

Kerry V. P. Fanson

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EDUCATION

DEGREE PROGRAMS

- 2009 Ph.D. – Purdue University, Department of Biological Sciences (West Lafayette, Indiana)
Dissertation: Stress and reproductive physiology in Canada lynx (*Lynx canadensis*):
Implications for *in-situ* and *ex-situ* conservation
Advisors: Drs. Jeffrey R. Lucas and Nadja C. Wielebnowski
- 2000 B.A. – Kalamazoo College, Department of Biology (Kalamazoo, Michigan)
Senior Thesis: Foraging time and vigilance in rock hyrax (*Procavia capensis*), a social forager
Advisor: Dr. Joel S. Brown

OTHER

- 2007 Karolinska Institute (Sweden) – Graduate course entitled “Neuroendocrinology”
- 2005 Organization for Tropical Studies (Costa Rica) – Graduate course entitled “Tropical Biology: An Ecological Approach”
- 1999-00 Kalamazoo Valley Community College – American Sign Language, Automotive Maintenance
- 1998-99 University of Nairobi (Kenya) – Undergraduate Study Abroad

PROFESSIONAL APPOINTMENTS

- 2011 Lecturer – University of New South Wales, Sydney, NSW, Australia
- 2010-now Practical coordinator – Macquarie University, Sydney, NSW, Australia
- 2009-now Reproductive Biologist – Taronga Western Plains Zoo, Dubbo, NSW, Australia
- 2008-now Research Associate – Macquarie University, Sydney, NSW, Australia

GRANTS & FELLOWSHIPS

- 2008 Purdue University – Bilsland Dissertation Fellowship
- 2008 Chicago Board of Trade – Endangered Species Fund (\$4,500)
- 2006 P.E.O. International – P.E.O. Scholar Award (\$10,000)
- 2006 Purdue University – Yeunkyeung Woo Achieve Excellence Travel Grant (\$500)
- 2005 Chicago Board of Trade – Endangered Species Fund (\$3,500)
- 2005 Graduate Women in Science – Sigma Delta Epsilon Fellowship (\$500)
- 2005 Purdue University – Graduate Student Incentive Award (\$750)
- 2004 Chicago Board of Trade – Endangered Species Fund (\$3,580)
- 2003 Colorado Division of Wildlife – Research Grant (\$6,000)
- 2003 Purdue University – Prospective Student Incentive Award (\$2,000)
- 1999 Kalamazoo College Beeler Fellowship – Research Grant (\$1,200)

PROFESSIONAL MEMBERSHIPS

- International Society for Wildlife Endocrinology
- Society for Behavioral Neuroendocrinology
- IUCN Cat Specialist Group
- Association of Zoos and Aquariums

TEACHING EXPERIENCE

LECTURING

- 2011 BIOS 3011: Animal Behaviour – Co-lecturer, University of New South Wales
Student evaluations: pending
- 2007 BIOL 115: Biology Resource Seminar – Instructor, Purdue University
Student evaluations: 4.6 out of 5
- 2005 BIOL 121: Biology I Diversity, Ecology and Behavior – Lecture assistant, Purdue University

LABORATORY/PRACTICAL UNITS

- 2010-now BBE 100: Intro to Brain, Behaviour and Evolution – Demonstrator, Macquarie University
Student evaluations: 4.5 out of 5
- 2004 BIOL 205: Biology for Elementary School Teachers – Lab instructor, Purdue University
Student evaluations: 4.2 out of 5
- 2004 BIOL 287: Introduction to Ecology Lab – Lab instructor, Purdue University
Student evaluations: 4.7 out of 5
- 2003 BIOL 122: Biology I Lab: Practical Skills – Lab instructor, Purdue University
Student evaluations: 4.4 out of 5
- 1999 BIO 112: Evolution Laboratory – Lab assistant, Kalamazoo College

COURSE DEVELOPMENT AND COORDINATION

- 2010-now BBE 100: Introduction to Brain, Behaviour and Evolution, Macquarie University
- 2005 BIOL 287: Organisms and Populations, Purdue University

GUEST LECTURES & PUBLIC TALKS

- 2010 University of New South Wales (Course: *Evolution, Physiology and Ecology*) – Sydney, AU
- 2009 University of the Third Age – Dubbo, New South Wales, AU
- 2007 Wabash College (Course: *Senior Biology Seminar*) – Crawfordsville, Indiana, USA
- 2007 P.E.O. International (local chapter) – Lafayette, Indiana, USA
- 2007 P.E.O. International (local chapter) – Milwaukee, Wisconsin, USA
- 2007 Alaska Zoo (Tuesday Night Education Program) – Anchorage, Alaska, USA

