

Seth William Coleman

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Research Interests

Behavioral and sensory ecology, sexual selection, animal communication, animal cognition, biology of beauty

Teaching interests

Evolution, behavioral ecology, animal behavior, animal communication, evolutionary psychology, animal cognition, scientific integrity

Professional Positions

- 2006-present **NIH Postdoctoral Fellow**, Texas A & M University
Received a three-year (January 2006 - January 2009) National Research Service Award from the NIH. Project title: Evolutionary Genetics of a Visual Communication System
- 2003-2004 **Lecturer**, Department of Psychology, University of Maryland
Psychology 403, Animal Behavior

Education

- 1999 – 2005 Ph.D., Behavior, Ecology, Evolution, and Systematics Program, University of Maryland, College Park, MD
- 2003 – 2005 University Teaching and Learning Program Fellow, Center for Teaching Excellence, University of Maryland, College Park, MD
- 1999 – 1999 M.S., Biology; University of Maryland, College Park, MD
- 1994 – 1998 B.S., Wildlife Biology; University of Montana, Missoula, MT

Research Experience

- 2006-present **Postdoctoral Fellow**, Texas A & M University, College Station, TX
Molecular and behavioral assays of *Xiphophorus* at TAMU; Field research conducted in mountains of Hidalgo and Vera Cruz, Mexico.
- 1999 – 2005 **Ph.D. Dissertation Research**, University of Maryland, College Park, MD
Thesis title: Variable female preferences and the evolution of complex male displays. Thesis advisor: Dr. Gerald Borgia (University of Maryland)
- July 1996-Aug. 1996 **Research Technician**, Michigan Tech. University, Houghton, MI
Project Title: Effects of wolf predation on moose populations on Isle Royale, Michigan. P.I.: Dr. Rolf Peterson (Michigan Tech. University)
- Feb. 1994-Mar. 1994 **Research Technician**, Idaho State University, Pocatello, ID
Project Title: Effects of fragmented habitat on mountain lion home ranges. P.I.: Dr. John Laundré (Idaho State University)
- Dec. 1993-Jan. 1994 **Research Technician**, Pacific Whale Foundation, Maui, HI
Project Title: Return rates of humpback whales to breeding grounds in the Hawaiian archipelago. P.I.: Dr. Paul Forestall (Pacific Whale Foundation)

Teaching, Leadership, Committee Experience

- Fall 2006 **Guest Lecturer**, Biology 689: Behavior, Genes, and Evolution, Texas A & M University
Created and presented the lecture *Neural and Physiological Control of Behavior* to Biology graduate students.
- 2005-present **Field Research Leader**, Hidalgo and Vera Cruz, Mexico
Several times each year, lead undergraduate and graduate students conducting field observations and in collecting fish to bring to the laboratory for molecular and behavioral assays.
- Fall – Spring 2004 **Graduate Student Representative**, ecological sustainability faculty search committee; Behavior, Ecology, Evolution, and Systematics Program, University of Maryland
Reviewed applications and interviewed applicants
- 2003-2004 **Lecturer**, Department of Psychology, University of Maryland
Autonomously taught Psychology 403, Animal Behavior, to Junior and Senior Psychology and Biology undergraduates.
Course description and syllabus available at:
<http://www.bsos.umd.edu/psyc/psyc403/main.html>
- 2003 – 2005 **Fellow**, University Teaching and Learning Program, Center for Teaching Excellence, University of Maryland
Attended discussions and workshops to enhance teaching efficacy; developed teaching portfolio.
- Spring 2004 **Graduate Student Representative**, Behavior, Ecology, Evolution, and Systematics Program (BEES) Application Review Committee, University of Maryland
Reviewed applications for admission to the BEES Program. Voted with faculty on admission of applicants.
- 1999 – 2003 **Teaching Assistant**, Introductory Biology (BSCI 106), Honors and non-honors programs, University of Maryland
Taught laboratory sections introducing students to principles of evolution, ecology, and animal behavior (Bioscience 106).
- Spring 2003 **Biology Seminar Coordinator**, University of Maryland
Organized weekly graduate student and postdoctoral seminars.
- Spring 2003 **Lab Designer**, University of Maryland
Designed two labs for Bioscience 106 Honors sections: *Sexual selection in Drosophila I: male mating success and fitness*; *Sexual selection in Drosophila II: female mate preferences*. These labs are the subject of a paper in press at *The American Biology Teacher*.
- 1999-2001 **Field Research Leader**, Wallaby Creek, NSW, Australia
For 4 months each year, led teams of six to eight volunteers conducting difficult field work under primitive living conditions during my dissertation research in northern NSW, Australia.
- 1989-1992 **Wildlife Interpreter**, Turnbull National Wildlife Refuge, Cheney, WA
Led discussions and field trips to enhance understanding of ecology and animal behavior for elementary, middle, and high school students.

