

# CURRICULUM VITAE

University of Idaho

**NAME:** Lisette P. Waits

**DATE:** 1/2/14

**RANK OR TITLE:** Professor

**DEPARTMENT:** Fish and Wildlife Sciences

**OFFICE LOCATION AND CAMPUS ZIP:** CNR 103D, 1136

**OFFICE PHONE:** (208) 885-7823

**WEB:** <http://www.uidaho.edu/cnr/fishwild/lisettewaits>

**FAX:** (208) 885 - 9080

**EMAIL:** lwaits@uidaho.edu

**DATE OF FIRST EMPLOYMENT AT UI:** November 1997

**DATE OF TENURE:** 2003

**DATE OF PRESENT RANK OR TITLE:** 2009

## **EDUCATION BEYOND HIGH SCHOOL:**

PhD (Genetics), 1996, University of Utah, Salt Lake City, Utah

BS (Genetics), 1991, University of Georgia, Athens, Georgia

## **EXPERIENCE:**

### **Teaching, Extension and Research Appointments:**

November 1997 – current, Professor, Department of Fish and Wildlife

August 1997 – current, Environmental Science Faculty member

August 2000 – current, Bioinformatics program Faculty member

August 2001 – current, Affiliate faculty, CATIE, Costa Rica

May 1996 – Sept 1997, Postdoctoral Fellow, Laboratoire de Biologie des Populations d'Altitude, Universite Joseph Fourier, France

February 1996 – April 1996, Postdoctoral Fellow, Department of Human Genetics, Univ. of Utah

August 1991 – January 1996, Research Assistant, Department of Human Genetics, Univ. of Utah

### **Academic Administrative Appointments:**

August 1999 – December 2001 Co-Administrator and Co-founder Natural Resources Ecology and Conservation Biology Undergraduate Program in CNR

July 2004 – Dec 2007 – Co-founder and Co-Director of UI Center for Research on Invasive Species and Small Populations

**TEACHING ACCOMPLISHMENTS:**

**Areas of Specialization:** Conservation Biology/Conservation Genetics/Landscape Genetics

**Courses Developed and Taught at UI:**

Conservation Biology, WLF440, 1998 – 2014, 3 cr, enrollment ~ 50  
 Conservation Genetics, WLF540, 1999 – 2012, 3-4 cr, enrollment ~ 12  
 Landscape Genetics, WLF 561, 2006 – 2014, 2-4 cr, ~12 enrollment  
 Advanced Topics in Conservation Biology, WLF515, 1999, 3 cr, enrollment 10  
 Ecuador Summer Research Planning, WLF 499/502, 2011-2013, 1 cr, enrollment 8  
 Ecology and Conservation Biology Seminar, WLF200, 1999 – 2001, 1 cr, enrollment ~15  
 Integrated Natural Resource Problem Solving, WLF470, 1999 - 2000, 3 cr, enrollment ~40  
 Microsatellite Analysis Seminar, WLF503, 2000, 1 cr, enrollment, 11  
 Gene Flow Seminar, WLF503, 2001, 1 cr, enrollment 14  
 New Wild West, Core 101/102, 2001-2002, 3 –4 credit, enrollment ~30  
 Interdisciplinary Research Methods, WLF504, 2002 – 2012, 2 cr, enrollment ~10  
 Spatial Methods in Ecology and Conservation, 2008, 3 cr, enrollment 11  
 Space Matters Seminar, WLF503, 2008, 1 cr, enrollment 22

**Students Advised:**

Undergraduate Students: (~20 per year in Wildlife and Conservation Biology), ~2-4 per year in undergraduate research projects.

**Graduate Students:**

2012 – present, Susannah Woodruff, PhD, Non-invasive genetic monitoring of endangered Sonoran pronghorn

2012 – present, Robert Lonsinger, PhD, Non-invasive genetic monitoring of kit fox

2011- present, Paul Rhodes (co-advised), PhD, Evaluating bee diversity and landscape genetics in Palouse prairie fragments

2011 – present, Stephanie DeMay (co-advised), PhD, Non-invasive genetic monitoring of the endangered Washington pygmy rabbit

2010 – present, Andre Sanfiorenzo, PhD, Functional connectivity of understory trees in the San Juan/La Selva biological corridor, Costa Rica

2010 – present, Kate Cleary, PhD, Functional connectivity of bats in the San Juan/La Selva biological corridor, Costa Rica

2010 - present, Joel Tebbencamp (co-advised), MS, Sage grouse genetic diversity and connectivity

2009 – present, Matt Mumma, PhD, Non-invasive genetic monitoring of carnivores in Newfoundland

2007 – present, Paulina Viteri, PhD, Diversity and gene flow among Andean bears

- 2000 – present, Bill Leacock, PhD, Genetic structure of Kamchatka brown bears
- 2009 – 2012, Carisa Stansbury, MS, Gray wolf population monitoring
- 2007 – 2011, Justin Bohling, PhD, Evaluating the red wolf/coyote hybrid zone
- 2007 – 2009, Jennifer Stenglein, MS, Fecal DNA monitoring of gray wolves
- 2005 – 2009, Niko Balkenhol, PhD, Landscape genetic theory and applications
- 2003 – 2009, Caren Goldberg, PhD, Amphibian ecology and landscape genetics
- 2002 – 2009, Marta DeBarba, PhD Non-invasive genetic sampling of Italian brown bears
- 2005 – 2007, Jessica Hoisington, MS, Landscape genetics/systematics ground squirrels
- 2004 – 2007, Kara Gebhardt, MS, Peruvian Macaw genetics
- 2004 – 2007, Paulina Viteri, MS, Population size and genetic diversity of Andean bears
- 2004 – 2006, Stacie Robinson, MS, Kenai black bear population structure
- 2002 – 2006, Jennifer Adams, PhD, Red wolf genetics
- 2000 – 2002, Christine Cegelski, MS, Genetic diversity and structure in wolverines
- 1999 – 2002, Jennifer Adams, MS, Non-invasive detection of hybridization in red wolves
- 1998 – 2003, Craig Miller, PhD, Evaluation of historical levels and patterns of genetic diversity of brown bears
- 1998 – 2002, David Roon, PhD, Non-invasive genetic tracking of brown bears and black bears (switched to Oz Garton Spring 2002, graduated spring 2003)
- 1998 – 2001, Melanie Murphy, MS, Fecal DNA analysis of brown bears.

#### **PostDoctoral Researchers**

David Onorato, Caren Goldberg, Steve Spear, Jen Adams

#### **Undergraduate Research Projects:**

##### Academic Year

- 1998 – Angie Grosland, Environmental Science
- 1998 – Jay Shepard, Wildlife
- 1998 – 1999, Sarah Jo Congelton, Zoology
- 1999 – 2000, Dan Sullivan, Wildlife
- 2000 – 2002, Chris McDaniel
- 2000 – 2002, Crystal Strobel
- 2000 – 2002, Robyn Januszewski
- 2002 – 2006, Adair Muth
- 2003 – 2006, Jon Keehner

2004 – 2007, Shiela Arias  
 2005 – Ricky Perez, Env Sci  
 2006 – 2006, Gavin Tyler  
 2006 – 2008, Sean Howard  
 2007 – Adam Schmoeger, Env Sci  
 2007 – Noel Sanyal, Env Sci  
 2007 – 2008 Joe Holbrook, Wildlife  
 2008 – 2009 Mike Callen, Env Sci  
 2008 – 2009, Michelle Meredith, Env Sci  
 2008 – 2010, Jack Torresdal  
 2009 – 2010, Danelle Russell  
 2010 – 2011, Shannon Torstrom  
 2011 – 2013, Rebecca Johnson  
 2012 – 2013, Rhianna Hohbein  
 2013 – 2014, Paige Byerly  
 2013 – 2014, Genevieve Pugsek

#### Summer NSF Research Experience for Undergraduates Program

2010, Dustin Houghton  
 2009, Wilfredo Linero  
 2006, Jay Loveland  
 2006, Connor Williams  
 2004, Ramona Flatz  
 2003, Miranda Thomas  
 2003, Dustene Cummings  
 2003, Becky Ternes  
 2002, Mark Couture  
 2002, Theresia Radtke  
 2001, Joe Chivaro  
 2000, Laura Fairham  
 2000, Jonathan Teeters  
 2000, Andrea Bristol  
 1999, Carol Perugini  
 1999, Dan Sullivan  
 1998, Amy Campbell

#### **Graduate Committee Involvement**

2013-present, Stephanie Graham, MS, **Auburn**  
 2013-present, Erin Poor, PhD, **Virginia Tech**  
 2012- present, Chris Baugher, PhD, Plant Soil and Entomological Science  
 2011 – present, Dana Morin, PhD, Wildlife, **Virginia Tech**  
 2010 – present, Nathan Borg, MS, Wildlife, **Univ of Montana**  
 2010 – present, Sarah Emel, PhD, Zoology, **WSU**  
 2010 – present, Daryl Trumbo, PhD, Zoology, **WSU**  
 2010 – present, Denim Jochimsen, PhD, Biology  
 2008 – present, Brice Sarver, PhD, Biology  
 2012 – present, Amy Klegarth, PhD, Biology, **Notre Dame**  
 2007 – 2013, Claudia Wultsch, PhD, Wildlife, **Virginia Tech**  
 2010 – 2012, Barbara Fanin, MS, Wildlife, **Univ of Montana**  
 2007 – 2012, Justin Teisberg, PHD, Zoology, **WSU**  
 2007 – 2012, Doni Schwalm, PhD, Wildlife, **Texas Tech**  
 2005 – 2012, Dana Wiegel, PhD, Fisheries

2005 – 2012, Tom Thompson, PhD, Wildlife  
 2009 – 2011, Indrani Sasmal, PhD, **South Dakota State**  
 2002 – 2011, Pete Bloom, PhD, Fish and Wildlife  
 2004 – 2008, Hua Feng, PhD, Statistics  
 2005 – 2009, Steve Spear, PhD, Zoology, **Washington State University**  
 2004 – 2010, Stacey Dunn, PhD, Biology  
 2003 – 2010, Jan Schipper, PhD, Fish and Wildlife  
 2005 – 2008, Sarah Hird, MS, Biology  
 2006 – 2008 Tom Gieson, PhD, Environmental Science  
 2003 – 2007, Gabe Colbeck, MS, Zoology (**WSU**)  
 2003 – 2008, Wendy Estes-Zump, PhD, Fish and Wildlife  
 2006 – 2007, Judy Morgan, WSU, PhD Zoology  
 2005 – 2007, Shannon Knapp, PhD, Statistics, **Purdue University**  
 2004 – 2007, Shannon Donovan, PhD, Environmental Science  
 2004 – 2006, Thor Hansen, PhD, Forest Resources  
 2003 – 2004, Leslie Davis, MS, Zoology (**WSU**)  
 2002 – 2004, Barley Hyde, MS, Biology  
 2002 – 2003, Wayde Morse, PhD, Resource Recreation and Tourism  
 2001 – 2004 Alisse Garner, MS Wildlife  
 2001 – 2004, Jason Hicks, MS Wildlife  
 2001 – 2006, Fernando Azevedo, PhD Wildlife  
 2000 – 2002 Luigi Mairano, PhD Wildlife  
 2000 – 2004, Holly Gates, Resource Recreation and Tourism  
 2000 – 2003 Hua Feng, Statistics  
 2000 – 2001, Fran Bonier, MS Biology  
 2000 – 2002, Chad VanOrmer, MS Resource Recreation and Tourism  
 1999 – 2002, Kim Romain, MS Wildlife (**WSU**)  
 1998 – 2000, Marilyn Neilson, MS Fisheries  
 1998 – 2002, Matt Carling, MS Biology  
 1997 – 2002, Paul Anders, PhD Fisheries

### **Mentoring International Scientists**

Daniela Arias, Ecuador (Spring 2014)  
 Odbayar Tumendemberel, Mongolia (Fall 2013, Spring 2014)  
 Jivan Shakya, Nepal (Fall 2011)  
 Sulochana Manandhar, Nepal (Fall 2011)  
 Kanchan Thapa, Nepal (Summer 2010)  
 Rodrigo Ciscernos, Ecuador (Fall 2007 – Fall 2010)  
 Tomaz Skrbinek, Slovenia (Spring 2006)  
 Paulina Viteri, Ecuador (Fall 1999, Summer 2001, Spring – Fall 2003)  
 Igor Khorozyan, Armenia (Spring 2001)  
 Marta DeBarba, Italy (Summer 2001 – Spring 2002)

### **Non-credit Classes, Workshops, Seminars, etc.:**

Conservation Genetics for Natural Resource Managers 2001 - 2010

### **Education Meeting Presentations**

Waits, LP (2000). Student assessment of alternative learning tools. University Education in Natural Resources. Columbia, MO

Waits, LP, K. Launchbaugh, B. McLaughlin, J. Force, and A. Campbell (2000) Re-designing a capstone course in integrated natural resource problem solving: a team approach. University Education in Natural Resources. Columbia, MO.

## SCHOLARSHIP ACCOMPLISHMENTS:

### Refereed Publications

#### Published or in press

\* denotes graduate student author, ^ denote undergraduate student author

140. Estes-Zumpf, WA, SE Zumpf, JL Rachlow, J Adams, LP Waits (in press) First Record of the Pygmy Rabbit (*Brachylagus idahoensis*) in Colorado. Journal of Fish and Wildlife Management
139. Ausband, DE, LN Rich, EM Glenn, MS Mitchell, P Zager, DA Miller, LP Waits, BB Ackerman, CM Mack (in press) Monitoring Gray Wolf Populations Using Multiple Survey Methods. Journal Wildlife Management
138. \*Barnowe-Meyer, KK, PJ White, LP Waits, JA Byers (in press) Social and genetic structure associated with migration in pronghorn. Biological Conservation 168:108-115.
137. \*Balkenhol, N, ^JD Holbrook, D Onorato, P Zager, C White, J Rachael, R DeSimone, LP Waits (in press) Landscape connectivity and gene flow in a highly mobile generalist species: A multi-method approach for analyzing hierarchical genetic structures: a case study with cougars *Puma concolor*. Ecography
136. Pilliod, DS, CS Goldberg, RS Arkle, LP Waits (2014) Factors Influencing Detection of eDNA from a stream dwelling amphibian. Molecular Ecology Resources 14:109-116.
135. \*Mumma, M, CE Soulliere, SP Mahoney, LP Waits (2014) Enhanced understanding of predator prey relationships using molecular methods to identify predator species, individual and sex. Molecular Ecology Resources 14:100-109
134. ^Torstrom, SM, JR Adams, LP Waits (2013) Detecting pygmy rabbits (*Brachylagus idahoensis*) using DNA extracted from fecal pellets of mixed species groups. Wildlife Society Bulletin 37:603-607.
133. \*McVey, JM, DT Cobb, RA Powell, MK Stoskopf, \*JH Bohling, LP Waits, CE Moorman (2013) Evaluating food habits of co-occurring red wolves and coyotes using faecal DNA identification. Journal of Mammalogy 94:1141-1148.
132. Goldberg, CS, A Sepulveda, A Ray, J Baumgardt, LP Waits (2013) Environmental DNA as a New Method for Early Detection of New Zealand Mudsnaills (*Potamopyrgus Antipodarum*). Freshwater Science 32:792–800.
131. \*Demay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, LP Waits (2013) Evaluating DNA Degradation Rates in Faecal Pellets of the Endangered Pygmy Rabbit. Molecular Ecology Resources 13: 654–662.