OUTDOOR EDUCATION

- 2004-07 Ross Reserve Biological Station – Caretaker & outreach coordinator, W. Lafayette, IN, USA
- 2001 Alaska Boreal Forest Council – Volunteer, Fairbanks, AK, USA
- 1997 Kalamazoo Nature Center – Volunteer, Kalamazoo, MI, USA
- 1997 Land/Sea Wilderness Orientation Program – Logistics co-ordinator and leader, Ontario, CAN

UNDERGRADUATE MENTORING

- 2011 Kim Weldon – Macquarie University, Honours Student
- 2011 Ingrid Petterson – Macquarie University
- 2010 Melissa Rigby – University of Sydney, Honours Student
- 2010 Lauren Whitfield – University of Sydney, Honours Student
- 2009 Naomi Bray – University of Queensland
- 2006-08 Lauren Kapernaros – Purdue University, Senior Honors Thesis
- *Howard Hughes Undergraduate Summer Research Fellow*
- *Sandy and Zippy Ostroy Research Experience for Undergraduates Award*
- 2007 Katy Kindig – Purdue University
- 2007 Bret Moore – Purdue University
- 2006 Natalie Rappaport – Purdue University

REVIEWER

- Journal of Mammalogy
- PLoS One

PUBLICATIONS

BOOK CHAPTERS

- Fanson, K.V.**, N.C. Wielebnowski, and J.R. Lucas. 2009. Reproductive physiology of Canada lynx (*Lynx canadensis*). *In: Iberian Lynx Ex-situ Conservation: An interdisciplinary approach*. Eds. A. Vargas, U. Breitenmoser, and C. Breitenmoser. Fundación Biodiversidad, Madrid, Spain, pp. 393-398.

PEER-REVIEWED MANUSCRIPTS

Published/Accepted

- Fanson, K. V.**, N.C. Wielebnowski, and T. Shenk. (*In Press*) Comparative patterns of adrenal activity in captive and wild Canada lynx (*Lynx canadensis*). *Journal of Comparative Physiology B*.
- Fanson, K.V.**, B.G. Fanson, and J.S. Brown. 2011. Using path analysis to explore vigilance behavior in the rock hyrax (*Procavia capensis*). *Journal of Mammalogy* 92: 78-85.
- Fanson, K.V.**, N.C. Wielebnowski, T. Shenk, W. Jakubas, J. Squires, and J.R. Lucas. 2010. Patterns of testicular activity in captive and wild Canada lynx (*Lynx canadensis*). *General and Comparative Endocrinology* 169: 210-216.
- Fanson, K.V.**, N.C. Wielebnowski, T. Shenk, J. Vashon, J. Squires, and J.R. Lucas. 2010. Patterns of ovarian and luteal activity in captive and wild Canada lynx (*Lynx canadensis*). *General and Comparative Endocrinology* 169: 217-224.
- Fanson, B.G., **K.V. Fanson**, and J.S. Brown. 2010. Ecological factors affecting the foraging behaviour of *Xerus rutilus*. *African Zoology* 45: 265-272.
- Finkenwirth, C., K. Jewgenow, A. Vargas, H. Meyer, **K. Fanson**, and M. Dehnhard. 2010. Pregnancy diagnosis in the Iberian Lynx (*Lynx pardinus*) and other felids based on non-invasive PGFM determination. *Reproduction in Domestic Animals* 45: 11-11.
- Dehnhard, M., **K. Fanson**, F. Göritz, S. Naidenko, A. Vargas, and K. Jewgenow. 2010. Comparative metabolism of gestagens and estrogens in the four lynx species, the Eurasian (*Lynx lynx*), the Iberian (*Lynx pardinus*), the Canada lynx (*Lynx canadensis*) and the bobcat (*Lynx rufus*). *General and Comparative Endocrinology* 167:287-296.
- Fanson, B.G., **K.V. Fanson**, and J.S. Brown. 2008. Foraging behaviour of a community of rodents inhabiting a kopje in Tsavo West National Park, Kenya. *African Zoology* 43:184-191.

In Prep/Submitted

- Fanson, K.V.**, N.C. Wielebnowski, T. Shenk, B. Fanson, and J. Lucas. Stress-response predicts post-release survival in reintroduced Canada lynx. Submitting to *Proceedings of the National Academy of Sciences*.
- Griffith, S., **K.V. Fanson**, N. Svendin, and S. Pryke. Mechanisms of cryptic female choice in Gouldian finches: Sperm mobility in same- vs. mixed-morph pairs.
- K.V. Fanson** and N.W. Wielebnowski. Effect of housing and husbandry practices on adrenal activity in captive Canada lynx. Submitting to *Animal Welfare*.
- Fanson, K.V.**, J.R. Lucas, and N.C. Wielebnowski. Factors affecting measured fecal hormone metabolite concentrations for Canada lynx. Submitting to *Journal of Wildlife Management*.