Awards & Honors

- 06-09 Ruth L. Kirschstein Individual Postdoctoral National Research Service Award (NRSA), The National Institutes of Health, U.S.A.
- 02/06 Invitation to attend, and travel and registration support for, the Gordon Research Conference on Genes and Behavior, Ventura, CA, 02/12/06-02/17/06.
- 04-05 Predoctoral Traineeship, The National Institutes of Health, U.S.A.
- 03-04 Outstanding Graduate Research Award, Department of Biology, University of Maryland
- 03-04 Predoctoral Traineeship, The National Institutes of Health, U.S.A.
- 03-04 Matching Tuition Scholarship, The Graduate School, University of Maryland
- 2003 Summer Fellowship, Behavior, Ecology, Evolution, and Systematics Program, University of Maryland
- 2003 Jane Prichard Memorial Award for Outstanding Teaching of Introductory Biology
- 2003 Distinguished Teaching Assistant, Department of Biology, University of Maryland
- 2002 Summer Fellowship, Behavior, Ecology, Evolution and Systematics Program, University of Maryland
- 2002 Semester Fellowship, NSF-RTG on the Biology of Small Populations, University of Maryland
- 2001 Summer Fellowship, Behavior, Ecology, Evolution and Systematics Program, University of Maryland
- 2000 Summer Fellowship, Behavior, Ecology, Evolution and Systematics Program, University of Maryland

Publications (chronological)

- ***Coleman, S. W.**, Patricelli, G. L., Coyle, B., Siani, J., and Borgia, G. A new role for vocal mimicry: the most attractive males are the best mimics. In press at *Biology Letters*.
- *Research is the subject of two interviews with S. W. Coleman on National Geographic's *Pulse of the Planet*, November 2005.
- Coleman, S. W.** and Jensen, J. Male mating success – preference or prowess? Investigating sexual selection in the laboratory using *Drosophila melanogaster*. In press at *The American Biology Teacher*.
- Coleman, S. W.** and Rosenthal, G. G. 2006. Swordtail fry attend to chemical and visual cues in detecting predators and conspecifics. *PLoS ONE* 1: 1-4.
- Patricelli, G. L., **Coleman, S. W.** and Borgia, G. 2006. Male satin bowerbirds, *Ptilonorhynchus violaceus*, adjust their display intensity in response to female startling: an experiment with robotic females. *Animal Behaviour* 71: 49-59.
- ***Coleman, S. W.**, Patricelli, G. L., and Borgia, G. 2004. Variable female preferences drive complex male displays. *Nature* 428: 742-745.
- *Paper is the subject of a *News & Views* article (Ryan, M. J. 2004. *Nature* 428: 708), a *News of the Week* article (Morrell, V. 2004. *Science* 304: 372), and of an interview with S. W. Coleman on National Public Radio's *All Things Considered* on 14 April 2004. Selected as one of the most influential papers of the year by the *Faculty of 1000*.
- Coleman, S. W.**, Patricelli, G. L., Coyle, B., Siani, J. and Borgia, G. 2003. Spectrographic cross-correlation reveals a possible role for vocal mimicry: In satin bowerbirds, the most attractive males are the best mimics. In *Proc. of the First International Conference on Acoustic Communication in Animals*, pp. 51-52. University of Maryland, College Park.
- *Borgia, G. and **Coleman, S. W.** 2000. Co-option of male courtship calls from aggressive display in bowerbirds. *Proceedings of the Royal Society of London, Series B* 267: 1735-1740.
- *Paper is the subject of a *News & Comments* article in *Trends in Ecology and Evolution* (Humphries, S. & Ruxton, G. D. 2001. 16: 15).