130. Pilliod, DS, CS Goldberg, RS Arkle, LP Waits (2013) Estimating occupancy and abundance of stream amphibians using environmental DNA from filtered water samples Canadian Journal of Fisheries and Aquatic Sciences 70: 1123-1130.
129. Andrew, RL, L Bernatchez, A Bonin, CA Buerkle, BC Carstens, BC Emerson, D Garant..... LP Waits, A Widmer (2013) A Road Map for Molecular Ecology. Molecular Ecology 22: 2605–2626.
128. \*Baumgardt, JA, CS Goldberg, KP Reese, JW Connelly, DD Musil, EO Garton, LP Waits (2013) A method for estimating population sex ratio for sage-grouse using noninvasive genetic samples. Molecular Ecology Resources 13:393-402.
127. \*Sasmal, I, JA Jenks, LP Waits, MG Gonda, GM Schroeder, S Datta (2013) Genetic diversity in a reintroduced swift fox population. Conservation Genetics 14:93-102
126. \*Pennell, MW, \*CR Stansbury, LP Waits, CR Miller (2013) Capwire: a R package for estimating population census size from non-invasive genetic sampling. Molecular Ecology Resources 13:154-157.
125. \*Bohling, JH, JR Adams, LP Waits (2013) Evaluating the ability of Bayesian clustering methods to detect hybridization and introgression using an empirical red wolf data set. Molecular Ecology 22:74-86.
124. \*Skrbinšek, T, ^M Jelenčič, LP Waits, H Potočnik, I Kos, P Trontelj (2012) Using a reference population yardstick to calibrate and compare genetic diversity reported in different studies: an example from the brown bear. Journal of Heredity 109:299-305
123. Sparkman, A, JR Adams, T Steury, L Waits, D Murray (2012) Pack social dynamics and inbreeding avoidance in the cooperatively breeding red wolf. Behavioral Ecology 23:1186-1194.
122. \*Blair C, DE Weigel\*, M Balazik\*, ATH Keeley\*, FM Walker\*, N Balkenhol, E Landguth, S Cushman, M Murphy, LP Waits (2012) A simulation-based evaluation of methods for inferring linear barriers to gene flow. Molecular Ecology Resources 12:822-833.
121. Goldberg, CS, DC Tank, S Uribe-Convers, WR Bosworth, HE Marx, LP Waits (2012) Species designation of the Bruneau Dune tiger beetle (*Cicindela waynei*) is supported by phylogenetic analysis of mitochondrial DNA sequence data. Conservation Genetics 13:373-380.
120. \*Skrbinšek, T., M. Jelenčič^, LP Waits, I Kos, K Jerina, P Trontelj (2012) Monitoring the effective population size of a brown bear (*Ursus arctos*) population using new single-sample approaches. Molecular Ecology 21:862-875.
119. \*Graves, TA, TN Wasserman\*, M Ribeiro\*, EL Landguth, SF Spear, N Balkenhol, CB Higgins\*, M-J Fortin, SA Cushman, LP Waits (2012) The influence of landscape characteristics and home-range size on the quantification of landscape-genetics relationships. Landscape Ecology 27: 253-266.
118. Sparkman AM, LP Waits, DL Murray (2012) Evidence for a genetic basis for delayed dispersal in a cooperatively breeding canid. Animal Behavior 83:1091–1098.
117. \*Hoisington-Lopez, JL, LP Waits, J Sullivan (2012) Species limits and integrated taxonomy of the Idaho ground squirrel (*Urocitellus brunneus*): Genetic and ecological differentiation. Journal

of Mammalogy 93:589-604.

116. Wagner HH, MA Murphy, R Holderegger, LP Waits (2012) Developing a distributed interdisciplinary graduate course for 21<sup>st</sup> century scientists. *Bioscience* 62:182-188.
115. \*Dunn, SJ, LP Waits, JA Byers (2012) Genetic versus census estimators of the opportunity for sexual selection in the wild. *The American Naturalist* 179: 451-462.
114. \*Dellinger, JA, TD Steury, BL Ortman, J Bohling\*, LP Waits (2011) Food habits of red wolves (*Canis rufus*) during pup-rearing season. *Southeastern Naturalist* 10:731-740
113. \*Dunn, SJ, E Clancey\*, LP Waits, JA Byers (2011) Inbreeding depression in pronghorn (*Antilocapra americana*) fawns. *Molecular Ecology* 20:4889-98.
112. Sparkman AM, LP Waits, DL Murray (2011) Social and Demographic Effects of Anthropogenic Mortality: A Test of the Compensatory Mortality Hypothesis in the Red Wolf. *PLoS ONE* 6: e20868.
111. Goldberg, CS, K Woodruff, R Toldness^, LP Waits (2011) Robust molecular sex identification of beaver (*Castor canadensis*) from non-destructive samples. *Conservation Genetics* 3:729-731.
110. Ausband, DE, J Young, B Fannin\*, MS Mitchell, JL Stenglein\*, LP Waits, JA Shivik (2011) Hair of the dog: obtaining samples from coyotes and wolves noninvasively. *Wildlife Society Bulletin* 35:105-111.
109. \*Goldberg CS, A Pocewicz\*, M Nielsen-Pincus\*, LP Waits, P Morgan, JE Force, LA Vierling (2011) Predictions of ecological and social impacts of alternative residential development policies to inform decision-making in a rural landscape. *Conservation Letters* 4:423-432.
108. Goldberg, CS, DS Pilliod, RS Arkle, LP Waits (2011) Molecular detection of cryptic vertebrate species in stream water. *Plos One* 6:e22746.
107. Adams, JR, CS Goldberg, WR Bosworth, JL Rachlow, LP Waits (2011) Rapid species identification of pygmy rabbits (*Brachylagus idahoensis*) from fecal pellet DNA. *Molecular Ecology Resources* 11:808-812.
- 106.\* Bohling JM, LP Waits (2011) Assessing the prevalence of hybridization between sympatric *Canis* species in a region surrounding the red wolf (*Canis rufus*) recovery area in North Carolina. *Molecular Ecology* 20: 2142-2156.
105. \*Stenglein JL, LP Waits, DE Ausband, P Zager, CM Mack (2011) Using noninvasive genetic sampling at grey wolf (*Canis lupus*) rendezvous sites to determine pack size, family relationships, and relatedness. *Journal of Mammalogy* 92:784-795.
104. ^Russell DM, CS Goldberg\*, L Sprague, LP Waits, DE Green, KL Schuler, EB Rosenblum (2011) Ranavirus outbreaks in amphibian populations of northern Idaho. *Herpetological Review* 42: 223-225.
103. ^Falcón-Linero W, CS Goldberg, LP Waits, WA Estes-Zumpf, JL Rachlow (2011) First record of multiple paternity in the pygmy rabbit (*Brachylagus idahoensis*): Evidence from analysis of 16 microsatellite loci. *Western North American Naturalist* 71:271-275.



102. Onorato, DP, R Desimone, C White, P Zager, LP Waits (2011) Genetic assessment of paternity and relatedness in a managed population of cougars: biological interpretation and management implications. *Journal of Wildlife Management* 75:378–384.
101. Sparkman A, JA Adams, T Steury, LP Waits, D Murray (2011) Helper effects on pup lifetime fitness in the cooperatively breeding red wolf (*Canis rufus*). *Proceedings of the Royal Society London, Series B* 278:1381-1389.
100. Sparkman A, JA Adams, T Steury, LP Waits, D Murray (2011) Direct fitness benefits of delayed dispersal in the cooperatively breeding red wolf (*Canis rufus*). *Behavioral Ecology* 22:199-205.
99. \*Waite JN, LP Waits, M Bozza, VN Burkanov, DG Calkins, RD Andrews (2011) Differentiating between Steller sea lion (*Eumetopias jubatus*) and northern fur seal (*Callorhinus ursinus*) scats through analysis of faecal DNA. *Molecular Ecology Resources* 11:166-170.
98. ^Russell D, C Goldberg, LP Waits, EB Rosenblum (2010) *Batrachochytrium dendrobatidis* infection dynamics in the Columbia Spotted Frog (*Rana luteiventris*) in north Idaho, USA. *Diseases of Aquatic Organisms* 92:223-230.
97. \*DeBarba M, LP Waits, EO Garton, P Genovesi, E Randi, R Chirichella, E Cetto (2010) The power of genetic monitoring for studying demography, ecology, and genetics of a reintroduced brown bear population. *Molecular Ecology* 19, 3938–3951.
96. Storfer A, \*Murphy M, Spear S, Holderegger R, Waits L (2010) Landscape Genetics: Where Are We Now? *Molecular Ecology* 19:3496-3514.
95. Sork, V and LP Waits (2010) Contributions of landscape genetics– approaches, insights, and future potential. *Molecular Ecology* 19:3489-3495.
94. \*Goldberg C, LP Waits (2010) Comparative landscape genetics of two pond-breeding amphibian species in a highly modified agricultural landscape. *Molecular Ecology* 19:3650 – 3633.
93. \*Dunn, SJ, KK Barnowe-Meyer, KJ Gebhardt, N Balkenhol\*, LP Waits, JA Byers (2010) Ten polymorphic microsatellite markers for pronghorn (*Antilocapra americana*). *Conservation Genetics Resources* 2:81-84.
92. Segelbacher G, Cushman SA, Epperson BK, Fortin M-J, Francois O, Hardy OJ, Holderegger R, Taberlet P, Waits LP, Manel S (2010) Applications of Landscape Genetics in Conservation Biology: Concepts and Challenges. *Conservation Genetics* 11:375-385.
91. \*Stenglein JL, M De Barba\*, DE Ausband, LP Waits (2010) Impacts of sampling location within a faeces on DNA quality in two carnivore species. *Molecular Ecology Resources* 10:109-114.
90. \*Estes-Zumpf W, JL Rachlow, LP Waits, KI Warheit (2010) Dispersal, gene flow, and population genetic structure in the pygmy rabbit (*Brachylagus idahoensis*). *Journal of Mammalogy* 91:208-219.
89. \*Goldberg CS, LP Waits (2010) Quantification and reduction of bias from sampling larvae to infer population and landscape genetic structure. *Molecular Ecology Resources* 10:304-313.
88. \*Nielsen-Pincus M, CS Goldberg\*, A Pocewicz\*. JE Force, LP Waits, P Morgan, L Vierling (2010) Predicted Effects of Residential Development on a Northern Idaho Landscape under Alternative Growth Management and Land Protection Policies. *Landscape and Urban Planning*

94:255-263

87. \*Skribinsek T, M Jelencic^, LP Waits, I Kos, P Trontelj (2010) Highly efficient multiplex PCR of noninvasive DNA does not require pre-amplification. *Molecular Ecology Resources* 10:495-501.
86. \*Stenglein JL, Waits LP, Ausband DE, Zager P, Mack C (2010) Efficient, Noninvasive Genetic Sampling for Monitoring Reintroduced Wolves. *Journal of Wildlife Management* 74:1050-1058.
85. \*De Barba, M, LP Waits (2010) Multiplex pre-amplification for noninvasive genetic sampling: is the extra effort worth it? *Molecular Ecology Resources* 10:659-665.
84. \*De Barba, M, LP Waits, P Genovesi, E Randi, R Chirichella, E Cetto (2010) Comparing opportunistic and systematic collection methods for noninvasive genetic monitoring of a small translocated brown bear population. *Journal of Applied Ecology* 47:172-181.
83. \*Viteri MP, LP Waits (2009) Identifying polymorphic microsatellite loci for future use in Andean bear research. *Ursus* 20:102-108
82. \*Goldberg, CS, TJ Hawley, LP Waits (2009) Local and regional patterns of amphibian chytrid prevalence on the Osa Peninsula, Costa Rica. *Herpetological Review* 40:309-311
81. \*Balkenhol N, LP Waits (2009) Molecular road ecology: exploring the potential of genetics for investigating transportation impacts on wildlife. *Molecular Ecology* 18: 4151–4164.
80. \*Balkenhol N, LP Waits, R Dezzani (2009) Statistical approaches in landscape genetics: An evaluation of methods for linking landscape and genetic data. *Ecography* 32:818-830.
79. \*Balkenhol N, Gugerli F, Cushman SA, Waits LP, Wagner HH, R Holderegger, A. Coulon (2009) Identifying Future Research Needs in Landscape Genetics: Where to From Here? *Landscape Ecology* 24:455-463.
78. \*Robinson, SJ, LP Waits, I Martin (2009) Estimating black bear abundance using DNA-based capture-mark-recapture models. *Ursus* 20:1-11.
77. Schwartz, MK, JP Copeland, NJ Anderson, JR Squires, RM Inman, KS McKelvey, KL Pilgrim, LP Waits, SA Cushman (2009) Wolverine gene flow across a narrow climatic niche. *Ecology* 90:3222-3232.
76. \*Knapp, SM, BA Craig, LP Waits (2009) Incorporating genotyping error into non-invasive DNA-based mark-recapture population estimates. *Journal of Wildlife Management*. 73:598-606.
75. \*Goldberg, CS, LP Waits (2009) Using habitat models to determine conservation priorities for pond-breeding amphibians in a privately-owned landscape of northern Idaho. *Biological Conservation* 142:1096-1104.
74. McCarthy, T, LP Waits, B Mijiddori (2009) Status of the Gobi bear in Mongolia as determined by non-invasive genetic methods. *Ursus* 20:30 – 38.
73. \*Gebhardt, KJ, D Brightsmith, G Powell, LP. Waits (2009) Maximizing DNA yield from molted feathers: A case study of parrots in the Peruvian Amazon rainforest. *Journal of Field Ornithology* 80:183-192
72. \*McCarthy, KP, TK Fuller, M Ming, TM McCarthy, LP Waits, K. Jumabaev (2008) Assessing

- Estimators of snow leopard abundance. *Journal of Wildlife Management* 72:1826-1833.
70. Kendall, KC, JB Stetz, DA Roon\*, LP Waits, JB Boulanger, D. Paetkau (2008) Grizzly bear density in Glacier National Park. *Journal of Wildlife Management*. 72(8):1693–1705.
  69. Vali, U, A Einarsson, LP Waits, H Elgren (2008) To what extent do microsatellite markers reflect genome-wide genetic diversity in natural populations? *Molecular Ecology* 17:3808-3813
  68. \*Gebhardt, KJ, LP Waits (2008) High error rates for avian molecular sex identification primer sets applied to molted feathers. *Journal of Field Ornithology* 79:286-292.
  67. \*Gebhardt, KJ, LP Waits (2008) Cross-species amplification and optimization of microsatellite markers for use in six Neotropical parrots. *Molecular Ecology Resources* 8:835 – 839.
  66. Galbreath, GJ, M Hunt, T Clements, LP Waits (2008) An apparent hybrid bear from Cambodia. *Ursus* 19:85-86.
  65. Boulanger, JB, KC Kendall, JB Stetz, DA Roon\*, LP Waits, D Paetkau (2008) Use of multiple data sources to improve DNA-based mark-recapture population estimates of grizzly bears. *Ecological Applications* 18:557-589.
  64. \*Hansen T, S Brunsfeld, B Finegan, LP Waits (2008) Pollen Dispersal and Genetic Structure of the tropical tree *Dipteryx panamensis* in a fragmented Costa Rican landscape. *Molecular Ecology* 17:2060-2073.
  63. \*Hansen, T, S Brunsfeld, B Finegan, LP Waits (2008) Characterization of microsatellite markers for the almendro (*Dipteryx panamensis*), a tetraploid rainforest tree. *Molecular Ecology Resources* 8:425-427.
  62. \*Pocewicz, A, M Nielsen-Pincus\*, CS Goldberg\*, MH Johnson\*, P Morgan, JE Force, LP Waits, L Vierling (2008) Predicting landscape change: comparison of landowner decision and historically-based models. *Landscape Ecology* 23:195-210.
  61. \*Estes-Zumpt, W, J Rachlow, LP Waits (2008) Ten polymorphic microsatellite markers for the pygmy rabbit (*Brachylagus idahoensis*). *Molecular Ecology Resources* 8:360-362.
  60. \*Hansen, T, S Brunsfeld, B Finegan, LP Waits (2007) Conventional and genetic measures of seed dispersal for *Dipteryx panamensis* (Fabaceae) in continuous and fragmented Costa Rican rain forest. *Journal of Tropical Biology* 23:635-642.
  59. \*Miller, CR, P Joyce, LP Waits (2007) Ordered vs. unordered samples: response to Bromghin. *Molecular Ecology* 16:4885.
  58. \*Robinson, SJ, LP Waits, I Martin (2007) Evaluating population structure of black bears on the Kenai Peninsula using mitochondrial and nuclear DNA analyses. *Journal of Mammalogy* 88:1288-1299.
  57. Murray, DL and LP Waits (2007) Taxonomic status and conservation strategy of the endangered red wolf: A response to Kyle et al. (2006). *Conservation Genetics* 8:1483-1485.
  56. Galbreath, G, CP Groves, LP Waits (2007) Genetic resolution of the composition and phylogenetics placement of the Isabelline bear. *Ursus* 18:129-131.

