# Laura R. Prugh

## **Associate Professor of Quantitative Wildlife Sciences**

School of Environmental and Forest Sciences University of Washington Box 352100 Seattle, WA 98195 phone 206-543-1588 <a href="mailto:lprugh@uw.edu">lprugh@uw.edu</a> http://www.prughlab.com/

**Primary Expertise:** quantitative multi-species conservation and management; population and community dynamics; conservation of endangered species and fragmented populations; human-wildlife interactions; noninvasive genetics

# Education

PhD, Wildlife Ecology, 2005

**University of British Columbia**, Zoology Department, Vancouver, British Columbia "Foraging ecology of coyotes in the Alaska Range" *advisor:* Dr. Charles J. Krebs

BA, Biology (honors), 1996

Earlham College, Richmond, Indiana

# Professional History

#### Research

University of Washington, Associate Professor	2018-present
UW Quantitative Ecology and Resource Management affiliate faculty	2018-present
University of Washington, Assistant Professor	2015-2018
University of Alaska Fairbanks, Assistant Professor	2012-2015
<b>UC Berkeley</b> , Research Associate ( <i>supervisor:</i> Dr. Justin Brashares)	2011-2012
<b>UC Berkeley</b> , Postdoctoral Researcher ( <i>supervisor:</i> Dr. Justin Brashares)	2007-2010
University of British Columbia, Postdoctoral Researcher	2005-2006
(Supervisors: Drs. ARE Sinclair and Karen Hodges)	
University of Minnesota, Biological Technician (supervisor. Dr. Peter Reich)	1997-1998
University of Montana, Field Assistant (supervisor: Dr. Wendy Arjo)	1997
Smithsonian Environmental Research Center, Intern	1996

#### Teaching

University of Washington, Assistant/Associate Professor 2016-present

Wildlife Techniques (ESRM 351)

Wildlife in the Modern World (ESRM 150)

Wildlife Seminar (ESRM 455)

Biology and Conservation of Mammals (ESRM 453)

Synthesis and Meta-analysis in Ecology (SEFS 590)

University of Alaska Fairbanks, Assistant Professor 2013-2015

Wildlife Populations and their Management (WLF 410)

Mammalogy (BIOL 425)
Advanced Community Ecology (BIOL 692)
University of British Columbia, Instructor
Population Biology (BIO 303)
University of British Columbia, Teaching Assistant
Biostatistics (BIO 300)

2005

2003-2004

# **Publications**

## Peer-reviewed

- Borg, BL, SM Arthur, JA Falke, LR Prugh. In press. Spatially explicit dynamics of wolf sightings in Denali National Park. **Arctic**.
- Gaynor, K, M Cherry, S Gilbert, M Kohl, C Larson, T Newsome, L Prugh, J Suraci, J Young, J Smith. 2020. An applied ecology of fear: linking theory to management practice. **Animal Conservation** https://doi.org/10.1111/acv.12629
- Leorna, S, T Brinkman, J McIntyre, B Wendling, L Prugh. 2020. Association between weather and Dall's sheep *Ovis dalli dalli* harvest success in Alaska. **Wildlife Biology** <a href="https://doi.org/10.2981/wlb.00660">https://doi.org/10.2981/wlb.00660</a>.
- Zhou, Jiake; Tape, Ken; Prugh, Laura; Kofinas, Gary; Carroll, Geoff; Kielland, Knut. 2020. Expansion of shrubs in the Arctic enhances habitat connectivity for browsing herbivores. **Global Change Biology** https://doi.org/10.1111/gcb.15104.
- van de Kerk, M, S. Arthur, M Bertram, B Borg, J Herriges, J Lawler, B Mangipane, C Lambert Koizumi, B Wendling, L Prugh. 2020. Environmental influences on Dall's sheep survival.

  Journal of Wildlife Management 84:1127-1138 <a href="https://doi.org/10.1002/jwmg.21873">https://doi.org/10.1002/jwmg.21873</a>
- Prugh, LR and KJ Sivy. 2020. Enemies with benefits: Integrating positive and negative interactions among terrestrial carnivores. **Ecology Letters** 23: 902-918. <a href="https://doi.org/10.1111/ele.13489">https://doi.org/10.1111/ele.13489</a>
- Brambila, A, J Chesnut, L Prugh, L Hallett. 2020. Herbivory enhances the effect of environmental variability on plant community composition and beta-diversity. **Journal of Vegetation Science.** <a href="https://doi.org/10.1111/jvs.12862">https://doi.org/10.1111/jvs.12862</a>
- Parsons, M, J Lewis, J Pauli, T Chestnut, J Ransom, D Werntz, L Prugh. 2020. Prey of reintroduced fishers and their habitat relationships in the Cascades Range, Washington. Forest Ecology and Management 460: <a href="https://doi.org/10.1016/j.foreco.2020.117888">https://doi.org/10.1016/j.foreco.2020.117888</a>.
- Carter, N, M Williamson, S Gilbert, S Lischka, L Prugh, J Lawler, A Metcalf, A Jacob, B Beltran, A Castro, A Sage, M Burnham. 2020. Integrated spatial analysis for human-wildlife coexistence in the American West. **Environmental Research Letters**. <a href="https://doi.org/10.1088/1748-9326/ab60e1">https://doi.org/10.1088/1748-9326/ab60e1</a>
- Parsons, MA, JC Lewis, B Gardner, T Chestnut, JI Ransom, DO Werntz, LR Prugh. 2019. Habitat selection and spatiotemporal interactions of a reintroduced mesocarnivore. **Journal of Wildlife Management** 83:1172-1184. <a href="https://doi.org/10.1002/jwmg.21670">https://doi.org/10.1002/jwmg.21670</a>
- Kelt, DA, EJ Heske, X Lambin, MK Oli, JL Orrock, A Ozgul, JN Pauli, LR Prugh, R Sollmann, S Sommer. 2019. Advances in population biology and species interactions in mammals.

