

Beth Ann Pettitt

School Address:
Ecology, Evolution & Behavior Department
University of Minnesota
100 Ecology Building
1987 Upper Buford Circle
St. Paul, MN 55108
pett0033@umn.edu

Home Address:
3105 Pleasant Ave #204
Minneapolis, MN 55408
(612) 810-6140

Education

University of Minnesota (Aug 2006 – Present) St. Paul, MN
Ph.D. Ecology, Evolution and Behavior; in progress

University of Central Florida (Aug 2003 – May 2006) Orlando, FL
M.Sc. Biology. (GPA = 4.0)
Thesis: Reproductive delay in the female Cape ground squirrel, *Xerus inauris*.
Fieldwork: Namibia and South Africa

College of St. Benedict (Sept 1991 – May 1995) St. Joseph, MN
B.A. Department of Natural Science, Pre-Veterinary, Mathematics minor (GPA = 3.7)
Honors thesis: The influence of a bamboo diet on the evolutionary adaptations of the Giant Panda.

Southwest China Normal University (Sept – Dec 1994) Beibei, Sichuan, China
Foreign exchange student. Studies included Chinese language and history. Researched the evolutionary adaptations of China's Giant Panda (*Ailuropoda melanoleuca*) in response to their bamboo diet. Performed quantitative analyses on dried bamboo for the presence of secondary metabolites (cyanide).

Comparative Ecology Training Program (Jan – Feb 1994) Galapagos Islands, Ecuador
Analyzed and documented the contrasting characteristics found in various ecological habitats and their associated flora and fauna within three distinct locales: alpine tundra of the Andes mountains, lowland rain forests of central Ecuador and the Galapagos Islands.

Publications

Pettitt, B.A., Wheaton, C.J. & Waterman, J.M. 2007. Effects of storage treatment on fecal steroid hormone concentrations of a rodent, the Cape ground squirrel (*Xerus inauris*). *General and Comparative Endocrinology*, 150: 1-11.

Pettitt, B.A. Waterman, J.M. & Wheaton, C.J. 2008. Assessing the effects of resource availability and parity on reproduction in female Cape ground squirrels: resources do not matter. *Journal of Zoology*, 276(3): 291-298.

Manuscripts in Prep

Pettitt, B. A. & J. M. Waterman. Reproductive suppression in female Cape ground squirrels, *Xerus inauris*. for *Behavioral Ecology*

Pettitt, B. A. & M. A. Bee. Vocal repertoire and individual identification in a neotropical frog. For *Journal of the Acoustical Society of America*

Non-refereed Publications

Waterman, J. M., Pettitt, B.A. & Manjerovic, M.B. 2006. Cape ground squirrels. *BBC Wildlife Magazine*. 24 (7): 16-25.

Pettitt, Beth A. 2006. Social effects on reproduction in female Cape ground squirrels (*Xerus inauris*): an update. Roan News, Wildlife Society of Namibia.

Pettitt, Beth A. & Jane M. Waterman. 2004. Environmental influences on the social structure of the Cape ground squirrel (*Xerus inauris*). Roan News, Wildlife Society of Namibia. 1: 12-14.

Presentations/Published Abstracts

“Individual variation in advertisement calls of male golden rocket frogs, *Anomaloglossus beebei*.” B.A. Pettitt, M.A. Bee, G.R. Bourne. Midwest Ecology and Evolution Conference in Lincoln, NE. March 27-29, 2009.

“Enriching K-6 Curriculum with ‘Real’ Science.” B.A. Pettitt, Susan Weller and Karen Oberhauser, National Science Foundation GK-12 Annual Meeting in Washington, D.C. February 29 – March 2, 2008.

“Fecal progesterone profiles of pregnant and lactating free-living Cape ground squirrels (*Xerus inauris*).” B.A. Pettitt and J.M. Waterman, Society for Integrative and Comparative Biology 2007 Annual Conference in Phoenix, AZ. January 3-7, 2007.

“Reproductive delay in female Cape ground squirrels (*Xerus inauris*).” B.A. Pettitt and J.M. Waterman. Animal Behavior Society 2006 Annual Meeting in Snowbird, UT. August 12-16, 2006.

“Reproductive delay in female Cape ground squirrels: suppression, inbreeding avoidance and skew.” B. A. Pettitt and J. M. Waterman. Southeastern Ecology and Evolution Conference in Tuscaloosa, AL. March 3-5, 2006

“Reproductive suppression in female Cape ground squirrels, *Xerus inauris*.” B. A. Pettitt and J. M. Waterman. Society for Integrative and Comparative Biology 2006 Annual Conference in Orlando, FL. January 4-8, 2006

“Influence of predation and habitat structure on social evolution in ground-dwelling sciurids: a comparative analysis.” B. A. Pettitt and J. Waterman. Animal Behavior Society 2005 Annual Meeting in Snowbird, UT. August 6-10, 2005

“Comparison of effects of different storage methods on fecal progesterone concentrations: implications for fecal transport.” B. A. Pettitt and J. Waterman. Southeastern Ecology and Evolution Conference in Athens, GA. March 11-13, 2005.

