

Kimberly L. VanderWaal

2949 Portage Bay West #179
Davis, CA 95616
kvanderwaal@ucdavis.edu
(530) 204-8555

EDUCATION

- 2008+ Ph.D. student, Animal Behavior Graduate Group. Advisor: Lynne Isbell. GPA: 4.0. University of California, Davis.
- 2007 B.S. *summa cum laude*, with honors and high distinction. Major: Ecology, Evolution, and Behavior. Minor: Statistics. GPA: 3.99. University of Minnesota, Twin Cities.

CURRENT PROJECTS

Impacts of association patterns and space use on bacterial transmission in giraffe (*Giraffa camelopardalis*) in central Kenya.

Identifying routes of pathogen transmission among wild and domestic ungulates in central Kenya.

Influences of social networks on the transmission of a parasite, *Cryptosporidium parvum*, in Belding's ground squirrels (*Spermophilus beldingi*).

Using signal detection theory to understand anti-predator behavior.

RESEARCH AREAS

Wildlife epidemiology, Social network analysis, Pathogen transmission, Giraffe, African savanna ecosystems.

PAST RESEARCH EXPERIENCE

- 2003-08 **Student Researcher, Serengeti Lion Research Center**, U of MN. Conducted two independent research projects Project 1: Environmental influences on lioness association. Project 2: Ecology of female dispersal. Advisor: Dr. Craig Packer.
- 2008 **Research Aide, Louisiana Black Bear Project**, University of Tennessee. Trapped black bears using foot-hold snares. Handled and radio-collared chemically immobilized bears. Tracked reintroduced bears using radio telemetry.
- 2007 **Field assistant, Kilimanjaro Elephant Research Project**, African Wildlife Foundation, Tanzania. Analyzed data on elephant ranging patterns and human-elephant conflict. Developed data collecting strategy to assess anti-poaching effectiveness. Assisted in fieldwork. Worked with community conservation projects.
- 2007 **Elk research technician, Grand Teton National Park**, WY, Iowa State University. Studied calving site selection by cows in the greater Yellowstone ecosystem. Used radio telemetry extensively to find parturition sites. Conducted vegetation surveys.
- 2007 **Research assistant, Mammalian molecular systematics lab**, U of MN. Researched population genetics of *Eliurus majori*, a Malagasy mouse. Performed PCR and gel electrophoresis. Prepared DNA samples for sequencing.
- 2006-07 **Raptor flight crew volunteer, University of MN Raptor Center**. Conditioned rehabilitated raptors for flight. Handled raptors. Exercised birds on a tether. Worked with team to attain goals. Assessed birds on their readiness to be released.

- 2006 **Student Researcher, Department of Ecology, Evolution, and Behavior**, U of MN. Project: Disease transmission in small, socially structured populations. Advisor: Dr. Claudia Neuhauser.
- 2005 **Trapping technician, Canada Goose Program**, St. Paul, MN. Trapped over 5,000 nuisance geese using canoes and drive traps. Handled, sexed, and banded geese and goslings. Recorded field data. Educated public about trapping purposes and process. Approached and consulted with landowners.
- 2003-05 **Research assistant, Dave Stephens Experimental Behavioral Ecology Lab**, U of MN. Maintained captive blue jay colony and lab facility. Handled adult and nestling jays. Monitored bird health and behavior. Collected and recorded data for studies on animal cognition and cooperation.
- 2005 **Research assistant, Department of Ecology, Evolution, and Behavior**, U of MN. Observed and recorded locations and behavior of Yellowstone wolves, bears, and bison for habitat usage study.
- 2004 **Research assistant, Department of Ecology, Evolution, and Behavior**, U of MN. Analyzed video of wolf-elk interactions in Yellowstone. Tracked progression of wolf hunts by observing behavioral cues of both wolf and elk. Quantified elk pursuit-deterrence behaviors (e.g. gait, stride frequency).