55. \*Murphy, MA, K Kendall, A Robinson, C Perugini<sup>^</sup>, and LP Waits (2007) The impact of time and field conditions on brown bear fecal DNA amplification. *Conservation Genetics*. 8:1219-1224.
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53. \*Hicks J, J Rachlow, C Willams, OH Rhodes, LP Waits (2007) Reintroduction and genetic structure: Rocky Mountain elk in Yellowstone and the Western States. *Journal of Mammalogy* 88:129-138.
52. Waits, LP, VA Buckley-Beason\*, WE Johnson, D Onorato, T McCarthy (2007) A select panel of polymorphic microsatellite loci for individual identification of snow leopards (*Panthercia*). *Molecular Ecology Notes* 7:311—314.
51. \*Adams, JR, C Lucash, L Schutte, LP Waits (2007) Locating hybrid individuals in the red wolf (*Canis rufus*) experimental population area using a spatially targeted sampling strategy and faecal DNA genotyping. *Molecular Ecology* 16:1823-1834.
50. Storfer, A, M Murphy\*, JS Evans, CS Goldberg\*, S Robinson\*, SF Spear\*, R Dezzani, E Delmelle, L Vierling, LP Waits (2007) Putting the “landscape” in landscape genetics. *Heredity* 98:128-142.
49. Adams\* JR and LP Waits (2007) An efficient method for screening faecal DNA genotypes and detecting new individuals and hybrids in the red wolf (*Canis rufus*) experimental population area. *Conservation Genetics* 8:123-131.
48. Byers J, LP Waits (2006) Good genes and sexual selection in nature. *Proceedings of the National Academy of Sciences, USA* 103:16343-16345.
47. Kitchen\*, AM, EM Gese, LP Waits, SM Karki, ER Schauster (2006) Multiple breeding strategies in the swift fox, *Vulpes velox*. *Animal Behavior* 71:1029-1038.
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45. Miller\*, CR, LP Waits, P Joyce (2006) Recent evolutionary history of the brown bear (*Ursus arctos*) in Southern Canada, the Contiguous United States, and Mexico. *Molecular Ecology* 15:4477 – 4485.
44. \*Bellemain, E, A Zedrosser, S Manel, P Taberlet, LP Waits, and JE Swenson (2006). The dilemma of female mate selection in the brown bear, a species with sexually selected infanticide. *Proceedings of the Royal Society London Series B* 273:283-291.
43. \*Cegelski, CC, LP Waits, NJ Anderson, CJ Kyle and C Strobeck (2006) Genetic diversity and population structure of wolverine (*Gulo gulo*) populations at the southern edge of their current distribution in North America with implications for genetic viability. *Conservation Genetics* 7:197-211.
42. Waits, LP and D Paetkau (2005, invited review) New non-invasive genetic sampling tools for wildlife biologists: a review of applications and recommendations for accurate data collection. *Journal of Wildlife Management* 69:1419-1433.

41. \*Garner, A, JL Rachlow, LP Waits (2005) Genetic diversity and population divergence in fragmented habitats: conservation of Idaho ground squirrels. *Conservation Genetics* 6:759 – 774.
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38. Haroldson, M, K Gunther, D Reinhart, S Podrutzny, C Cegelski, L Waits, T Wyman, J Smith (2005) Changing number of spawning cutthroat trout in tributary streams of Yellowstone lake and estimates of grizzly bears visiting streams from DNA. *Ursus* 16:167-180.
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29. \*Cegelski, C, LP Waits, NJ Anderson (2003) Assessing population structure and gene flow in Montana wolverines (*Gulo gulo*) using assignment-based approaches. *Molecular Ecology* 12:2907-2918.
28. \*Murphy, MA, LP Waits, KC Kendall (2003) Impact of diet on faecal DNA amplification and sex identification brown bears (*Ursus arctos*). *Molecular Ecology* 12:2261-2265.
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- Yellowstone Grizzly (*Ursus arctos*): Implications for Conservation. Proceedings of the National Academy of Science USA 100:4334-4339.
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  19. \*Miller, J, C Miller\*, M Scott, LP Waits (2002) Endangered Species Act: Salvation or starvation, *Bioscience* 52:163-168.
  18. \*Goossens, B, L Chikhi, P Taberlet, LP Waits, D Allainé (2001) Microsatellite analysis of genetic variation among and within Alpine marmot populations in the French Alps. *Molecular Ecology* 10:41-52.
  17. Waits, LP, G Luikart, P Taberlet (2001) Estimating the probability of identity among genotypes: Cautions and guidelines. *Molecular Ecology* 10:249-256.
  16. \*Murphy, M, LP Waits, KC Kendall (2000) Quantitative evaluation of drying methods for brown bear fecal samples. *Wildlife Society Bulletin* 28:951-957.
  15. Waits, LP, P Taberlet, J Swenson, A Sandegren, R Franzen (2000) Genetic diversity and gene flow in the Scandinavian brown bear. *Molecular Ecology* 9:421-431.
  14. Waits, LP (1999) Molecular genetic applications for bear research. *Ursus* 11:253-260.
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  12. Taberlet, P, LP Waits, G Luikart (1999) Non-invasive genetic sampling: look before you leap. *Trends in Ecology and Evolution* 14:323-327.
  11. \*Goossens, B, LP Waits, P Taberlet (1998) Hair samples as a source of DNA: reliability of dinucleotide microsatellite genotyping. *Molecular Ecology* 7:1231-1241.
  10. \*Goossens, B, L Graziani, LP Waits, E Farand, S Magnolon, J Coulon, M-C Bel, D Allainé, (1998)

- Extra-pair paternity in the monogamous alpine marmot revealed by nuclear DNA microsatellite analysis. *Behavioural Ecology and Sociobiology* 43:281-288.
9. Paetkau, D, LP Waits, P Clarkson, L Craighead, E Vyse, R Ward, C Strobeck (1998) Dramatic variation in genetic diversity across the range of North American brown bears. *Conservation Biology* 12:418-429.
  8. Waits, L, S Talbot, RH Ward, G Shields (1998) Phylogeography of the North American brown bear and implications for conservation. *Conservation Biology* 12:408-417.
  7. Waits, L, D Paetkau, C Strobeck, RH Ward (1998). A comparison of mitochondrial DNA and microsatellite DNA variability in brown bear populations from Alaska, Canada, and the lower 48 states. *Ursus* 10:307-314.
  6. Taberlet, P, LP Waits (1998) Non-invasive genetic sampling (letter). *Trends in Ecology and Evolution* 13:26-27.
  5. Paetkau, D, LP Waits, P Clarkson, L Craighead, C Strobeck (1997) An empirical evaluation of genetic distance statistics for use with microsatellite loci. *Genetics* 147:1943-1957.
  4. Taberlet, P, JJ Camarra, S Griffin, E Uhres, O Hanotte, LP Waits, C Dubois-Paganon, T Burke, J Bouvet (1997) Non-invasive genetic tracking of the endangered Pyrenean brown bear population. *Molecular Ecology* 6:869-876
  3. Taberlet, P, S Griffin, B Goossens, S Questiau, V Manceau, N Escaravage, LP Waits, J Bouvet (1996) Reliable genotyping of samples with very low DNA quantities using PCR. *Nucleic Acids Research* 24:3189-3194.
  2. Dunkle, S, T Reust, D Nowack, L Waits, M Paulik, DM Morre, DJ Morre (1991) Temperature- and acceptor-specificity of cell-free vesicular transfer from transitional endoplasmic reticulum to the cis Golgi apparatus. *Biochemistry Journal* 288: 969-976.
  1. Waits, L, S Dunkle, FE Wilkinson, P Moreau, K Safranski, T Reust, DM Morre, DJ Morre (1990). Cell-free transfer of sterols from dictyosome-like structures to plasma membrane vesicles of guinea pig testes. *Protoplasma* 154:815-824.

#### Refereed (submitted)

- Apa AD, TR Thompson\*, KP Reese, LP Waits (submitted) Dispersal, gene flow, and population genetic structure in the greater sage-grouse: implications for connectivity and natural recolonization. *Condor*
- \*Barnowe-Meyer, KK, PJ White, LP Waits, JA Byers (submitted) The extant genetic diversity, connectivity, and structure of Greater Yellowstone pronghorn populations following regional demographic collapse. *Conservation Genetics*.
- Beckmann, JP, LP Waits, A Hurt, A Whitelaw, S Bergen (submitted) Using detection dogs and resource selection probability function models to assess habitat suitability in a critical linkage zone for large carnivores in the Greater Yellowstone Ecosystem. *Journal of Mammalogy*
- \*Bohling JH, A Beyer, LP Waits (submitted) Factors influencing red wolf-coyote hybridization in eastern North Carolina. *Journal of Animal Ecology*
- \*Brzeski KE, DR Rabon, Jr, MJ Chamberlain, LP Waits, SS Taylor (submitted) Inbreeding and Inbreeding Depression in Endangered Red Wolves (*Canis rufus*). *Molecular Ecology*
- Davidson GA, DA Clark, BK Johnson, LP Waits (submitted) Estimating Cougar Densities in northeast Oregon Using Scat Detection Dogs. *Journal of Wildlife Management*

- De Barba M, JR Adams, CS Goldberg, CR Stansbury, LP Waits (submitted) Molecular species identification for multiple carnivores. Conservation Genetics Resources
- Knowlton, F.F. E. M. Gese, J. R. Adams, K. Beck, T. K. Fuller, D. L. Murray, T. Steury, M. K. Stoskopf, W. Waddell, L. P. Waits (submitted) Managing Hybridization in Endangered Species Recovery: The Case of the Red Wolf. Animal Conservation.
- \*Schwalm D, LP Waits, WB Ballard (submitted) Little fox on the prairie: genetic structure and diversity throughout the distribution of a grassland carnivore in the United States. Conservation Genetics
- \* Seamster VA, LP Waits, SA Macko, HH Shugart (submitted) Coyote (*Canis latrans*) mammalian prey diet shifts in response to seasonal vegetation change. Isotopes in Environmental Health Studies
- \*Stansbury CR, DE Ausband, P Zager, CM Mack, LP Waits (submitted) A long-term population monitoring approach for a wide-ranging carnivore: noninvasive genetic sampling of gray wolf rendezvous sites in Idaho, USA. Journal of Wildlife Management
- \* Tebbenkamp JM, LA Wiechman, SC Gardner, KP Reese, LP Waits (submitted) A multi-method evaluation of connectivity in a threatened Distinct Population Segment of greater sage-grouse. Conservation Genetics
- \*Woodruff, S, JR Adams, T Johnson, LP Waits (submitted) Rapid species identification of Sonoran pronghorn (*Antilocapra americana sonoriensis*) from fecal pellet DNA. Wildlife Society Bulletin
- \*Wulsch, C, LP Waits, M Kelly (submitted) Non-invasive Individual and Species Identification of Jaguars (*Panthera onca*), Pumas (*Puma concolor*) and Ocelots (*Leopardus pardalis*) in Belize, Central America using Cross-Species Microsatellites and Fecal DNA. Molecular Ecology Resources

### Peer-Reviewed Other Publications:

#### Book Chapters

- Cleary, KC, A Sanfiorenzo, LP Waits (in press) Genetics as a tool for biodiversity conservation: examples from Central America in Central American Biodiversity - Conservation, Ecology, and a Sustainable Future, F. Huettmann, Ed, Springer
- Francois, O, LP Waits (in press) Assignment & clustering methods in landscape genetics in *Landscape genetics: Concepts, methods, applications*, N Balkenhol, S Cushman, A Storfer, LP Waits, eds, Blackwell.
- Spear S, J Parker, C Peterson, C Jenkins, L Waits (in press) Modeling the effect of roads on habitat area and connectivity of midget faded rattlesnakes (*Crotalus oreganus concolor*) across southwest Wyoming. In *Biology of the Rattlesnakes volume II*, WK Hayes, ed, Eco
- Waits, LP, CW Epps (in press) Population genetics and wildlife habitat. In *Habitats in Peril: concepts, challenges, and solutions*, Michael L. Morrison, Editor, John Hopkins University Press
- Waits, LP, S Spear, S Cushman (in press) Applications of landscape genetics in terrestrial wildlife research in *Landscape genetics: Concepts, methods, applications*, N Balkenhol, S Cushman, A Storfer, LP Waits, eds, Blackwell.
- Waits, LP, A Storfer (in press) Basics of population genetics in *Landscape genetics: Concepts, methods, applications*, N Balkenhol, S Cushman, A Storfer, LP Waits, eds, Blackwell.
- Waits, LP (2010) Box 4: Sex identification and population size of grizzly bears by using noninvasive genetic sampling in DeWoody et al, eds. Molecular approaches in natural resource conservation. Cambridge University Press, New York.
- Johnson, WE, E Eizirik, LP Waits, SJ O'Brien (2007). Molecular ecology and carnivore conservation: the application of molecular techniques for inferring identity, kinship, and social structure in the Neotropics. In: Neotropical Carnivore Conservation.
- Waits, LP (2007) Microsatellite DNA genotyping identifies killer bear and cubs Example box in Eds. F Allendorf and G Luikart, Conservation and Genetics of Populations. Blackwell, Mass.
- Miller, C and LP Waits, (2007, 2012) Estimating effective population size in Yellowstone Grizzly bears in Example Box in ed. F Allendorf and G Luikart Conservation and Genetics of Populations.



Blackwell, Mass.

Allendorf, F, Miller, C and Waits, L (2005) Genetically effective sizes of grizzly bear populations in Meffe and Carroll. Principles of Conservation Biology, Sinauer, Mass.

Waits, LP (2004) Using non-invasive genetic sampling to detect and count rare wildlife species in B. Thompson (Ed) Sampling Rare or Elusive Species, Island Press.

Waits, LP (2004) Taxonomic Placement of the Giant Panda Based on Molecular Data in DH Lindberg (ed) Giant Panda Conservation, University of California Press.

Haufler, J, R Baydack, H Campa, B Kernohan, LJ O'Neil, LP Waits, C Miller (2002) Performance measures for Ecosystem Management. Wildlife Society Technical Report.

Waits, L, D Paetkau, C Strobeck (1999) The genetics of the bears of the world. In: Bears: Status Survey and Conservation Action Plan (C. Servheen, ed) IUCN. Gland, Switzerland.

### **Other Publications**

Pilliod, DS, CS Goldberg, MB Laramie, LP Waits. 2013. Application of environmental DNA for inventory and monitoring of aquatic species: U.S. Geological Survey Fact Sheet 2012-3146, 4 p.

Wultsch, C, M. Kelly, L.P. Waits 2011. Noninvasive Monitoring of Elusive Jaguars (*Panthera onca*) and other Forest Felids in Belize, Central America: a powerful survey approach for the tropics. Wild Field Monitor

Mumma, M and LP Waits. 2011. Using Genetic Techniques to Inform Wildlife Management Decisions in Newfoundland, Canada. Safari Club International Newsletter

Waits, LP, D Roon, M Murphy. (1999) Non-invasive genetic sampling of bear populations. International Bear Association Newsletter 8:23-25

Waits, LP, E Meijarrd, (1997) A report on the bear ecology session of the 11th International Conference of Bear Research and Management. International Bear Association Newsletter

Wooding, S, LP Waits. (1994) Mitochondrial DNA sequence analysis as a tool in bear biology. International Bear Association Newsletter 3:2-3.

### **Invited Research Talks**

2013, Tracking hybridization of red wolves and coyotes: lessons for ecology, evolution and recovery. Iowa State University

2013, Approaches for ensuring accuracy in aquatic environmental DNA studies, eDNA symposium, Society for Conservation Biology Meeting, Baltimore, MD.

2013, Using noninvasive genetic sampling approaches to monitor terrestrial and aquatic biodiversity, American Museum of Natural History, New York.

2013, Tracking hybridization of red wolves and coyotes: lessons for ecology, evolution and recovery. Kansas State University

2012, Contributions of genetics to the conservation and management of wildlife populations, Biotechnology symposium, Katmandu, Nepal.

2012, Genetic Diversity and Fitness, Medical University, Katmandu, Nepal

2012, Conservation Genetic, landscape genetics and molecular ecology, Katmandu University, Nepal

2012, Non-invasive genetic sampling contributions to wildlife ecology, conservation and management, Memorial University Newfoundland, Canada

2012, Balancing it all: teaching, research, service and family, Memorial University Graduate Student Symposium, Newfoundland, Canada

2012 The use of non-invasive genetic sampling to monitor terrestrial carnivores in the Symposium Transformative Research and Management in Northwestern Large and Meso-Carnivores Wildlife Society, Portland.