  Journal of Mammalogy 100: 965-1007. <a href="https://doi.org/10.1093/jmammal/gyz017">https://doi.org/10.1093/jmammal/gyz017</a>

- Montgomery, RA, RJ Moll, E Say-Sallaz, M Valeix, LR Prugh. 2019. A tendency to simplify complex systems. **Biological Conservation** 233:1-11. https://doi.org/10.1016/j.biocon.2019.02.001.
- Prugh, LR, KJ Sivy, PJ Mahoney, TR Ganz, MA Ditmer, M van de Kerk, SL Gilbert, RA Montgomery. 2019. Designing studies of predation risk for improved inference in carnivore-ungulate systems. **Biological Conservation** 232: 194-207. <a href="https://doi.org/10.1016/j.biocon.2019.02.011">https://doi.org/10.1016/j.biocon.2019.02.011</a>.
- Grinath, J, L Prugh, J Brashares, K Suding. 2019. Environmental gradients determine the potential for ecosystem engineering effects. **Oikos** 128:994-1004. https://doi.org/10.1111/oik.05768
- Boelman, N., Liston, G.E., Gurarie, E., Meddens, A.J.H., Mahoney, P.J., Kirchner, P.B., Bohrer, G., Brinkman, T.J., Cosgrove, C.L., Eitel, J., Hebblewhite, M., Kimball, J.S., LaPoint, S.D., Nolin, A.W., Pedersen, S.H., Prugh, L.R., Reinking, A.K., Vierling, L. 2019. Integrating snow science and wildlife ecology in Arctic-boreal North America. **Environmental Research Letters**. https://doi.org/10.1088/1748-9326/aaeec1.
- van de Kerk, M, D Verbyla, AW Nolin, KJ Sivy and LR Prugh. 2018. Range-wide variation in the effect of spring snow phenology on Dall sheep population dynamics. **Environmental Research Letters** <a href="https://doi.org/10.1088/1748-9326/aace64">https://doi.org/10.1088/1748-9326/aace64</a>.
- Prugh, LR, N Deguines, JB Grinath, KN Suding, WT Bean, R Stafford, JS Brashares. 2018. Ecological winners and losers of extreme drought in California. **Nature Climate Change** 8: 819-824. https://doi.org/10.1038/s41558-018-0255-1.
- Mahoney, PJ, G Liston, S LaPoint, E Gurarie, B Mangipane, AG Wells, TJ Brinkman, JUH Eitel, N Boelman, LR Prugh. 2018. Navigating snowscapes: scale-dependent responses of mountain sheep to snowpack properties. **Ecological Applications** 28: 1715-1729. <a href="https://doi.org/10.1002/eap.1773">https://doi.org/10.1002/eap.1773</a>.
- Sivy, KJ, A Nolin, C Cosgrove, LR Prugh. 2018. Critical snow density threshold for Dall sheep (*Ovis dalli dalli*). **Canadian Journal of Zoology** 96: 1-8. <a href="https://doi.org/10.1139/cjz-2017-0259">https://doi.org/10.1139/cjz-2017-0259</a>.
- Grinath, JB, N Deguines, JW Chesnut, LR Prugh, JS Brashares, KN Suding. 2018. Animals alter precipitation legacies: trophic and ecosystem engineering effects on plant community temporal dynamics. **Journal of Ecology** 106: 1454-1469. <a href="https://doi.org/10.1111/1365-2745.12936">https://doi.org/10.1111/1365-2745.12936</a>
- Sivy, KJ, CP Pozzanghera, KE Colson, M Mumma, and LR Prugh. 2018. Apex predators and the facilitation of resource partitioning among mesopredators. **Oikos** 127: 607-621. <a href="https://doi.org/10.1111/oik.04647">https://doi.org/10.1111/oik.04647</a>
- Verbyla, D, T Hegel, A Nolin, M van de Kerk, T Kurkowski, L Prugh. 2017. Remote sensing of alpine spring snowline in Dall sheep mountain ranges of Alaska and western Canada. **Remote Sensing** 9:1157 <a href="https://doi.org/10.3390/rs9111157">https://doi.org/10.3390/rs9111157</a>.
- Sivy KJ, CP Pozzanghera, JB Grace, LR Prugh. 2017. Fatal attraction? Intraguild facilitation and suppression among carnivores. **American Naturalist** 190: 663–679. <a href="https://doi.org/10.1086/693996">https://doi.org/10.1086/693996</a>
- Zhou, J, LR Prugh, KD Tape, G Kofinas, K Kielland. 2017. The role of vegetation structure in controlling distributions of vertebrate herbivores in Arctic Alaska. **Arctic, Antarctic, and Alpine Research** 49: 291-304. <a href="https://doi.org/10.1657/AAAR0016-058">https://doi.org/10.1657/AAAR0016-058</a>

