

# Curriculum Vitae

## Dr. Evelyn Hunter Merrill



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University of Alberta, CCIS 1-281  
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**EDUCATION:**

- 1987 - Ph.D., University of Washington, Seattle
- 1978 - M.Sc., University of Idaho, Moscow
- 1974 - B.A., St. Lawrence University, Canton, New York
- 1973 - University of Vienna, Vienna, Austria
- 1969 - Sorbonne University, Paris, France

**RESEARCH INTERESTS:** Research interests include foraging and nutritional ecology of ungulates, trophic interactions among plants, ungulates and carnivores and land use impacts on wildlife populations. Current research uses modeling to address how landscape patterns influence, predator-prey behaviours and disease spread.

### ACADEMIC POSITIONS:

Visiting scientist	2022-2023	Inland Norway University of Applied Sciences, Faculty of applied ecology, agricultural sciences and biotechnology
Contracted professorship	2020-2023	Department of Biological Sciences, University of Alberta
Professor Emerita	2020	Department of Biological Sciences, University of Alberta
Professor	2007-present	Department of Biological Sciences, University of Alberta. Tenured faculty - 50% teaching & service, 50 % research.
Associate Professor	1999-2007	Department of Biological Sciences, University of Alberta. Tenured faculty - 50% teaching & service, 50 % research
Associate Professor	1996-1999	University of Wisconsin-Stevens Point, Stevens Point, WI. Tenured faculty - 50% teaching, 25% outreach & 25% GIS lab coordinator.
Assistant Professor	1994-1999	University of Wisconsin-Stevens Point, Stevens Point, WI. Tenure-track faculty - 25% teaching, 25% research.
Assistant Professor	1990-1994	Department of Zoology and Physiology, University of Wyoming, Laramie, WY. Tenure-track faculty - 50% teaching and service, 50% research.
Visiting Professor	1986-1989	Department of Zoology and Physiology, University of Wyoming, Laramie, WY. Lecturer - 100% teaching.
Teaching Assistant	1984	Bio 442- Mammalogy, University of Washington, Seattle.
Affiliate Professor	1983-1984	San Francisco State University, Wildlands Institute
Project Leader	1982-1983	School for Field Studies, Cambridge, MA.
Teaching Assistant	1982-1986	University of Washington, Seattle, WA.
Graduate Research	1975-1978	University of Idaho, Moscow, ID.

**OTHER POSITIONS:**

Wildlife Research	1979-1982	
biologist		
Wildlife Biologist	1979	Bureau of Land Management, Idaho Falls, ID.
Wildlife Biologist	1978	Bureau of Land Management, Washington, DC.
Wildlife Technician	1975	Glacier National Park, MT.

**ACADEMIC, ADMINISTRATIVE, AND SERVICE COMMITTEES**Canadian National Committees

Member	2019-2021	National Committee Canadian Council of Animal Care- Wildlife Subcommittee
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Alberta Committees

Member	2023-2025	Advisory Committee, Office Chief Scientist, Ministry of Environment & Protected Areas
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The Wildlife Society

Chair	2022-2024	Publications Committee
Member	2019-2021	Publications Committee
Chair	2020-2021	Positions Statement
Member	2022-2024	Positions Statement

University of Alberta

Member	2012-2020	Univ. Animal Policy and Welfare Committee
Member	2016	Selection Committee: Ecologist Position
Member	2011-2014	Science Advisory Selection Committee
Member	2011-2014	General Awards Committee- BioSciences
Chair	2009-2010	Biosciences Animal Use & Care Committee
Member	2008-2015	Univ. Animal Policy and Welfare Committee
Member	2009-2019	Field Research Activities Committee
Member	2008-2009	Faculty of Science: Kaplan Award Committee
Coordinator	2007-2009	Alberta Coop. Conservation Research Unit
Member	2008	Selection Committee: Aquatic Biologist
Committee Member	2006-2015	Environmental Biology & Ecology
Committee Member	2005-2007	Student and Postdoctoral Award Committee
Committee Member	2006	Committee on Issues for Field Research at University of Alberta
Committee Member	2004-2015	Geographic Information Systems Advisory Committee
Committee Chair	2000-2004	Geographic Information Systems Advisory Committee
Committee Member	2000-2003	Learning Initiative Committee
Committee Member	2004-2012	Biological Sciences Animal Care Committee
Committee Member	2004-2005	New Interdisciplinary Science Building Committee
Committee Member	1999-2008	Ecology and Environmental Science Curriculum
Committee Member	1999-2005	Plant Biology Research & Curriculum Committee

**PROFESSIONAL DEVELOPMENT ACTIVITIES:**

- 2018 Wilderness First Aid, Univ. Alberta, Edmonton, Feb 22-23.  
 2017 Canadian Assoc. Zoo & Wildlife Veterinarians Chemical Immobilization Course, Jan 20-22  
 2014 Spatial Recapture Workshop: Edmonton, AB, 20-25 July  
 2012 Movement Models Workshop: Hedmark University, Evanstad, Norway, 8-10 Aug  
 2010 Institute for Complex Data Structure: statistical workshop, Montreal, CA 4-5 Mar  
 2009 Program Mark Workshop, The Wildlife Society, Monterey, CA, 24 Sept  
 2008 Occurrence and Detection Workshop, D. McKenzie, Edmonton, AB 21-26 Oct  
 2008 Infectious Disease Modeling Workshop. Math & Stats, U. Alberta, Edmonton, AB. 1-13 May.  
 2008 Landscape Genetics. Landscape Ecology Assoc, Madison, WI., 7 Apr.  
 2006 Alberta Veterinary Research Institute Workshop, Edmonton, AB. 27 Jan.  
 2006 Crossing Boundaries: Making partnerships work. Univ. Alberta, 16-17 Mar.  
 2005 GLIM/GAM workshop in habitat modeling, Rideralp, Switzerland, 23-27 Aug.  
 2003 U of Alberta Animal Care Course- Part I. Edmonton, AB. 9 Apr.  
 2003 Survival Analysis Workshop, Christchurch, New Zealand. 5 Dec.  
 2001 Photography and Videography in Resource Assessment Workshop, Amherst, MA. 16-18 May.  
 1999 Geostatistics Workshop, Rutgers University, Princeton, NJ, 22-26 Jun.  
 1998 ArcInfo. Course, Agric. & Life Sciences, U. Wisconsin-Madison, 9-12 Jun.  
 1997 Chemical Immobilization of Animals & Safe-capture, U. Wisconsin-Stevens Point. 25-26 Oct.  
 1997 GIS and Internet Instruction Workshop. University of Wisconsin-Stevens Point, Aug. 18.  
 1996 U of Wisconsin-Stevens Point Development Award: *Linking Splus and GIS*, Houston, TX. 15-19 Jan.  
 1993 Biomodeling Workshop, National Science Foundation, U Montana, Missoula, MT.

**CURRENT CERTIFICATIONS:**

Firearms recertification	2020	Alberta Environment
Chemical immobilization of wildlife	2017	Canadian Assoc. Zoo & Wildlife Vet
Horse packing- backcountry	2016	Banff National Park, AB
Small boat operators license	2016	Prince Rupert, BC
Marine radio course	2012	Edmonton Marine Squadron, AB
Scuba diving certification	2009	PADI, AB
Horse packing	2011	Wilmore Wilderness Assoc. AB
AB Resident Furbearer Trapping license	2003	Alberta Environment, AB
Firearms instruction certification	2000	Alberta Environment, AB
Certified Wildlife Biologist	2000	The Wildlife Society, MD

**AWARDS AND RECOGNITION:**

Alberta Chapter – The Wildlife Society	2020	Best Technical Journal Article Award <sup>2</sup>
Alberta Chapter – The Wildlife Society	2020	Best Technical Journal Article Award <sup>1</sup>
International Journal of Forest Research	2018	Excellence in Journal Review
Student Choice Honor Roll	2018	Faculty of Science, University of Alberta
Wildlife Research Award	2017	Rocky Mountain Elk Foundation
Group Special Recognition Award	2017	Alberta Chapter, The Wildlife Society
Distinguished Service Award	2016	The Wildlife Society
Alumnae Achievement Award	2015	University of Idaho
William Rowan Professional Service	2013	Alberta Chapter of The Wildlife Society
Wildlife Society Fellow	2012	The Wildlife Society
Special Recognition Award	2011	Alberta Trappers Association
Dedicated Service Award	2011	Alberta Chapter, The Wildlife Society
Induction	2011	Boone and Crockett: Professional Member
Honorable mention	2008	Honorable mention: paper in <i>Landscape Ecology</i>

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Improv lecture, winner	2005	UA-Alberta Student Chapter, Wildlife Society
Outstanding College Faculty Member	1998	College of Natural Resources, U. Wisconsin-Stevens Point: students in entire college
University Teaching Award	1997	University of Wisconsin-Stevens Point
Appreciation Award	1996	Milwaukee Zoological Society
Sponsorship Award	1993	WY Student Chapter, The Wildlife Society
Faculty Growth Award	1992	University of Wyoming

## EDITORIAL

**Editor-in-Chief:** *Journal of Wildlife Management* 2013-2015

**Editorial Boards:**

- *Journal of Wildlife Management* 2015-2016
- *PlosOne* 2012-2014
- *Wildlife Monographs* 2014-2015
- *Journal of Wildlife Management* 2014-2015
- *Wildlife Research* 2009-2011
- *Wildlife Professional* 2008-2010
- *Journal of Range Ecology & Management* 2002-2004
- *Journal of Wildlife Management* 1996-1998

**Referee for the following journals:**

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|----------------------------------|--|
| • Acta Theriologica              | • Northwest Science                    |
| • Canadian Journal of Botany     | • Oecologia                            |
| • Ecography                      | • PlosOne                              |
| • Ecology                        | • Science                              |
| • Ecological Applications        | • Trans. Wisconsin Academy of Sciences |
| • Ecosphere                      | • Tropical Ecology                     |
| • EcoScience                     | • Wildlife Biology                     |
| • Journal of Range Management    | • Wildlife Diseases                    |
| • Journal of Wildlife Management | • Wildlife Monographs                  |
| • Landscape Ecology              | • Wildlife Review                      |
| • Movement Ecology               | • Wildlife Society Bulletin            |
| • Natural Areas Journal          | • Forest Ecology & Management          |
| • Nature                         | • Behavior Ecology                     |

**MAJOR GRANTS & CONTRACTS** since at the University of Alberta:

<u>Year</u>	<u>Agency</u>	<u>Shortened title</u>	<u>Amount</u>
2022-2028	<i>NSERC Alliance</i>	Develop models to forecast the impact of mitigation strategies on CWD spread	\$117,500
2023-2024	<i>AFGA, MSL</i>	Mule deer connectivity map for assessing Chronic Wasting Disease spread in Alberta	\$21,305
2023-2024	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Ya Ha Tinda elk herd migratory behaviour	\$10,000
2023-2024	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Chronic wasting disease spread in Alberta	\$12,000

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2023-2024	<i>Alberta Innovates</i>	Addressing mule deer harvest strategies for Chronic Wasting Disease management using an Integrative Population Model	\$248,526
2022-2023	<i>AFGA, MSL</i>	Evaluating bull elk reproductive success using a wild pedigree	\$44,278
2021-2023	<i>AFGA, MSL</i>	Integrating disease modeling into spatial harvest tools for managing chronic wasting disease in mule deer in Alberta	\$140,801
2021-2023	<i>AB Environ. Parks</i>	Harvest management on mule deer across populations at different levels of CWD	\$184,758
2020-2025	<i>NSF</i>	Demography of partially migratory populations	\$599,824
2020-2021	<i>AFGA, MSL</i>	Bull elk recruitment, survival, and harvest in a partially migratory elk herd in the Ya Ha Tinda	\$28,973
2020-2021	<i>AFGA, MSL</i>	Quantifying deer contact rates for modeling CWD transmission in mule deer	\$16,239
2020-2021	<i>WMI</i>	Modeling spatial harvest strategies for Chronic Wasting Disease transmission	\$28,456
2020-2021	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$5,000
2020-2021	<i>ACA Research Grant</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$11,000
2019-2020	<i>AFGA, MSL</i>	Bull elk recruitment, survival, and harvest in a partially migratory elk herd in the Ya Ha Tinda	\$29,521
2019-2020	<i>AFGA, MSL</i>	Quantifying deer contact rates for modeling CWD transmission in mule deer	\$19,100
2019-2021	<i>Rocky Mt. Elk Foundation</i>	Contact rates in mule deer: Inputs for assessing transmission of CWD	\$30,114
2019-2020	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Winter behavior in new migratory segment: Ya Ha Tinda elk herd	\$5,000
2019-2020	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$11,700
2019-2020	<i>ACA Research Grant</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$32,400
2019-2021	<i>ACA, Grants in Biodiversity</i>	Winter behaviour in a new migratory segment: Ya Ha Tinda elk herd	\$11,280
2019-2021	<i>ACA, Grants in Biodiversity</i>	Analysis of Mule Deer ( <i>Odocoileus hemionus</i> ) Contacts and Transmission of Chronic Wasting	\$10,200
2019-2020	<i>WCSC - W. Garfield Weston Fellowship Award</i>	Influences of nutritional resources on woodland caribou in Northern Ontario	\$5,000
2018-2021	<i>Alberta Innovates Bio Solution, (APRI)</i>	Quantifying contact rates for modeling CWD transmission in wild mule deer populations	\$208,529
2018-2019	<i>AFGA, MSL</i>	Bull elk recruitment, survival and harvest elk herd in the Ya Ha Tinda	\$26,719
2018-2019	<i>AFGA, MSL</i>	Quantifying deer contact rates for modeling CWD transmission in mule deer	\$15,000
2018-2019	<i>Boone and Crockett Club, WI Spencer Conservation Grant</i>	Quantifying contact rates for disease transmission in mule deer	\$15,444 USD
2018-2019	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$13,800