2011 Molecular genetic tools and techniques for improving management of wildlife and game species. International Union of Game Biologists, Barcelona (Keynote talk)

- 2011 An Overview of the Contributions of Non-invasive Genetic Sampling and Landscape Genetics to the Conservation of Wildlife Populations. 8th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin
- 2011 Recovering the endangered red wolf (*Canis rufus*): addressing the challenge of hybridization. WSU Student Chapter of the Wildlife Society
- 2011 Contributions of genetics to wildlife conservation and management. Zoo, Exotics and Wildlife Symposium. Pullman, Washington.
- 2011 Contributions of bioinformatics and computational biology to conservation genetics. IBEST seminar Series, University of Idaho.
- 2010 Landscape Genetics Contributions to Wildlife Management, Texas Tech University
- 2010 Historical DNA analyses of brown bears in North America, Stockholm Univ, Sweden
- 2010 An introduction to Landscape Genetics – Conservation Genetics Workshop, Florida
- 2010 Genetic Contributions to Red Wolf Recovery - Conservation Genetics Workshop, Florida
- 2010 Genetic Consideration for lynx recovery in Europe – Lynx Conference, Slovenia
- 2009 Landscape Genetics of Wildlife, Northern Arizona University
- 2009 Noninvasive genetic sampling for carnivore surveys. Carnivores 2009, Denver, Colorado
- 2008 Realizing the potential of non-invasive genetic sampling of wildlife populations. Biometry Symposium. Wildlife Society Meetings. Miami, FL.
- 2008 New directions in landscape genetics: examples from simulations and North American Amphibians. EU funded workshop on Landscape Genetics, Grenoble, France.
- 2008 Wolverine conservation genetics, Friends of the Clearwater Public Meeting, Moscow, Idaho
- 2008 Getting the scoop from scat, Univ Idaho, Alumni Association, Moscow, Idaho
- 2007 Molecular genetic contributions to the recovery of the red wolf, Univ. of California, Davis
- 2007 Genetic structure of Kenai Black bears, Alaska Chapter of Wildlife Society, Juneau
- 2007 Landscape genetics revolution, Idaho State University
- 2006 Conservation Genetics of the Red Wolf, Uppsala University, Sweden
- 2006 Non-invasive genetic sampling past, present and future, Wildlife Society Meetings, Alaska
- 2005 Non-invasive Genetic sampling in Europe, International Bear Association
- 2005 Achieving science driven recovery planning for endangered species, Utah State University
- 2005 The Landscape genetic revolution, Purdue University
- 2005 The Value of Conservation Genetics, Los Amigos Research Station, Peru
- 2004 Conservation Genetics for Wildlife, Universite de San Francisco de Quito Ecuador
- 2004 The Landscape genetic revolution, Kansas State University Women in Science Seminar
- 2004 Developing an interdisciplinary graduate program, UI interdisciplinary colloquium
- 2003 Addressing the Challenge of Hybridization in the Red Wolf, Conservation Genetics Conference sponsored by American Genetics Association, Fort Royal, Virginia.
- 2002 Promise and pitfalls of non-invasive DNA sampling for studying the abundance of rare and/or elusive wildlife species, Wildlife Society Conference, Bismark
- 2002 Controlling Introgression the Red Wolf, Oxford University, England
- 2002 Established protocols for dealing with reliability in highly contentious data sets, Northwest Chapter Wildlife Society Meetings, Spokane.
- 2001 Molecular Genetic Tools for the Conservation and Management of Natural Populations, Animal Genomics Symposium, NC State University
- 2001 Interagency Grizzly Bear Study Team Meeting, Post Falls
- 2001 Interagency Grizzly Bear Study Team meeting, Jackson Hole, Wy
- 2000 Panda 2000 Conference, San Diego, Taxonomic placement of the giant panda based on molecular data
- 2000 University of British Columbia Zoology Dept – Conservation genetics and molecular ecology of brown bears
- 1999 Univ. of Idaho, Biology Dept – Conservation Genetics of the Scandinavian Brown Bear,
- 1998 Univ. of Montana, Genetic diversity and Gene Flow in the Scandinavian Brown bear
- 1998 Idaho Chapter Wildlife Society, Brown bear conservation genetics

- 1998 Conservation Genetics of Scandinavian Brown Bear, Working group for conservation of Spanish brown bears, Spain,
- 1997 Recent advances in the conservation genetics and molecular ecology of the brown bear (*Ursus arctos*) Department of Zoology, Washington State
- 1996 Department of Mathematics, University of Southern California, Conservation genetics of bears - data analyses and mutational models
- 1995 Department of Wildlife Biology, Utah State, Phylogeny and genetic variation of the brown bear and implications for management
- 1994 University of California, Berkeley - Museum of Natural History, Phylogenetics and genetic variation within the Ursidae estimated using mtDNA sequence analysis

### **Workshops/Symposia Organized**

- 2013, Landscape Genetics Workshop, Society for Conservation Biology, Baltimore, MD – 25 attendees
- 2012, Conservation Genetics Workshop, Loja, Ecuador – 20 attendees
- 2011, Conservation Genetics Workshop, Kathmandu, Nepal – 15 attendees
- 2010, Landscape Genetics Workshop, Society for Conservation Biology, Edmonton, Canada
- 2008, Landscape Genetics Workshop, Wildlife Society Meetings, Miami, Florida
- 2008, Introduction to landscape genetics for landscape ecologists Workshop, US Association of Landscape Ecologists, Madison, WI.
- 2007, Conservation Genetics Workshop, Wildlife Society Meetings, Tuscon, AZ
- 2007, Introduction to landscape genetics for Landscape ecologists Workshop, International association of Landscape Ecologists, Netherlands
- 2007, Landscape genetics for wildlife management and conservation Symposium, Wildlife Society Meetings, Alaska
- 2005, Balancing biodiversity conservation and sustainable development, Symposium, Society for Conservation Biology, Brasilia, Brazil
- 2005, Non-invasive genetic sampling, Workshop, International Bear Association, Italy.
- 2000, Non-invasive genetic sampling of carnivores, Symposium, Carnivore 2000 Conference, Denver
- 1998, Conservation Genetics, Symposium International Bear Association, Gatlinburg, Tenn.

### **Professional Meeting Presentations (1<sup>st</sup> author presented)**

- Adams JR, A Beyer, LP Waits (2013) Understanding the Evolutionary History of Canis in North America: A Multiple Molecular Dataset Approach. The Wildlife Society, Milwaukee, WI.
- Baughner, C, G Filippi, JR Adams, JL Johnson-Maynard, LP Waits (2013) A nondestructive, noninvasive genetic test for the presence/absence of the Giant Palouse earthworm (*Driloleirus americanus*). Ecological Society of America. Minneapolis, MN.
- Becker, PA, SM DeMay, LP Waits, JL Rachlow, and C Warren (2013) Evaluating pygmy rabbit recovery efforts in Washington's Columbia Basin. The Wildlife Society, Milwaukee, WI.
- Bosque-Pérez, N.A. J.E. Force, L. Waits, S. Eigenbrode, J.D. Wulfhorst, B. Finegan, P. Morgan, S. Gunter, and N. Sibelet (2013) An international, team-based graduate education and research program: Lessons from an Idaho-Costa Rica collaboration. Entomological Society of America Annual Meeting. Austin, TX (Invited)
- Cleary K, A Chain, A Sanfiorenzo, R Santiago, I Shaver, LP Waits, B Finegan, L Vierling, N Sibelet, N Bosque-Perez, and L Hormel (2013) Quantifying linkages among land-use policies, agricultural intensification, habitat fragmentation, and social-ecological systems in a neotropical biological corridor. Wallace Conference: Turrialba, Costa Rica.
- Cleary K, LP Waits and B Finegan (2013) Agricultural intensification in a neotropical biological corridor: can functional connectivity for frugivorous bats be maintained? Association for Tropical Biology and Organization for Tropical Studies, San Jose, Costa Rica.
- Cleary K, LP Waits and B Finegan (2013) Agricultural intensification in a neotropical biological corridor: can functional connectivity for frugivorous bats be maintained? American Society of

- Mammologists, Philadelphia, PA.
- DeMay, SM, JL Rachlow, LP Waits, and PA Becker (2013) Comparing noninvasive genetic sampling and telemetry to monitor survival and dispersal of juvenile pygmy rabbits. The Wildlife Society, Milwaukee, WI. (poster)
- DeMay, SM, JL Rachlow, LP Waits, and PA Becker (2013) Comparing telemetry and fecal DNA sampling methods to quantify survival and dispersal of juvenile pygmy rabbits. American Society of Mammalogists, Philadelphia, PA.
- DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, and LP Waits (2013) Evaluating noninvasive genetic sampling as a monitoring method for the endangered pygmy rabbit. University of Idaho Innovation Showcase, Moscow, ID.
- DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, and LP Waits (2013) Evaluating DNA degradation rates in faecal pellets of the endangered pygmy rabbit. Idaho Chapter of The Wildlife Society, Couer d'Alene, ID.
- Goldberg CS, K Strickler, A Fremier, LP Waits (2013) Factors affecting detection probability of fishes and amphibians using environmental DNA sampling. American Fisheries Society, Little Rock, AR. (Invited)
- Goldberg CS, K Strickler, A Fremier, LP Waits (2013) Designing efficient monitoring programs using environmental DNA. International Congress for Conservation Biology, Baltimore, MD. (Invited)
- Goldberg CS, K Strickler, A Fremier, LP Waits (2013) Detection of macroorganisms across environmental gradients using aquatic environmental DNA. International Association of Landscape Ecology, Austin, TX. (Invited)
- Goldberg CS, DS Pilliod, RS Arkle, LP Waits (2013). Detection of stream-breeding amphibians using environmental DNA. California/Nevada Amphibian Population Task Force meeting, Arcata, CA.
- Hohbein R, K Cleary, LP Waits (2013) Habitat loss and fragmentation effects upon *C. castanea*, a short-tailed fruit bat. Idaho Chapter of The Wildlife Society, Couer d'Alene, ID. **(best student presentation award)**
- Lonsinger, RC and LP Waits (2013) Monitoring Species of Concern Using Noninvasive Genetic Sampling. Dugway Integrated Natural Resource Management Annual Meeting, Salt Lake City, UT
- Lonsinger, RC, EM Gese, and LP Waits (2013) Balancing Scat Deposition and Fecal DNA Degradation Rates to Optimize Noninvasive Genetic Sampling of Carnivores. The Wildlife Society Annual Meeting, Milwaukee, WI
- Morin, D.J., M.J. Kelly, L.P. Waits (2013) Incorporating Territoriality and Relatedness to Better Understand Coyote Space Use In The Forests Of Western Virginia Using Relocation Data And Fecal DNA. The Wildlife Society, Milwaukee, WI
- Mumma M, C Soulliere, S Mahoney, LP Waits (2013) CSI Newfoundland: Molecular identification of caribou calf predators. Idaho Chapter of The Wildlife Society, Coeur d'Alene, Idaho.
- Pilliod, DS, CS Goldberg, RS Arkle, LP Waits Successes and challenges of using eDNA to monitor amphibians in high-gradient streams. International Congress for Conservation Biology, Baltimore, MD
- Spear SF, M Freake, J Groves, L Williams, C Goldberg, C Jenkins, LP Waits (2013) Using environmental DNA methods to improve detectability and assess reproductive status in hellbender (*Cryptobranchus alleganiensis*) monitoring programs. International Congress for Conservation Biology, Baltimore, MD
- Spear SF, J Parker, CL Jenkins, CR Peterson, LP Waits (2013) Modeling Western Rattlesnake habitat use and connectivity to inform the current and potential impacts of energy development. Joint Meetings of Herpetology, Albuquerque, NM (invited)
- Spear SF, C Jenkins, B Olson, LP Waits (2013) The effects of seasonal habitat use on functional connectivity in Eastern Indigo Snakes in Georgia. US Chapter of the International Association for Landscape Ecology, Austin, TX (invited)
- Waits, LP, C Goldberg (2013) Approaches for ensuring accuracy in aquatic environmental DNA studies. International Congress for Conservation Biology, Baltimore, MD

- Wultsch C, MJ Kelly, LP Waits (2013) Comparison of population density estimation methods for sympatric jaguars and pumas in Belize, Central America using non-invasive genetic sampling, remote-camera trapping and capture-recapture models. The Wildlife Society, Milwaukee, WI.
- Wultsch C, MJ Kelly, LP Waits (2013) Non-invasive Genetic Tracking of Jaguars (*Panthera onca*) and Co-Occurring Felids in Belize, Central America. International Mammalogical Congress, Belfast, Northern Ireland.
- Bosque-Pérez, NA, JE Force, LP Waits, S Eigenbrode, Z Klos (2012) An interdisciplinary team-based graduate research and education program: The University of Idaho IGERT project. Workshop on Developing and Sustaining Interdisciplinary Graduate Programs. Coeur d'Alene, ID.
- DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, LP Waits (2012) Non-invasive genetic monitoring of the Columbia Basin pygmy rabbit: evaluation of fecal DNA degradation. The Wildlife Society 19th Annual Conference, Portland, OR, US.
- Dunn, S, LP Waits, J Byers (2012) Sexual selection in the wild. Palouse Ecology Evolution and Systematics, Moscow, ID.
- Goldberg, CS, DS Pilliod, RS Arkle, LP Waits (2012) Detection of stream-breeding amphibians using environmental DNA. World Congress of Herpetology, Vancouver, B.C., Canada.
- Mumma, MA, LP Waits, KP Lewis, D Fitfield (2012) A comparison of density estimation techniques for black bears and coyotes. American Society of Mammalogists, Reno, NV.
- Pilliod, DS, RS Arkle, Goldberg, CS LP Waits (2012) Using Environmental DNA from Filtered Water Samples to Detect Rocky Mountain Tailed Frogs and Idaho Giant Salamanders. Department of Environmental Quality Workshop. Boise, ID.
- Rhoades, PR, LP Waits, NA Bosque-Pérez, WS Sheppard, C Davis, SD Eigenbrode (2012) Effects of landscape context on native bee communities in Palouse Prairie fragments. Annual meeting of the Entomological Society of America, Knoxville, TN. Poster presentation.
- Rhoades, PR, LP Waits, NA Bosque-Pérez, WS Sheppard, C Davis, SD Eigenbrode (2012) Using landscape factors to estimate abundance, species richness and genetic structure of native bees: a conceptual approach. Annual meeting of the Pacific Branch of the Entomological Society of America. Portland, OR. Poster presentation.
- Schwalm, DL, MA Murphy, LP Waits, WB Ballard (2012) Multiple factors influence gene flow in the Great Plains: the swift fox as a case study. Annual Conference of the Texas Chapter of The Wildlife Society, Fort Worth, TX.
- Schwalm, DL, SA Cushman, MA Murphy, L. P. Waits (2012) Identifying connectivity networks and corridors in a fragmented mesocarnivore population with a novel resistance surface. Annual Conference of The Wildlife Society, Portland, OR.
- Shaver, I, K Cleary, A Sanfiorenzo, R Santiago, A Chain-Guadarrama, L Waits, B Finegan, L Vierling, L Hormel, NA Bosque-Pérez (2012) Evaluating social-ecological interactions in fragmented forests and the agricultural matrix in a dynamic biological corridor landscape in Costa Rica. IGERT PI Meeting. Washington, DC, (Poster presentation)
- Spear, S, M Freake, C Jenkins, LP Waits (2012) Using environmental DNA to detect hellbender (*Cryptobranchus alleganiensis*) presence in Tennessee and Georgia. Annual meeting of the Southeast Partners in Amphibian and Reptile Conservation, Pikeville, TN.
- Spear, S, D Stevenson, C Jenkins, B Olson, LP Waits (2012) Conservation Genetics of the threatened Eastern Indigo Snake. World Congress of Herpetology, Vancouver, BC.
- Spear, S, J Parker, C Peterson, C Jenkins, LP Waits (2012) Natural and anthropogenic factors influencing habitat use and connectivity of Midget Faded Rattlesnakes (*Crotalus oreganus concolor*). Invited talk, Annual meeting of the Southwest Partners in Amphibian and Reptile Conservation, Las Vegas, NV.
- Tebbenkamp, J, LP Waits, KP Reese, S Gardner (2012) Genetic structure and genetic diversity of greater sage-grouse in Mono County, California. Annual Conference of The Wildlife Society, Portland, OR
- Torstrom, S and LP Waits (2012) Detecting the presence of pygmy rabbits (*Brachylagus idahoensis*) using DNA extracted from fecal pellets of mixed species groups. McNair Undergraduate Research