- Deguines, N, JS Brashares, LR Prugh. 2017. Precipitation alters interactions in a grassland ecological community. **Journal of Animal Ecology** 86:262-272. https://doi.org/10.1111/1365-2656.12614
- Keinath, D, Doak, D, Hodges, K, Prugh, L, Fagan, W, Sekercioglu, C, Butchart, S, Kauffman, M. 2017. A global analysis of species sensitivity to habitat disturbance. **Global Ecology and Biogeography** 26:115-127. <a href="https://doi.org/10.1111/geb.12509">https://doi.org/10.1111/geb.12509</a>
- Gilbert, SL, SJ Sivy, CB Pozzanghera, A DuBour, K Overduijn, MM Smith, J Zhou, JM Little, LR Prugh. 2017. Socioeconomic benefits of large carnivore recolonization through reduced wildlife-vehicle collisions. **Conservation Letters** 10:431-439. <a href="https://doi.org/10.1111/conl.12280">https://doi.org/10.1111/conl.12280</a>
- Pozzanghera, C, K Sivy, M Lindberg, L Prugh. 2016. Variable effects of snow conditions across boreal mesocarnivore species. **Canadian Journal of Zoology** 94: 697-705. <a href="https://doi.org/10.1139/cjz-2016-0050">https://doi.org/10.1139/cjz-2016-0050</a>
- Dorendorf, R, P Fix, LR Prugh. 2016. Motivations of fur trappers in Interior Alaska. **Human Dimensions of Wildlife** 21: 522-537.
- Borg, B. L., S. M. Arthur, N. A. Bromen, K. A. Cassidy, R. McIntyre, D. W. Smith, and L. R. Prugh. 2016. Implications of harvest on the boundaries of protected areas for large carnivore viewing opportunities. **Plos One** 11:e0153808.
- Gurney, CM, LR Prugh, JS Brashares. 2015. Restoration of native plants is reduced by rodent-caused soil disturbance and seed removal. **Rangeland Ecology and Management** 68: 359-366.
- Prugh, LR and SM Arthur. 2015. Optimal predator management for mountain sheep conservation depends on the strength of mesopredator release. **Oikos** 124: 1241-1250.
- Borg, B, S Brainerd, T Meier, LR Prugh. 2015. Impacts of breeder loss on social structure, reproduction and population growth in a social canid. **Journal of Animal Ecology** 84: 177-187.
- Bean, WT, LR Prugh, R Stafford, HS Butterfield, M Westfall, JS Brashares. 2014. Species distribution models of an endangered rodent offer conflicting measures of habitat quality at multiple scales. **Journal of Applied Ecology** 51: 1116-1125.
- Endicott, RL, LR Prugh, JS Brashares. 2014. Surplus killing by endangered San Joaquin kit foxes (*Vulpes macrotis mutica*) is linked to a local population decline of endangered giant kangaroo rats (*Dipodomys ingens*). **Southwestern Naturalist** 59: 110-115.
- Prugh, LR and CD Golden. 2014. Does moonlight increase predation risk? Meta-analysis reveals divergent responses of nocturnal mammals to lunar cycles. **Journal of Animal Ecology** 83: 504-514.
- McCune, JL, WL Harrower, S Avery-Gomm, JM Brogan, A Csergo, LN Davidson, A Garani, LR Halpin, LP Lipsen, C Lee, JC Nelson, LR Prugh, C Stinson, CK Whitney, J Whitton, 2013. Threats to Canadian species at risk: an analysis of finalized recovery strategies. **Biological Conservation** 166: 254-265.
- Bean, WT, R. Stafford, LR Prugh, S. Butterfield, JS Brashares 2012. An evaluation of monitoring methods for the endangered giant kangaroo rat. **Wildlife Society Bulletin** 36: 587-593.

- Prugh, LR and JS Brashares. 2012. Partitioning the keystone effects of an ecological engineer: kangaroo rats control community structure via multiple pathways. **Journal of Animal Ecology** 81: 667-678.
- Arthur, SM and LR Prugh. 2010. Predator-mediated indirect effects of snowshoe hares on Dall sheep in Alaska. **Journal of Wildlife Management** 74: 1709-1721.
- Prugh, LR and JS Brashares. 2010. Basking in the moonlight? Illumination increases the capture success of the endangered giant kangaroo rat. **Journal of Mammalogy** 91: 1205-1212.
- Prugh, LR, ARE Sinclair, KE Hodges, AL Jacob, DS Wilcove. 2010. Reducing threats to species: threat reversibility and links to industry. **Conservation Letters** 3: 267-276.
- Brashares, JS, LR Prugh, CJ Stoner, CW Epps. 2010. Ecological and conservation implications of mesopredator release. Pp. 221-240 *in* J.Terborgh and J. Estes, eds. Trophic cascades. Island Press, Washington DC.
- Prugh, LR, CJ Stoner, CW Epps, WT Bean, WJ Ripple, AS Laliberte, JS Brashares. 2009. The rise of the mesopredator. **BioScience** 59: 779-791. https://doi.org/10.1525/bio.2009.59.9.9
- Prugh, LR. 2009. An evaluation of patch connectivity measures. **Ecological Applications** 19: 1300-1310.
- Prugh, LR, KE Hodges, ARE Sinclair, JS Brashares. 2008. Effect of habitat area and isolation on fragmented animal populations. **Proceedings of the National Academy of Sciences** 105: 20770-20775.\*† <a href="https://doi.org/10.1073/pnas.0806080105">https://doi.org/10.1073/pnas.0806080105</a>
  - \* with associated commentary by Franklin, JF and DB Lindenmayer. 2009. Importance of matrix habitats in maintaining biological diversity. PNAS 106: 349-350.
  - <sup>†</sup> recommended twice by the Faculty of 1000
- Prugh, LR, SM Arthur, CE Ritland. 2008. Use of fecal genotyping to determine individual diet. **Wildlife Biology** 14: 318-330. <a href="https://doi.org/10.2981/0909-6396(2008)14[281:FIPPCH]2.0.CO;2">https://doi.org/10.2981/0909-6396(2008)14[281:FIPPCH]2.0.CO;2</a>
- Mooers, AO, LR Prugh, M Festa-Bianchet, and JA Hutchings. 2007. Biases in legal listing under Canadian endangered species legislation. **Conservation Biology** 21:572-575.
- Prugh, LR, CE Ritland, SM Arthur, CJ Krebs. 2005. Monitoring coyote population dynamics by genotyping feces. **Molecular Ecology** 14: 1585-1596. <a href="https://doi.org/10.1111/j.1365-294X.2005.02533.x">https://doi.org/10.1111/j.1365-294X.2005.02533.x</a>
- Prugh, LR. 2005. Coyote prey selection and community stability during a decline in food supply. **Oikos** 110: 253-264. https://doi.org/10.1111/j.0030-1299.2005.13478.x
- Prugh, LR and CE Ritland. 2005. Molecular testing of observer identification of carnivore feces in the field. **Wildlife Society Bulletin** 33: 189-194. <a href="https://doi.org/10.2193/0091-7648(2005)33[189:MTOOIO]2.0.CO;2">https://doi.org/10.2193/0091-7648(2005)33[189:MTOOIO]2.0.CO;2</a>
- Prugh, LR and CJ Krebs. 2004. Snowshoe hare pellet decay rates and aging in different habitats. **Wildlife Society Bulletin** 32: 386-393.
- Reich, PB, C Uhl, MB Walters, L Prugh, DS Ellsworth. 2004. Leaf demography and phenology in Amazonian rain forest: a census of 40,000 leaves of 23 tree species. **Ecological Monographs** 74: 3-23.