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2018-2019	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	The waiting game: remote cameras to investigate elk avoidance of predators at Ya Ha Tinda	\$3,073
2018-2019	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Are there costs of shifting migration linked to parasitism?	\$5,660
2018-2019	<i>ACA Research Grant</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$32,400
2017-2022	<i>NCASI</i>	Caribou nutrition in relation for forest management	\$110,986
2017-2019	<i>Alberta Innovates Bio Solution, (APRI)</i>	Quantifying contact rates for modelling CWD transmission in wild mule deer populations	\$302,857
2017-2019	<i>ACA, Grants in Biodiversity</i>	Trading-off space use and vigilance to avoid multiple predators: Investigating the behavioural differences between migrant and resident elk	\$13,750
2017-2019	<i>ACA, Grants in Biodiversity</i>	Can contents of predator scat predict the spatial risk of predation for elk at Ya Ha Tinda?	\$16,800
2016-2022	<i>NSERC, Discovery Grant</i>	Partial migration of elk in a heterogeneous landscape	\$310,000
2016-2020	<i>Genome Canada</i>	Systems Biology and Molecular Ecology of Chronic Wasting Disease (Co-PI) (\$11,534,556)	\$81,000
2016-2021	<i>NSF</i>	Long Term Research in Environmental Biology (LTREB), (Co-PI Mark Hebblewhite)	\$434,340 USD
2014-2020	<i>McGill University, CREATE</i>	Enhancing Canada's prosperity through innovative environmental assessment, monitoring and management, (PI, Stan Boutin at UA; Murry Humphries at McGill)	\$275,472
2016-2018	<i>WSF, Alberta Chapter</i>	Does predator scat content reflect spatial risk for big horn sheep?	\$6,875
2014-2018	<i>NSERC, EQPEG</i>	Biotelemetry System: Infrastructure for Assessing Disease Transmission in Wildlife	\$150,000
2017-2018	<i>AFGA, MSL</i>	Bull elk recruitment, survival and harvest in a partially migratory elk herd in the Ya Ha Tinda	\$10,320
2017-2018	<i>AFGA, MSL</i>	Quantifying deer contact rates for modeling CWD transmission in mule deer	\$12,500
2017-2018	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Effects of migration on parasite levels of the Ya Ha Tinda elk herd	\$3,000
2017-2018	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Can contents of predator scats predict predation risk for elk?	\$4,500
2017-2018	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Trading-off space use and vigilance by migrant and resident elk to avoid multiple predators	\$4,500
2017-2018	<i>SCI - Northern Alberta Chapter, Hunting Heritage Fund</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$8,000
2017-2018	<i>ACA Research Grant</i>	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$27,600
2016-2017	<i>TD Friends of the Environment Foundation</i>	Do spatial differences in carnivore scat reflect predation risk for elk in the Ya Ha Tinda, AB?	\$4,375
2016-2017	<i>AFGA, MSL</i>	Persistence of the Ya Ha Tinda elk population	\$19,262
2016-2017	<i>ACA Research Grant</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$34,197
2016-2017	<i>SCI Foundation</i>	Persistence of the Ya Ha Tinda elk population	\$25,000
2016-2017	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Ya Ha Tinda Elk Herd: Calf survival studies	\$7,600

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2016-2017	<i>CICan, Clean Tech Internship Program</i>	Persistence of the Ya Ha Tinda elk population (field technician internship – Camille Roberge)	\$12,000
2016-2017	<i>CICan, Clean Tech Internship Program</i>	Diet analysis of carnivores in Ya Ha Tinda (field technician internship - Mitch O'Donnell)	\$12,000
2016-2017	<i>SCI - Northern Alberta, Hunting Heritage Fund</i>	Ungulate predation risk through carnivore diet analysis in a multi-carnivore community	\$3,100
2015-2016	<i>WSF, Alberta Chapter</i>	Spatial interactions in multi-carnivore communities in the Rocky Mountains of Alberta	\$4,560
2015-2017	<i>Rocky Mt. Elk Foundation- WA</i>	Mount St. Helens forest succession & carrying capacity for elk study.	\$15,899 USD
2015-2017	<i>Rocky Mt. Elk Foundation</i>	Ya Ha Tinda Elk Calf Study	\$25,198 USD
2015-2017	<i>ACA, Grants in Biodiversity</i>	Spatial interactions in multi-carnivore communities in the Rocky Mountains of Alberta	\$14,130
2015-2016	<i>SCI Foundation</i>	Persistence of the Ya Ha Tinda elk population	\$32,483
2015-2016	<i>Environment Canada, Sci. Horizons Internship</i>	Diet and distribution of predators in relation to a declining elk herd	\$12,000
2015-2016	<i>Environment and Climate Change Canada</i>	Shifting migration in a shifting climate: the role of anthropogenic factors and predation in a declining elk herd	\$12,000
2015-2016	<i>TD Friends of the Environment Foundation</i>	Spatial interactions in multi-carnivore communities and ungulate predation in the Rocky Mountains of Alberta	\$6,444
2015-2016	<i>International Association for Bear Research &amp; Management</i>	Spatial interactions in multi-carnivore communities and ungulate predation in the Rocky Mountains of Alberta	\$5,094.45
2015-2016	<i>ACA Research Grant</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$29,386
2015-2016	<i>SCI, Northern Alberta Chapter</i>	Predator Interaction Study	\$3,700
2015-2016	<i>SCI, Northern Alberta Chapter</i>	Ya Ha Tinda Elk Calf Study	\$5,000
2015-2016	<i>AFGA, MSL</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$16,000
2014-2015	<i>RMEF, WA Chapter</i>	Mount St. Helens forest succession and carrying capacity for elk study	\$10,253
2014-2017	<i>Alberta Innovates Bio Solution, (APRI)</i>	Experimental harvests for CWD control in wild cervids	\$119,015
2014-2015	<i>Parks Canada Agency</i>	Banff Field Unit, YaHa Tinda Elk Data Analysis	\$12,900
2013-2015	<i>SCI, Northern Alberta Chapter</i>	Experimental harvests for CWD control in wild Cervids	\$6,000
2014-2015	<i>SCI, Northern Alberta Chapter</i>	Elk Ya Ha Tinda Calf Study: Persistence of the Ya Ha Tinda elk population	\$3,913
2014-2015	<i>AFGA, MSL</i>	Experimental Harvests for CWD Control in Mule Deer	\$20,000
2014-2015	<i>AFGA, MSL</i>	Persistence of the Ya Ha Tinda elk population	\$26,769
2014-2015	<i>ACA</i>	Experimental harvest for CWD control in wild cervids in Alberta	\$38,809
2014-2015	<i>ACA</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$23,000

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2013-2015	<i>RMEF</i>	Ya Ha Tinda Elk Study - 2013	\$15,249
2013-2016	<i>Alberta's Conservation Collaboration, MSL</i>	Experimental harvests for CWD control in wild cervids	\$25,000
2013-2014	<i>Alberta's Conservation Collaboration, MSL</i>	Persistence of the Ya Ha Tinda elk herd: the role of calf survival	\$18,399
2013-2014	<i>SCI, Northern Alberta Chapter</i>	Persistence of the Ya Ha Tinda elk herd: the role of calf survival	\$23,171
2013-2014	<i>SCI, Northern Alberta Chapter</i>	Persistence of the Ya Ha Tinda elk herd: the role of calf survival	\$2,500
2013-2015	<i>SCI, Northern Alberta Chapter</i>	Experimental harvests for CWD control in wild Cervids	\$6,000
2013-2014	<i>TD Friends of the Environment Foundation</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$3,500
2013-2016	<i>Alberta Sport Connection, Recreation, Parks &amp; Wildlife Foundation</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$4,485
2013-2014	<i>ACA</i>	Persistence of the Ya Ha Tinda elk population: the role of calf survival	\$20,000
2012-2013	<i>ACA</i>	Estimating deer contact rates to design a long-term experiment for reducing CWD prevalence in Alberta	\$8,455
2012-2013	<i>ACA</i>	Long-term Studies and Elk Calf Study at Ya Ha Tinda	\$25,500
2012-2013	<i>Parks Canada, Banff National Park</i>	Wolf Scat Analysis	\$4,992
2011-2013	<i>NCASI</i>	Effects of Herbicide Application and Elk Herbivory on Vegetation at Mount St. Helens	\$37,359 USD
2011-2017	<i>NSERC, Discovery Grant</i>	Ecological Processes in Heterogeneous Landscapes: predation and disease	\$190,000
2011-2012	<i>Washington Commission of Pesticides</i>	Effects of Forestry Herbicides and Herbivory on Habitat Quality for Big Game in Western Washington	\$39,737
2011-2012	<i>RMEF</i>	Mount Saint Helens Habitat Assessment #1	\$12,997
2010-2012	<i>Alberta Innovates</i>	Decision Support Tools for Chronic Wasting Diseases	\$117,780
2009-2014	<i>Parks Canada</i>	Vegetation and Elk Population Research for Managing the Ya Ha Tinda Elk Herd	\$74,975
2009-2010	<i>ACA</i>	Ya Ha Tinda Elk & Vegetation Study	\$20,000
2009-2010	<i>ACA</i>	Predicting CWD Spread from Saskatchewan into Alberta	\$34,500
2009-2010	<i>SCI, Northern Alberta Chapter</i>	Wolf Summer Kill Rates	\$4,000
2009-2012	<i>ACA, Biodiversity Grant</i>	Summer Wolf Predation in the Central Eastern Slopes of the Rocky Mountains, Alberta	\$19,800
2009	<i>Alberta Sport, Recreation, Parks &amp; Wildlife Foundation</i>	Wolf Summer Kill Rates	\$4,700
2008-2009	<i>ACA</i>	Deer Sight-ability and Survey Design in Alberta Prairies	\$39,742
2008-2009	<i>ACA</i>	Ya Ha Tinda Elk Vegetation Study	\$34,500



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2008-2009	<i>ACA</i>	Pack-size and Wolf Predation	\$37,200
2008-2009	<i>SCI, Northern Alberta Chapter</i>	Pack-size and Wolf Predation	\$3,500
2008-2009	<i>FNAWS, Alberta Chapter</i>	Pack-size and Wolf Predation	\$30,000
2008-2009	<i>FNAWS, Eastern Chapter</i>	Pack-size and Wolf Predation	\$1,000 USD
2008-2009	<i>Alberta Professional Outfitters Society</i>	Pack-size and Wolf Predation	\$30,000
2008-2009	<i>AFGA, MSL</i>	Pack-size and Wolf Predation	\$17,250
2007-2008	<i>FNAWS, International Chapter</i>	Pack-size and Wolf Predation	\$25,000 USD
2007-2008	<i>FNAWS, Alberta Chapter</i>	Pack-size and Wolf Predation	\$30,000
2007-2008	<i>Alberta Professional Outfitters Society</i>	Pack-size and Wolf Predation	\$30,000
2007-2008	<i>Alberta Sport, Recreation, Parks &amp; Wildlife Foundation</i>	Ya Ha Tinda Elk Winter Foraging	\$5,000
2007-2008	<i>ACA</i>	Deer Sight-ability and Survey Design in Alberta Prairies	\$34,742
2007-2008	<i>ACA</i>	Modeling for proactive management of CWD	\$30,200
2007-2008	<i>Alberta Professional Outfitters Society</i>	Modeling for proactive management of CWD	\$2,000
2006-2010	<i>APRI</i>	Spatial spread of CWD: genetic and animal movement approaches (Co-PI's - D. Coltman & M. Pybus)	\$1,636,000
2006-2007	<i>FNAWS</i>	Wolf predation on ungulates (Co-PI - N. Webb)	\$10,000
2006-2007	<i>Alberta Professional Outfitters Society</i>	Wolf predation on ungulates (Co-PI - N. Webb)	\$8,000
2006-2007	<i>ACA</i>	Deer movements to predict chronic wasting disease spread	\$30,000
2006-2007	<i>ACA</i>	New field techniques for estimating wolf densities (Co-PI - N. Webb)	\$33,000
2006-2011	<i>NSERC, Discovery Grant</i>	Linking species to ecosystems: predation mediated nutrient flows	\$116,000
2005-2006	<i>NSF</i>	Joint Ecology & Ecosystem Panels, Mechanistic basis for landscape ecology of ungulates (Co-PI's - P. Turchin, M. Turner, J. Fryxell, M. Boyce)	\$80,000 USD
2005-2007	<i>RMEF</i>	Determining wolf predation from GPS-based movements (Co-PI - N. Webb)	\$51,888
2005-2006	<i>ACA</i>	Habitat use and population monitoring of elk in East Central foothills of Alberta (Co-PI's - R. Anderson & J. Frair)	\$12,000
2005-2006	<i>Talisman Oil Company</i>	A computer interface for models of cumulative impacts from land management on elk (Co-PI's - R. Anderson & J. Frair)	\$15,000
2005-2006	<i>ACA, Biodiversity Grant</i>	Determining wolf pregnancy using fecal hormones (N. Webb)	\$8,000
2005-2006	<i>Alberta Professional Outfitters Society</i>	Determining wolf predation from GPS-based movements	\$3,444