“Predation, Habitat Structure and Evolution of Sociality in Ground-dwelling Sciurids (Tribe Marmotini): A Comparative Analysis.” B. A. Pettitt and J. Waterman. Florida Academy of Sciences in Orlando, FL. March 19-20, 2004.

“Social Evolution, Predation Pressure and Habitat Structure: A Comparative Analysis Within Tribe Marmotini.” B. A. Pettitt and J. Waterman. Southeastern Ecology and Evolution Conference in Atlanta, GA. March 5-7, 2004.

Research Experience

Conservation and Reproductive Behavior in the Golden Rocket Frog, Primary Investigator

(May – July 2007; June- August 2008)

Kaieteur National Park, Guyana

Research focused on the acoustic communication and parental care behaviors of the neotropical Golden Rocket frog (*Anomaloglossus beebei*). Developed and trained field assistants in sample collection techniques. Conducted behavior observations and acoustical recordings. Led a crew of 2 field technicians.

Polar Bear Vocalizations, Social Complexity Study Field Leader (Oct – Nov 2005)

Churchill, Manitoba, Canada

Research focused on acoustic and play behavior of males and the impact of human activities on energy expenditure and behavior of polar bears. Led 4 different teams of 6-10 Earthwatch volunteers in video, audio and digital photography of polar bear interactions. Follow-up analysis of vocalizations.

Cape Ground Squirrel Reproductive Suppression Study Field Leader (May – Nov 2004)

Bloemhof, South Africa; Farm Christirina, Namibia

Research focused on the determination of a delay in reproductive maturation of sub-adult female Cape ground squirrels (*Xerus inauris*). Developed and trained field assistants in sample collection techniques. Conducted behavior observations, trapped, marked squirrels. Led a crew of 2 field technicians.

Endangered Mount Graham Red Squirrel Study Research Assistant (Sept – Dec 2002)

Mount Graham, University of Arizona, Tucson, Arizona

Research focused on pattern of habitat/space utilization of the Endangered Mount Graham red squirrel (*Tamiasciurus hudsonicus grahamensis*). Personal responsibilities included: radio-telemetry, behavioral observation and documentation, GPS, habitat analysis, data management and entry.

Antelope Island Wildlife and Recreationist Study Research Assistant (April–July 2001)

Antelope Island State Park, Syracuse, Utah

Research focused on effects of hikers, mountain bikers and horse-back riders on the behavior of pronghorn, mule deer and bison. Personal responsibilities included: behavioral observation, coding, documentation and GPS. Surveyed public opinion on the presumed effects of recreationists on the behavior of wildlife.

Endangered Delmarva Fox Squirrel Study Field Research Assistant (Sept–Nov 2001)

Patuxent Wildlife Research Center, Delmarva Peninsula, Maryland

Research focused on the impacts of selective tree harvesting on the movement patterns and dispersal of the squirrels through analysis of capture-recapture data. Personal responsibilities included: running trap lines, handling and radio-collaring the endangered Delmarva fox squirrel (*Sciurus niger sincereus*).

Endangered Utah Prairie Dogs Study Field Research Assistant (March-June 1999, April-June 2003)

Bryce Canyon National Park, Bryce, Utah

Research focused on a variety of behavioral patterns, including: mate selection, inbreeding avoidance behaviors, infanticide, communal nursing, aggression, alarm calling and other social interactions. Personal responsibilities included: behavioral observation, documentation and coding of behaviors, and live trapping. Assisted in handling, marking and tagging the endangered Utah prairie dog. (*Cynomys pavridens*).

Elephant Sanctuary Internship (June-August 1998)

The Elephant Sanctuary, Hohenwald, Tennessee

Assisted in the care and maintenance of three female Asian elephants. Assembled meals, documented changes in diet/behavior, assisted with barn construction.

Teaching Experience

National Science Foundation GK-12 Fellowship; Twin Cities, MN

General Science and Mathematics, Visiting Scientist (August 2007 – June 2008)

Developed curriculum for 1st and 5th graders in science and mathematics. Taught 1st and 5th graders scientific method, experimentation techniques, animal behavior methodologies and basic math.