- National Conference.
- Wultsch, C, M Kelly, LP Waits (2012) Noninvasive Tracking of Jaguars (*Panthera onca*) and Co-Occurring Wild Felids in Belize. Belize Natural Resource Management Annual Meeting, Belize.
- Waits, LP, CS Goldberg, DS Pilliod, RS Arkle (2011) Molecular detection of aquatic species in water samples using environmental DNA. The Wildlife Society 18th Annual Conference, Waikaloa, HI, US.
- Adams, JR, MA Mumma, CJ Zieminski, TK Fuller, CE Soulliere, LP Waits (2011) Molecular identification of multiple prey species remains in predator scats. The Wildlife Society 18th Annual Conference, Waikaloa, HI.
- Wultsch, C., MJ Kelly, and LP Waits (2011) Noninvasive Tracking of Jaguars and Cooccurring Felids by Combining Molecular Scatology, Remote Camera Trapping and GIS in Belize, Central America. The Wildlife Society 18th Annual Conference, Waikaloa, HI.
- Stansbury, CR, Ausband, DE, Mack CM, Zager P, Mitchell M, LP Waits (2011) A non-invasive genetic sampling approach for monitoring gray wolves in Idaho. The Wildlife Society 18th Annual Conference, Waikaloa, HI.
- Lewis, K, M Mumma, LP Waits, C Zieminski, C Soulliere (2011) Preliminary estimates of black bear density in caribou calving areas, Newfoundland, Canada, International Bear Association, Canada.
- Mumma, M, LP Waits, C Soulliere (2011) CSI Newfoundland: Molecular determination of caribou calf predators - Arctic Ungulate Conference, Yellowknife, Canada.
- Seamster, VA, LP Waits, SA Macko, HH Shugart (2011) Shifts in the base of the coyote food chain in response to long- and short-term vegetation change. New Mexico Chapter of the Wildlife Society, Albuquerque.
- Cisneros, R, J. Armijos, C. Narváez, A. Ontaneda, L. Waits (2011) Ecology, diversity, and conservation of the spectacled bear (*Tremarctos ornatus*) in the Podocarpus-El Condor Biosphere Reserve. Ecuadorian Mammal Conference, Quito, Ecuador.
- Wultsch, C, MJ Kelly, and LP Waits (2011) Noninvasive Tracking of Jaguars (*Panthera onca*) and Co-occurring Feline Species in Belize by Genotyping Feces and Remote Camera Trapping. Mountain Lion Workshop 2011, Bozeman, MT, US.
- Wultsch, C, MJ Kelly, and LP Waits (2011) Noninvasive Tracking of Jaguars (*Panthera onca*) and Co-occurring Feline Species in Belize, Central America. Student Conference on Conservation Science, New York City, NY, US.
- Cleary, K, and LP Waits. (2011) Does the matrix matter?: Structural and functional connectivity for phyllostomid bats in the San Juan-La Selva biological corridor, Costa Rica. Montana Chapter, Society for Conservation Biology 4th Annual Research Symposium. Missoula, MT.
- Schwalm, D., Ballard, W.B., and L.P. Waits (2011) An assessment of genetic structure and diversity among swift fox populations in the United States. Texas Tech University Association of Biologists, Lubbock, TX. Awarded best presentation, Ecology section.
- Schwalm, D., Ballard, W.B., Waits, L.P., McIntyre, N.M., Gipson, P., Young, J., and M.A. Cronin (2011) Genetic implications for management of swift fox in Texas. American Society of Mammalogist, Portland, OR
- Goldberg, C. S., E. B. Rosenblum, D. Davis, W. R. Bosworth, L. P. Waits (2011) Patterns of prevalence of a newly-emerged multi-host pathogen across an amphibian community: amphibian chytrid fungus (Bd) in north Idaho (poster). Ecology and Evolution of Infectious Diseases, 9th Annual Conference, Santa Barbara, CA.
- Goldberg, C. S., E. B. Rosenblum, D. Davis, W. R. Bosworth, L. P. Waits (2011) Predicted effects of climate change on the distribution of invasive threats to amphibians in north-central Idaho. 26th Annual Symposium of the United States Regional Chapter of the International Association of Landscape Ecology, Portland, OR.
- Goldberg, C. S., D. Davis, E. B. Rosenblum, W. R. Bosworth, L. P. Waits (2011) Predicted expansion of the American bullfrog and amphibian pathogenic chytrid fungus in the inland Northwest under climate change scenarios. Society for Northwestern Vertebrate Biology and Washington Chapter of The Wildlife Society 2011 Joint Annual Meeting, Gig Harbor, WA.

- Goldberg, C. S., D. S. Pilliod, R. S. Arkle, L. P. Waits (2011) Molecular detection of aquatic species in water samples using environmental DNA. 6th National New Zealand Mudsail Conference, Moscow, ID.
- Spear, SF, MD Anderson, DA Keinath, JM Parker, CR Peterson, LP Waits (2011) Using distribution models to predict seasonal habitat use in the midget faded rattlesnake (*Crotalus oregonus concolor*). Annual Meeting of the Society for Northwestern Vertebrate Biology, Gig Harbor, WA.
- Spear, SF, MD Anderson, DA Keinath, JM Parker, CR Peterson, LP Waits (2011). Using distribution models to predict fine-scale resource use in a northern temperate rattlesnake. Annual Meeting of the US Regional Association of the International Association for Landscape Ecology, Portland, OR.
- Spear, SF, JM Parker, CR Peterson, MD Anderson, DA Keinath, LP Waits (2011) Integrating Genetics and Habitat Modeling to Inform Conservation of Midget Faded Rattlesnakes (*Crotalus oregonus concolor*). Biology of the Rattlesnakes, Tucson, AZ.
- Stansbury, CR, Ausband, DE, Mack CM, Zager P, Mitchell M, LP Waits (2011) A non-invasive genetic sampling approach for monitoring gray wolves in Idaho. Idaho Chapter of the Wildlife Society, Idaho Falls, ID.
- Borg, N., LP Waits, P Zager, M Mitchell (2011) Evaluating the Genetic Distinctiveness of the Salmon River Drainage Bighorn Sheep and their Connectivity to Neighboring Populations. Idaho Chapter of the Wildlife Society, Idaho Falls, ID.
- Goldberg, C. S., W. R. Bosworth<sup>1</sup>, D. C. Tank, L. P. Waits (2011). Species designation of the Bruneau tiger beetle (*Cicindela waynei*) is supported by phylogenetic analysis of mitochondrial DNA sequence data. Idaho Chapter of The Wildlife Society, Idaho Falls, ID.
- Baumgardt, J, C. S. Goldberg, K. P. Reese, J. W. Connelly, D. D. Musil, E. O. Garton, L. P. Waits (2011). A method for estimating the population sex ratio of greater sage-grouse from fecal DNA. Idaho Chapter of The Wildlife Society, Idaho Falls, ID.
- Schwalm, DL, WB Ballard, LP Waits, MA Cronin, P Gipson, J Young (2010) An Assessment of Genetic Structure and Diversity Among Swift Fox Populations in the United States. Mammalogy Society Meetings. Portland.
- Stansbury CR, DE Ausband, CM Mack, P Zager, M Mitchell, LP Waits (2010) A noninvasive genetic sampling approach for monitoring gray wolves in Idaho. Wildlife Society Meeting. Snowbird, UT
- Mumma MA, Waits LP, Zieminski CJ, Fuller TK, and Soulliere CE (2010) Evaluating seasonal changes in populations size of the major predators of Newfoundland caribou using multiple non-invasive genetic sampling strategies. Wildlife Society Meeting. Snowbird, UT
- Seamster, G, SA Macko, LP Waits, HH Shugart (2010) Long-term and short-term variation in coyote feeding ecology. Wildlife Society Meeting. Snowbird, UT.
- Bosque-Pérez, N, LP Waits, JE Force, S Eigenbrode, J.D. Wulfhorst, P Morgan, B Finegan, F De Clerck, D Stoian, J Jones (2010) Bridging the disciplinary divide: Lessons learned from the University of Idaho-CATIE IGERT project. Enhancing Interdisciplinary Communication. Coeur D'alene ID.
- Waits, LP, J. Adams, J. H. Bohling (2010) Quantifying hybridization and introgression by reconstructing the pedigree of the endangered red wolf (*Canis rufus*) population Society for Conservation Biology, Edmonton, Alberta, Canada.
- Goldberg, C. S., A. Pocewicz, M. Nielson-Pincus, L. P. Waits, P. Morgan, J. E. Force, L. Vierling (2010). Predicting ecological impacts of alternative policy scenarios on a rural landscape in northern Idaho (poster). Society for Conservation Biology, Edmonton, Alberta, Canada.
- Russell, D., C. S. Goldberg, L. P. Waits, E. B. Rosenblum (2010). Variation in prevalence and intensity of infection by the amphibian chytrid fungus across seasons for the Columbia Spotted Frog in north Idaho. Idaho Chapter of The Wildlife Society, Boise, ID.
- Balkenhol, N., Holbrook, J., Zager, P., Rachael, J., Onorate, D., DeSimone, R, White, C., Waits, L.P (2009) Hierarchical, Multi-scale Analysis of Landscape-Genetic Relationships in Idaho Cougars (*Puma concolor*). U.S. Regional Meeting of the International Association for Landscape Ecology

- (US-IALE); Snowbird, UT, USA. (3rd place in best student presentation competition)
- Balkenhol, N., Holbrook, J., Zager, P., Rachael, J., Onorato, D., DeSimone, R., White, C., Waits, L.P. (2009) Hierarchical Population Genetic Structure of Cougars (*Puma concolor*) in Idaho and Western Montana. Idaho Chapter of The Wildlife Society 2009, Moscow, ID.
- Bohling, J.H., L.P. Waits (2009) The history and future of red wolf (*Canis rufus*) recovery in North Carolina. North Carolina Museum of Natural Sciences, Raleigh, NC. (Invited seminar)
- Bohling, J.H., L.P. Waits (2009) Evaluating the ability of Bayesian clustering methods to detect hybridization and introgression using an empirical red wolf dataset. Evolution 2009, Moscow, ID.
- Bohling, J.H., A. Beyer, L.P. Waits (2009) Factors influencing red wolf-coyote hybridization in eastern North Carolina. Defenders of Wildlife Carnivores Conference, Denver, CO.
- De Barba, M., Waits, L.P., Genovesi, P., Randi, E., Groff, C. (2009) Noninvasive genetic monitoring of population expansion, mating system, and genetic composition of the translocated brown bear (*Ursus arctos*) population in the Italian Alps. European Conservation Genetics conference, Trondheim, Norway.
- De Barba, M., Waits, L.P., Garton, O.E., Genovesi, P., Randi, E., Groff, C. (2009) Demographic and genetic population viability analysis of a small translocated brown bear population and implications for conservation and management. 7th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Germany.
- Dunn, S., L.P. Waits, J. Byers (2009) A test of the generality of the Shuster and Wade model of sexual selection. Evolution. Moscow, ID
- Goldberg, C.S., L.P. Waits (2009) Landscape genetics of Columbia Spotted Frogs and Long-toed Salamanders in a rural landscape of northern Idaho, USA. Joint Meeting of Ichthyologists and Herpetologists, Portland, OR.
- Goldberg, C.S., L.P. Waits (2009) Quantification and reduction of bias from sampling larvae to infer population and landscape genetic structure. Evolution 2009: the joint annual meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists, Moscow, ID.
- Goldberg, C.S., A. Pocewicz, M. Nielson-Pincus, L.P. Waits, P. Morgan, J.E. Force, L. Vierling (2009). Predicting ecological impacts of alternative policy scenarios on a rural landscape in northern Idaho. 24th Annual Symposium of the United States Regional Chapter of the International Association of Landscape Ecology, Snowbird, UT.
- Goldberg, C.S., L.P. Waits (2009) Patterns of amphibian chytrid fungus on pond-breeding amphibians of north Idaho. Idaho Chapter of the Wildlife Society, Moscow, ID.
- Jelenčič, M, T Skrbinšek, L Waits, P Trontelj, And I Kos (2009) Genetic diversity of brown bears (*Ursus arctos*) in Slovenia. European Conservation Biology Meetings
- Kelly, M.J. C.Wultsch, L.Waits, M.L. Davis (2009) A comparative study of felid densities via simultaneous scat detector dog and remote camera trap mark-recapture in Belize, Central America. Carnivore Conference, Denver, US
- Seamster, V. A., S. A. Macko, L. P. Waits, H. H. Shugart (2009) A shift in coyote feeding ecology in response to woody plant encroachment. Ecological Society of America, Albuquerque, NM.
- Skrbinšek, T. M Jelenčič, H Potočnik, L Waits, P Trontelj, I Kos (2009) Population size and sex ratio of brown bears (*Ursus arctos*) in Slovenia estimated using noninvasive genetic sampling and implications for conservation and management. European Conservation Biology Meetings
- Stenglein, J., L Waits, C Mack, D Ausband, M Mitchell, P Zager, S Nadeau (2009) Monitoring gray wolf packs and populations with noninvasive genetic sampling at predicted rendezvous sites. Idaho Chapter of the Wildlife Society Meetings, Moscow, Idaho.
- Waits, L (2009) Landscape genetics: An emerging tool for conservation and management at the landscape scale. College of Natural Resources, 100 years of Forestry Celebration.
- Waits, L (2009) Molecular genetic contributions to noninvasive survey approaches for carnivores. Carnivore Conference, Denver, US (Invited Talk)



- Waits, L, J. Adams, B. Bosworth, J. Rachlow (2009) Development of a fecal DNA detection method for pygmy rabbits. Idaho Chapter of the Wildlife Society Meetings, Moscow, Idaho.
- Waits L and J Adams (2009) Quantifying hybridization and introgression by reconstructing the pedigree of the endangered red wolf (*Canis rufus*) population. Evolution. Moscow, ID
- Wultsch, C, M. Kelly, L. Waits (2009) Using Scat Detector Dogs And Molecular Scatology To Monitor Jaguars And Other Elusive Feline Species Co- Occurring In Belize, Central America. Carnivore Conference, Denver, US (Invited Talk)
- Wultsch, C, M. Kelly, L. Waits (2009) Using Scat Dogs and Remote Cameras to Estimate Jaguar Density and Connectivity in Belize. Felid Session, XIII Mesoamerican Society For Biology and Conservation Symposium, Belize City, Belize (Invited Talk)
- Bohling J and LP Waits (2008) Assessing the extent of hybridization between sympatric red wolves (*Canis rufus*) and coyotes (*Canis latrans*) in coastal North Carolina. Society for Conservation Biology. Chattanooga, TN.
- Schalwm D, W Ballard, LP Waits (2008) Assessment of swift fox population structure in the United States. Society for Conservation Biology. Chattanooga, TN.
- Balkenhol N, L.P. Waits (2008) Using landscape genetics to evaluate functional landscape connectivity for wildlife. Wildlife Society Meetings. Miami, FL.
- Stenglein J, C. Mack, D. Ausband, M. Mitchell, P. Zager, S. Nadeau, L.P. Waits (2008) Evaluating the potential of noninvasive genetic sampling for long-term monitoring of gray wolves in Idaho. Wildlife Society Meetings. Miami, FL.
- Adams J, L.P. Waits, L. Vucetich, R. Peterson, J. Vucetich (2008) A genetic analysis of Isle Royale wolves and moose. Midwest Wolf Stewards Meeting, Hinckley, MN
- Wultsch C, M.J. Kelly, and L.P. Waits (2008) Noninvasive tracking of jaguars (*Panthera onca*) and co-occurring feline species across protected areas in Belize by combining molecular scatology and GIS: optimizing wildlife population monitoring and connectivity on a large scale. Natural Resource Management Conference, Belize.
- Drummond C, J. Sullivan, LP Waits (2008) Landscape genetics across a species range: modeling population connectivity in tailed frogs (*Ascaphus montanus*). Society for Evolution Meetings.
- Goldberg C, LP Waits (2008) Predicting the impacts of land-use policies on habitat for amphibians across a privately-owned landscape in northern Idaho. Society for Northwestern Vertebrate Biology, Missoula, MT.
- Pocewicz A, M. Nielsen-Pincus, C.S. Goldberg, P. Morgan, J.E. Force, L.P. Waits, L. Vierling (2008) Consequences of alternative residential development scenarios for agriculture, fire, water, and social acceptability in a rural landscape in north Idaho, USA. US Association of Landscape Ecologists, Madison, WI.
- Balkenhol N, L.P. Waits (2008) Understanding landscape genetic relationships in animals: Is landscape resistance all that matters? US Association of Landscape Ecologists, Madison, WI.
- Pocewicz A, M. Nielsen-Pincus, C.S. Goldberg, P. Morgan, J.E. Force, L.P. Waits, L. Vierling (2008) Consequences of alternative residential development scenarios for agriculture, fire, water, and social acceptability in a rural landscape in north Idaho, USA. US Association of Landscape Ecologists, Madison, WI.
- Balkenhol N, L.P. Waits (2008) Using Landscape Genetics to Evaluate Functional Connectivity in Transportation Planning. NW section of the Wildlife Society, WA
- Waits LP, C. Goldberg (2008) Landscape genetics of the Columbia Spotted Frog in northern Idaho, USA, US Association of Landscape Ecologists, Madison, WI.
- Estes-Zumpf WA, J. L. Rachlow, L.P. Waits, K. Warheit (2008) Gene flow and genetic diversity among populations of pygmy rabbits in Idaho and Montana, Idaho Chapter of the Wildlife Society, ID.
- Howard S, N. Balkenhol, K. Olson, L. Waits (2008) Genetic diversity and population structure of Mongolian wolves. Idaho Chapter of the Wildlife Society, ID.
- Stenglein J, C. Mack, D. Ausband, M. Mitchell, P. Zager, S. Nadeau, L.P. Waits (2008) Evaluating the use of noninvasive genetic sampling for monitoring gray wolves in Idaho. Idaho Chapter of the