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2005	<i>NSERC, RTI Grant</i>	Travel infrastructure for field studies (Co-PI - S. Hannon)	\$36,567
2005	<i>NSERC, RTI Grant</i>	Integrated field system for measuring animal movement (Co-PI - Cassidy St. Clair)	\$21,786
2005	<i>FNAWS</i>	Wolf predation on ungulates	\$3,500
2005	<i>SCI, Northern Alberta Chapter</i>	Predation rates on ungulates by wolves in Alberta	\$1,000
2004-2006	<i>Weyerhaeuser Company</i>	Trans-boundary elk and wolf movements to Jasper National Park	\$127,000
2004-2006	<i>ACA</i>	New field techniques for estimating wolf densities and predation rates	\$72,038
2004-2005	<i>Wilburforce Foundation, Y2Y Grant</i>	Pregnancy rates of wolves: a non-evasive approach through scat analysis	\$29,887
2003-2008	<i>NSERC, Collaborative Research Opportunities</i>	Spatial dynamics of wolf predation in Central East Alberta (Co-PI's - M. Boyce & J. Fryxell)	\$1,064,840
2005	<i>RMEF</i>	Foraging ecology of native ungulate communities: implications for dietary competition	\$13,000
2003-2006	<i>RMEF</i>	Ya Ha Tinda elk migration and management study	\$65,060
2003-2006	<i>ACA</i>	Evaluation fire management scenarios: ungulate habitat potential (Co-PI - M. Hebblewhite)	\$54,430
2003-2004	<i>ACA, Biodiversity Grant</i>	Wolf predation on elk migration (Co-PI - M. Hebblewhite)	\$13,050
2002-2006	<i>NSERC, Strategic Project</i>	Precision Ranching: Multi-species grazing systems (Co-PI's - R. Hudson, R. Grant, E. Bork, D. Hik & J. Cahill)	\$784,000
2002-2004	<i>Parks Canada, Wood Buffalo National Park</i>	Seasonal dynamics and carry capacity of bison forages in Wood Buffalo National Park (Co-PI - J. Wilmshurst)	\$49,047
2001-2004	<i>Parks Canada, Banff National Park</i>	Effects of wolf predation and seasonal forage dynamics on elk migration in Banff National Park	\$184,600
2001-2003	<i>National Geographic Society</i>	Wolves in Yellowstone: Multi-trophic level responses to the addition of a top carnivore (Co-PI's - R. Peterson, M. Boyce & L. Mech)	\$150,000 USD
2001	<i>RMEF</i>	Effects of elk herbivory on soil and vegetation in grassland communities of Alberta	\$12,000
2001	<i>CFI</i>	Precision Ranching (Co-PI's - M. Price, E. Bork, R. Hudson, J. Cahill, D. Hik, R. Pelletier, S. Moore)	\$440,000
2000-2004	<i>Sunpine Forests, ACA, Weyerhaeuser, RMEF &amp;</i>	Population monitoring and land-use impacts on resident and translocated elk in Alberta	\$450,000
2001-2004	<i>National Science Foundation of Innovation</i>	Building a mechanistic basis for landscape ecology of ungulate (Co-PI's - P. Turchin, M. Turner, J. Fryxell & M. Boyce)	\$2,080,000 USD
2000-2002	<i>Parks Canada, Jasper National Park</i>	Grazing in grassland communities in Jasper National Park	\$20,000
2000	<i>CFI, New Opportunities Equipment Grant</i>	Biotelemetry analysis system: infrastructure for cumulative effects (Co-PI's - M. Boyce & S. Lele)	\$340,000

**CONFERENCE/MEETING ORGANIZATION & CHAIR since 2010**

**2023** – Abstract review and open paper program, B.C.-Canadian Section of The Wildlife Society Joint meeting, Victoria, Mar 3-8

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- 2019** – Moderator, Conservation & Ecology of Mammals, The Wildlife Society, Reno, NV, Oct 2  
 - Program Co-Chair, Joint meeting of the Alberta Chapter and the Canadian Section of The Wildlife Society, Canmore, AB Mar 25-27
- 2017** - Co-organizer – The Canadian Section of The Wildlife Society (CSTWS) Symposium – National Conservation Summit, Kananaskis, AB - Nov 26-28  
 - Predator Control Special Session AB Chapter of The Wildlife Society, Lac La Biche, AB, 19 Mar
- 2016** - Symposium Organizer, Joint meeting: Canadian Section – Canadian Section of The Wildlife Society & Canadian Ecology & Evolution Society, St John's, NF - Jul 7-10  
 - Wildlife Society 22<sup>nd</sup> Conference, Ecology & Habitat Relationships, Winnipeg MB, 20 Oct
- 2015** - Western States & Provinces Deer and Elk Workshop, CWD Special Session, Canmore, AB, 14 May
- 2013** - Co-Chair, Joint Meeting of the Canadian Section of the Wildlife Society and the Alberta Chapter of The Wildlife Society, Canmore, AB – Mar 8-10
- 2010** - Co-Chair, Special Symposium on sustainable use and hunting, ICCB-Society for Conservation Biology Annual Meeting, Edmonton, AB - July 4  
 - Co-Chair, Program Committee, Canadian Section Annual Meeting, Edmonton, AB – July 3

**INVITED REVIEWS****Research Grants:**

- USGS, Review of our spatial analyses for feedground elk related to CWD, Aug 2022
- Alberta Agriculture and Forestry: Research Proposal, Nov 2021
- Natural Sciences and Engineering Research Council of Canada (NSERC) Reviews - Discovery Grants (10 reviews) – since 2005
- Alberta Conservation Association – Biodiversity Student Grants – 2002-2019
- Minnesota Environment Natural Resources Trust Fund – Research Grant – 2016
- MITACS – MITACS Accelerate Grant – 2016
- Natural Environment Research Council (NERC)-Science Programs, UK – New Investigator Grant – 2014
- Alberta Conservation Association – Grant Eligible Conservation – 2005-2014
- Natural Environment Research Council (NERC), UK – PFD Scholarships – 2012
- US-Israel Bi-national Science Foundation, Ecology Program – 2009
- National Science Foundation, Ecology Program Grant (2) – 2008
- Research Council of Biological Sciences and Environment, Academy of Finland, Research Grants – 2003, 2005
- South African Resource Foundation, Pretoria, Research Grants – 2003
- National Science Foundation: Ecology Program, Washington D.C., Research Grants – 1992, 1994
- Milwaukee Zoological Society, Student Scholarship Grants – 1996, 1998
- UW-National Park Service Center, Laramie WY, National Park Research Grants – 1990-1993

**Invited Program/Scholarship/Tenure Reviews:**

- Review Panel: Canadian Council of Animal Care guidelines: Wildlife, 2020-2022
- University of Wyoming – Full professor review, 2021
- Alberta Chronic Wasting Disease Management and Policy Review, 2018-2019
- Draft Research and Monitoring Plan for the Little Smoky Caribou Rearing Facility – June 2019
- Tenure and Promotion review, Memorial University – October 2018
- Tenure and promotion review, Lakehead University – September 2018

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- Columbia Mountains Institute, BC, Program Review: Southern MT Caribou 2016
- University of Minnesota, Tenure/Promotional External Review – 2016
- Southern Illinois University, Tenure/Promotional External Review – 2015
- ESRI Canada, ESRI Canada Scholarship Program – 2016
- University of Alberta, Dick Peter Conference – Student Judge – 2015
- University of Vermont, Tenure External Review – 2014
- Swedish University of Agricultural Sciences, PhD External Examiner – 2013
- Iowa State University, Tenure External Review – 2012
- University of Saskatchewan, PhD External Examiner – 2011
- The Wildlife Society-Technical Report, Ungulate Management in Parks – 2011
- University of Calgary, Biological Sciences, Faculty Tenure Review - 2010
- Université Claude Bernard-Lyon 1, Laboratoire de Biométrie et Biologie Evolutive (LBBE), PhD Dissertation Examiner - 2008
- US Forest Service-Alaska Region, Wildlife Resource Monitoring, Technical Reviewer – 2005
- Washington State University, Natural Resources, Tenure/Promotional External Review – 2002

**Professional Activities and Positions:**

- 2018-2024** Canadian Representative to The Wildlife Society Council
- 2018-2024** Board member, Canadian Section of Wildlife Society
- 2018** Board Member, British Columbia Government, Management Plan for Rocky Mountain Elk
- 2015-2018** Chair, The Wildlife Society - Canadian Section Awards
- 2012-2018** Co-Chair, Boone & Crocket Club - Conservation Grants Subcommittee, 2012-2018
- 2017** MSc Thesis External Examiner, Memorial University (Dec)
- 2016** Alberta Prion Research Institute, CWD Regional Workshop
- 2015** Past President, The Wildlife Society - Canadian Section
- 2014** President, The Wildlife Society - Canadian Section
- 2013** President-elect, The Wildlife Society - Canadian Section
- 2012** Fellow, The Wildlife Society
- 2012** Chair, The Wildlife Society - Aldo Leopold Award Committee
- 2011** Co-organizer, The Wildlife Society – Canadian Section, 1<sup>st</sup> Student Conclave
- 2011** Chair, The Wildlife Society - Jim McDonough Awards
- 2010-2011** Past President, The Wildlife Society – Alberta Chapter
- 2009-2010** Executive Board Member, The Wildlife Society - Canadian Section
- 2007-2010** Committee Member, Alberta Ingenuity: Policy for TSE Surveillance
- 2009** Chair, The Wildlife Society, Presidential Nominations
- 2008-2009** President, The Wildlife Society – Alberta Chapter
- 2008** President-elect, The Wildlife Society – Alberta Chapter
- 2008** Chair, Alberta Fish & Wildlife, Wolf Management Research
- 2007-2008** Chair - The Wildlife Society – Canadian Section, Nominations Committee
- 2007-2008** Committee Member, Alberta Prion Research Institute, Planning and Priority Committee: CWD Surveillance
- 2007** President, The Wildlife Society – Alberta Chapter
- 2006** President-elect, The Wildlife Society – Alberta Chapter
- 2005** Scientific Committee Member - Jasper National Park, Elk Monitoring Review Panel
- 2004** International Expert Panel Member - CWD in Canadian Wildlife, University of Saskatchewan, Canadian Cooperative Wildlife Health Centre
- 1999-2003** Membership Chair, The Wildlife Society – Alberta Chapter
- 2001-2002** Executive Board Member, The Wildlife Society – Alberta Chapter

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- 2000** Selection Committee Member, Journal of Wildlife Management (Editor search)  
**1995-1996** Treasurer, University of Wisconsin-Stevens Point – Sigma Xi  
**1992-1993** Chair, The Wildlife Society - Wyoming Chapter, Awards Committee  
**1990-1991** Chairperson, The Wildlife Society - Wyoming Chapter, Resolutions and Position Statements  
**1988-1990** Newsletter Editor, The Wildlife Society, Wyoming Chapter – 1988-1990

**Professional Memberships:**

- Boone & Crockett Club, Professional member – since 2011
- Wild Sheep Foundation – Life member – since 2010
- Wildlife Disease Association – member – since 2008
- The Wildlife Society - Canadian Section – since 2007
- The Wildlife Society - Alberta Chapter– since 1999
- The Wildlife Society – British Columbia Chapter since 2019
- The Wildlife Society - Wisconsin Chapter– 1994-1999
- The Wildlife Society Wyoming Chapter – 1986-1994
- The Wildlife Society – since 1976
- Canadian Society of Ecology and Evolution – since 2006
- Ecological Society of America – since 1988
- International Association for Landscape Ecologists – since 1996
- Rocky Mountain Elk Foundation – Life member – since 1985
- Society of Conservation Biologists – since 1993
- Sigma Xi – 1995-2015