#### Non-refereed

Prugh, LR. 2011. Predators in our midst. **Bioscience** 61: 488-489 (invited book review).

Prugh, LR. 2009. Kangaroo rats: the great farmer-engineers of our deserts. **Sierra Club Desert Report** (Sept 2009): 15-17. Available at: desertreport.org/wp-content/uploads/2009/09/DR Fall2009.pdf

Prugh, LR. 2007-2011. Carrizo Plain Ecosystem Project annual reports. Prepared for agency partners.

#### **Submitted**

- Parsons, M, A Orloff, L Prugh. In review. Evaluating live trapping and camera-based indices of small mammal density. **Wildlife Society Bulletin**.
- Davidson, SC, G Bohrer, E Gurarie, S LaPoint, PJ Mahoney, NT Boelman, JUH Eitel, LR Prugh et al. In revision. New ecological insights from the Arctic Animal Movement Archive (AAMA). **Science**.
- Mahoney, P, K Joly, B Borg, M Sorum, T Rinaldi, H Golden, D Saalfeld, A Latham, A Kelly, B Mangipane, C Lambert Koizumi, L Neufeld, M Hebblewhite, N Boelman, L Prugh. In review. Denning phenology and reproductive success of wolves in response to climate signals. **Environmental Research Letters**.
- Cosgrove, CL, J Wells, AW Nolin, J Putera, LR Prugh. In revision. Seasonal influence of snow conditions on Dall's sheep productivity in Wrangell-St Elias National Park and Preserve. **Plos One**.
- Sytsma, M, T Lewis, B Gardner, LR Prugh. In review. Low levels of outdoor recreation alter wildlife behavior. **Journal of Applied Ecology.**
- Klauder, K, B Borg, KJ Sivy, LR Prugh. In revision. Gifts of an enemy: Scavenging dynamics in the presence of wolves. **Journal of Mammalogy**.
- Klauder, K, B Borg, LR Prugh. In revision. Living on the edge: coyote space use, survival, and response to wolves in the subarctic. **Canadian Journal of Zoology.**
- Happe, PJ, SH Pace, LR Prugh, KJ Jenkins, JC Lewis, J Hagar. In revision. Food habits of fishers (*Pekania pennanti*) reintroduced on the Olympic Peninsula, WA. **Northwestern Naturalist.**

# Grants and Fellowships

#### **NASA Interdisciplinary Science Program**

\$1,273,545 2020-2022

Prugh, LR (PI), J Lundquist (co-PI), M Durand (co-PI). Linking seasonal snow processes to wildlife population dynamics (\$989,657 to UW).

Seattle City Light \$63,508 2020-2022

Prugh, LR (PI). Relationships between fishers and mountain beavers in the North Cascades.

UW Royalty Research Fund \$40,000 2020-2021

Prugh, LR (PI). Advancing urban carnivore ecology using noninvasive genetics.

NASA Fellowship Activity \$165,000 2019-2022

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Prugh, LR (PI). Evaluating camera traps as ground-based remote sensing networks linking snow and wildlife. (graduate fellowship for PhD student Catherine Breen)

# **NASA Terrestrial Ecosystems Program**

\$800,850

2019-2022

Boelman, N (PI), LR Prugh (co-PI), T Brinkman (co-PI), G Liston (co-PI). Quantifying socioecological consequences of changing snow and icescapes: A data-model fusion approach (\$142,515 to UW).

# **USDA NIFA McIntire Stennis Program**

\$100,000

2019-2021

Prugh, LR (PI). Forest Carnivore Restoration and Mountain Beaver Pest Control in Washington.

#### **Rocky Mountain Elk Foundation**

\$55.471

2019-2021

Prugh, LR (PI). Timber harvest and Selkirk Elk: Predator-prey interactions. (proposal led by PhD student Taylor Ganz)

#### **National Science Foundation, DEB**

\$898,562

2017-2022

Prugh, LR (PI). CAREER: Integrating positive and negative interactions in carnivore community ecology.

## **Washington Department of Fish and Wildlife**

\$1,075,941

2017-2022

Wirsing, A (PI), Prugh, LR (PI), Gardner, B (PI). *Ungulate-predator dynamics in northern Washington (\$518,460 to Prugh)* 

# **National Park Service CESU agreement**

\$159,998

2014-2021

Prugh, LR (PI). Population dynamics of forest carnivores in Denali (\$26,108 to UAF, \$133,890 to UW).

#### **National Park Service CESU Agreement**

\$167,208

2016-2019

Prugh, LR (PI). Impacts of tour boat shore excursions on terrestrial wildlife Glacier Bay National Park.

#### **USDA NIFA McIntire Stennis Program**

\$99,679

2016-2018

Prugh, LR (PI). Trophic relationships of reintroduced fishers in the South Cascades.

#### **NASA Terrestrial Ecosystems Program**

\$1,237,611

2015-2019

Boelman, N (PI), G Bohrer (co-PI), M Hebblewhite (co-PI), L Prugh (co-PI), JL Vierling (co-PI), Eitel (co-PI). Animals on the move: Remotely based determination of key drivers influencing movements and habitat selection of highly mobile fauna throughout the ABoVE study domain (\$218,131 to UW).

### **NASA Terrestrial Ecosystems Program**

\$1,011,491

2015-2019

Prugh, LR (PI), D Verbyla (co-PI), A Nolin (co-PI), T Brinkman (co-PI). Assessing alpine ecosystem vulnerability to environmental change using Dall sheep as an iconic indicator species (\$369,361 to UW).