- Wildlife Society, ID.
- Holbrook J, L. Waits, D. Onorato, C. White, J. Rachel, P. Zager, R. Desimone (2008) Genetic diversity, population structure and gene flow among cougar populations in Idaho and Montana. Idaho Chapter of the Wildlife Society, ID.
- Goldberg C, LP Waits (2008) Predicting the impacts of land-use policies on habitat for amphibians across a privately-owned landscape in northern Idaho. Inland Northwest Aquatic, Riparian, and Wetland Symposium, Spokane, WA.
- Kendall K, J.B. Stetz, D.A. Roon, L. P. Waits, J. B. Boulanger, D. Paetkau (2008) Grizzly bear density in Glacier National Park. Montana Chapter of the Wildlife Society, MT.
- Waits L, S. Robinson, I. Martin (2007) Evaluating population structure of black bears on the Kenai peninsula using mitochondrial and nuclear DNA analyses, Alaska Chapter of the Wildlife Society, AK.
- Viteri MP, L. Waits, F. Cuesta, M. Proctor (2007) Genetic Diversity and Population Size of Andean Bears in the Southern Cayambe-Coca Ecological Reserve in Northeastern Ecuador. Conservation Genetics Meetings, NY.
- Balkenhol N, L. Waits. 2007. An evaluation of current methods for linking genetic variation to landscape heterogeneity using simulated data. International Association of Landscape Ecologists Meeting. Netherlands.
- Waits L (2007) Potential contributions of landscape genetics to ecology, conservation and management of riverscape taxa. UI-ISU Riverscape Symposium, Moscow, Idaho.
- Estes-Zumplt W, J. Rachlow, L. Waits (2007) Gene flow and dispersal in a patchy environment: pygmy rabbits in the Lemhi valley, Idaho. American Society of Mammalogists meetings. NM.
- Hoisington J, J. Sullivan, L. Waits, J. Rachlow (2007) Systematics of the Idaho Ground Squirrel (*Spermophilus brunneus*). American Society of Mammalogists Meetings. NM.
- DeBarba M, L. Waits, P. Genovesi, E. Randi. 2007 incorporating demographic and genetic data to project genetic diversity, inbreeding and viability of a small translocated brown bear population. International Bear Association Meetings, Mexico.
- Waits LP, D. Onorato, C. White, J. Rachel, P. Zager, R. Desimone (2007) Genetic diversity, population structure and gene flow among cougar populations in Idaho and Montana. Wildlife Society Meeting, Tucson, AZ
- Howard S, N. Balkenhol, K. Olson, L. Waits (2007) Genetic diversity and population structure of Mongolian wolves. Wildlife Society Meeting, Tucson, AZ.
- Adams J, A. Beyer, W. Wadell, L. Waits (2007) Pedigree reconstructions of the wild red wolf population reveals minimal introgression of coyote genes. Wildlife Society Meeting, Tucson, AZ.
- Kendall K, J.B. Stetz, D.A. Roon, L. P. Waits, J. B. Boulanger (2007) DNA-based density estimate for grizzly bears in Glacier National Park, Montana, Wildlife Society Meeting, Tucson, AZ.
- Goldberg C, L. Waits (2007) Predicting the impacts of land-use policies on habitat for amphibians across a privately-owned landscape in northern Idaho. Wildlife Society Meeting, Tucson, AZ.
- Hoisington J, L. Waits, J. Sullivan, J. Rachlow (2007) Population Connectivity and Landscape Genetics of the Idaho ground squirrel (*Spermophilus brunneus*). Ecological Society Meetings, CA.
- Gebhardt K, L. Waits, D. Brightsmith, G. Powell (2007) An evaluation of Genetic diversity and phylogenetic relationships among three large macaws in Peru. Cooper Society Meetings, Idaho.
- Gebhardt K, L. Waits, D. Brightsmith, G. Powell (2007) Genetic diversity and genetic structure of 4 large parrots in the Peruvian Amazon American Ornithological Union Meeting, WY.
- Keenher J, D. Onorato, L. P. Waits (2006) Using DNA sequence analysis to detect and identify carnivores in National Parks of the Southwest. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March.
- Goldberg CS, L. P. Waits. 2006. Landscape genetics of the Columbia Spotted Frog in the Palouse ecoregion of northern Idaho. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March.
- Tserenbataa T, L. P. Waits, H. V. Reynolds, D.J. Craighead, L. Amgala, B. Mijiddorj (2006) Genetic analysis of the taxonomic status of the Gobi bear. International Bear Association Meeting, Japan. (Best oral presentation award).

- Kendall K, J.B. Stetz, D.A. Roon, L. P. Waits, J. B. Boulanger, and D. Paetkau (2006) Grizzly bear population density in Glacier National Park, Montana. International Bear Association Meeting, Japan.
- Viteri MP, L. P. Waits, B McLaughlin (2006) Genetic Diversity and Structure among Andean Bear population in Ecuador. International Bear Association Meeting, Japan.
- Roon DA, L. P. Waits, J. Stetz, K. Kendall (2006) A non-invasive genetic estimate of abundance for black bears (*Ursus americanus*) in the Greater Glacier Ecosystem. Wildlife Society, AK.
- Adams J, L. P. Waits (2006) Fecal DNA genotyping: a tool to manage the endangered red wolf population. Wildlife Society, AK.
- Tyler G, C. S. Goldberg, L.P. Waits (2006) Estimating the number of breeding adults and effective population sizes of Columbia Spotted Frogs in northern Idaho. Wildlife Society, AK.
- Wadell W, A. Beyer, L. Waits, J. Adams (2006) Red Wolf Studbook Data: Integrating captive and wild population management. Defenders of Wildlife
- Kendall K, J.B. Stetz, D.A. Roon, L. P. Waits, J. B. Boulanger, and D. Paetkau (2006) Grizzly bear population density in Glacier National Park, Montana. Carnivores 2006
- Bosque-Pérez NA, S. D. Eigenbrode, J. E. Force, L. Waits, B. Finegan, C. Harvey, J. Jones, D. Stoian, J. Boll, S. Brunsfeld, P. McDaniel, M. O' Rourke, J. D. Wulforst (2006) Lessons from an interdisciplinary team-based Ph.D. program in sustainable production and conservation biology at the University of Idaho and CATIE, Idaho Academy of Sciences, Moscow Idaho, March.
- Waits LP (2006) Inland Northwest Philosophy Conference Public Forum. "What Should We Do for Nature? Environmental Problems, Responsibility, and Action". Panel member and presenter – Moscow Idaho.
- Goldberg C, L. P. Waits (2006) Genetic structure of Columbia Spotted Frog populations in the changing Palouse landscape of Northern Idaho. Idaho Herp Society
- Newcomb G, L. Waits, C. Anderson (2006) Center for Research on Invasive Species and Small Populations. Idaho Academy of Sciences, Moscow Idaho, March.
- Waits LP, S. Robinson, Niko Balkenhol, C. S. Goldberg, R. Dezzani, L. Vierling (2006) Interdisciplinary research in landscape genetics and applications for natural resource conservation. Idaho Academy of Sciences, Moscow Idaho, March.
- Gebhardt K, J. Doble, L. Waits (2006) Development of a molecular sex identification marker for non-invasively collected feathers. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March. (poster)
- Robinson S, L. Waits, R Dezzani, I. Martin (2006) Spatial analysis of black bear gene flow on the Kenai Peninsula, Alaska. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March.
- Balkenhol N, L. P. Waits, C. C. Cegelski, N. J. Anderson (2006) Landscape genetics of wolverines in western Montana. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March
- Hoisington J, L. Waits, J. Sullivan, J. Rachlow, S. Brunsfeld (2006) Population structure of the Idaho ground squirrel (*Spermophilus brunneus*) using mitochondrial data. Idaho Chapter of the Wildlife Society Meeting, Boise, Idaho, March
- Waits L (2006) Using new approaches for defining population boundaries. Wildlife Society, Anchorage, AK
- Robinson S, L. Waits, R. Dezzani, I Martin (2006) Spatial analysis of black bear gene flow on the Kenai Peninsula. Wildlife Society, Anchorage, AK
- Robinson, S., L. P. Waits, I. Martin (2005) Population Genetics of Black Bears on the Kenai Peninsula, Alaska, US Park Service South West Alaska Network Investigator's Symposium
- Anderson, C., L. P. Waits, and S. Brunsfeld (2005) Bridging the Gap between Scientists and Managers: Integrating research, education and outreach, and building partnerships between university scientists, government and private land management agencies. Idaho Chapter of the Wildlife Society, Boise, Idaho.
- Waits, L.P., Brunsfeld, B, and C. Anderson (2005) Integrating Research, Education And Outreach: Building Partnerships Between University Scientists, Government And Private Land Management Agencies, Society for Conservation Biology, Brasilia.

- Waits, L. P.; N. Bosque-Perez, J. Force, S. Eigenbrode, S. Brunsfeld, JD Wulforst, P. McDaniel, J. Boll, C. Harvey, B. Finegan, D. Stoian (2005) Launching interdisciplinary team-based PhD training in conservation biology and sustainable development at the University of Idaho and CATIE, Society for Conservation Biology, Brasilia, Brazil.
- Roon, D., J. Hinson, M. Soulen, E. Strand, L. P. Waits (2005) Student landowner collaborations in Southern Idaho: a paradigm for landscape level conservation planning. Society for Conservation Biology. Brasilia, Brazil.
- Waits, L. P., E. Bellemain, M. DeBarba, E. Randi, P. Taberlet (2005) Non-invasive Genetic Sampling and Population Estimation of Brown Bears in Europe, International Bear Association, Italy. (invited)
- De Barba, M., L. P. Waits, P. Genovesi, E. Randi (2005) Monitoring the brown bear in the Italian alps through non-invasive genetic sampling. International Bear Association, Italy.
- Kendall, K., J. Stetz, L. Waits, D. Roon (2005) Sampling Bears Using Rub Trees. International Bear Association, Italy.
- Viteri, P., F. Cuesta, L. Waits, G. Remache, A. Tapia, M. Proctor (2005) Genetic Diversity and minimum count of the Andean bear (*Tremarctos ornatus*) in Ecuador. International Bear Association, Italy.
- Keehner, J.R. D. P. Onorato, L. P. Waits (2005) Using DNA sequence analysis of hair and feces to detect and identify carnivore species in the National Parks of the southwest, Second International Symposium on Conservation Genetics, Monterey, CA.
- Viteri, P., F. Cuesta, and L. Waits (2005) Conservation Genetics of the Andean Bear in Ecuador, Second International Symposium on Conservation Genetics, Monterey, CA.
- Gebhardt, K., G. Powell, D. Brightsmith, L.P. Waits (2005) Species identification and success rates of DNA amplification for parrot feathers from claylicks. Second International Symposium on Conservation Genetics, Monterey, CA.
- Goldberg, C, L. P. Waits (2005) Quantification of bias associated with using tadpole samples to infer population genetic structure of Columbia Spotted Frogs. Second International Symposium on Conservation Genetics, Monterey, CA.
- Robinson, S., L. P. Waits, I. Martin (2005) Landscape Genetics of Black Bears on the Kenai Peninsula, Alaska: Defining the Questions Questioning the Answers, Second International Symposium on Conservation Genetics, Monterey, CA.
- Waits, L. P. and C. R. Miller (2004) Mitochondrial DNA phylogeography of historical brown bear populations in the lower 48 states. International Bear Association, San Diego
- DeBarba, M., L. P. Waits, E. Randi, P. Genovesi (2004) Monitoring the brown bear in the Italian alps through non-invasive genetics sampling. International Bear Association, San Diego.
- Force, J., L. Waits, N. Bosque-Perez, S. Eigenbrode, S. Brunsfeld, P. McDaniel, J. D. Wulforst, J. Boll, B. Finegan, C. Harvey and E. Somarriba. (2004) An Integrative Model of Graduate Education in Biodiversity Conservation and Sustainable Production in Fragmented Landscapes. 5<sup>th</sup> Biennial Conference on University Education in Natural Resources. Flagstaff, AZ.
- Hicks, J.F., J.L. Rachlow, O.E. Rhodes, Jr., L.P. Waits, and Christen L. Williams (2004) Microsatellite analysis of regional and local gene dynamics across elk populations in the West. The 84<sup>th</sup> Annual Meeting of the American Society of Mammalogists, Arcata, CA, USA.
- Onorato, D. P., Rich DeSimone, Lisette P. Waits (2004) Paternity assignment and relatedness in a population of cougars impacted by heavy hunting pressure. Presented at the 84th annual meeting of the American Society of Mammalogists, Arcata, California.
- Hicks, J, J. Rachlow, O. Rhodes, and L. Waits (2003) Microsatellite analysis of genetic variation and structure among source and reintroduced elk populations in the Western states, Society for Conservation Biology, Duluth, Minnesota
- Roon, D., K. Kendall, L. Waits (2003) Microsatellite genotyping error and demographic assessment: a simulation test of the effectiveness of several common error-checking protocols, Society for Conservation Biology, Duluth, Minnesota.

