

Elinor M. Lichtenberg

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EDUCATION

Ph.D., Biology, expected March 2011

University of California, San Diego

Dissertation Topic: Olfactory eavesdropping by stingless bees: ecological drivers and effects

Advisor: James Nieh

Committee: Tim Gentner, David Holway, Walter Jetz, Jim Moore, Peter Nonacs

B.S., Biology (Behavior, Evolution, Ecology, and Systematics), June 2003

University of Maryland, College Park

Summa cum Laude, High Honors in Biology, Concentration in French

Honors Thesis: "Abdomen Bobbing in Stalk-Eyed Flies"

Honors Project Advisor: Jerry Wilkinson

AWARDS AND HONORS

First Place, Entomological Society of America President's Prize, 2008

National Science Foundation Graduate Research Fellowship, 2006-present

Chancellor's Graduate Fellowship, University of California, San Diego, 2005-present

Howard Hughes Medical Institute Undergraduate Research Fellowship, 2001-2003

First Place, Biological Sciences Group 2 Poster Session, UMBC 5th Annual Undergraduate

Research Symposium in the Chemical and Biological Sciences, 2002

Honorable Mention, Genesis Award (Best Undergraduate Poster), 2002 Animal Behavior

Society Annual Meeting

Phi Beta Kappa, 2002-present

Phi Beta Kappa 2002 Gamma of Maryland Junior Award (Outstanding Junior Inductee)

GRANTS

National Science Foundation Doctoral Dissertation Improvement Grant, 2009-2011.

"DISSERTATION RESEARCH: Landscape-scale effects of competition and eavesdropping in stingless bees". \$13,000. Co-PI with James Nieh.

Animal Behavior Society Research Grant, 2009. "Context-dependent eavesdropping in stingless bees". \$1000. Sole recipient.

Association of Women in Science San Diego Chapter, Scholarship Award. 2006. \$1000. Sole recipient.

PUBLICATIONS

Lichtenberg EM, Hrncir M and Nieh JC. 2009. A scientific note: Foragers deposit attractive scent marks in a stingless bee that does not communicate food location. *Apidologie* 40: 1-2.

Lichtenberg EM and Hallager S. 2008. A description of commonly observed behaviors for the kori bustard (*Ardeotis kori*). *Journal of Ethology* 26: 17-34.

Hallager S and **Lichtenberg EM**. 2007. New display behavior in male kori bustard (*Ardeotis kori strunthiunculus*). *The Wilson Journal of Ornithology* 119: 750-755.

- Lichtenberg EM**, Imperatriz-Fonseca VL and Nieh JC. Stingless bee competition: dominance, aggression and coexistence in a Brazilian meliponine community. In review.
- Lichtenberg EM**, Hallager S and Carlstead K. Factors affecting breeding success of captive kori bustards (*Ardeotis kori*) in the United States. In preparation for *Zoo Biology*.
- Lichtenberg EM** and Hallager S. Characterization of preening behavior by kori bustards (*Ardeotis kori*). In preparation for *Ostrich*.
- Lichtenberg EM** and Hallager S. Activity budgets of kori bustards (*Ardeotis kori*) at the Smithsonian National Zoological Park. In preparation for *Avicultural Magazine*.

PRESENTATIONS

- Lichtenberg EM**, Imperatriz-Fonseca VL and Nieh JC. Group foraging is beneficial for stingless bees. Ecological Society of America Annual Meeting, Albuquerque, NM. August 2009. Poster.
- Lichtenberg EM**, Nieh JC. Risk-sensitive eavesdropping by stingless bees. Animal Behavior Society Annual Meeting, Pirenópolis, Brazil. June 2009. Presentation.
- Lichtenberg EM**, Nieh JC. Olfactory eavesdropping mediates stingless bee foraging patterns. Entomological Society of America Annual Meeting, Reno, NV. November 2008. Presentation.
- Lichtenberg EM**. Scent marking by stingless bees. VIII Encontro sobre Abelhas: Biodiversidade e Uso Sustentado de Abelhas, Ribeirão Preto, Brazil. July 2008. Presentation.
- Lichtenberg EM**, Imperatriz-Fonseca VL and Nieh JC. Group foraging is beneficial for stingless bees. VIII Encontro sobre Abelhas: Biodiversidade e Uso Sustentado de Abelhas, Ribeirão Preto, Brazil. July 2008. Poster.
- Lichtenberg EM** and Nieh JC. Stingless bee competition: dominance, aggression and coexistence in a Brazilian meliponine community. Entomological Society of America Annual Meeting, San Diego, CA. December 2007. Presentation.
- Lichtenberg EM** and Nieh JC. Rethinking stingless bee competition: dominance, aggression and coexistence in a Brazilian meliponine community. Southern California Animal Behavior Symposium, Santa Barbara, CA. March 2007. Presentation.
- Lichtenberg EM** and Hallager S. Factors affecting breeding success in captive kori bustards (*Ardeotis kori*).
- California Animal Behavior Symposium, San Diego, CA. March 2006. Presentation.
 - Section of Ecology, Behavior & Evolution retreat, San Diego, CA. October 2005. Presentation.
- Lichtenberg EM**. Abdomen bobbing in stalk-eyed flies. Honors thesis defense, College Park, MD. April 2003. Presentation.
- Lichtenberg EM** and Wilkinson JS. Abdominal oscillations and status discrimination in stalk-eyed flies.
- Undergraduate Research Day, College Park, MD, April 2003. Presentation.
 - 4th Annual Howard Hughes Medical Institute Research Fellowship Program Research Symposium, College Park, MD, March 2003. Poster.
 - 5th Undergraduate Research Symposium in the Chemical and Biological Sciences, Baltimore, MD, October 2002. Poster.
 - Animal Behavior Society Meetings, Bloomington, IN, July 2002. Poster.
 - Undergraduate Research Day, College Park, MD, April 2002. Poster.
 - 3rd Annual Howard Hughes Medical Institute Research Fellowship Program Research Symposium, College Park, MD, March 2002. Poster.

