and Community Development
Reed Larson  Assistant Professor  Spannish, Italian, and Portuguese
Christy Lleras  Associate Professor  Sociology/African American Studies
Hellen McDonald  Assistant Professor  Urban and Regional Planning
Marisell Melendez  Professor  Kinesiology and Community Health
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Reinforcement of Female Mating Preferences in Sympatric vs. Allopatric Populations of Lucania goodei and L. Parva

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Research Mentor: Becky Fuller, Associate Professor, Department of Animal Biology

Abstract

Low fitness of hybrid offspring can generate selection on mate preferences so individuals avoid mating with heterospecifics. This process is known as reinforcement and is observed as increased behavioral isolation in areas of sympathy compared to allopatry. We performed female-choice behavioral trials in which females of Lucania parva and Lucania goodei were allowed to choose between conspecific or heterospecific males. We tested females from both sympatric and allopatric populations using a novel female choice assay. Measures of time spent with each male revealed that females of sympatric populations prefer their own species significantly more often than females from allopatric populations. This pattern of preference was seen in both L. parva and L. goodei females. This shows that females prefer males of their own species only when from populations where there is the opportunity for hybridization. Our data suggests that reinforcement of female mate preference has occurred in sympatric populations of L. parva and L. goodei.