**Community Involvement**

- 2018 - 2022 Dukes Ranch, Riding Establishment  
 2005 - 2023 Sherwood Park Fish and Game Club  
 2002 - 2024 Alberta Trapper Association: Registered Trapline  
 2002 - 2003 Cancer Society- canvassing, Edmonton  
 2001 - 2003 PTA McKernan Junior High School, Edmonton  
 2000 - 2003 SWAT Hockey League, Edmonton  
 1995 - 1997 PTA Steven Point Middle School, Stevens Point  
 1995 - 1999 Portage County Youth on Ice Hockey League representative  
 1994 - 1999 Boy Scouts of America – Pack 292  
 1994 - 1999 YMCA, Steven Point, WI

**COURSES TAUGHT****Undergraduate Courses****University of Alberta (1999- present)**

	<b># Semesters</b>	<b># Students</b>	<b># Credits</b>
Conservation biology (Bio 468)	12	12-18	3
Diversity of life (Bio 108)	8	315-360	3
Landscape ecology (Bio 471) *	22	11-18	3
Landscape ecology & applications (Bio 571) *	22	11-18	3

**University of Wisconsin-Stevens Point (1994-1999)**

Introduction to Fish & Wildlife Management*	3	25-30	3
Wildlife Techniques*	8	25-30	3

**University of Wyoming (1986-1994)**

General Biology	1	350	3
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Wildlife Management (Game Biology) *	4	65-70	3
Vertebrate Natural History*	2	35-40	4
Introduction to Birds & Mammals*	2	35-40	2
Natural History of Fishes, Amphibians & Reptiles*	2	45-40	2

\* Lab courses

**Graduate Courses and Seminars**University of Alberta (1999- present)

	<u># Semesters</u>	<u># Students</u>	<u># Credits</u>
Biol 633: Movement in habitat selection	1	13	1
Biol 633: Spatial epidemiology	1	6	1
Biol 633: Models for animal movement	1	8	1
Biol 468: Conservation Biology	2	20	3
Biol 633: Habitat Ecology	1	8	1
Biol 571: Landscape Ecology	9	12	3
Biol 633: Herbivore Nutritional Ecology	1	6	1
Biol 564: Introduction to GIS and GPS	1	7	1

University of Wisconsin-Stevens Point (1994-1999)

Issues of Scale in Ecology	1	10	2
Advanced Statistics	1	8	0.5
Biodiversity and Conservation	2	15	2
Plant-Herbivore Dynamics	1	12	2

University of Wyoming (1986-1994)

Wildlife Habitat Ecology	3	13-16	2
Spatial Statistics and Modeling	1	12	2
GIS Applications in Environmental Modeling	1	11	2
Riparian Ecology & Management Seminar	1	8	1
Game Harvest Management	1	14	1
Fire Ecology Seminar	1	12	1
Multivariate Statistics Seminar	1	8	1

**Short-courses:**

2022	Applied Ecology: Models in wildlife conservation, Hedmark University, Evanstat, 20-29 August 2022
2011	Applied Ecology: Resource selection functions. International Research School in Applied Ecology, Hedmark University, Evanstat, Norway. 9-12 August 2011.

**Student Advising:**

2007-2010	<i>Advisor:</i> Ecology program	University of Alberta
2006	<i>Mentor:</i> Outreach program	WP Wagner High School, Edmonton
1990-1994	<i>Advisor:</i> Student Chapter of The Wildlife Society	University of Wyoming

**SUPERVISED****Undergraduate Supervision:**

<u>Name</u>	<u>Dates</u>	<u>Project Title and Awards</u>
Wyatt Villetard	2021	URI - Effect of Insect Harassment on Woodland Caribou Movement in Northeastern Ontario
Gary Elschuk	2020	USRA – Deer contacts from remote cameras
Robert Lu	2019	URI - Deer RSF from remote cameras
Darby McPhee	2018-2019	Bio 499 – Honors thesis, Ya Ha Tinda elk grouping dynamics
Eleanor Stern	2018-2019	Bio 499 – Honors thesis, Landscape heterogeneity on mule deer

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Kayla Kuefler	2018-2019	Bio 399 - Time-to-event modeling for deer habitat use
Dascha Ivanova	2018-2019	Bio 298 – Woody cover influence on deer contact domains
Robert Lu	2018-2019	Bio 298 – Habitat selection of mule deer
Maria Dobbin	2018	CWD mule deer study, Summer NSERC USRA
Eleanor Stern	2018	CWD Modeling with ALCES, Blanch Summer Undergrad Researcher Stipend
Khadija Malik	2017-2018	Bio 398, Caribou foraging ecology – video translation
Michelle Bentley	2017-2018	Bio 398, Caribou foraging ecology – video translation
Dana Wong	2017-2018	Bio 398, Caribou foraging ecology – video translation
Tehseenah Zahrah	2017-2018	Bio 398, Caribou foraging ecology – video translation
Jessica Melsted	2017-2018	Bio 499, Summer elk response to predator occurrences
Darby McPhee	2017-2018	Bio 398, Caribou foraging ecology – video translation
Jesse Lentz	2016-2017	Bio 499, Honors. Thesis, Hormonal reaction to stress in elk
Jed Pettit	2015-2016	Bio 399, Honors Thesis, Density-dependent habitat selection of elk
Alyssa Bonart	2014-2015	Bio 499, Honor Thesis, Spatial predation at Ya Ha Tinda
Alyshia Skurdal	2014-2015	Bio 399, Undergrad research: Prey Diversity in Predator Diets
Alexandra Beatty	2014-2015	Bio 398, Undergrad research: Comparison of scat methods
Trevor Pettitt	2014-2015	Bio 499, Honors thesis, Genetic relatedness and connectivity in deer
Nicole Boucher	2014-2015	Bio 499, Honors thesis, Stress hormones in elk
Kerri Krawchuk	2013-2014	Bio 499. Honors thesis. Grizzly bear habitat selection, Biology 499 Student award
Stephanie Coates	2012-2013	Comparison of wolf diets at Ya Ha Tinda, 2005 and 2012. Parks Canada Report, 15 pp.
Brett Howard	2009-2010	Bio 499. Honors Thesis. Prey space use in a multi-predator system.
Patrick Jones	2008-2009	Bio 499. Honors Thesis, Areas-intensive search patterns of ungulate grazing assemblages
Barry Norbert	2008-2009	Bio 499. Honors Thesis, Habitat selection of deer in CWD areas
Crystal Riczu	2007-2008	Bio 499. Honors Thesis. Is hunter success related to wolf reintroduction in Idaho
Chelsea Flaig	2007-2008	Bio 499. Honors Thesis. Coyote diets related to deer availability

**Master's Supervision:**

<u>Name</u>	<u>Degree Date</u>	<u>Thesis/Project Name</u>	<u>Post-degree Position</u>
Madeline Trottier	2022	Winter behaviour in a new migratory segment: Ya Ha Tinda elk herd	Parks Canada Biologist
Maria Dobbins	2022	Contact models of CWD in mule deer	
Kelsey Gritter	2022	Modeling CWD due to artificial attractants	Physical Scientist, Northern Forestry Centre
Kelly Mulligan	2021	Loss of migration in B.C. elk	Cumulative Effects Biologist, Kimberley, BC
Jacalyn Normandeau	2019	Parasites in a partially migratory elk herd	Vet student, Ontario
Mitchell Flowers	2019	Winter predator distribution at Ya Ha Tinda	Environmental Consultant,

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Kara MacAulay	2019	Spatial distribution of prey in scats, Ya Ha Tinda	Smithers, B.C. BC Wildlife Ministry
Alicia Kelly	2019	Woodland caribou habitat selection	
Eric Spilker	2018	Spatial distribution of prey in scats, Ya Ha Tinda	Medicine Hat, Alberta
Shantel Sparkes	2016	Elk carrying capacity since 1980 Mt. St. Helens eruption	Environmental Consultant, North Shore Environmental Consultants
Kerri Krawchuk	2014	Cougars and wolves: sympatric ecology	
Celie Interling	2014	Elk grouping dynamics at Ya Ha Tinda	Wildlife Technician at Aseniwuche Environmental Corporation
Andrew Geary	2013	Habitat relationships of elk at Mt. St. Helens	
Barry Norbert	2012	CWD: modeling movement corridors	Alberta Fish & Wildlife
Lindsay Glines	2011	Grassland vegetation dynamics	Saskatchewan Environment
Peter Knamiller	2011	Wolf summer predation in AB.	Coordinator, Wolf Management Program, Yukon
Tom Habib	2010	Ecology and management of white-tailed deer and mule deer: chronic wasting disease.	Alberta Biodiversity Monitoring Program; Alberta Government.
Barry Robinson	2009	Foraging-predator avoidance trade-offs made by Migrant and resident elk ( <i>Cervus elaphus</i> ) on their sympatric winter range	Grassland Bird Biologist, Canadian Wildlife Service
Heather McPhee	2009	Kill site selection and attack rates of wolves in heterogeneous environments in west central Alberta.	Environmental consultant
Phil DeWitt	2008	Ungulate guild dynamics in aspen parklands	Environmental Consultant Matrix Solutions
Maria Didkowsky	2007	Foraging behavior of ungulates in aspen-prairie.	Parks Canada
Hannah McKenzie	2007	Wolf movement responses to on linear features.	PhD program at University Alberta
James Allen	2004	RSF stratification-based survey methods.	Head Biologist, Game and Priority Species, SRD, AB.
Stephen Hamilton	2004	Effects of habitat on bison in Wood Buffalo NP.	Biologist, Alberta Conservation Association
Megan Watters	2003	Effects of seasonal grazing on grassland soils.	Environmental consultant, Edmonton, AB.
Leslie McInenly	2003	Seasonal grazing on montane rough fescue.	Minnesota Department Conservation
<u>University of Wyoming</u>			
Tom Kohley	1996	Habitat modeling approaches in Gap Analysis	Owner and Operator at Ranch Maps, Billings, Montana
Greg McDaniel	1995	Deer ecology on Devils Tower National Monument	
Sean Kelly	1995	Elk and cattle impact on riparian areas, Idaho	



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**Doctoral Supervision:**

<b><u>Name</u></b>	<b><u>Degree Date</u></b>	<b><u>Thesis/Project Name</u></b>	<b><u>Post-degree Position</u></b>
Phillip Walker	2023	Foraging ecology & habitat selection of caribou during calving	PDF, UAlberta
Jodi Berg	2019	Elk calf ecology at Ya Ha Tinda	Idaho Fish and Game Biologist
Peter Smolko	2013	Fire-habitat relationships of <i>Cervus elaphus</i>	Slovakia
Darcy Visscher	2010	Trade-offs between risk and reward at multiple scales: A state-dependent approach	Instructor, Kings College
Nathan Webb	2009	Density, demography, functional response of wolf population in central Alberta, Canada.	Alberta Carnivore Biologist
Mark Hebblewhite	2006	Wolf predation on elk foraging and migration.	Assoc. Professor, University of Montana, Missoula
Jacqui Frair	2005	Cumulative effects of forestry on elk.	Associate Professor, SUNY, Syracuse

**Postdoctoral Supervision:**

<b><u>Name</u></b>	<b><u>Date</u></b>	<b><u>Project</u></b>	<b><u>Post-degree Position</u></b>
Phillip Walker	2023	PDF: Movement ecology: chronic Wasting Disease Risk in Alberta	Wildlife Biologist, WSP
Jingjing Xu	2023	PDF: Modeling transmission of CWD	ScotiaBank Manager
Peter Smolko	2020	PDF: Modeling CWD spread	Slovakia
Erin Rees	2009	PDF: Modeling CWD spread in SK & AB	Professor, Laval University, Quebec
Daniel Fortin	2003	PDF: Foraging ecology of elk	Professor, Laval U Quebec
Alexei Potapov	2014	Research Associate: Epidemiological modeling of deer CWD	Research Associate University of Alberta

**GRADUATE STUDENT SCHOLARSHIPS & AWARDS**

<b><u>Student</u></b>	<b><u>Degree</u></b>	<b><u>Year</u></b>	<b><u>Award</u></b>
Kelsey Gritter	MSc	2020-2021	NSERC CGS-M
			Alberta Graduate Excellence Scholarship
Madeline Trottier	MSc	2019-2020	NSERC CGS-M
			Alberta Graduate Excellent Scholarship
Maria Dobbin	MSc	2020	GSA Teaching Assistant Award
			Alberta Graduate Excellent Scholarship
Jacalyn Normandeau	MSc	2017-2018	NSERC CGS-M
			University Admission Award
			Best Poster Award - Alberta Chapter Wildlife Society
			Best Student Poster: Alberta Chapter Wildlife Society
			2 <sup>nd</sup> place Student Presentation - Alberta Chapter Wildlife Society
			Best MSc Poster- Peters Conference, U Alberta. Edmonton, AB.
Alberta Chapter of the Wildlife Society Student Travel Grant.			