RESEARCH EXPERIENCE

Graduate Student Researcher, Section of Ecology, Behavior and Evolution, University of California, San Diego, September 2005-present

- Conduct field research using Brazilian stingless bee communities to study effects of detection of heterospecific odor marks and dominance interactions on foraging dynamics and community structure
- Employ modeling and statistical techniques to study the adaptive value of stingless bee functional diversity

Graduate Rotation Student

- Burton Lab, Scripps Institute of Oceanography, Fall 2005
Gained familiarity with basic molecular genetics techniques including PCR, restriction digests and gel electrophoresis
- Russ Lande, University of California, San Diego, Spring 2006
Discussed game theory and potential applications to stingless bee foraging behavior

Kori Bustard Behavior Research Intern, Smithsonian National Zoological Society, September 2004-August 2005

- Carried out a cross-institutional study of kori bustard breeding success to help improve captive breeding
- Developed a kori bustard ethogram
- Analyzed datasets of kori bustard general activity, male sexual displays and preening behavior

Undergraduate Researcher, Wilkinson Lab, University of Maryland, College Park, January 2001-May 2003

- Designed and implemented experiments to study the communicative function of stalk eyed fly abdomen bobbing

Volunteer, Borgia Lab, University of Maryland, College Park, Summer 2000

- Satin bowerbird courtship data analysis

PROFESSIONAL TRAINING

Tropical Rainforest and Canopy Ecology, Institute for Tropical Ecology and Conservation, Bocas del Toro, Panama, Dec. 2007 – Jan. 2008.

TEACHING EXPERIENCE

Teaching Assistant, Division of Biology, UCSD

- Introductory Ecology: Organisms and Habitats (Fall 2008)
- Biometry (Fall 2007)
- Animal Behavior & Communication (Spring 2007)

Guest Lecturer, “English for Biologists”, Faculdade de Filosofia, Ciências e Letras, Universidade de São Paulo – Ribeirão Preto, May – July 2009

- Taught a practical mini-course to Brazilian students where students practiced talking about their research in English, learned vocabulary related to their fields and discussed academic cultural differences between Brazil and the United States

Guest Lecturer, “Uma Introdução a Estatística - Análise Prática dos Dados” [Translated title: An Introduction to Statistics: Practical Data Analysis], Faculdade de Filosofia, Ciências e Letras, Universidade de São Paulo – Ribeirão Preto, August - September 2008

- Taught a mini-course to Brazilian students introducing basic statistical concepts and tests
- Guest Lecturer**, “Stingless bee competition and foraging”, Faculdade de Filosofia, Ciências e Letras, Universidade de São Paulo – Ribeirão Preto, August 2007
- Taught a mini-course to Brazilian students, emphasizing critical thinking and interpretation of published articles

SAT Tutor, Kaplan Premier

AP Biology Tutor, self employed

Math Teacher, Collège de Lafou, Guinea, West Africa

- Taught 8th and 9th grades as a Peace Corps Volunteer
- Emphasized critical thinking skills and empowerment of female students

SCIENTIFIC MEMBERSHIPS

Animal Behavior Society

Association of Women in Science

Ecological Society of America

Entomological Society of America

SERVICE

Admissions Committee Member, Division of Biology, UCSD, 2009

Graduate Student Association Representative, Division of Biology, UCSD, 2007-2008

Graduate student liaison, Section of Ecology, Behavior and Evolution, 2007-2008

PUBLIC OUTREACH & SCIENCE EDUCATION

Judge, Association of Women in Science professional society awards, Greater San Diego Science & Engineering Fair, 2006-2008

Mentor, Expanding Your Horizons conference, San Diego, 2006