## **National Science Foundation, DEB**

\$744,758

2014-2018

Prugh, LR (PI), JS Brashares (co-PI), KN Suding (co-PI). *Collaborative research: Interactive effects of climate, ecosystem engineering, and trophic interactions on grassland community dynamics* (\$350,000 to UAF, \$115,189 transferred to UW).

# Alaska Energy Authority (PI)

\$414,515

2012-2015

Prugh, LR (PI). Terrestrial furbearer abundance and habitat use (\$414,515 to UAF).

## **Bureau of Land Management CESU Grant**\*

\$90,000

2012

Optimizing habitat management for the giant kangaroo rat and associated San Joaquin Valley upland species: Part II

**USDA National Research Initiative Grant §** 

\$350,000

2008-12

Effect of native rodents on the restoration of western rangelands

# **Bureau of Land Management CESU Grant§**

\$75,000

2008-10

Optimizing habitat management for the giant kangaroo rat (Dipodomys ingens) and associated San Joaquin upland species

**USFWS Endangered Species Conservation Fund**§

\$102.300

2009-11

Habitat management for the giant kangaroo rat and associated species

The Nature Conservancy Carrizo Endowment Fund§

.000 2007

Conservation of the giant kangaroo rat (Dipodomys ingens) and associated species

Rob and Bessie Welder Wildlife Graduate Fellowship	\$39,200	2002-2004
University of British Columbia Graduate Fellowship	\$16,000	2001
American Wildlife Research Foundation	\$2,000	2001
American Society of Mammalogists	\$1,000	2001

National Science Foundation Graduate Research Fellowship \$76,300 1998–2001

# Honors and Awards

2019 Presidential Early Career Award for Scientists and Engineers (PECASE)

2019 SEFS Faculty of the Year Award, UW

2019 TWS Wildlife Publication Award (for Gilbert et al. 2017 Cons Letters)

1996 Departmental and College Honors, Earlham College

1996 Lucy Moore Graves Award for Marine Biology, Earlham College

# Professional activities/Service

Faculty Advisory Committee, UW Finance Transformation (member) 2020-present **QERM admissions review committee** (ad hoc member) 2020 NASA ABoVE Snowscapes Working Group (co-chair) 2019-present **SEFS Promotion and Tenure Committee** 2019-present **SEFS Shared Molecular Lab** (director) 2016-present **Journal of Animal Ecology** (Associate Editor) 2015-present **IUCN Canid Specialist Group** (invited member, wolf working group) 2014-present 5<sup>th</sup> NASA ABoVE Science Team Meeting Organizing Committee (member) 2019-2020 NSF proposal ad-hoc reviewer (DEB, OPP, IOS) 2019-2020 Royalty Research Fund (ad hoc reviewer) 2017, 2020

<sup>§</sup> I led these grant proposals during my postdoc at UC Berkeley, where postdocs are not allowed to have PI status

ADVANCE CAREER workshop (presenter)	2018
JAE early career review paper award (panelist)	2018
CoE Scholarship committee (ad hoc reviewer)	2017
AGU student award judge	2017
ESA student award judge	2017
SEFS Scholarship Committee (member)	2017-2019
NSF DEB full proposal review panel (panelist)	2017
NASA ABoVE Stakeholder Engagement Working Group (member)	2016-2019
SEFS Research Committee (member)	2015-2019
NASA ABoVE Wildlife and Ecosystem Services Working Group (member)	2015-2019
NSF DEB pre-proposal review panel (panelist)	2015
Introduction to Access workshop (I offered a half-day, hands-on workshop on database management to graduate students and faculty each year)	2013-2015
UAF Biology Grad Student Association (faculty liason)	2013-2015
UAF Lensink Fellowship Review Panel (member)	2013-2015
UAF Wildlife Society Student Chapter (faculty advisor)	2012-2015
IAB Comps Committee (member)	2012-2015
IAB Summer Fellowships Committee (member)	2012-2015
AK Chapter of the Wildlife Society annual meeting (program chair)	2013
Interdisciplinari-Tea (member, interdisciplinary working group at UC Berkeley)	2011
Faculty of 1000 (associate reviewer)	2009-2011
Sunpower Corp. science advisory committee (invited member)	2010
Non-invasive genotyping symposium, Wildlife Society Meeting (organizer)	2006
UBC population ecologist search committee (student member)	2004
UBC population and community ecology weekly seminar (coordinator)	2002-2004

**Member:** National Science Teachers Association, Society for College Science Teachers; The Natural History Network; The Wildlife Society (National, Washington chapter, Alaska chapter, urban wildlife working group, biodiversity working group); Society for Conservation Biology; Ecological Society of America; American Society of Mammalogists

Referee for: Science, National Science Foundation, Sigma Delta Epsilon (Women in Science), PNAS, TREE, Proceedings of the Royal Society, Ecology Letters, Ecology, Conservation Letters, Bioscience, Molecular Ecology, Journal of Animal Ecology, Oikos, Animal Conservation, Wildlife Biology, The Wildlife Society Bulletin, Journal of Wildlife Management, Society for Conservation Biology (species assessment peer review), Human-Wildlife Conflicts, Western North American Naturalist, Journal of Mammalogy, Global Ecology and Biogeography, Ecography, Conservation Genetics, Diversity and Distributions, Forest Ecology and Management, Journal of Arid Environments, Journal of Zoology, Ecosphere, Frontiers in Zoology, Molecular Ecology Resources, Behavioral Ecology, Ecological Applications, Biodiversity and Conservation, Animal Behavior, American Naturalist, Nature Ecology & Evolution