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Phil Walker	PhD	2018	2 <sup>nd</sup> Place Poster - Alberta Chapter of the Wildlife Society
		2019	Certificate of Teaching Innovation Best Student Presentation - Alberta Chapter Wildlife Society
Kelly Mulligan	MSc	2019	WCSC - W. Garfield Weston Fellowship Award Teaching accommodation
		2017	UA Teaching Award Best oral presentation - Alberta Chapter of the Wildlife Society
Kara MacAulay	MSc	2018	Bill Samuel Award Graduate Teaching Award - Department of Biological Sciences UAlberta
		2014	Alberta Chapter of the Wildlife Society Travel Grant NSERC-CGS- M Scholarship
Eric Spilker	MSc	2017	QE II Best Poster - R.E. Peters Symposium, UAlberta, Edmonton, AB
		2018	Graduate Teaching Award - Department of Biological Sciences UAlberta
		2012	Doctoral Recruitment Scholarship, UAlberta
Jodi Berg	PhD	2015	William Wishart - Alberta Chapter of the Wildlife Society William Samuel Award, UAlberta
		2016	Best student poster - Alberta Chapter of the Wildlife Society
		2015	University Teaching Award
Shantel Sparkes	MSc	2016	William Samuel Award
		2014	NSERC-CGS- M Scholarship
Kerri Krawchuk	MSc	2011	QE II
Andrew Geary	MSc	2010	NSERC-CGS-M Scholarship
Barry Nobert	MSc	2009	QE II NSERC-USRA summer internship
Patrick Jones	Ung	2008	NSERC-CGS-M Scholarship
Lindsay Glines	MSc	2008	QE-II Julia O'Hrapko Scholarship
Heather McPhee	MSc	2008	NSERC-PGS-M Scholarship QE-II (declined)
Tom Habib	MSc	2008	NSERC-CGS-M Scholarship
Barry Robinson	MSc	2007	NSERC-CGS-M Scholarship
Phil DeWitt	MSc	2008	Teaching Award, UAlberta
		2009	Teaching Award, UAlberta
		2007	Teaching Award, UAlberta

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Chris Garrett	MSc	2007	NSERC: Julie Payette Graduate Scholarship
Darcy Visscher	PhD	2006	NSERC: Industrial Scholarship
		2007	Teaching Award, UAlberta
		2008	Teaching Award UAlberta
Nathan Webb	PhD	2006	J Gordin Kaplan Graduate Student Award
		2006	Louis D. Hyndman Sr. Award: Award for Animal Welfare in Research- Technical recipient
		2006	Graduate Student Award, Alberta Chapter of the Wildlife Society
		2007	Best Student Poster, Northwest Section of The Wildlife Society, Red Deer, Alberta.
Mark Hebblewhite	PhD	2002	Cannon National Parks Science Scholars
		2004	Best Post Award, Alberta Chapter of The Wildlife Society
		2005	Andrew Stewart Graduate Award, UAlberta
		2005	NSERC Post-Doctoral Fellowship
		2005	Parks Canada National Ecological Integrity Merit Award
		2006	Martha Piper Graduate Award, UAlberta
		2006	Convocation Governor General's Award, <i>Nomination</i>
Jacqui Frair	PhD	2006	NSERC Doctoral award: UA Science nomination,
		2004	Best student paper, Alberta Chapter of the Wildlife Society
		2005	Graduate Student Award, Alberta Chapter of the Wildlife Society
		2006	Outstanding Dissertation Award: <i>Nomination</i>
Hannah McKenzie	MSc	2005	Alberta Ingenuity Scholarship
			NSERC PGS Scholarship
Maria Didkowsky	MSc	2005	Best student paper, Alberta Chapter of the Wildlife Society
		2004	NSERC PGS Scholarship
Megan Watters	MSc	2001	NSERC PGS Scholarship

### **Graduate Supervisory Committee (member only)**

<b><u>Name of Student</u></b>	<b><u>Degree</u></b>	<b><u>Begin</u></b>	<b><u>End</u></b>
Birch Gano- Univ Montana	MSc	2023	--
Conner Meyer, Univ. Montana	PhD	2021	--
Tara Meyer	PhD	2020	--
Arlana Bennett	PhD	2020	--
Brianna Lorentz	MSc	2021	2023
Alexa Macpherson	MSc	2019	2022
Noelle Helder	MSc	2019	2021
Maggie McDonald	MSc	2019	2020
Alex Beatty	MSc	2017	2020

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Hans Martin (University of Montana)	PhD	2016	2021
April Manning	PhD	2016	2020
Amy Johnson	PhD	2015	2020
Elly Knight	PhD	2015	--
Michael Peers	PhD	2015	2019
Julia Shonfield	PhD	2012	2018
Melanie Dickie	MSc	2011	2015
Meghan Anderson	MSc	2010	2014
Robert Found	MSc	2010	2014
Xiaofeng Ruan	PhD	2010	2016
Aditya Gangadharan	PhD	2009	2014
Ulrike Schlaegel	PhD	2009	2015
Tisa Bevan	MSc	2008	2011
Claudia Lopez	PhD	2008	2012
Marie Auger-Methe	PhD	2008	2014
Christine Lambert	PhD	2007	2012
Adam Blake	MSc	2007	2010
Michael Clark	MSc	2008	2010
Daniel Fitzgerald	MSc	2007	2012
John Nagy	PhD	2006	2009
Kim Dawe	PhD	2006	2011
Stephanie Nakada	MSc	2006	2009
Kerri Lappin	MSc	2006	2009
Todd Mahon	PhD	2005	2010
Holger Spaedke	MSc	2005	2009
Christy Strocel	MSc	2005	2009
Gerry Kuzyk	PhD	2004	2008
Ian Whittaker	MSc	2004	2008
Marg Glasgow	MSc	2003	2006
Emily Parks	MSc	2003	2005
Amy Hurford	MSc	2003	2005
Conrad Thiessen	MSc	2003	2006
Nathan Varley	PhD	2003	2007
Guangquan Su	PhD	2002	2004
Heather Hinam	PhD	2002	2007
Judy Muir	MSc	2002	2004
Angela Bogan	MSc	2001	2005
Evan Richardson	MSc	2001	2004
Elsebe Kloppers	MSc	2001	2004
Boyan Tracz	MSc	2001	2004
Glynnis Hood	PhD	2001	2006
Megan Colon	MSc	2000	2002
Nicole Koper	PhD	2000	2004

## PUBLICATIONS

**Peer-Reviewed Journal Publications** (student, postdoc and research associate names are in **bold**):

1. Walker, P.D., A.R. Rodgers, J. Shuter, J., J.M. Fryxell, and E.H. Merrill, Woodland caribou calving fidelity: spatial location, habitat, or both? *Ecology and Evolution* *in revision*.
2. **Gritter, K., M. Dobbin**, E. Merrill, M. Lewis. An individual-based movement model for contacts between mule deer (*Odocoileus hemionus*). *Ecological Complexity*. *in revision*.
3. Williams, S., M. Hebblewhite, H. Martin, C. Meyer, J. Whittington, J. Killeen, **J. Berg, K. MacAulay, P. Smolko**, E. Merrill. 2023. Predation risk drives long-term shifts in migratory behavior and demography in a large herbivore population. *Journal of Animal Ecology*. 93:21-35. DOI: 10.1111/1365-2656.14022.
4. Tucker, M.E., A.M. Schipper, T.S.F. Adams, et al. 2023. Behavioral responses of terrestrial mammals to COVID-19 lockdowns *Science* 380(6649): 1059-1064 DOI: [10.1126/science.abo6499](https://doi.org/10.1126/science.abo6499)
5. Martin, H., M. Hebblewhite, A. Hubbs, R. Corrigan, E.H. Merrill. 2023. Male elk survival, vulnerability, and antler size in a transboundary and partially migratory population. *Journal of Wildlife Management* 87(4): e22386 <https://doi.org/10.1002/jwmg.22386>
6. **Dobbin, M.**, P. Smolko, L. Put, E.H. Merrill. 2023. Risky Business: Relating probability of direct contact to risk of chronic wasting disease. *Frontiers in Ecology and Evolution*. 11: 1156853 <https://doi.org/10.3389/fevo.2023.1156853>
7. **Berg, J.**, D. Eacker, M. Hebblewhite, and E. Merrill. 2023. Elk calf survival in a partially migratory population. *Journal of Wildlife Management*. 87:e22330. <https://doi.org/10.1002/jwmg.22330>
8. Martin, H.W., M. Hebblewhite and E.H. Merrill. 2022. Large herbivores in a partially migratory population search for the ideal free home 103(5): e3652 <https://doi.org/10.1002/ecy.3652>
9. **Xu, J.**, E.H. Merrill, M. A. Lewis. 2022. Spreading speed of chronic wasting disease across deer groups with overlapping home ranges. *J. of Theor. Biol.* 547: 111135 <https://doi.org/10.1016/j.jtbi.2022.111135>
10. **MacAulay, K., E. Spilker, J. Berg**, M. Hebblewhite, and E. Merrill. 2022. Beyond the encounter: Predicting multi-predator risk to elk (*Cervus canadensis*) in summer using predator scat. *Ecology and Evolution*. 12(2): e8589 <https://doi.org/10.1002/ece3.8589>
11. **Normandeau, J. C.** Cassidy St. Clair, S. Kutz, M. Hebblewhite, and E. Merrill. 2022.
12. What makes elk tick: winter tick (*Dermacentor albipictus*): grooming behavior in wild elk (*Cervus canadensis*). *J. Mammal.* 103(2): 373-382. <https://doi.org/10.1093/jmammal/gyab155>
13. **Smolko, P.**, D. Seidel, M. Pybus, A. Hubbs, M. Ball, E. Merrill. 2021. Spatio-temporal changes in chronic wasting disease risk in wild deer during 14 years of surveillance in Alberta, Canada. *Prev. Vet. Med.* 197(10): 105512 [doi.org/10.1016/j.prevetmed.2021.105512](https://doi.org/10.1016/j.prevetmed.2021.105512)
14. Falcón-Cortés, A., D. Boyer, E. H. Merrill, J. L. Frair, J. M. Morales. 2021. Hierarchical, memory-based movement models for translocated elk (*Cervus canadensis*). *Frontiers in Ecology & Evolution*. doi: 10.3389/fevo.2021.702925.
15. **Berg, J.**, J. Reimer, **P. Smolko**, H. Bohm, M. Hebblewhite, and E.H. Merrill. 2021. Mothers' movements: Shifts in calving area selection by partially migratory elk, *Journal Wildlife Management*. 87: 1476-1489. DOI: 10.1002/jwmg.22099.
16. Kauffman, M.J., et al. 2021. Mapping out a future for ungulate migrations. *Science*. 372(6542):566-569. (many authors). DOI: 10.1126/science.abf0998
17. **Normandeau, J.**, H. Martin, E. Merrill, and M. Hebblewhite. 2020. Potential case of hermaphroditism in elk (*Cervus canadensis*) in Alberta, Canada. *The Canadian Field Naturalist*. 134:241-247. <https://doi.org/10.22621/cfn.v134i3.2481>
18. Sperling, J., Z. MacDonald, **J. Normandeau**, E. Merrill, F. Sperling, and K. Magor. 2020. Within-population diversity of bacterial microbiomes in winter ticks (*Dermacentor albipictus*). *Ticks and Tick-Borne Diseases* 11:101535. <https://doi.org/10.1016/j.ttbdis.2020.101535>

