

Curriculum Vitae

Stacie L. Hooper

Behavioral Management Lab
Ecology Graduate Group
School of Veterinary Medicine:
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EDUCATION

- 1990-1994 B.S. in Zoology; University of California at Davis, Davis, CA.
2001 Ph.D. program, Ecology Graduate Group; University of California at Davis, Davis, CA.
Advanced to candidacy April 2004 (equivalent to Master's). Degree anticipated January 2010.

RESEARCH EXPERIENCE

- 2009-present **Postdoctoral Scholar**, Patricelli Laboratory, Evolution and Ecology Department, University of California, Davis, Davis, CA. Modeling the effects of industrial noise on historic and current patterns of greater sage grouse lek attendance. Responsibilities: develop and ground truth spatially explicit model of gas rig drilling noise using NMSiM modeling software, gather geographic and terrain data, noise source data and other environmental factors affecting noise propagation, integrate model output with GIS, present final noise model product as software package for use by the Bureau of Land Management to predict impacts of future drilling rigs on greater sage grouse populations. Dr. Gail Patricelli, Principal Investigator.
- 2006-2009 **Research Supervisor**, Behavioral Management Laboratory, Population Health and Reproduction Department, School of Veterinary Medicine, University of California at Davis, Davis, CA. Role of social behavior of beef cattle in the transmission of *Cryptosporidium parvum*. Responsibilities: behavioral data collection, database management and quality control, fecal sample collection, shipment and storage, assisted in study design. Dr. Brenda McCowan, and Dr. Edward R. Atwill, Principal Investigators.
- 2004 **Research Supervisor**, Behavioral Management Laboratory, Population Health and Reproduction Department, School of Veterinary Medicine, University of California at Davis, Davis, CA. Role of social behavior of Belding's ground squirrels in the

transmission of a protozoan disease agent, *Cryptosporidium parvum*. Responsibilities: behavioral data collection, database management and quality control, fecal sample collection, shipment and storage, assisted in study design. Dr. Brenda McCowan, Principal Investigator.

- 2001-2009 **Graduate Researcher**, Ph.D. dissertation, Ecology Graduate Group, University of California at Davis, Davis, CA. Demonstrating the feasibility of acoustic fingerprints as a conservation and management tool for mammals, using golden-mantled ground squirrels and Belding's ground squirrels as models. Measuring the effects of highway noise on the alarm call system of Belding's ground squirrels. Responsibilities: all aspects of study design, data collection, management and analysis, literature review, preparation of publications, assisted in funding acquisition. Dr. Brenda McCowan, Advisor.
- 1998-2000 **Research Assistant**, Pinniped Research in Cognition and Sensory Systems Laboratory, Long Marine Laboratory, University of California at Santa Cruz, Santa Cruz, CA. Research program studying vocal communication, cognition, behavior, and sensory systems in pinnipeds. Responsibilities: diet preparation, animal husbandry, facility maintenance, literature review, behavioral and acoustic data collection, assisted with cognitive and acoustic experiments. Individual research project: vocal behavior of a captive female elephant seal and its relation to breeding, molting cycles and behavioral context. Dr. Ronald Schusterman, Director.
- 1995-2001 **Volunteer Research Coordinator**, Dolphin Research Laboratory, Marine Research Center, Six Flags Marine World, Vallejo, CA. Research program studying dolphin vocal communication, vocal imitation, social behavior, and cognition. Responsibilities: data entry, audio and videotape analysis, whistle digitization, observational and experimental data collection, lab and equipment maintenance. Dr. Brenda McCowan, Director.
- 1993 **Research Assistant**, Animal Communications Laboratory, University of California at Davis, Davis, CA. Territoriality, home ranges, and dewlap displays in anole lizards. Responsibilities: videotape analysis, data entry, map analysis using QuatroPro software. Dr. Judy Stamps, Supervisor.