University of Minnesota, College of Biological Science; Twin Cities, MN

General Biology Laboratory, Teaching Assistant (August 2006 – December 2006)

Lectured and assisted students in general biology laboratory techniques and laboratory report writing. Developed teaching materials, composed quizzes and administered all grades.

University of Central Florida, Department of Biology; Orlando, FL

General Biology Laboratory, Teaching Assistant (August 2003 – April 2005)

Lectured and assisted students in general biology laboratory techniques and laboratory report writing. Developed teaching materials, composed quizzes and administered all grades. Supervised senior undergraduate teaching assistants.

Ecology & Behavior of Small Mammals in Southern Africa, Field Course Teaching Assistant (June 2004)
Assisted with instructing students on proper field research techniques, including behavioral observations and trapping skills.

Animal Behavior, Teaching Assistant (August – December 2003)
Graded homework and exams. Assisted in composing exams. Addressed individual students' questions and needs. Developed, administered and graded laboratory portion of class.

K. L. Smith Faculty Center for Teaching & Learning Graduate Teaching Assistant Seminar (August 2003)
Developed new teaching strategies, course design methodologies, assessment tools and techniques.

Minnesota Zoo

Apple Valley, MN

Teaching Assistant (June – August 1994)

Taught environmental education, including: entomology, conservation, vertebrate identification, and behavior. Certified in handling various zoo animals.

Teacher Training Programs

Commenting on and Grading Student Writing Seminar Certification, Center for Writing, University of Minnesota, August 2006.

Teaching Enrichment Series, Center for Teaching and Learning, University of Minnesota, August 2006.

“Electronic Communications: Strategies for the Wired Instructor”

“Student Diversity: Enriching Teaching and Enhancing Learning”

Awards, Honors and Funding

Elmer C. Birney Fellowship (2008; \$3939)

International Pre-Dissertation and Small Grant Fund, Office of International Programs (2008; \$3500)

University of Minnesota's Graduate School Thesis Research Grant (2008; \$1500)

Andrews-Hunt Fund Award (2008; \$3500)

Animal Behavior Society Grant (2008; \$750)

Dayton & Wilkie Natural History Fund Grant (2008; \$1100)

Gaige Fund Award, American Society of Ichthyology & Herpetology (2008; \$500)

National Science Foundation GK-12 Fellowship (2007-2008; \$30,000)

The Explorers Club Exploration Fund Grant (2007; \$1200)

Sigma Xi Graduate Research Award (2007; \$500)

Florence Rothman Fellowship (2007; \$1500)

University of Central Florida University Award for Outstanding Masters Thesis (2007; \$1200)

Sigma Xi Communicating Science Poster Contest 1st Place Winner (2007; \$100)

Minnesota Herpetological Society Grant (2007; \$500)

Chicago Herpetological Society Grant (2007; \$500)

Carol H. and Wayne A. Pletcher Graduate Fellowship (2006; \$2500)

UCF Biology Graduate Student Research Enhancement Award (2005; \$1000)

UCF Graduate Student Travel Grant: Animal Behavior Society Conference (2005; \$550)

American Association for the Advancement of Science Award Nominee (2004, 2005, 2006)

UCF Graduate Student Travel Grant: Southeast Ecology and Evolution Conference (2004, \$300; 2005,

Group Leader \$900)

Astronaut Scholarship Foundation Scholarship Finalist (2004)

Merit Fellowship (2003-2004; \$5000)

College of St. Benedict President's Scholarship (1991-1995; \$5000)

College of St. Benedict Academic Scholarship (1991-1995; \$7500)

Professional Duties and Service

NSF GK-12 Management Team	Student Liason	September 2007 – Present
UMN Ecology, Evolution & Behavior Graduate Student Committee	President	September 2007 – Present
UMN Minnesota Herpetological Society	Vice President	April 2007 – Present

Referee for *Journal of Mammalogy*, *Behaviour*

Professional Memberships

Graduate Women in Science	(November 2007 – Present)
Sigma Xi, Associate Member	(April 2007 – Present)
American Association for the Advancement of Science	(May 2004 – Present)
Animal Behavior Society	(September 2003 – Present)
Ecological Society of America	(September 2005- Present)
International Society for Behavioral Ecology.	(September 2003 – Present)
Society for the Study of Amphibians & Reptiles	(December 2006 – Present)
The Wildlife Society of Namibia	(January 2004 – Present)

Community Presentations

“Listening for Frogs in Guyana.” Invited speaker. Bell Museum Adventure Science series, Minneapolis, MN. February 17, 2008.

“Communication and Parental Care in a Neotropical Frog.” Invited speaker. Monarchs in the Classroom Insect Fair, Minneapolis, MN. December 15, 2007.