OTHER SCIENTIFIC PUBLICATIONS

- Che, J. and **K. Fanson**. 2005. Like a fish out of water: Examining the ability of juvenile cichlids to assess variable costs associated with a unique predator avoidance behavior. *Organization for Tropical Studies* 2005-01: 103-109.
- Fanson, K.** and E. Gillam. 2005. Altitudinal variation in natural selection for stomatal and trichome density. *Organization for Tropical Studies* 2005-01: 111-116.
- Cole, R. and **K. Fanson**. 2005. Saponins as a potential mechanism of herbivore defense in young *Pentaclethra macroleoba* leaves. *Organization for Tropical Studies* 2005-01: 155-159.
- Fanson, K.**, E. Gillam, and G. Pahad. 2005. Does density matter?: A test of the resource concentration hypothesis in *Calathea marantifolia*. *Organization for Tropical Studies* 2005-01: 235-241.
- Petterson, K.V.** 2000. Foraging time and vigilance in rock hyrax (*Procavia capensis*), a social forager. Kalamazoo College, Undergraduate thesis.

PRESENTATIONS

RESEARCH SEMINARS

- 2009 **Purdue University, Department of Biological Sciences** – West Lafayette, Indiana, USA
“Stress and reproductive physiology in Canada lynx (*Lynx canadensis*): Implications for in-situ and ex-situ conservation”
- 2008 **University of Chicago, Animal Behavior Research Group** – Chicago, Illinois, USA
“Studying stress and reproduction in reintroduced Canada lynx”
- 2006 **Purdue University, Department of Biological Sciences** – West Lafayette, Indiana, USA
“All that glitters is not gold: Using fecal hormone analysis to study stress and reproduction in Canada lynx”
- 2006 **Leibniz Institute for Zoo and Wildlife Research** – Berlin, Germany
“Studying stress and reproduction in reintroduced Canada lynx”
- 2006 **University of Veterinary Medicine, Institute of Biochemistry** – Vienna, Austria
“Studying stress and reproduction in reintroduced Canada lynx”
- 2004 **Purdue University, Department of Biological Sciences** – West Lafayette, Indiana, USA
“Fluctuating asymmetry as an indicator of stress”

SCIENTIFIC MEETINGS

Invited

- Fanson, K.V.P., N.C. Wielebnowski, J.R. Lucas. 2006. Determining stress and reproductive status of reintroduced Canada lynx. **Iberian Lynx Ex-situ Conservation Seminar: Reproductive Physiology**, Matalascañas, Spain.

Platform

- Griffith, S., S. Pryke, L. Rollins, K. Fanson. 2010. The function of female polyandry in socially monogamous birds: Highly effective extra-pair copulations and a genetically loaded raffle select for genetically compatible sires. **13th International Behavioral Ecology Congress**, Perth, Western Australia, Australia.
- Keeley, T., K. Fanson. 2011. The value of non-invasive hormone monitoring in captive and wild wombats for management and conservation. **National Wombat Conference**, Albury, New South Wales, Australia.
- Fanson, K.V.P., N.C. Wielebnowski, J.R. Lucas. 2008. Letting the cat out of the bag: Monitoring hormone expression in reintroduced Canada lynx. **Felid Taxon Advisory Group's Annual Meeting**, Cincinnati, Ohio, USA.
- Fanson, K.V.P., N.C. Wielebnowski, J.R. Lucas. 2007. Hormonal profiles of captive and free-ranging lynx. **Canada Lynx on the Border: Biological and Political Realities for Conservation Planning**, Grand Portage, Minnesota, USA.
- Fanson, K. 2007. To B.E. or not to B.E.?: The value of Behavioral Endocrinology to conservation biology. **Purdue University's Annual Biology Graduate Student Retreat**, West Lafayette, Indiana, USA.
- Fanson, K.V.P., N.C. Wielebnowski, J.R. Lucas. 2006. Reproductive and stress physiology of Canada lynx: Implications for reintroduction success. **Felid Taxon Advisory Group's Annual Meeting**, Denver, Colorado, USA.
- Fanson, K.V.P., N.C. Wielebnowski, J.R. Lucas. 2004. Assessing stress and reproductive status in reintroduced Canada lynx via fecal hormone analysis. **Felid Taxon Advisory Group's Annual Meeting**, Albuquerque, New Mexico, USA.
- Petterson, K.V., B.G. Fanson, and J.S. Brown. 2000. Foraging time and vigilance in rock hyrax (*Procapra capensis*), a social forager. **Kalamazoo College's Annual Diebold Symposium**, Kalamazoo, Michigan, USA.