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# Invited lectures

- 2020 **Inland Norway University** Community Ecology Research workshop, invited plenary talk and hands-on structural equation modeling workshop, Evenstad Norway.
- 2020 **UW School of Environmental and Forest Sciences** Seminar Series, Seattle WA
- 2018 **The Wildlife Society Annual Conference** Symposium "The Ecology of Fear: Linking Theory to Management Practice," Cleveland OH
- 2018 **Boise State University** Social-Ecological Future of the American West Workshop: invited participant, Boise ID
- 2018 **Wrangell Institute for Science and Environment** Science Lecture Series, Wrangell-St Elias National Park, AK
- 2018 Alaska Department of Fish and Game, Fairbanks AK
- 2018 Oregon State University Ecology, Evolution, Conservation, and Biodiversity seminar series, Corvallis OR
- 2017 **Howard Hughes Medical Institute** scientific panel at the Jackson Hole Wildlife Film Festival (one of 4 invited panelists, along with Jane Lubchenco, Rob Pringle, and Paola Bouley)
- 2017 **NASA's Earth to Sky Partnership** "Interpreting Climate Change" workshop: invited presenter at 2-day workshop for employees of natural resource agencies, Spokane WA
- 2017 Ohio State University Integrated Carnivore-Livestock Management Workshop, Columbus, OH
- 2017 Virginia Tech Ecology, Evolution and Behavior Seminar Series, Blacksburg, VA
- 2016 University of Idaho Department of Fish and Wildlife Seminar Series, Moscow, ID
- 2016 UW School of Environmental and Forest Sciences Seminar Series, Seattle WA
- 2016 Research Exposed! Seminar Series, University of Washington, Seattle WA
- 2016 NASA's Earth to Sky webinar series for the general public
- 2015 UW School of Aquatic and Fishery Sciences Seminar Series, Seattle WA
- 2015 Dept. Forest and Wildlife Ecology Seminar Series, University of Wisconsin Madison, Madison WI
- 2015 UAF Research Showcase, University of Alaska Fairbanks, AK
- 2015 Overview of Noninvasive Monitoring Methods. **Northern Furbearer Conference workshop**, Juneau AK
- 2014 **Ecological Society of America Annual Conference** Symposium "*Ungulate population dynamics in multi-prey, multi-predator systems*", Sacramento CA
- 2013 Yale Institute for Biospheric Studies Symposium "Large Carnivores in Terrestrial Ecosystems: Bridging Theory and Natural History to Inform Management," New Haven CT
- 2013 IAB 50<sup>th</sup> Anniversary Celebration, UAF, Fairbanks AK
- 2011 **Oxford Biodiversity Institute** Symposium "*Biodiversity Beyond Protected Areas*," Oxford UK
- 2010, 2011 Wildlife Ecology Course, UC Berkeley (4 lectures on population dynamics)
- 2009 **UC Davis Bodega Marine Lab**, Mary and Louise Riley Seminar Series
- 2008 University of British Columbia, Species at Risk Workshop
- 2007-2009 University of California Berkeley, Wildlife Lunch Seminar

- 2007 University of California Berkeley, Ecolunch Seminar Series
- 2004, 2006 University of British Columbia, Ecology and Evolutionary Biology Seminar
- 2006 Canadian Wildlife Service, Delta BC
- 2006 Simon Fraser University, Vancouver BC, Les Ecologistes Seminar Series
- 2005 University of Alaska Fairbanks, Life Sciences Seminar Series
- 2005 Alaska Department of Fish and Game, Fairbanks Alaska
- 2004 Yukon Science Institute Lecture Series, Whitehorse YT, Dawson YT, Canada
- 2004 Wildlife Ecology and Management Course, University of British Columbia
- 2003, 2004 Ecological Methodology Course, University of British Columbia

# Conference Presentations

- 2019 Gardner, B, SB Bassing, T Ganz, L Prugh, T Roussin, O Sanderfoot, L Satterfield, A Wirsing. 2019. Smoke on the water, fire in the sky. Quantifying the effects of smoke pollution on large mammal movement. The Wildlife Society Annual Conference, Reno NV.
- 2019 Ganz, T, M DeVivo, L Prugh. Wildlife whodunit: Forensic identification of predators to improve wildlife conservation. **The Wildlife Society Annual Conference**, Reno NV.
- 2019 Bassing, SB, T Ganz, L Prugh, L Satterfield, A Wirsing, B Gardner. Potential biases in camera trap data when monitoring multiple species. **The Wildlife Society Annual Conference**, Reno NV.
- van de Kerk, M, S. Arthur, M Bertram, B Borg, J Herriges, J Lawler, B Mangipane, C Lambert Koizumi, B Wendling, L Prugh. Remote sensing reveals drivers of Dall's sheep survival. 5<sup>th</sup> NASA ABoVE Science Team Meeting, La Jolla CA.
- 2019 Sytsma, M, LR Prugh, T Lewis, B Gardner. Responses of Wildlife to Tourism in Glacier Bay National Park, AK. The Wildlife Society Washington Chapter Annual Meeting, Grand Mound WA.
- 2018 Mahoney, PJ, K Joly, B Borg, M Sorum, H Golden, T Rinaldi, D Saalfeld, D Latham, B Mangipane, C Koizumi, É Bélanger, M Hebblewhite, N Boelman, L Prugh. Wolf denning phenology and reproductive success in response to climate signals. AGU Annual Meeting, Washington DC.
- 2018 Klauder, K, LR Prugh, and B Borg. Gifts of an enemy: scavenging dynamics in the presence of wolves. **Alaska Chapter of the Wildlife Society** Annual Meeting, Anchorage AK.
- 2018 Sytsma, M, LR Prugh, T Lewis, and B Gardner. Response of wildlife to tourism in Glacier Bay National Park, Alaska. **Alaska Chapter of the Wildlife Society** Annual Meeting, Anchorage AK.
- 2018 Mahoney, P, G Liston, S LaPoint, E Gurarie, B Mangipane, A Wells, T Brinkman, J Eitel, M Hebblewhite, A Nolin, N Boelman, L Prugh. Navigating snowscapes: scale-dependent responses of mountain sheep to snowpack properties. **4**<sup>th</sup> **NASA ABoVE Science Team Meeting**, Seattle WA.
- 2017 Prugh, LR, D Verbyla, M van de Kerk, P Mahoney, KJ Sivy, G Liston, A Nolin. Snowscape ecology: linking snow properties to wildlife movements and demography. **AGU** Annual Meeting, New Orleans, LA.