19. Aikens, E.O., et al. 2020. Wave-like patterns of plant phenology determine ungulate movement tactics. *Current Biology* 30: 1–6. (many authors) <https://doi.org/10.1016/j.cub.2020.06.032>
20. **Normandeau, J.**, S.J. Kutz, M. Hebblewhite, E.H. Merrill (2020). Living with liver flukes: Does migration matter? *Internatl. J. Parasitology: Parasites and Wildlife*. 12:76-84. <https://doi.org/10.1016/j.ijppaw.2020.05.002>
21. Merkle, J.A., N.J. Anderson, D.L. Baxley, M. Chopp, L.C. Gigliotti, J.A. Gude, T.M. Harms, H.E. Johnson, E.H. Merrill, M.S. Mitchell, T.W. Mong, J. Nelson, A.S. Norton, M.J. Sheriff, E. Tomasik, K.R. Vanbeek, (2019) A collaborative approach to bridging the gap between wildlife managers and researchers. *J. Wildl. Manage.* 83:1644-1651. doi: 10.1002/jwmg.21759
22. Muhly, T.B.; C.A. Johnson, M. Hebblewhite, E.W. Neilson, D. Fortin, J.M. Fryxell, A.D.M. Latham, M.C. Latham, P.D. McLoughlin, E.H. Merrill, P.C. Paquet, B.R. Patterson, F. Schmiegelow, M. Musiani, (2019). Functional response of wolves to human development across boreal North America. *Ecol. Evol.* 18:10801-10815 . DOI: 10.1002/ece3.5600
23. **Berg, J.E.**, M. Hebblewhite, C.C. St Clair, E.H. Merrill (2019) Prevalence and mechanisms of partial migration in ungulates. *Front. Ecol. Evol.* 7:324 doi: 10.3389/fevo.2019.00325
24. **Normandeau, J., K. MacAulay, J. Berg** and E. Merrill (2019). Identifying guard hairs of Rocky Mountain carnivores. *Wildlife Society Bulletin*: 42:706-712. DOI: 10.1002/wsb.913
25. **Visscher, D.R.**, E.H. Merrill (2018) Functional connectivity in ruminants: A generalized state-dependent modelling approach. *PLoS One*. 13(6): 22. doi.org/10.1371/journal.pone.0199671
26. Hebblewhite M., D.R. Eacker, S. Eggeman, H. Bohm, E.H. Merrill (2018) Density-independent predation affects migrants and residents equally in a declining partially migratory elk population. *Oikos*. doi:10.1111/oik.05304 (epub) **[2020 Publication Award from Alberta Chapter The Wildlife Society)**
27. **Smolko, Peter**, R.Kropil, T. Pataky, A. Veselovska, E.H. Merrill (2018) Why do migrants move downhill? The effects of increasing predation and density on red deer altitudinal migration in temperate Carpathian forests. *Mammal Research*. 63(3): 297-305. doi.org/10.1007/s13364-018-0355-3
28. Tucker, M. (2018) Moving in the Anthropocene: Global reductions in terrestrial mammalian movements *Science*. 359(6374): 466-469. (Many authors) DOI: 10.1126/science.aam9712
29. **Geary, A.B.**, E.H. Merrill, J.G. Cook, R.C. Cook, and L.L. Irwin. (2017) Elk nutritional resources: Herbicides, herbivory and forest succession at Mount St. Helens. *Forest Ecology and Management*. 401: 242-253. DOI: 10.1016/j.foreco.2017.06.028
30. Schlagel, U., E. H. Merrill, M. Lewis. (2017) Territory surveillance and prey management: wolves keep track of space and time. *Ecology and Evolution*. 7(20): 8388-8405. <https://doi.org/10.1002/ece3.3176>
31. **Visscher, D.R.**, E.H. Merrill and P.K. Martin. (2017) Hierarchical trade-offs between risk and reward mediated by behavior. *Mammal Research* 62:129–140. <https://doi.org/10.1007/s13364-016-0290-0>
32. Eggeman, S.L., M. Hebblewhite, H. Bohm, J. Whittington, and E.H. Merrill. (2016) Behavioural flexibility in migratory behaviour in a long-lived large herbivore. *Journal of Animal Ecology* 85(3):785-797. <https://doi.org/10.1111/1365-2656.12495>
33. **Nobert, B.**, E.H. Merrill, M. Pybus, T. Bollinger, and Y.T. Hwang. (2016) Landscape connectivity predicts chronic wasting disease risk in Canada. *Journal of Applied Ecology* 53: 1450-1459. <https://doi.org/10.1111/1365-2664.12677>
34. Cagnacci, F., S. Focardi, A. Ghisla, B. van Moorter, E.H. Merrill, E. Gurarie, M. Heurich, A. Mysterud, J. Linnell, M. Panzacchi, R. May, T. Nygard, C. Rolandsen, and **M. Hebblewhite**. (2016) How many routes lead to migration? Comparison of methods to assess and characterize migratory movements. *Journal of Animal Ecology* 85(1): 54-68. <https://doi.org/10.1111/1365-2656.12449>
35. **Potapov, A.**, E.H. Merrill, M. Pybus, and M.A. Lewis. (2016) Chronic Wasting Disease: Transmission mechanisms and the possibility of harvest management. *PLOS ONE* 11: e0151039. <https://doi.org/10.1371/journal.pone.0151039>

36. **Potapov, A.**, E.H. Merrill, M. Pybus, and M.A. Lewis. (2015) Empirical estimation of r-0 for unknown transmission functions: the case of chronic wasting disease in Alberta. *PLOS ONE* 10, e0140024. DOI: [10.1371/journal.pone.0140024](https://doi.org/10.1371/journal.pone.0140024)
37. Boyce, M.S., C.J. Johnson, E.H. Merrill, S.E. Nielsen, E.J. Solberg, and B. van Moorter. (2015) Can habitat selection predict abundance? *Journal of Animal Ecology* 85:11-20. doi: 10.1111/1365-2656.12359
38. Lele, S.R., E.H. Merrill, J. Keim, and M.S. Boyce. (2013) Selection, use, choice and occupancy: clarifying concepts in resource selection studies. *Journal of Animal Ecology* 82:1183–1191. <https://doi.org/10.1111/1365-2656.12141>
39. **Robinson, B.G** and E.H. Merrill. (2013) Foraging-vigilance trade-offs in a partially migratory population: comparing migrants and residents on a sympatric range. *Animal Behaviour* 85:849-856. <https://doi.org/10.1016/j.anbehav.2013.02.004>
40. **Potapov, A.**, E. Merrill, M. Pybus, D. Coltman, and M. Lewis. (2012) Chronic wasting disease: possible transmission mechanisms in deer. *Ecological Modelling* 250: 244-257. <https://doi.org/10.1016/j.ecolmodel.2012.11.012>
41. **Habib, T.J.**, D.A. Moore, and E.H. Merrill. (2012) Detection and stratification approaches for aerial surveys of deer in prairie parklands. *Wildlife Research* 39:593-602. <https://doi.org/10.1071/WR11175>
42. **Webb, N.F.** and E.H. Merrill. (2012) Simulating carnivore movements: an occupancy-abundance relationship for surveying wolves. *Wildlife Society Bulletin* 36(2):240–247. <https://doi.org/10.1002/wsb.140>
43. **McPhee, H.M, N.F. Webb,** and E.H. Merrill. (2012) Hierarchical predation: wolf (*Canis lupus*) selection along hunt paths and at kill sites. *Canadian Journal Zoology* 90:555-563. <https://doi.org/10.1139/z2012-021>
44. **McKenzie, H.W.**, E.H. Merrill, R.J. Spiteri, and M.A. Lewis. (2012) How linear features alter predator movement and the functional response. *Interface Focus* 2(2):205-216. doi: [10.1098/rsfs.2011.0086](https://doi.org/10.1098/rsfs.2011.0086)
45. **Potapov, A.**, Merrill, E.H. and M. Lewis (2012) Wildlife disease elimination and density dependence. *Proceedings of the Royal Society B-Biological Sciences* 279(1741): 3139-3145. doi: [10.1098/rspb.2012.0520](https://doi.org/10.1098/rspb.2012.0520)
46. **Rees, E.E.**, E.H. Merrill, T.K. Bollinger, Y.T. Hwang, M. Pybus, and D. Coltman. (2012) Targeting the detection of chronic wasting disease using the hunter harvest during early phases of an outbreak in Saskatchewan, Canada. *Preventive Veterinary Medicine* 104(1-2):149-159. DOI: [10.1016/j.prevetmed.2011.10.016](https://doi.org/10.1016/j.prevetmed.2011.10.016)
47. **McPhee, H.M., N.F. Webb,** and E.H. Merrill. (2012) Time-to-kill: measuring attack rates in a heterogeneous landscape with multiple prey types. *Oikos* 121(5):711-720. <https://doi.org/10.1111/j.1600-0706.2011.20203.x>
48. **Hebblewhite, M.** and E.H. Merrill. (2012) Demographic balancing of migrant and resident elk in a partially migratory population through forage–predation tradeoffs. *Oikos* 120(12):1860-1870. <https://doi.org/10.1111/j.1600-0706.2011.19436.x>
49. Nelson, B., **M. Hebblewhite,** V. Ezenwa, T. Shury, E.H. Merrill, P.C. Paquet, F. Schmiegelow, D. Seip, G. Skinner, **N. Webb.** (2012) Prevalence of antibodies to canine parvovirus and distemper virus in wolves in the Canadian Rocky Mountains. *Journal Wildlife Diseases* 48(1):68-76. DOI: [10.7589/0090-3558-48.1.68](https://doi.org/10.7589/0090-3558-48.1.68)
50. **Robinson, B.G.** and E.H. Merrill. (2012) The influence of snow on the functional response of grazing ungulates. *Oikos* 121(1): 28-34. <https://doi.org/10.1111/j.1600-0706.2011.19408.x>
51. **Webb, N.F.** , **J.A. Allen,** and E.H. Merrill. (2011) Demography of a harvested wolf population in west-central Alberta, Canada. *Canadian Journal Zoology* 89:744-752. <https://doi.org/10.1139/z11-043>
52. Romme, W.H., M.S. Boyce, R. Gresswell, E.H. Merrill, G.W. Minshall, C. Whitlock, and M.G.Turner. (2011) Twenty years after the 1988 Yellowstone fires: Lessons about disturbance and ecosystems. *Ecosystems*. DOI: 10.1007/s10021-011-9470-6.

53. **Habib, T.J.**, E.H. Merrill, M.J. Pybus, and D.W. Coltman. (2011) Modelling landscape effects on density-contact rate relationships of deer in eastern Alberta: implications for chronic wasting disease. *Ecological Modeling* 222:2722-2732. <https://doi.org/10.1016/j.ecolmodel.2011.05.007>
54. Cullingham C.I., E.H. Merrill, M. Pybus, T.K. Bollinger, G.D. Wilson, D.W. Coltman. (2011) Broad and fine-scale genetic analysis of white-tailed deer populations: estimating the relative risk of chronic wasting disease spread. *Evolutionary Applications* 4:116-131. doi: 10.1111/j.1752-4571.2010.00142.x
55. Cullingham, C.I., S.M. Nakada, E.H. Merrill, T.K. Bollinger, M.J. Pybus, and D.W. Coltman. (2011) Multiscale population genetic analysis of mule deer (*Odocoileus hemionus hemionus*) in western Canada sheds new light on the spread of chronic wasting disease. *Canadian Journal Zoology* 89: 134–147. <https://doi.org/10.1139/Z10-104>
56. Merrill, E., H. Sand, B. Zimmermann, **H. McPhee, N. Webb, M. Hebblewhite**, P. Wabakken, and **J.L. Frair**. (2010). Building a mechanistic understanding of predation with GPS-based movement data. *Philosophical Transactions Royal Society B* 365:2279-2288.
57. **Robinson, B.G., M. Hebblewhite**, and E.H. Merrill. (2010) Are migrant and resident elk (*Cervus elaphus*) exposed to similar forage and predation risk on their sympatric winter range? *Oecologia* 164: 265-275.
58. Morales, J.M., P.R. Moorcroft, J. Matthiopoulos, **J.L. Frair**, J.G. Kie, R.A. Powell, E.H. Merrill, and D.T. Haydon. (2010) Building the bridge between animal movements and population dynamics. *Philosophical Transactions Royal Society B* 365:2289-2301.
59. Owen-Smith, N., J.M. Fryxell, and E.H. Merrill. (2010) Foraging theory upscaled: the behavioural ecology of herbivore movement. *Phil. Trans. R. Soc. B.* 365: 2267-2278.
60. Van Moorter B., **D.R. Visscher**, C.L. Jerde, **J.L. Frair** and E.H. Merrill. (2010) Identifying movement states from location data using cluster analysis. *Journal Wildlife Management* 74(3): 588-594.
61. **McInenly, L.E.**, E.H. Merrill, J.F. Cahill, and N.G. Juma. (2010) *Festuca campestris* alters root morphology and growth in response to simulated grazing and nitrogen form. *Functional Ecology* 24(2): 283-292. <https://doi.org/10.1111/j.1365-2435.2009.01642.x>
62. **Hebblewhite, M.** and E.H. Merrill. (2009) Trade-offs between predation risk and forage differ between migrant strategies in a migratory ungulate. *Ecology* 90(12):3445-3454. <https://doi.org/10.1890/08-2090.1>
63. Wilson, G.A., S.M. Nakada, T.K. Bollinger, M.J. Pybus, E.H. Merrill, and D.W. Coltman. (2009) Polymorphisms at the PRNP gene influence susceptibility to chronic wasting disease in two species of deer (*Odocoileus spp.*) in western Canada. *Journal Toxicology and Environmental Health* 72(17-18):1025-1029. DOI: [10.1080/15287390903084264](https://doi.org/10.1080/15287390903084264)
64. **Hebblewhite, M.**, R.H. Munroe, and E.H. Merrill. (2009) Trophic consequences of postfire logging in a wolf-ungulate system. *Forest Ecology and Management* 257(3):1053-1062. <https://doi.org/10.1016/j.foreco.2008.11.009>
65. **McKenzie H.W.**, M.A. Lewis, and E.H. Merrill. (2009) First passage time analysis of animal movement and insights into the functional response. *Bulletin of Mathematical Biology* 71(1):107-129. doi: 10.1007/s11538-008-9354-x.
66. **Visscher, D.R.** and E.H. Merrill. (2009) Temporal dynamics of forage succession for ungulates at two scales: Implications for forest management. *Forest Ecology and Management* 257(1):96-106. DOI:[10.1016/j.foreco.2008.08.018](https://doi.org/10.1016/j.foreco.2008.08.018)
67. Wolf, M., **J.L. Frair**, E.H. Merrill, and P. Turchin. (2009) The attraction of the unknown: the importance of spatial familiarity in habitat selection in wapiti (*Cervus elaphus*). *Ecography* 32(3):401-410. <https://doi.org/10.1111/j.1600-0587.2008.05626.x>
68. **McKenzie, H.W.**, C.L. Jerde, **D.R. Visscher**, E.H. Merrill, and M.A. Lewis. (2009) Inferring linear feature use in the presence of GPS measurement error. *Environmental and Ecological Statistics* 16:531-546. <https://doi.org/10.1007/s10651-008-0095-7>