Poster

- Fanson, K., N. Wielebnowski, J. Lucas. 2008. Monitoring stress physiology in reintroduced Canada lynx. **First International Wildlife Reintroduction Conference**, Chicago, Illinois, USA.
- Fanson, K., N. Wielebnowski, J. Lucas. 2006. Understanding the role of physiology in reintroduction success: stress and reproduction in reintroduced Canada lynx. **The Wildlife Society's Annual Conference**, Anchorage, Alaska, USA.

- Fanson, K., N. Wielebnowski, J. Lucas. 2006. Reproductive and stress physiology of Canada lynx: Implications for reintroduction success. **Midwest Ecology and Evolution Conference**, St. Louis, Missouri, USA.
- Fanson, K., J. Lucas, N. Wielebnowski. 2005. Understanding the role of physiology in reintroduction success: Stress and reproduction in reintroduced Canada lynx (*Lynx canadensis*). **Forestry and Ecology Research Symposium**, West Lafayette, Indiana, USA.

OTHER RESEARCH EXPERIENCE

- 2007 **Brookfield Zoo** – Research assistant
 - Behavioral and hormonal responses of captive felids and pachyderms to nearby construction
- 2004 **Purdue University, Dr. Peter Waser** – Field technician
 - Dispersal patterns and population genetics of bannertail kangaroo rats (*Dipodomys spectabilis*) in southeastern Arizona
- 2004 **Purdue University, Dr. Alan Konopka** – Intern
 - Microbial community dynamics in contaminated soil collected from central Indiana
- 2003-04 **Purdue University, Dr. Dennis Minchella** – Intern
 - Parasite ecology, with a focus on nematodes and schistosomes
- 2003 **Geo-Marine, Inc.** – Field technician
 - Impact of stealth airplanes on the population dynamics and behavior of Mexican spotted owls (*Strix occidentalis*) in western New Mexico
- 2002 & '03 **University of Wyoming** – Field technician
 - Population dynamics and habitat use of snowshoe hares (*Lepus americanus*) in Colorado
- 2002 **Hamer Environmental** – Field technician
 - Survey of marbled murrelets (*Brachyramphus marmoratus*) on the Olympic Peninsula, Washington
- 2002 **Colorado Division of Wildlife** – Field technician
 - Causes of juvenile mortality in Rocky Mountain elk (*Cervus elaphus*) in south-western Colorado
- 2001 **National Resource Research Institute** – Field technician
 - Survey of the Canada lynx (*Lynx canadensis*) population in northern Minnesota
- 1999-00 **Kalamazoo College** – Principal Investigator
 - Understanding how various ecological factors affect the vigilance behavior of rock hyrax (*Procapra capensis*) using structural equation modeling
- 1999 **Kalamazoo College** – Co-Principal Investigator
 - Using patch use theory to study the foraging behaviour of the African unstriped ground squirrel (*Xerus rutilus*) and the potential consequences on community dynamics
- 1999 **Kalamazoo College** – Co-Principal Investigator
 - Exploring the effects of indirect cues of predation risk on the habitat use of two rodent species inhabiting a rock kopje in Tsavo National Park, Kenya
- 1998-99 **University of Illinois, Chicago** – Field technician
 - Foraging behavior of black rhinos (*Biceros dicornous*) in Aberdares National Park, Kenya
- 1997 & '98 **Colorado Division of Wildlife** – Field technician
 - Seasonal habitat use of greater sage grouse (*Centrocercus urophasianus*) in northwestern Colorado

AWARDS & HONORS

- 2007 **Purdue University** – Best oral presentation at the graduate student retreat
- 2006 **Feline Conservation Federation** – Best newsletter article
- 2000 **Kalamazoo College** – High honors for academic achievement
- 1996-00 **Kalamazoo College** – Honors scholarship
- 1996-00 **Czechoslovak Society of America** – Merit scholarship

PROFESSIONAL ACTIVITIES

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| 2010 | International Society for Wildlife Endocrinology – Standardizing Methodologies Working Group |
| 2007 | Felid Taxon Advisory Group – In-Situ Conservation Working Group (secretary) |
| 2004-2007 | Purdue University's Ross Biological Reserve caretaker and outreach coordinator |
| 2004-2005 | Organized Ecology Journal Club meetings |
| 2004, 2006 | Assisted with prospective graduate student recruitment weekend |
| 2004 | Felid Taxon Advisory Group – Ex-Situ and In-Situ Conservation Working Group |
| 2004 | Hosted guest speaker Dr. Joel S. Brown (University of Illinois, Chicago) – Biological Sciences Departmental Seminar and Eco-lunch, Purdue University |