Papers in Review (alphabetical)

- Coleman, S. W.** Conspecifics and heterospecifics attend to the sounds of mourning dove (*Zenaida macroura*) wing-whistles. In review at *The Condor*.
- Coleman, S. W.**, and Borgia, G. Juvenile males prefer tutors with high quality sexual displays. In review at *Animal Behaviour*.
- Coleman, S. W.**, Harlin-Cognato, A., and Jones, A. G. Reproductive isolation, reproductive mode, and sexual selection: Empirical tests of the viviparity-driven conflict hypothesis. In review at *Evolution*.
- Madden, J. R., and **Coleman, S. W.** Shared aesthetic preferences for male sexual displays between humans and non-human animals. In review at *Biology Letters*.
- Rosenthal, G., Jones, A., **Coleman, S. W.**, and Meyer, C. Genetic architecture, receiver psychology, and the evolution of complex mating displays. In review at *Trends in Ecology and Evolution*.
- Rosenthal, G. G., Wong, B. B., Fisher, H. S., **Coleman, S. W.**, and García de León, F. J. Rapid Loss of a Conspicuous Trait in a Hybrid Zone via Sexual Selection. In review at *Science*.

Presentations at Professional Meetings

- Coleman, S. W.** Juvenile male satin bowerbirds prefer tutors with high quality sexual displays. 2007 Winter Animal Behavior Conference, Steamboat Springs, CO, U.S.A.
- Coleman, S. W.** Variable preferences are beneficial to female satin bowerbirds (*Ptilonorhynchus violaceus*). 2006 Southwestern Animal Behavior Conference, Lake Texoma Biological Station, OK, U.S.A.
- Coleman, S. W.** Variable female preferences drive complex male displays. 2004 International Society for Behavioral Ecology, Jyväskylä, Finland.
- Coleman, S. W.** Variable female preference drive complex male displays. 2004 Animal Behavior Society, Oaxaca, Mexico.
- Coleman, S. W.** Spectrographic cross-correlation reveals a possible role for vocal mimicry: In satin bowerbirds, the most attractive males are the best mimics. 2003 Acoustic Signals in Animals Conference, University of Maryland, College Park, MD, U.S.A.
- Coleman, S. W.** Complexity in mate choice: age- and context-related differences in female assessment of male display traits. Oral presentation, 2003 Northeast Ecology & Evolution Conference, Rutgers University, New Brunswick, NJ, U.S.A.
- Coleman, S. W.** Multiple signals for multiple receivers: experience-based differences in female choice of male display traits. Oral presentation, 2002 Meeting of the International Society for Behavioral Ecology, University of Quebec, Montreal, Canada.
- Coleman, S. W.** Age-related differences in color preferences of male satin bowerbirds (*Ptilonorhynchus violaceus*). Poster presentation, 2001 Meeting of the Society for the Study of Evolution, University of Tennessee, Knoxville, TN, U.S.A.
- Coleman, S. W.** Evidence for learning in the development of complex display in the satin bowerbird (*Ptilonorhynchus violaceus*). Poster presentation, 2000 Meeting of the Society for the Study of Evolution, Indiana University, Bloomington, IN, U.S.A.

Invited Talks

- University of California, Berkeley, California, April 2007.
- Winter Animal Behavior Conference, Steamboat Springs, Colorado, January 2007.
- Boston University, Department of Biology, Boston, Massachusetts, September 2005.
- Boston University Marine Program, Marine Biological Laboratory, Woods Hole, Massachusetts, December 2002.

Membership in Professional Societies

Animal Behavior Society, International Society for Behavioral Ecology, National Association of Biology Teachers (U.S.A.), Society for the Study of Evolution