- 2017 Waianuhea, L\*, L Prugh, R Endicott. Do giant kangaroo rats display a saturating functional response to food availability? Poster presented at the **National Diversity in STEM Conference**, Salt Lake City Utah (\*REU student)
- 2017 Prugh, LR and KJ Sivy. Enemies with benefits: Integrating positive and negative interactions among terrestrial carnivores. **Ecological Society of America** Annual Meeting, Portland OR.
- 2017 Parsons, M. A. and L. R. Prugh. Habitat use of reintroduced fishers with respect to trophic relationships. **Ecological Society of America** Annual Meeting, Portland, OR.
- 2017 Mahoney, PJ, GE Liston, SD LaPoint, E Gurarie, B Mangipane, J Jennewein, RY Oliver, E Palm, JUH Eitel, M Hebblewhite, N Boelman, and LR Prugh. Navigating snowscapes: scale-dependent responses of mountain sheep to snowpack properties. **Ecological Society of America** Annual Meeting, Portland, OR.
- van de Kerk, M, D Verbyla, AW Nolin, KJ Sivy, LR Prugh. Effects of snow extent on Dall sheep recruitment indicate population declines under climate change. **Ecological Society of America** Annual Meeting, Portland OR.
- van de Kerk, M, D Verbyla, AW Nolin, KJ Sivy, LR Prugh. Climate change may adversely affect Dall sheep populations through variation in snow extent. Annual Meeting of the **American Society of Mammalogists**, Moscow ID.
- 2017 Deguines, N, LR Prugh, and JS Brashares. 2017. Precipitation alters interactions in a grassland ecological community. **Functional Ecology and Environment Conference**, Toulouse, France.
- 2017 Parsons, MA and LR Prugh. Prey availability for reintroduced fishers in the South Cascades. **The Wildlife Society Washington Chapter Annual Meeting**, Yakima, WA.
- van de Kerk, M, D Verbyla, A Nolin, K Sivy, L Prugh. Effects of snow cover on Dall sheep recruitment. **3<sup>rd</sup> NASA ABoVE Science Team Meeting**, Boulder CO.
- 2016 Klauder, K, L Prugh, B Borg. A landscape of unease: scavenging dynamics and habitat use of mesocarnivores in the presence of wolves. **NPS Centennial Science and Stewardship Symposium**, Anchorage AK.
- 2016 Grinath, JB, N Deguines, LR Prugh, J Brashares, and KN Suding. Lagged effects of precipitation drive plant community composition responses to ecosystem engineering. **Ecological Society of America** Annual Meeting, Fort Lauderdale FL.
- 2015 Gilbert, SL, SJ Sivy, CB Pozzanghera, A DuBour, K Overduijn, MM Smith, J Zhou, JM Little, LR Prugh. Socioeconomic benefits of large carnivore restoration in the Eastern United States. **Ecological Society of America** Annual Meeting, Baltimore MD.
- 2015 Deguines, N, J Brashares, L Prugh. Precipitation effects on a semi-arid food web. **Ecological Society of America** Annual Meeting, Baltimore MD.
- 2015 Stafford, B, C Feihler, B Cypher, L Prugh, S Butterfield. Long term population trends and density estimates for San Joaquin kit fox on the Carrizo Plain National Monument. **TWS Western Section**, Santa Rosa CA.
- 2015 Sivy, K, C Pozzanghera, L Prugh. Coyote and red fox diet in relation to wolves in Interior Alaska. **Northern Furbearer Conference**, Juneau AK.
- 2015 Pozzanghera, C, K Sivy, L Prugh. Mesocarnivore occupancy patterns in Alaska's interior. **Northern Furbearer Conference**, Juneau AK.
- 2015 Dorrendorf, R, P Fix, L Prugh. Motivations and drivers of Interior Alaskan trappers. **Northern Furbearer Conference**, Juneau AK.

- 2015 Borg, B, K Cassidy, D Smith, J Falke, L Prugh. Implications of harvest on the border of protected areas for wolf viewing opportunities. Northern Furbearer Conference, Juneau AK.
- 2015 Prugh, LR. NASA ABoVE Dall sheep project. **1**<sup>st</sup> **NASA ABoVE Science Team Meeting**, Minneapolis MN.
- 2014 Sivy, SJ, C Pozzanghera, LR Prugh. Mesocarnivore response to wolf presence, prey, and snowpack. **Ecological Society of America Annual Conference**, Sacramento CA.
- 2014 Gilbert, SL, SJ Sivy, CB Pozzanghera, A DuBour, K Overduijn, MM Smith, J Zhou, JM Little, LR Prugh. Economic and ecological benefits of cougar recolonization through deer population reduction. North America Congress for Conservation Biology, Missoula MT.
- 2014 Prugh, LR, SM Arthur. Optimal predator management for Dall sheep conservation depends on the strength of mesopredator release. **Alaska Chapter of the Wildlife Society Annual Meeting**, Anchorage AK.
- 2014 Lewis, A, S Barcalow, R Casto, B Elkins, A Haberski, V Hartanovich, H Heniff, A Interrante, J Lewis, J McLaughlin, J Rose, M Sorlin, V Tenney, L Prugh, T Booms. American kestrel population dynamics on the University of Alaska Fairbanks campus: initiation of a new study. Alaska Chapter of the Wildlife Society Annual Meeting, Anchorage AK.
- 2014 Gilbert, SL, SJ Sivy, CB Pozzanghera, A DuBour, K Overduijn, MM Smith, J Zhou, JM Little, LR Prugh. Could cougar recolonization reduce deer-vehicle collisions? Gordon Conference on Predator-Prey Interactions, Ventura CA.
- 2013 Prugh, LR, SM Arthur. Wolves as shepherds: Optimal predator management for mountain sheep conservation depends on the strength of mesopredator release. **International Congress for Conservation Biology, Baltimore MD.**
- 2013 Borg, B, LR Prugh. Impacts of breeder loss on wolf social structure, reproduction and viewability in Denali National Park and Preserve. **International Congress for Conservation Biology**, Baltimore MD.
- 2011 Prugh, LR, JS Brashares. Partitioning the effects of an ecosystem engineer: kangaroo rats control community structure via multiple pathways. **96**<sup>th</sup> **Ecological Society of America Annual Meeting,** Austin, TX.
- 2010 Northern Wild Sheep and Goat Council Symposium, Hood River, OR
- 2010 National Landscape Conservation System Science Symposium, Albuquerque, NM
- 2010 63rd Annual Meeting of the Society for Range Management, Denver, CO
- 2009 16th Annual Meeting of the Wildlife Society, Monterey, CA
- 2008 Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management, Estes Park, CO
- 2008 San Joaquin Valley Natural Communities Conference, Bakersfield, CA
- 2006 13th Annual Meeting of the Wildlife Society, Anchorage, AK
- 2006 **20th Annual Meeting of the Society for Conservation Biology**, San Jose, CA
- 2006 Inaugural Meeting of the Canadian Society for Ecology and Evolution, Montréal, QC
- 2004 11th Annual Meeting of the Wildlife Society, Calgary, AB
- 2004 NW Section of the Wildlife Society Annual Meeting, Girdwood, AK
- 2004 89th Annual Meeting of the Ecological Society of America, Portland, OR
- 2003 University of British Columbia Graduate Symposium, Vancouver, BC