TEACHING AND LEADERSHIP EXPERIENCE

- 2009-present **Postdoctoral Scholar**, Patricelli Laboratory, Evolution and Ecology Department, University of California, Davis, Davis, CA. Modeling the effects of industrial noise on historic and current patterns of greater sage grouse lek attendance. Responsibilities: instructing Bureau of Land Management personnel in the use and interpretation of the noise model developed to predict propagation of gas drilling rig noise through the environment. Dr. Gail Patricelli, Principal Investigator.
- 2006-2009 **Research Supervisor**, Behavioral Management Laboratory, Population Health and Reproduction Department, School of Veterinary Medicine, University of California at Davis, Davis, CA. Role of social behavior of beef cattle in the transmission of *Cryptosporidium parvum*. Responsibilities: trained two field assistants in proper

behavioral data and fecal sample collection protocols, supervised data collection by field assistants. Dr. Brenda McCowan, and Dr. Edward R. Atwill, Principal Investigators.

- 2001-2009 **Research Leader**, Ph.D. dissertation, Ecology Graduate Group, University of California at Davis, Davis, CA. Demonstrating the feasibility of acoustic fingerprints as a conservation and management tool for mammals, using golden-mantled ground squirrels and Belding's ground squirrels as models. Measuring the effects of highway noise on the alarm call system of Belding's ground squirrels. Responsibilities: ran field sites in White Mountains and Yosemite National Park which included training and supervision of two field assistants in acoustic data collection protocols, coordinating with land owners and managers, obtaining proper collection permits, field lab and equipment maintenance under unpredictable weather conditions. Dr. Brenda McCowan, Advisor.
- 2004 **Research Supervisor**, Behavioral Management Laboratory, Population Health and Reproduction Department, School of Veterinary Medicine, University of California at Davis, Davis, CA. Role of social behavior of Belding's ground squirrels in the transmission of a protozoan disease agent, *Cryptosporidium parvum*. Responsibilities: trained field assistants in proper behavioral data collection protocols, trapping, handling, and marking of subjects, supervised data collection by three field assistants. Dr. Brenda McCowan, Principal Investigator.
- 2002-2006 **Teaching Assistant**, Anthropology and Evolution & Ecology Departments, University of California at Davis, Davis, CA. Taught laboratory and discussion sections for introductory anthropology course (genetics, natural selection, behavioral ecology and evolution), introductory biology course (genetics, natural selection, survey of animal kingdom), and upper division animal communication course (perceptual systems, signaling modalities, signal design, production and evolution). Responsibilities: held office hours and review sessions, proctored exams, graded homeworks, quizzes, exams, term papers, research proposals and student oral presentations. Dr. Lynne Isbell, Professor; Dr. Susan Keen, Professor; and Dr. Gail Patricelli, Professor, respectively.
- 1995-2001 **Volunteer Research Coordinator**, Dolphin Research Laboratory, Marine Research Center, Six Flags Marine World, Vallejo, CA. Research program studying dolphin vocal communication, vocal imitation, social behavior, and cognition. Responsibilities: trained multiple student assistants in observational and experimental data collection protocols, supervised student data collection. Dr. Brenda McCowan, Director.
- 1995 **Keeper**, Butterfly World, Marine World Foundation, Marine World Africa, USA, Vallejo, CA. Responsibilities: care and maintenance of animals and exhibit, provided tours and explained exhibit to children and adult groups. Entomologist Richard Kelson, Supervisor.

PROFESSIONAL EXPERIENCE

- 2002-Present **Graduate Student Assistant**, California Department of Fish and Game, Biogeographic Data Branch, California Wildlife Habitat Relationships System. Program which

maintains and manages habitat relationship models for 694 Californian terrestrial vertebrates and distributes spatial data and models (in a software package) to agency biologists, conservation organizations, and environmental consultants. Responsibilities: reviewing and updating species distribution maps using current occurrence data and ArcMap GIS software, maintaining the database, reviewing model ratings for new habitat types, web design, preparing training material for and assisting in training course, providing technical support to product subscribers, handling orders for products. Monica Parisi, Senior Wildlife Biologist.

AWARDS AND FELLOWSHIPS

1990-91	Dean's List
1991	University of California, Davis Freshman Scholarship (\$1,000)
1993	Ruth Storer Scholarship (\$1,000)
1994	Ruth Storer Scholarship (\$1,000)
2002	University of California, Davis Block Grant (\$4,800)
2003	University of California, Davis Block Grant (\$4,800)
2002	White Mountain Research Station Graduate Student Fellowship (\$2,000)
2003	White Mountain Research Station Graduate Student Fellowship (\$1,800)
2003	American Museum of Natural History Theodore Roosevelt Fellowship (\$1,400)
2006	Graduate Studies Travel Award (\$500) for poster presentation at Animal Behavior Society Conference, Snowbird, Utah