69. **Frair, J.L.**, E.H. Merrill, H.L. Beyer, and J.M. Morales. (2008) Thresholds in landscape connectivity and mortality risks in response to growing road networks. *Journal of Applied Ecology* 45(5):1504-1513. (Editor's recommended article) <https://doi.org/10.1111/j.1365-2664.2008.01526.x>
70. **Allen, J.R., L.E. McInenly**, E.H. Merrill, and M.S. Boyce. (2008) Using resource selection functions to improve estimation of elk population numbers. *Journal of Wildlife Management* 72(8):1798-1804. <https://doi.org/10.2193/2007-311>
71. **Webb, N.F., M. Hebblewhite**, and E.H. Merrill. (2008) Statistical methods for identifying wolf kill sites using global positioning system locations. *Journal Wildlife Management* 72(3):798-807. <https://doi.org/10.2193/2006-566>
72. **Hebblewhite, M.**, E.H. Merrill, and G. McDermid. (2008) A multiscale test of the forage maturation hypothesis in a partially migratory ungulate population. *Ecological Monographs* 78(2):141-166. (Cover photo) <https://doi.org/10.1890/06-1708.1>
73. **Hebblewhite, M.** and E.H. Merrill. (2008) Modeling wildlife-human relationships for social species with mixed-effects resource selection models. *Journal Applied Ecology* 45(3):834-844. (Cover photo) <https://doi.org/10.1111/j.1365-2664.2008.01466.x>
74. Beyer, H.L., E.H. Merrill, N. Varley, and M.S. Boyce. (2007) Willow on Yellowstone National Park's northern range: evidence for a trophic cascade in a large mammalian predator-prey system. *Ecological Applications* 17(6):1563-1571. DOI: [10.1890/06-1254.1](https://doi.org/10.1890/06-1254.1)
75. **Hebblewhite, M.**, M. Percy, and E.H. Merrill. (2007) Are all GPS collars created equal? Correcting habitat-induced bias using three brands in the Central Canadian Rockies. *Wildlife Society Bulletin* 71(6):2026-2033. <https://doi.org/10.2193/2006-238>
76. **Hebblewhite, M.** and E.H. Merrill. (2007) Multi-scale wolf predation risk for elk: does migration reduce risk. *Oecologia* 152:377-387. <https://doi.org/10.1007/s00442-007-0661-y>
77. Koper, N., F.K.A. Schmiegelow, and E.H. Merrill. (2007) Residuals cannot distinguish between ecological effects of habitat amount and fragmentation: implications for the debate. *Landscape Ecology* 22:811-820. (Honorable mention from *Landscape Ecology*: 2008) <https://doi.org/10.1007/s10980-007-9083-9>
78. **Frair, J.L.**, E.H. Merrill, **J.W. Allen**, and M.S. Boyce. (2007) Know thy enemy: lessons from elk translocations into risky landscapes. *Journal of Wildlife Management* 71(2):541-554. <https://doi.org/10.2193/2006-141>
79. **Hebblewhite, M.**, E.H. Merrill, L.E. Morgantini, C.A. White, J.R. Allen, E. Bruns, L. Thurston, and T.E. Hurd. (2006) Is the migratory behaviour of montane elk (*Cervus elaphus*) herds in peril? The case of Alberta's Ya Ha Tinda elk herd. *Wildlife Society Bulletin* 34(5):1280-1294. [https://doi.org/10.2193/0091-7648\(2006\)34\[1280:ITMBOM\]2.0.CO;2](https://doi.org/10.2193/0091-7648(2006)34[1280:ITMBOM]2.0.CO;2)
80. Johnson, C.J., S.E. Nielsen, E.H. Merrill, T.L. McDonald, and M.S. Boyce. (2006) Resource selection functions based on use-availability data: theoretical motivation and evaluation methods. *Journal Wildlife Management* 70(2):347-357 [https://doi.org/10.2193/0022-541X\(2006\)70\[347:RSFBOU\]2.0.CO;2](https://doi.org/10.2193/0022-541X(2006)70[347:RSFBOU]2.0.CO;2)
81. **Visscher, D.R.**, E.H. Merrill, **D. Fortin**, and **J.L. Frair**. (2006) Estimating woody browse availability for ungulates at increasing snow depths. *Forest Ecology and Management* 222(1-3):348-354. <https://doi.org/10.1016/j.foreco.2005.10.035>
82. Mao, J.S., M.S. Boyce, D.W. Smith, F.J. Singer, D.J. Vales, and E.H. Merrill. (2005) Habitat selection by elk before and after wolf reintroduction in Yellowstone National Park. *Journal of Wildlife Management* 69(4):1691-1707. [https://doi.org/10.2193/0022-541X\(2005\)69\[1691:HSBEBA\]2.0.CO;2](https://doi.org/10.2193/0022-541X(2005)69[1691:HSBEBA]2.0.CO;2)
83. Anderson, D.P., J.D. Forester, M.G. Turner, **J.L. Frair**, E.H. Merrill, **D. Fortin**, J. Mao, and M.S. Boyce. (2005) Factors influencing home range sizes of elk (*Cervus elaphus*) in North American landscapes. *Landscape Ecology* 20:257-271. <https://doi.org/10.1007/s10980-005-0062-8>
84. **Frair, J.L.**, E.H. Merrill, **D.R. Visscher**, **D. Fortin**, H.L. Beyer, and J.M. Morales. (2005) Scales of movement by elk (*Cervus elaphus*) in response to heterogeneity and predation risk. *Landscape Ecology* 20:273-287. <https://doi.org/10.1007/s10980-005-2075-8>

85. **Hebblewhite, M.**, E.H. Merrill, and T.L. McDonald. (2005) Spatial decomposition of predation risk using resource selection functions: an example in a wolf-elk predator-prey system. *Oikos* 111(1):101-111. <https://doi.org/10.1111/j.0030-1299.2005.13858.x>
86. Merrill, E.H., J.J. Hartigan, and M.W. Meyer. (2005) Does prey biomass or mercury exposure affect loon chick survival in Wisconsin? *Journal Wildlife Management* 69(1):57-67. [https://doi.org/10.2193/0022-541X\(2005\)069<0057:DPBOME>2.0.CO;2](https://doi.org/10.2193/0022-541X(2005)069<0057:DPBOME>2.0.CO;2)
87. Morales, J.M., **D. Fortin, J.L. Frair**, and E.H. Merrill. (2005) Adaptive models for large herbivore movements in heterogeneous landscapes. *Landscape Ecology* 20:301-316. <https://doi.org/10.1007/s10980-005-0061-9>
88. **Fortin, D.**, M.S. Boyce, E.H. Merrill, and J.M. Fryxell. (2004) Foraging costs of vigilance in large mammalian herbivores. *Oikos* 107(1):172-180. <https://doi.org/10.1111/j.0030-1299.2004.12976.x>
89. **Fortin, D.**, M.S. Boyce, and E.H. Merrill. (2004) Multi-tasking by mammalian herbivores: overlapping processes during foraging. *Ecology* 85(8):2312-2322. <https://doi.org/10.1890/03-0485>
90. **Frair, J.L.**, S.E. Nielson, E.H. Merrill, S.R. Lele, M.S. Boyce, R.H. Munro, G.B. Stenhouse, and H.L. Beyer. (2004) Approaches for removing GPS-collar bias in habitat-selection studies. *Journal of Applied Ecology* 41(2):201-212. <https://doi.org/10.1111/j.0021-8901.2004.00902.x>
91. Boyce, M.S., J. Mao, E.H. Merrill, **D. Fortin**, M.G. Turner, J. Fryxell, and P. Turchin. (2003) Scale and heterogeneity in habitat selection by elk in Yellowstone National Park. *EcoScience* 10(4):421-431. <https://doi.org/10.1080/11956860.2003.11682790>
92. Merrill, E.H., H.L. Beyer, G.P. Jones, and **G.W. McDaniel**. (2003) Deciduous woodland conservation under heavy deer browsing on Devils Tower National Monument, USA. *Journal for Nature Conservation* 10(4):221-232. <https://doi.org/10.1078/1617-1381-00022>
93. Merrill, E.H. and P.J.S. Coleberg. (2003) Defoliation, waterlogging and dung influences allocation patterns of *Deschampsia caespitosa*. *Journal of Range Management* 56:634-639. DOI: 10.2307/4003939
94. Driese, K.L., W.A. Reiners, E.H. Merrill, and K.G. Gerow. (1997) A digital GIS land cover map of Wyoming: a tool for vegetation analysis. *Journal Vegetation Science* 8(1):133-146. <https://doi.org/10.2307/3237251>
95. Merrill, E.H., K.J. Raedeke, and R.D. Taber. (1995) Food habits and simulated diet quality of elk inhabiting early successional forests in western Washington. *Northwest Science* 69:9-18.
96. Merrill, E.H. (1994) Summer foraging ecology of elk in the Mount St. Helens blast zone. *Canadian Journal Zoology* 72:303-311. <https://doi.org/10.1139/z94-042>
97. Merrill, E.H., N. Stanton, and H. Hak. (1994) Responses of bluebunch wheatgrass, Idaho fescue, and nematodes to ungulate grazing in Yellowstone National Park. *Oikos* 69:231-240. <https://doi.org/10.2307/3546143>
98. Merrill, E.H., L.E. Kuck, and T.A. Hemker. (1994) Impacts of mining facilities on fall migration of mule deer. *Wildlife Society Bulletin* 22:68-73
99. Merrill, E.H., R.W. Marrs, M.B. Brodahl, and M.S. Boyce. (1993) Estimations of green herbaceous phytomass in Yellowstone National Park using remote sensing. *Journal Range Management* 46(2):151-157. DOI: [10.2307/4002273](https://doi.org/10.2307/4002273)
100. Merrill, E.H. (1991) Thermal constraints on the use of cover types and activity patterns of elk in the Mt. St. Helens blast zone. *Applied Animal Behavior Science* 29(1-4):251-267. [https://doi.org/10.1016/0168-1591\(91\)90252-S](https://doi.org/10.1016/0168-1591(91)90252-S)
101. Boyce, M.S. and E.H. Merrill. (1991) Ungulate responses to the 1988 fires in Yellowstone National Park. *Tall Timbers Fire Ecology* 17:121-132.
102. Kuck, L.E., G.L. Hompland, and E.H. Merrill. (1985) Elk calf response to stimulated mine disturbances in Southeast Idaho. *Journal Wildlife Management* 49:751-757.
103. Merrill, E.H., H.F. Mayland, and J.M. Peek. (1982) Shrub responses after fire in an Idaho Ponderosa pine community. *Journal Wildlife Management* 46(2):496-502. DOI: 10.2307/3808665

## Page

104. Merrill, E.H., H.F. Mayland, and J.M. Peek. (1980) Effects of wildfire on herbaceous vegetation on xeric sites in the Selway-Bitterroot Wilderness. *Journal Range Management* 33(5):363-367.
105. Merrill, E.H. (1978) Bear depredation at back country campgrounds in Glacier National Park. *Wildlife Society Bulletin* 6(3):123-127.