TEACHING EXPERIENCE

- 2010 **Associate Instructor**, Ecology of Grassland and Savanna Herbivores, Department of Plant Sciences, UC Davis.
- 2010 **Teaching assistant**, Ecology and Conservation of Wild Mammals, Department of Wildlife, Fisheries, and Conservation Biology, UC Davis.
- 2009 **Teaching assistant**, Principles of Ecology and Evolution, Department of Ecology and Evolution, UC Davis.
- 2008 **Teaching assistant**, Human Evolutionary Biology, Anthropology Department, UC Davis.
- 2006 **Teaching assistant**, Mammalogy, Department of Ecology, Evolution, and Behavior, U of MN.
- 2004-06 **Team lead and section leader**, U of MN Marching Band. Led 30-member trombone section of the 300 member band in all aspects of rehearsal and performance. Organized and led additional section rehearsals. Taught first-year members how to march. Provided constructive criticism to individual section members and to the group as a whole. Guided and directed the five member leadership team in the management of the section. Worked as team to attain goals.

RESEARCH GRANTS

- 2010 Bacterial transmission and social networks in giraffe. Wildlife Health Center Graduate Fellowship, \$5,000.
- 2010 Bacterial transmission and social networks in giraffe. Sigma Xi Grant-in-Aid of Research, \$800.
- 2010 Bacterial transmission and social networks in giraffe. Animal Behavior Society Student Research Grant, \$600.
- 2009 African Studies Department research grant, \$1,500.
- 2007 Environmental influences of lioness association patterns and crèche formation. Undergraduate Research Opportunities Program (UROP), \$1,700.
- 2006 Rosenberg travel grant, \$500.
- 2005 Disease transmission in small, socially structured populations. UROP, \$1,400.
- 2005 Disease transmission in small, socially structured populations. NSF Research Experience for Undergraduates, \$6,000.
- 2005 Social and ecological stimuli of female dispersal in lions. UROP, \$1,400.

FELLOWSHIPS AND HONORS

- 2009 National Science Foundation Graduate Research Fellowship.
2006 Barry M. Goldwater Scholarship.

PUBLICATIONS

- VanderWaal, K.L.**, A. Mosser, and C. Packer. 2009. Optimal group size, dispersal decisions, and postdispersal relationships in female African lions. *Animal Behaviour* 77: 949-954.
VanderWaal, K. 2009. Investigating social and bacterial transmission networks in reticulated giraffes. *Giraffa* 3 (2): 21-22.

PRESENTATIONS AND POSTERS

- 2009 Optimal group size and dispersal decisions in African lions. Regional Graduate Student Conference on Animal Behavior.
2007 Ecology of female dispersal. Undergraduate Research Poster Symposium. "Outstanding Poster" award.
2005 Within-group density dependence in lions. Undergraduate Research Poster Symposium.

PROFESSIONAL AFFILIATIONS

International Giraffe Working Group (IUCN)
American Society of Mammalogists
Society of Integrative and Comparative Biology
Animal Behavior Society

PROFESSIONAL SERVICE

- 2009-10 Meeting coordinator. Animal Behavior Graduate Group, UC Davis.
2009-10 Treasurer. Animal Behavior Graduate Group, UC Davis.

RELEVANT COURSEWORK

Graduate: Fundamentals of Animal Behavior, Agent-based Modeling, Predation and Primates, Ecological Genetics.

Undergraduate: Mammalogy, Ornithology, Wildlife Population Analysis, Wildlife Handling and Immobilization, Evolution of Social Behavior, Animal Behavior, Zoology, Microbiology, Issues in Wildlife Conservation, Animal Cognition, Social Behavior, Primate Behavioral Ecology, GIS, Statistics I and II, Regression Analysis, Designing Experiments.

REFERENCES

- Brenda McCowan, Ph.D./DVM
Population Health and Reproduction
University of California, Davis, CA
bjmccowan@ucdavis.edu
- Andy Sih, Ph.D.
Department of Environmental Science and Policy
University of California, Davis, CA
asih@ucdavis.edu
(530) 754-9307
- Lynne Isbell, Ph.D.
Department of Anthropology
University of California, Davis, CA
laisbell@ucdavis.edu
(530) 754-9718