- Adams, J., B. Fazio and L. Waits (2003) The effect of genotyping errors on population size estimates derived from fecal sampling, Society for Conservation Biology, Duluth, Minnesota,
- Waits, L., N. Bosque-Perez, J. Force, S. Eigenbrode, S. Brunsfeld, JD Wulfhorst, P. McDaniel, J. Boll, C. Harvey, B. Finegan, and E. Somarriba (2003) An integrative model of graduate education in conservation biology and sustainable production, Society for Conservation Biology, Duluth, Minnesota
- Murphy, M., P. Zager, S. Monfort, A. Muth and L. Waits (2003) Development of a non invasive method for determining sex ratio and pregnancy rate in an Idaho elk herd, Society for Conservation Biology, Duluth, Minnesota
- Viteri, P., L. Waits (2002) A non-invasive genetic sampling pilot study of the Andean bear (*Tremarctos ornatus*) in the Cayambe-Coca Ecological Reserve, Ecuador., International Conference for Bear Research and Management, Norway
- Haroldson, M, K. Gunther, C. Schwartz, L. Waits (2002) Estimates of grizzly bear numbers visiting Yellowstone Lake spawning streams using DNA. International Conference for Bear Research and Management, Norway
- Kendall, K., L. Waits, D. Roon, J. Stetz (2002) Bear rubbing activity: implications for population monitoring. International Conference for Bear Research and Management, Norway
- Miller, C.R., P. Joyce, L. Waits (2002) Bayesed and confused: comparing allelic diversity in the face of unequal sample sizes, sampling error and other headaches, Society for Conservation Biology, Canterbury England
- Waits, L., J. Adams, C. Miller, S. Funk, B. Fazio (2002) Recovering the endangered red wolf: addressing the challenge of hybridization, Society for Conservation Biology, Canterbury England
- Roon, DA, J. Chivaro, K. Kendall, L. Waits (2002) MtDNA sequencing reveals fine scale spatial population structure for *Ursus arctos* in Glacier National Park, Society for Conservation Biology, Canterbury England
- Waits, L., J. Adams, C. Miller, B. Fazio (2002) Recovering the endangered red wolf: addressing the challenge of hybridization, Northwest Chapter Wildlife Society Meetings, Spokane.
- Roon, DA, J. Chivaro, K. Kendall, L. Waits (2002) MtDNA sequencing reveals fine scale spatial population structure for *Ursus arctos* in Glacier National Park, Northwest Chapter Wildlife Society Meetings, Spokane.
- Cegelski, C., L. Waits, N. Anderson, C. Kyle, C. Strobeck, J. Copeland (2002) An evaluation of genetic diversity and population genetic structure in Rocky Mountain Wolverines, Northwest Chapter Wildlife Society Meetings, Spokane.
- Waits, L. (2001) Non-invasive genetic sampling of bear populations: promise and pitfalls. International Bear Association meetings, JacksonHole WY
- Romain, K., R. Wielgus, M. Austin, L. Waits, W. Kasworm, W. Wakkinen (2001) Efforts to detect North Cascade Grizzly Bears using non-invasive DNA hair sampling techniques, International Bear Association meetings, JacksonHole WY
- Roon, D., L. Waits, K. Kendall (2001) The effectiveness of filtering non-invasive genetic data: a case study from Glacier National Park. International Bear Association meetings, JacksonHole WY
- Murphy, M., L. Waits, K. Kendall (2001) Brown bear fecal DNA analysis: Technique optimization and application to Glacier National Park, International Bear Association meetings, JacksonHole WY
- Kendall, K, L. Waits, D. Roon, M. Murphy, J. Stetz (2001) Biases associated with sampling bears with hair traps, rub trees, and scat surveys. International Bear Association meetings, JacksonHole WY (Best paper award)
- Kendall, K., L. Waits, D. Roon, M. Murphy, J. Stetz (2001) Biases associated sampling bears with hair traps, rub trees and scat surveys. American Society of Mammalogists, Missoula, MT
- Adams, J., B. Kelly, L. Waits (2001) Monitoring for genetic introgression into an island population: the Red Wolf as a case study, Society for Conservation Biology, Hilo, HI
- Luikart, G., S. Manel, L. Waits (2001) Wildlife forensic applications of DNA typing: empirical

- evaluations and guidelines, Society for Conservation Biology, Hilo, HI
- Cegelski, C., L. Waits, N. Anderson (2001) Mitochondrial DNA and microsatellite DNA analysis of wolverine population structure in Montana, Society for Conservation Biology, Hilo, HI
- Adams, J. L. Waits, A. Beyer (2001) Faecal DNA sampling to detect the presence of coyotes and hybrids in the Red Wolf Recovery Zone, Canid Biology and Conservation Conference, Oxford, England
- Waits, L., J. Adams, C. Miller, W. Waddell, and A. Beyer (2001) Detecting coyote introgression into the wild Red Wolf populations, Canid Biology and Conservation Conference, Oxford, England
- Waits, L., K. Kendall, D. Roon, M. Murphy (2001) Non-Invasive Genetic Sampling of Bears at an Ecosystem Scale Using Multiple Collection Methods, Conservation Genetics Meeting, Lausanne, Switzerland
- Roon, D., L. Waits, K. Kendall (2001) Trail travails: The impact of human presence on the Non-invasive genetic sampling of brown bears (*Ursus arctos*) and black bears (*Ursus americanus*) within a protected landscape, Conservation Genetics Meeting, Lausanne, Switzerland
- Miller, C., G. Luikart, L. Waits (2001) Maintaining genetic variation in an island population: shortcomings of the one migrant rule. Conservation Genetics Meeting, Lausanne, Switzerland
- Waits, L., K. Kendall, M. Murphy, D. Roon, J. Adams (2000) Non-invasive genetic sampling: promise and pitfalls. Carnivores 2000, Denver, CO.
- Kendall, K., L. Waits, M. Murphy, D. Roon, J. Stetz (2000) Non-invasive genetic sampling of grizzly bear and black bear population status at an ecosystem scale, Carnivores 2000, Denver, CO
- Adams, J., L. Waits, B. Kelly (2000) Non-invasive genetic sampling of red wolf population on Alligator River National Wildlife Refuge, Carnivores 2000, Denver, CO.
- Roon, D., K. Kendall, L. Waits (2000) Tracking bear demography in the Greater Glacier Area of the U.S.A. through non-invasive DNA sampling, Managing for Bears in Forested Environments, Revelstoke, BC.
- Waits, L. (2000) Taxonomic placement of the giant panda based on molecular data. Panda 2000, San Diego Zoo.
- Miller, C., L. P. Waits (2000) The bear bones: a historical genetic analysis of the Yellowstone grizzly. Society for Conservation Biology. Missoula, MT
- Miller, J., J.M. Scott, C. R. Miller, L.P. Waits (2000) Endangered Species Recovery: Dollar and Sense. Society for Conservation Biology. Missoula, MT
- Kendall, K., L. Waits, D. Roon, M. Murphy, K. Peterson (2000) Grizzly bear population status in northwestern Montana. Society for Conservation Biology. Missoula, MT.
- Roon, D., L. Waits, and K. Kendall (2000) Non-invasive genetic sampling, genotyping error, and bias potential in demographic studies. Society for Conservation Biology. Missoula, MT
- Waits, L. (2000) Exploring the ESU concept using mtDNA and nDNA data sets from brown bears. Society for Conservation Biology. Missoula, MT
- Shields, G., A. Cooper, D. Paetkau, L. Waits (2000) The necessity of large, multilocus data sets in molecular conservation biology. Society for Conservation Biology. Missoula, MT
- Murphy, M., L. Waits, K. Kendall (2000). Impact of diet and field conditions on PCR amplification success for brown bear fecal DNA samples. Society for Conservation Biology. Missoula, MT
- Roon, D., L. Waits, K. Kendall (2000) Genetics of Glacier National Park Brown Bears: Demographics and Population Structure through Non-invasive Genetic Sampling. Western Black Bear Conference. Coos Bay, Oregon
- Murphy, M., L. Waits, K. Kendall (2000) Diet and temporal impacts on PCR amplification success in brown bear fecal DNA samples, Western Black bear meeting, Coos Bay OR.
- Miller, C., L. Waits (2000) Down in the dumps? An historical genetic analysis of the Yellowstone grizzly bear population, Northwest Chapter of the Wildlife Society, Post Falls, ID
- Murphy, M., L. Waits, K. Kendall (2000) The importance of diet and time in the field for successful amplification of brown bear fecal dna samples. Northwest Chapter of the Wildlife Society, Post Falls, ID
- Kendall, K., L. Waits, D. Roon, M. Murphy, K. Peterson (2000) Use of DNA to monitor grizzly bear

- population status. Northwest Chapter of the Wildlife Society, Post Falls, ID
- Waits, L., K. Kendall, M. Murphy, D. Roon (2000) Non-invasive genetic sampling of wildlife populations: Promise and Pitfalls. Northwest Chapter of the Wildlife Society, Post Falls, ID.
- Murphy, M., L. Waits, K. Kendall (1999) A Quantitative Evaluation Of Brown Bear Fecal DNA Preservation Methods, Wildlife Society Meetings, Austin, Texas.
- Roon, D., L. Waits, K. Kendall (1999) Genetics of Glacier Park Brown Bears: Abundance and population structure through Non-invasive Genetic Sampling, Ecological Society Meetings, Spokane, Washington.
- Murphy, M., L. Waits, K. Kendall (1999) A Quantitative Evaluation Of Methods For Preserving DNA In Brown Bear Fecal Samples, Ecological Society Meetings, Spokane, Washington.
- Roon, D., L. Waits, K. Kendall (1999) Northern Continental Divide Brown Bears: Minimal Abundance and Population Structure through Non-Invasive Hair Trapping. Society for Conservation Biology, College Park, Maryland.
- Murphy, M., L. Waits, K. Kendall (1999) A Quantitative Evaluation Of Methods For Preserving DNA In Brown Bear Fecal Samples, Society for Conservation Biology, College Park, Maryland.
- Waits, L. 4/98, Genetic applications for bear research and management Int. Conf. of Bear Res. and Manage., Gatlinburg, Tenn.
- Kendall, K. C., L. Waits, D. Schirokauer, S. Wolff (1999) Using DNA to monitor bear populations in Glacier National Park Int. Conf. of Bear Res. and Manage., Gatlinburg, TN
- Waits, L., K. Kendall, M. Murphy, Dave Roon (1999) Non-invasive genetic sampling: Promise and Pitfalls. Species at Risk Conference, Kamloops, Canada
- Miller, C., L. Waits (1999) An examination of historic levels and patterns of genetic diversity in the brown bear of the lower 48 states, Kamloops, Canada
- Waits, L., J. Swenson, F. Sandegren, P. Taberlet (1997) Genetic diversity and gene flow in the Scandinavian brown bear population: implications for management. Int. Conf. of Bear Res. and Manage.
- Waits, L. (1995) A comparison of genetic variability in brown bear populations from Alaska, Canada, and the lower 48 states - 10th Int. Conf. for Bear Res. and Man. Fairbanks, AK.
- Waits, L. (1995) Mitochondrial DNA phylogeography of the brown bear (*Ursus arctos*) and implications for management. - 10th Int. Conf. for Bear Res. and Man. Fairbanks, AK.
- Ward RH, L. Waits (1995) Phylogenetic hypotheses of bear evolution evaluated by multiple region mitochondrial DNA sequence data. 10th Int. Conf. for Bear Res. and Man. Fairbanks, AK.
- Waits, L. (1993) An Ursid phylogeny estimated from multiple regions of mtDNA. Int. Con. of Genet. Birmingham, England.
- Waits, L. (1993) Identification of endangered bear species by taxon-specific sequences (TSSs). - Soc. for Cons. Biol. Tempe, AZ.
- Wooding, S., L. Waits, T. Thier, C. Servheen, R.H. Ward. (1993) MtDNA sequences indicate different population origins of grizzly bears and black bears in Montana. Soc. for Cons. Biol. Tempe, AZ
- Waits, L. (1992) Haplotypes at the low density lipoprotein receptor influence lipid levels in females. American Society of Human Genetics. San Francisco, CA.
- Morre, D.J., N. Minnifield, M. Paulik, S. Dunkle, L. Waits, D.M. Morre (1989) Temperature dependence of transition vesicle formation and membrane transfer from endoplasmic reticulum to golgi apparatus in a cell-free system from rat liver. Soc. for Cell. Biol., Boston, MA.

**Grants and Contracts Awarded:**Competitive Grants

- 2013 - 2014 Preliminary evaluation of environmental DNA for monitoring amphibians in Yellowstone National Park. National Park Service, Cooperative Ecosystems Study Unit, with C. Goldberg, \$8813
- 2013 - 2014 Population genetics of the pygmy rabbit in northern Utah. Utah Department of Natural Resources, \$28,317
- 2013 - 2014 A Proposal to Evaluate the Effectiveness of Environmental DNA Methodology for Surveying Amphibians on the Lower Colorado River Drainage, Arizona Fish and Game, with C. Goldberg, \$9500
- 2013 - 2014 Noninvasive Genetic Sampling Pilot Studies on Green Diamond Forestry Lands, Green Diamond Forestry, with C. Goldberg, \$26,556
- 2013 - 2014 Noninvasive genetic evaluation of predators of caribou, Newfoundland Government, \$42,401
- 2013– 2018 Mexican wolf genetics, USFWS, \$150,000
- 2013-2014 Molecular Genetic Equipment for Improved Inventory and Monitoring of Species of Conservation Concern on Department of Defense Lands, Department of Defense, with C. Goldberg, \$169,514
- 2013 – 2015 Quantifying linkages among land-use policies, agricultural intensification, habitat fragmentation, and social-ecological systems in a tropical biological corridor, National Science Foundation, Coupled Natural Human Ecosystems, with N Bosque-Perez, L Vierling, L. Hormel, \$183,423
- 2012 – 2015 Monitoring species of concern using noninvasive genetic sampling and capture-recapture methods: demonstration and validation with kit fox and Sonoran pronghorn, L Waits, J Horne, DOD, \$607,518
- 2012 – 2015 Environmental DNA as a Tool for Inventory and Monitoring of Aquatic Vertebrates, A Fremier, K Strickler, C Goldberg (I was co-contributor but not co-PI because it was not possible to be PI on two DOD grants), DOD, \$650,000
- 2011 – 2012 Detecting amphibian species using environmental DNA from water samples, USGS Amphibian Research, Monitoring and Inventory, David Pilliod (USGS), L Waits, C Goldberg, R Arkle (USGS) - \$48,769, (subcontract to UI \$20,790)
- 2011 – 2012 Developing a test for early detection of New Zealand mudsnails using environmental DNA. Adam Sepulveda (USGS), Andrew Ray (USGS), L Waits. USFWS \$25,635
- 2010 – 2013 An Interdisciplinary Team-Based International Research Experience in Biodiversity Conservation and Sustainable Community Development in the Ecuadorian Andes, Waits, L, S. Pinel, S. Mulkey, D. Tank, J. Rachlow, D. Roon National Science Foundation, \$146,945
- 2009 – 2014 Evaluating resilience of ecological and social systems in changing landscapes: a doctoral research and education program in Idaho and Costa Rica with Bosque-Perez, N., S Eigenbrode, P Morgan, JD Wulforst, JE Force, NSF IGERT Grant, \$3.2 million
- 2007 – 2010 Behavioral Responses to a Population Bottleneck in Pronghorn, with J Byers, National Science Foundation, \$575,000
- 2007 – 2008 Landscapes without borders: Towards an interdisciplinary teaching and research program to analyze landscapes for ecology and conservation, with R. Dezzani, L. Vierling, University of Idaho Interdisciplinary Grants Program, \$14,600.
- 2008 NSF Dissertation Improvement Grant with PhD student Stacey Dunn, \$10,000.
- 2005 – 2006 Systematics and landscape genetics of Idaho ground squirrels, with J. Sullivan, J. Rachlow, S. Brunfeld, UI Center for Research on Invasive Species and Small Populations, \$24,900
- 2005 – 2008 Temporal and spatial patterns of genetic variation in small populations of plants



- and animals found in one of Idaho's major biodiversity hotspots, postdoctoral project with S. Brunsfeld, J. Sullivan UI Center for Research on Invasive Species and Small Populations, \$107,2000.
- 2005 – 2007 Systematics and landscape genetics of Idaho ground squirrels with J. Sullivan, J. Rachlow, S. Brunsfeld, Idaho State Wildlife Grants Program \$26,262.
- 2005 – 2007 Building Protected Area Management Capacity Globally Consolidated Proposal from the University of Idaho with Bill McLaughlin, Consortium of Protected Area Managers. \$63,250
- 2004 - 2007 Evaluation of genetic structure among black bear (*Ursus americanus*) on the Kenai Peninsula, with Ian Martin, National Park Service, Inventory and Monitoring of National Park Service \$58,500
- 2004 – 2007 Research center for applied biotechnology and natural resource management, Co-PIs Steve Brunsfeld and Cort Anderson, State of Idaho Center Grant, \$979,134
- 2004 – 2007, Modeling trends in forest management, exurban development, and biodiversity conservation under alternative policy portfolios in northern Idaho, Co-Pis, Penny Morgan and JoEllen Force, McIntire-Stennis, \$74,000
- 2004 – 2006, Evaluating population size, genetic diversity and genetic structure in Croatian brown bears, with Djuro Huber, Ana Galov, and Ivana Tomaskovic (Croatia), Croatian Ministry of Science and the US State Department, \$10,000
- 2003 – 2004 - U of Idaho EPSCoR/NSF request for Genetics Laboratory Instrumentation Improvements, Co-PIs Cort Anderson, Steve Brunsfeld, \$29,500
- 2001 – 2006, Ecosystem management in tropical and temperate regions: integrating education in sustainable production and biodiversity conservation, National Science Foundation, Co-PI – Nilsa Bosque-Perez, Sanford Eigenbrode, and Paul McDaniel Plant, Soil & Entomological Sciences, Steve Brunsfeld and JoEllen Force, Forest Resources, \$2.6 Million
- 2001 – 2004 An integrative statistical framework for assessing and minimizing errors in ancient, non-invasive and forensic genetic studies, National Science Foundation, Co-PI - Paul Joyce, Mathematics, \$166,000
- 2000 - 2005 Environmental Surveillance, Education Research on Idaho National Engineering and Environmental Laboratory, US Department of Energy, Multidisciplinary Proposal Stoller Corporation (Idaho Falls, Idaho) with University of Idaho subcontract thru R. Crawford, \$10M to Stoller
- 2000 – 2003 An interdisciplinary approach to landscape ecology of brown bears (*Ursus arctos*), black bears (*Ursus americanus*) and humans (*Homo sapiens*) within the Greater Glacier Area, McIntire-Stennis Co-PI Nick Sanyal, Resource Recreation and Tourism, \$121,000
- 2000 – 2002 An evaluation of fecal DNA amplification success rates in ungulates. University of Idaho Seed Grant, \$7943
- 2000 – 2001 Using non-invasive genetic sampling in research and conservation of endangered wildlife, NATO Expert Visit program, \$2,635
- 1999 – 2001, Minimum population estimate and limiting factors for the North Cascades Grizzly Bear, Seattle City Light, through WSU with Co PI - Robert Wieglus and Charlie Robbins, Department of Natural Resource Sciences, Washington State University, \$187,000
- 1998 - 2001 Evaluation of historical levels of genetic diversity in brown bears of the lower forty eight states, National Science Foundation -EPSCoR, Co-PI – grant was administrated by Dr. Shreeve and included proposals from 10 faculty. \$180,000
- 1998 - 2000 Research Experience for Undergraduates, NSF-EPSCoR, \$10,800,
- 1998 - 2002 Acquisition of equipment for a molecular genetics core facility for research and research training in conservation genetics and molecular ecology, National Science Foundation, Co PI - Steve Brunsfeld, Forest Resources, Ernest Brannon, Aquaculture, \$271,615