- 11<sup>th</sup> Northern Furbearer Conference, Whitehorse, YK
   9th Annual Meeting of the Wildlife Society, Bismarck, ND
   10<sup>th</sup> Northern Furbearer Conference, Fairbanks, AK
   Pacific Ecology Conference, Tofino, BC
  - Workshops and trainings

## SpeakOut Summer Institute, 2020

Participated in 3-day workshop on equity and social justice education

# **UW Engaging Alaska Native and Native American Undergraduates in Research**, 2018 Participated in 2-hour workshop about how to engage AN/NA students in research

# **UW ADVANCE Workshops**, 2015-2016

Participated in 3 pre-tenure workshops about applying for grants, time management, and mentoring

## Wilderness First Aid Training, 2016

2-day course offered by Solo in Anchorage, AK as part of the 2<sup>nd</sup> NASA ABoVE Science Team Meeting

#### Meet, Greet, Teach, 2015

Participated in discussion "Be quiet! Teaching introverts" sponsored by the Program on the Environment at UW

# **UW Faculty Fellows Program**, 2015

Participated in four days of teaching-focused workshops and activities led by experience UW faculty and geared towards new faculty.

# Resource Selection Function workshops, 2014 & 2015

Full-day workshops on resource selection functions led by Dr. Mark Boyce of the University of Alberta (2014) and Dave Gregovich of ADFG (2015), offered as part of the Alaska chapter of The Wildlife Society meetings in Anchorage and Juneau.

# Chemical Immobilization workshop, 2014

3-day workshop offered by the Alaska Department of Fish and Game designed for professionals to learn how to safely immobilize animals for wildlife research. Instruction included classroom and hands-on exercises (e.g., firing dart rifles, cleaning dart wounds, immobilizing and drawing blood from caribou).

#### Science: Being the Messenger, 2013

Full-day workshop offered by NSF designed to improve the ability of scientists to communicate research findings to the media and general public.

#### Women's leadership training, 2013

Full-day leadership training workshop for women offered by Dr. Alice Eagly of Northwestern University. This workshop increased my awareness of inherent biases and roadblocks facing women in leadership positions, and I gained experience practicing new tools to increase my effectiveness as a mentor and leader.

# Positive Space training, 2004

Half-day workshop offered by the Positive Space Campaign at UBC to become a resource person for the LGBTQ community on campus. Training increased awareness of issues related to homophobia, gender identity, and queer culture, and I was provided information about resources available to students in need of assistance.

# Outreach

**UW WiSE (Women in Science and Engineering) Program Pre-Collegiate Summit**, 2019 Attended the networking summit as a mentor for high school girls interested in STEM careers

# The Show About Science podcast, 2019

Interviewed by 8-year old host! <a href="https://soundcloud.com/the-show-about-science/070-meet-the-mesopredators-with-laura-prugh">https://soundcloud.com/the-show-about-science/070-meet-the-mesopredators-with-laura-prugh</a>

# **UW College of Environment Student Visit Day**, 2017, 2018

Hands-on presentation on wildlife tracking for prospective undergraduate students

# Media engagement (ongoing)

Numerous interviews with journalists; articles about research reported in media outlets such as New York Times, Washington Post, Chicago Tribune, London Times, CBC, Vox, Scientific American, NPR, Fox News, Slate, Wall Street Journal, KUOW, numerous local outlets

**Girls In Science, UW,** 2016 (http://www.burkemuseum.org/education/girls\_in\_science) Designed and led half-day workshop for ~30 girls in grades 6-8. The workshop used handson identification of prey remains in coyote scats to introduce participants to the study of predator-prey interactions.

# Learning Design Group, Lawrence Berkeley Lab, 2017

Children's science book "Nighttime Investigations" about my work with kangaroo rats will be included in a new science curriculum for first-graders that was widely used across the US

## Camp Habitat, 2014

Led activities for 30 kids (ages 8-11) focusing on predator-prey interactions

# The Wildlife Society Mentoring Program, 2011-2014

#### Solar development workshop, 2010

Participated in 2-day workshop to address impacts of a major solar development on giant kangaroo rat populations in San Luis Obispo County, CA.

#### Let's Talk Science, University of British Columbia, 2003-2004

Gave science presentations once per month to 5th and 6th graders

# Women in Natural Resources Mentoring, University of Minnesota, 1997-1998

1-on-1 mentoring program for inner-city Native American girls