PUBLICATIONS

- Gubbins, C. M., McCowan, B., Lynn, S., **Hooper, S.L.** and Reiss, D. 1999. Developmental changes in mother-infant spatial relations in captive bottlenose dolphins (*Tursiops truncatus*). *Marine Mammal Science*, **15**: 751-765.
- McCowan, B. and **Hooper, S.L.** 2002. Individual acoustic variation in Belding's ground squirrel alarm chirps in the High Sierra Nevada. *Journal of the Acoustical Society of America*, **111**: 1-4.
- Rabin, L.A., McCowan, B., **Hooper, S.L.**, and Owings, D.H. 2003. Anthropogenic noise and its effect on animal communication: an interface between comparative psychology and conservation biology. *International Journal of Comparative Psychology*, **16**: 172-192.
- Randall, J., Collins, K., McCowan, B., **Hooper, S.L.**, and Rogovin, K. 2005. Alarm signals of the great

gerbil: acoustic variation by predator context, sex, age, individual and family group. *Journal of the Acoustical Society of America*, **118**: 1-9.

Hooper, S.L., Reiss, D., Carter, M.R., and McCowan, B. 2006. Importance of contextual saliency on vocal imitation by bottlenose dolphins. *International Journal of Comparative Psychology*, **19**: 116-128.

MANUSCRIPTS SUBMITTED FOR PUBLICATION

Hooper, S.L., Meyer, N., and McCowan, B. Exploring the feasibility of bioacoustics as a wildlife management and conservation tool: Searching for individual distinctiveness in an asocial rodent, the golden-mantled ground squirrel (*Spermophilus lateralis*). *Journal of the Acoustical Society of America*, in review.

PRESENTATIONS AT PROFESSIONAL MEETINGS

Hooper, S.L., Reiss, D., Carter, M.R., and McCowan, B. Importance of contextual saliency on vocal imitation by bottlenose dolphins. Poster presentation, **2001 Society of Marine Mammalogy Conference**, Vancouver, British Columbia, Canada.

McCowan, B. and **Hooper, S.L.** Individual acoustic variation in Belding's ground squirrel alarm chirps in the High Sierra Nevada. Oral presentation, **2001 Animal Behavior Society Conference**, Oregon State University, Corvallis, OR.

Hooper, S.L., Meyer, N., and McCowan, B. Exploring the feasibility of bioacoustics as a wildlife management and conservation tool: Searching for acoustic distinctiveness in an asocial rodent, the golden-mantled ground squirrel (*Spermophilus lateralis*). Poster presentation, **2006 Animal Behavior Society Conference**, Snowbird, UT.

Hooper, S.L. Pump up the volume: Effects of anthropogenic noise on wildlife. Oral presentation, **2008 Society for Conservation Biology Annual Symposium (Davis student chapter)**, University of California at Davis, Davis, CA.

INVITED LECTURES AND SEMINARS

Yosemite Forum, Yosemite National Park. 2004. Impacts and applications: Assessing the effect of highway noise on a mammalian communication system and exploring the use of "acoustic fingerprints" as a conservation tool.

Undergraduate Conservation Biology Seminar, Davis student chapter of the Society for Conservation Biology, University of California at Davis, Davis, CA. 2006. Voices in the wilderness: developing a bioacoustic tool for conservation and management.

Animal Behavior Class, Holy Names College, Oakland, CA. 2006. Impacts and applications: Vocal communication applied to conservation.

Animal Communication Class, University of California, Davis. 2009. Voices in the wilderness: communication applied to conservation.

PROFESSIONAL SERVICE

Participated in Evolution and Ecology Teaching Seminar, University of California at Davis, Spring 2004

Participated in Teaching Resources Center Workshop on Improving Student Participation, University of California at Davis, Winter 2006

Reviewed admission application packages as member of Admissions Committee for the Ecology Graduate Group, University of California at Davis, Winter 2009

PROFESSIONAL MEMBERSHIPS

Animal Behavior Society
Society for Conservation Biology
Acoustical Society of America

RESEARCH INTERESTS

How noise impacts vocal communication systems and compensatory mechanisms

Applications of bioacoustics to conservation biology, wildlife management and animal welfare issues

Relationship between communication system complexity and social system complexity

Relationship between vocal structure and function in communication systems