1998 – 1999 An examination of the effects of highways on genetic diversity and gene flow in *Peromyscus maniculatus*, University of Idaho Seed Grant, \$5,865

### **Grants Funded and Written in Partnership with other Institutions**

(\$ did not come to UI but supported my research and teaching activities)

2011- 2012 Distributed graduate course in landscape genetics: Interdisciplinary, international, experiential graduate education, Melanie Murphy, Helene Wagner, Lisette Waits, American Genetics Association \$20,000

2011 – 2012 CIEE Graduate Mini-Course in Landscape Genetics: Training in Interdisciplinary International Research Collaboration. H. Wagner, L. Waits, M. Murphy, N. Keyghobadi, National Science and Engineering Research Council of Canada, \$19,800

2011 – 2013 Nepal Tiger Genome Project - Building Wildlife Genetics Capacity for Tiger Conservation in Nepal. Dibesh Karmacharya (CMD-Nepal), Kanchan Thapa (CMD-Nepal), Marcella Kelly (VT), L Waits. USAID, \$282,865.

2008 – 2010 Distributed Graduate Seminar in Landscape Genetics. National Center for Ecological Analysis and Synthesis (NCEAS) with H. Wagner (U of Toronto) \$40,000

### **Contracts**

2013 eDNA analysis of amphibians, \$2683, North Carolina Zoological Park

2013 Individual ID of wolf scats, \$30,350, Montana Coop Unit

2013 Genetic analysis of Idaho wolves, \$48,000, Idaho Fish and Game

2013 Fecal DNA analysis of felid scats, \$20,770, Oregon Fish and Game

2013 Species and individual ID of carnivore scats, \$965, Colville Tribe

2013 Species and individual ID of carnivore scats, \$858, Courdelane Tribe

2013 Species and individual ID of carnivore scats \$922, Spokane tribe

2013 Legal deposition work, \$636, Southern Environmental Law Center

2013 DNA analysis of polar bear scats, \$2500, Queens University

2013 Fecal DNA analysis of wolf scats, \$1625, Oregon Fish and Game

2013 Genetic analysis of red wolves, \$4741, US Fish and Wildlife Service

2013 Genetic analysis of kill site samples, \$563, South Dakota Game and Fish

2013 Paternity analysis of wild horses, \$2170, National Park Service

2013 Individual ID of bear hair samples, \$1845, Univ Washington

2013 Genetic analysis of fecal samples, \$2184, Notre Dame

2013 Genetic analysis of fecal samples, \$18,200, Virginia Tech

2013 Genetic analysis of bear hair samples, \$6321, Auburn Univ

2012 Oregon Cougar Fecal DNA sampling project, Oregon Fish and Game - \$30,000

2012 Oregon Wolf Monitoring project, Oregon Fish and Game – \$2,265

2012 Oregon Cattleman's Association Predator Monitoring - \$675

2012 Spokane Tribe Carnivore Fecal DNA analysis - \$1,070

2012 Colville Tribe Carnivore Fecal DNA analysis \$1,500

2012 USFWS Wolf Fecal DNA Monitoring Project \$22,500

2012 YE Wolf Fecal DNA Monitoring Project, YNP \$5,000

2012 Wolf Fecal DNA Monitoring USGS Montana Coop Unit \$7,000

2012 Amphibian Disease Monitoring, IDFG \$1924

2012 Pygmy Rabbit Monitoring, IDFG \$6950

2012 Pygmy Rabbit Monitoring, Colorado Natural Heritage, \$600

2012 Genetic analysis of West Virginia Coyotes, VDFG, \$5,500

2012 Fecal DNA analysis of Virginia Canids, Virginia Tech, \$23,600

2011 Genetic analysis of golden eagles \$6428, Aquilla Environmental

2011 Genetic assessment of W. Virginia coyotes, \$1450, USDA

2011 Sage Grouse Pellet Individual ID \$630, Environmental Consulting CA  
2011 – 2012 Cougar and bobcat fecal DNA analysis, Oregon Fish and Wildlife \$12,000  
2011 Species and Individual ID of carnivore hair samples, Alaska Fish and Game, \$830  
2011 Genetic analysis of wolves, Oregon Department of Fish and Game, \$1150  
2011 Fecal DNA monitoring of pygmy rabbits, Idaho Fish and Game Pocatello \$4400  
2010 Genetic analysis of water samples to detect amphibians, \$1270, USGS Boise  
2010 - 2011 Beaver sex identification \$2940, Forest Service  
2010 – 2012 Predator prey dynamics in Newfoundland, Newfoundland Government \$46,700  
2010 – 2011 Bighorn sheep population genetics \$15,000, Idaho Fish and Game  
2010 Genetic analysis of gray wolf feces, \$8522, Idaho Fish And Game  
2010 Genetic analysis of Idaho Giant Salamander \$1700, Idaho Fish and Game  
2010 Genetic analysis of New Mexico Black bears, \$3000, Virginia Tech  
2010 – 2011 Paternity Analysis of Shackleford Island Horses, National Park Service \$8650  
2009 – 2011 Chytrid fungus monitoring and landscape genetics of Idaho Giant Salamanders in the Clearwater National Forest, US Forest Service, \$44,000  
2009 – 2012 Predator monitoring in Newfoundland, Safari Club, \$165,000  
2009 – 2011 Fecal DNA analysis of felids of Belize, Virginia Tech, \$23,000 (\$8,000 2011)  
2009 – 2011 Idaho Tiger Beetle systematics, Idaho Fish and Game, \$20,000  
2009 – 2011 Chytrid fungus monitoring and landscape genetics of Idaho Giant Salamanders in the Clearwater National Forest, US Forest Service, \$44,000  
2008 – 2011 Red wolf genetic analysis \$165,500  
2007 - 2011 Pygmy Rabbit Fecal DNA Identification project, Idaho Fish and Game, \$45,000  
2007 – 2011 Fecal DNA Monitoring of Idaho Gray Wolves, Nez Perce Tribe and IDFG \$70,600  
2007 Coyote genetic analysis, Utah State-USGS - \$5700  
2006 – 2008 Conservation genetics of red wolves, USFWS, \$97,260  
2006 – 2007 Species and Individual ID of snow leopard scats, Snow Leopard Trust \$13,500  
2005 - 2006 Mongolian Gazelle and Grey Wolf Genetics – WCS \$12,000  
2005 – 2006 Wildlife Conservation Society carnivore detection project \$10,000  
2003 – 2009 Non-invasive genetic sampling Italian brown bears \$70,500  
2002 – 2005 Non-invasive Sampling and genetics of Red wolf, USFWS, \$135,000  
2002 – 2004 Paternity study Montana Cougars, Montana Fish and Game \$20,000  
2002, - 2005 Black Bear and cougar Individual ID from Hair and feces, IDFG, \$45,000  
2001 – 2002 Paternity study of Alaska brown bears, LGL environmental consulting \$6,000  
2001 - 2004, Non-invasive genetic sampling in the Grand Canyon, US Park Service, \$7,000  
2001 - 2002 Species ID of bear scats from Montana, Montana Fish and Game, \$5000  
2001 – 2002, DNA analysis of bear hair samples, Gerry Wright, Univ. Idaho, \$28,000  
2001 - 2002 Gene flow in Montana Wolverines, Montana Fish and Wildlife \$10,500  
1999 – 2001, Red wolf genetics, US Fish and Wildlife Service, \$79,000  
1999 – 2000, Genetic analysis bear hair samples British Columbia, LGL, \$15,000  
1999 - 2000 Population estimation of Minnesota black bears, Univ. of Minnesota, \$20,000  
1999 - 2000 Genetic identification Montana black bears, Montana Fish and Game \$4000  
1999 – 2000 Individual ID and gene flow of brown bears in the Gobi desert, WCS, \$3000  
1999 Identifying Carnivore species at Moose Kill Sites, Alaska Fish and Game, \$2000  
1998 – 2002 Genetic ID hair samples, Yellowstone Grizzly Foundation/Interagency Grizzly Bear Study Team, \$60,000  
1998 – 2002 Using DNA to monitor grizzly bear population trends in Glacier Park with US Geological Survey/Biological Research Division, \$386,000  
1998, Forensic individual identification of bear scat and hair samples from a human predation event in Glacier National Park, Glacier National Park, \$2,000

**Consulting**

Prepared a legal declaration on coyote hunting filed by Southern Environmental Law Firm over concerns on possible impacts to red wolves

Prepared a legal declaration on Great Lakes Wolf Delisting – retained by BIRCH, HORTON, BITTNER AND CHEROT paid by the U.S. Sportsmen’s Alliance Foundation (“USSAF”) and Wisconsin Bear Hunters Association

**Honors and Awards:**

- 2001 Best Paper/Oral Presentation International Bear Association Meeting (with 3 co-authors)
- 2002 Best Poster – International Bear Association Meeting (with 3 co-authors)
- 2003 Outstanding Research Award, College of Natural Resources
- 2004 Outstanding Research Award, College of Natural Resources
- 2005 Teaching Excellence Award, University of Idaho
- 2005 Publication of the year for USGS National Wildlife Research Center (with 3 coauthors)
- 2005 Best Oral Presentation International Bear Association Meeting, Italy
- 2006 Alumni Award for Excellence, University of Idaho
- 2006 Research Excellence Award, University of Idaho
- 2006 Publication of the year for USGS National Wildlife Research Center (with 3 coauthors).
- 2007 Environmental Science Faculty Excellence Award
- 2009 Best professional presentation, Idaho Chapter of the Wildlife Society
- 2009 Alumni Award for Excellence, University of Idaho
- 2010 Donald Crawford, Graduate Mentoring Award, University of Idaho
- 2010 Alumni Award for Excellence, University of Idaho
- 2011 Excellence in Interdisciplinary Research Team Award, University of Idaho
- 2012 Mid Career Excellence Award, University of Idaho

**SERVICE:****Major Committee Assignments:**University level

- 2013 Research/technology building faculty review team
- 2013 Don Crawford Mentoring Award Committee
- 2013 Interdisciplinary Research Award Committee
- 2011– 2013 Selection Committee for UI Distinguished University Professor
- 2011 Athena Scholarship Committee
- 2009 – 2011 Research Council
- 2009 – 2010 Search Committee for Dean of College of Natural Resources
- 2008 Facilitated UI leadership retreat organized by the Provost
- 2006 - 2007 UI Strategic Implementation Team for Research
- 2006 - 2007 Search Committee VP for Research
- 2005 - 2006 President’s Blue Ribbon Panel
- 2002 – present, NSF-IGERT program steering committee
- 2000 – 2003 International Affairs
- 2000 – 2004 Graduate Council
- 1998 – 2001 Animal Care and Use Committee

College Level

- 2007 – 2013 Ecology and Conservation Biology Petitions Committee
- 2007 – 2009 Chair PhD Assessment and Outcomes Committee
- 2000 – 2005 Curriculum Committee

2000 Department Head Review Committee  
 1998 – 1999 Conservation Biology Undergraduate Curriculum Development Committee  
 1999 – 2001 Co-Led Undergraduate Program in Natural Resources Ecology and Conservation  
 Biology  
 1998 CNR Lab Space Committee

#### Departmental

2013 Department Head search committee chair  
 2013 Tenure and promotion committee  
 2013 Population Ecology Search Committee  
 2011 Chair of 3<sup>rd</sup> Year Review Committee  
 2008 Third year review committee  
 2007 Tenure and promotion committee  
 2006 Tenure and Promotion committee  
 2004 Department Head selection committee  
 2004 Tenure and Promotion Committee  
 2004 Third Year Review Committee  
 2001 – 2003 NRECB club advisor  
 1999 Departmental Tenure Review Committee  
 1998 – 1999 Third Year Review Committee

#### **Professional and Scholarly Organizations**

Society of Molecular Biology and Evolution 1999 – 2003  
 American Genetic Society 2011 – present  
 American Association for the Advancement of Science 2012 - present  
 Sigma Xi 2011 - present  
 Society of Conservation Biology 1996 - present  
 International Association for Bear Research and Management 1995 – present  
 Wildlife Society – 1999 – present  
 International and US Association of Landscape Ecologists 2007 - present

#### **Outreach Service:**

2013 Organized and led Palouse Prairie School field trip on  
 2010 Friends of Clearwater Talk on Wolverines  
 2008 Guest speaker for primary school Roots and Shoots environmental club  
 2007 Organized and led science day at Moscow Charter School  
 2007 Participated in women in science seminar at Moscow High School  
 2003 Hosted 2 Legislator visits to my lab thru the EPSCOR program  
 2002 Hosted 1 legislator in my lab thru the EPSCOR program  
 2001 Interview was recorded and used by National Public Radio as part of NSF DNA files series  
 1999 Women in Natural Resources workshop for junior high girls

#### **Appointed Professional Service**

2009-2011 NCEAS working group on Landscape Genetics  
 2010 Outside thesis opponent Stockholm University  
 2007 Global Environmental Change Associate Professor External Search Committee Member,  
 Uppsala University, Sweden  
 2007 NSF review panel Evolutionary Biology  
 2006 Outside thesis opponent Uppsala University  
 2005 – 2006, Associate Editor, Journal of Wildlife Management  
 2004 – 2011, Associate Editor Wildlife Biology  
 2004 Outside thesis opponent Norway

2003 – present, Associate Editor Molecular Ecology  
2003 – 2006, Mexican Wolf Recovery Team  
2001 – 2004, Washington Pygmy Rabbit Scientific Advisory Board  
2001 NSF review panel for Doctoral Dissertation Improvement Grants  
2000 – 2009, Wildlife Society Working Group on Ecosystem Management  
1999 NSF review panel for Major Research Instrumentation Grants  
1999 – 2001 International Union for Conservation of Nature (IUCN) bear specialist group  
1999 – present, Red Wolf Recovery Implementation Team for USFWS

**Professional Reviews for grants and manuscripts**

Animal Conservation, Australian Journal of Zoology, Conservation Biology, Conservation Genetics, Evolution, Journal of Applied Ecology, Journal of Heredity, Journal of Mammalogy, Journal of Wildlife Management, Journal of Zoology, Landscape Ecology, Molecular Biology and Evolution, Molecular Ecology, Molecular Phylogenetics and Evolution, Nature, Northwest Science, NSF Ecology Panel, NSF Population Biology Panel, Proceedings of the Royal Society London, Proceedings of National Academy of Sciences, Science, Ursus, Wildlife Research

**PROFESSIONAL DEVELOPMENT:**

**Teaching and Advising:**

2013 Workshop on science and the media  
2002 Workshop on Teaching Conservation Biology, Canterbury England  
2000 Natural Resources in Education Conference, Columbia  
1999 Advising Workshop, U of I  
1998, 1999 Writing Across the Curriculum, U of I  
1998 Natural Resources Education Conference, Logan, Utah  
1998 Attended University of Idaho Teaching Course