**Book Chapters**

1. Merrill, E.H., P. L. Kennedy, S.K. Skagen, and K. A. Grinillo. 2022. Personal and Institutional Barriers to Success: Challenges and Solutions for Women. Pages 82-112 in Carol L. Chambers and Kerry L. Nicholson, Editors. *Women in Wildlife Science Building Equity, Diversity, and Inclusion*. Johns Hopkins University Press, Baltimore
2. Boyce, M.S, E.H. Merrill and A.R.E Sinclair. 2009. Managing the biosphere: Wildlife Management. Pages: 695-700 in S.L. Levin, Editor. *The Princeton guide to ecology*. Princeton University Press, Princeton, N.J., USA
3. Merrill, E.H. 1992. Population and habitat characteristics of recolonizing elk herd. Pages 225-227 in B. Bobek, K. Perzanowki and W.L. Reglin, editors. *Global trends in wildlife management*. Vol 2. Swiat Press, Krakow, Poland.
4. Merrill, E.H. and M.S. Boyce. 1991. Summer range and elk population dynamics in Yellowstone National Park, Pages 263-272 in R.B. Keiter and M.S. Boyce, editors. *Greater Yellowstone Ecosystem: redefining America's wilderness heritage*. Yale Univ. Press, New Haven.
5. Merrill, E.H. 1991. Thermal constraints on the use of cover types and activity patterns of elk in the Mt. St. Helens blast zone. Pages 251-267 in E.C. Mungel, editor. *Ungulate behavior and management*. Elsevier Publ. Co., Amsterdam.

**Published Abstracts**

1. **Smolko, P.**, D. Seidel, E. Merrill, M. Pybus, A. Hubbs, M. Ball (2019) Inferring the effects of deer population and landscape structure on spread of the chronic wasting disease in Alberta. *PRION*. 13:9-1.
2. E.H. and M.S. Boyce. 2010. Tri-trophic interactions: Is the northern range elk less variable with wolves and fire? *The Yellowstone Fires and Beyond*. Symposium. Tall Timbers Research Misc. Publications.
3. **Hebblewhite, M.**, E.H. Merrill, C. White. 2010. Disentangling bottom-up and top-down effects of fires on montane ungulates. *The Yellowstone Fires and Beyond*. Symposium. Tall Timbers Research Misc. Publications.

**Symposia**

1. Merrill, E.H., R.W. Marrs, M.B. Brodahl, and M.S. Boyce. 1996. Estimation of green herbaceous phytomass from MSS data in Yellowstone National Park using remote sensing. Pages 367-375 in F.J. Singer, editor. *Effects of grazing by wild ungulates in Yellowstone National Park - a report to the director*. National Park Service, Natural Resource Information Division. Denver, CO.
2. Merrill, E.H., J.K. Hak, and N.L. Stanton. 1994. Nematode responses to ungulate herbivory. Pages 231-238 in *Plants and their environments: proceedings of the first biennial scientific conference of the Greater Yellowstone Ecosystem*, U.S. Nat. Park Ser., Nat. Resource. Publ. Off. Denver, CO.
3. **McWhirter, D.**, S. Smith, E.H. Merrill, and L. Irwin. 1992. The significance of agricultural lands to the winter foraging behavior of bighorn sheep. *Northern Wild Sheep and Goat Symposium*. 8:264-278.
4. Merrill, E.H. and K.J. Raedeke 1987. Elk harvest strategies in relation to forest succession in the Mt. St. Helens blast zone. Pages 198-202 in *Proc. W. States and Provinces Elk Workshop*, Wenatchee, WA.
5. Raedeke, K.J., E.H. Merrill, and S.M. McCorquodale, 1986. Estimates of intrinsic rates of increase from three Washington elk herds. Pages 69-72 in *Proc. Western States Elk Workshops*, Coos Bay, OR.

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6. Merrill, E.H., K.J. Raedeke, K.L. Knutson, and R.D. Taber, 1985. Elk recolonization of the Northwest portion of the Mount St. Helens blast zone: preliminary findings. Pages 172-177 in S.A.C. Keller, ed., Mount St. Helens - five years later, Eastern Washington Univ. Press, Cheney, WA.

**Major Reports**

1. Hebblewhite, M. and E. Merrill. 2021. Mechanisms driving facultative switching in partially migratory species and population dynamics consequences. Five-year Summary report to National Science Foundation.
2. Hebblewhite, M and E. Merrill 2020. Testing for facultative switching between migratory strategies in a partially migratory, long-lived large herbivore population. Annual report to National Science Foundation. Long-term Environmental Biology program. 34pp
3. Merrill, E., **M. Dobbin, P. Smolko, J. Xu, J. Thalmann, L. Horne,**. 2019. Quantifying contact rates for modelling transmission of chronic wasting disease. Annual Report. University of Alberta, unpublished report. 66pp.
4. Hebblewhite, M and E. Merrill 2019. Testing for facultative switching between migratory strategies in a partially migratory, long-lived large herbivore population. Annual report to National Science Foundation. Long-term Environmental Biology program. 34pp.
5. Merrill, E., **T. Habib, B. Nobert,** E. Brownrigg, P. Jones, C. Garrett, A. Bertrand, J. Wachowski, M. Pybus, M. Ball, and **J. Allen**. 2014. Alberta Chronic Wasting Disease: North Border Deer Study Final Report. University of Alberta, unpublished report. 45pp
6. Nobert, B; Pybus, M (Alberta ESRD), Merrill, EH (University of Alberta) 2013. CWD Surveillance in Alberta 2005-2012: Literature Review and Initial Data Analysis. 109 pp
7. Demarais, S., L. Cornicelli, R. Kahn, E. Merrill, C. Miller, J. M. Peek, W. F. Porter, and G. A. Sargeant. 2012. Ungulate management in national parks of the United States and Canada. The Wildlife Society Technical Review 12-05. The Wildlife Society, Bethesda, Maryland, USA
8. Merrill E. and M. Lewis. 2012. Decision support models for managing CWD in wild deer populations in Alberta. Final Report. Alberta Prion Research Institute, BioInnovates, Edmonton, AB. 16 pp
9. Glines, L; Bohm, A; Spaedtke, H; Merrill, EH (Department of Biological Sciences University of Alberta); Eggeman, S; Deedy, A; Hebblewhite, M (Wildlife Biology Program, College of Forestry and Conservation, University of Montana) 2011. Ya Ha Tinda Elk Herd and Red Deer River Valley Ecotone Study: Final Report. 111pp
10. Carbyn, L. E. Merrill, and A. Hubbs. 2008. Assessment of an alternative wolf management strategy: Experimental reduction of wolf pack sizes and predation. Science Committee Report. 9pp.
11. **Habib, T.,** C. Garrett, J. Stevens, **D. Visscher,** and E. Merrill. 2008. Report on the activities of the Border deer study in the province of Alberta: 30 April – 31 March 2008. University of Alberta, Edmonton, AB.
12. Coltman, D., E.H. Merrill, and M. Pybus. 2008. Albert Prion Research Institute, Annual Rept. 10pp.
13. **Habib, T.,** C. Garrett, J. Stevens, and E.H. Merrill. 2008. Border deer study annual report. Submitted to Alberta Sustainable Resource Development. 34pp.
14. Merrill, E.H and C. Garrett. 2007. Border deer study annual report. Submitted to Alberta Sustainable Resource Development. 34pp.
15. Boyle, E., **N. Webb,** C. Thiessen, **M. Hebblewhite,** and E.H. Merrill. 2006. Feasibility of using scats for determining wolf pregnancy rates: Implications for harvested wolves. Yellowstone to Yukon Conservation Initiative. Final Report. 27 pp.
16. **Hebblewhite, M.,** R. Munro, and E.H. Merrill. 2005. Effects of post-fire logging on elk habitat during the first 3 years post-fire: a case study of the Dogrib Creek Fire in the east slope of Alberta. Report prepared for: Foothills Model Forest. Chisholm-Dogrib Fire Research Initiative. Hinton, Alberta. 76 pp.

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17. Merrill, E.H., **J. Allen, J. Frair, D. Visscher**, H. Beyer, **N. Webb, D. Fortin, L. McInenly**, and M.S. Boyce. 2005. Population monitoring, translocation, and the cumulative effects of industrial activities on elk (*Cervus elaphus*) in the Central Eastern foothills of Alberta, Canada. Completion Report. 40 pp.
18. Hamilton, S., E.H. Merrill, and J. Wilmshurst. 2005. Estimates of winter carrying capacity for bison in Wood Buffalo National Park. Report prepared for: Wood Buffalo National Park. 75 pp.
19. Bollinger, T., P. Caley, E.H. Merrill, F. Messier, M. Miller, M. Samuel, and E. Vanopdenbosch. 2004. Chronic Wasting Disease In Canadian Wildlife: An Expert Opinion On The Epidemiology And Risks To Wild Deer. Final Report submitted to the Canadian Cooperative Wildlife Health Centre, University of Saskatchewan, Saskatoon.
20. Merrill, E.H., H. Beyer, **J. Frair, D. Visscher, D. Fortin**, M.S. Boyce, and **J. Allen**. 2004. Vegetation mapping and dynamics of elk forage in the central east slope of Alberta. The Central East Slopes Elk and Wolf Study. University of Alberta, Edmonton. 37 pp.
21. Merrill, E.H., E. Anderson, J. Hardin, and N. Neimuth. 2000. Prairie Chicken Management : course GIS exercises. Lab manual. University of Wisconsin-Stevens Point, 148 pp. completion as part of 1999 University of Wisconsin Undergraduate Teaching Grant: *Integrating GIS into the Wildlife Program*.
22. Merrill, E.H. 1998. Prairie Chicken Surveys in Central Wisconsin. University of Wisconsin-Stevens Point. Stevens Point, WI. 25 pp.
23. Merrill, E.H. 1997. Avian diversity in the Bighorn Mountains of Wyoming in relation to monitoring scale. University of Wisconsin-Stevens Point, WI. 96 pp. Final Report. Submitted to: Environmental Protection Agency, Washington, D.C. 65 pp.
24. Merrill, E.H., T. Kohley, M. Herdendorf, W. Reiners, K. Driese, R. Marrs, and S. Anderson. 1996. Wyoming Gap Analysis: A geographic information system. University of Wyoming, Laramie, WY. 245 pp. Final Report. Submitted to: National Biological Service. 242 pp.
25. Merrill, E.H. and R.W. Marrs. 1995. Remote sensing of grassland vegetation recovery after the 1988 fires in Yellowstone National Park. University of Wyoming, Laramie, WY. Final Report. Submitted to: Yellowstone National Park, Mammoth, WY. 22 pp.

**Popular Articles**

1. **Krawchuk, K.**, E. Merrill, and M. Boyce. 2014. Aboriginal consumptive use. Alberta Outdoorsman. Winter 2014:18-20.
2. **Berg, J.**, E. Merrill, M. Hebblewhite, and M. Boyce. 2014. Ya Ha Tinda elk herd: Persistence or Doom? Alberta Outdoorsman. Fall 2013: 6-9.
3. **Frair, J.L.**, E.H. Merrill, J. Allen, and M.S. Boyce. 2010. Experience influences success of elk translocations. Fair Chase. Boone and Crockett. April 2010 pp.
4. Merrill, E.H., M. Pybus, and M.S. Boyce. 2010. Chronic wasting disease--the big unknown. Alberta Outdoors. Sept 2010: 10-12.
5. Merrill E. and M. Boyce. 2010. Predator perspectives from down under. Alberta Chapter- The Wildlife Society. Newsletter 22:2-3.
6. **Frair, J.L.**, E.H. Merrill, J. Allen, and M.S. Boyce. 2009. How to translocate elk in risky landscapes. Alberta Outdoors. Fall 2009.
7. Merrill, E.H. 1990. Ashes to elk: Mount St. Helens elk recolonizing elk herds. Bugle 7:75-80.

**Published as Editor-in-Chief : Editors Messages in Journal of Wildlife Management, 2013-2015**

1. Merrill, E.H. A. Cox, and A. Knipps. 2015. The time has come and gone. *Journal of Wildlife Management* 7:1211-1212.
2. Merrill, E.H. 2015. A word about supplemental materials. *Journal of Wildlife Management* 7: 1039-1040.
3. Merrill, E.H. 2015. Bibliographic databases: Is the *Journal of Wildlife Management* being found? *Journal of Wildlife Management* 7: 693-694.

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4. Cox, A. and E. H. Merrill. 2015 What taxa are appropriate for the Journal? *Journal of Wildlife Management* 79: 527-528.
5. Merrill, E.H. 2015. Where we go wrong: Issues of dual publication and self-plagiarism. *Journal of Wildlife Management* 79: 355-356.
6. Merrill, E.H. 2015. Sensitivity and integrity of authorship. *Journal of Wildlife Management* 79:171-173.
7. Merrill, E.H. 2015. Are management implications for the *Journal* ceremonial? *Journal of Wildlife Management* 79: 1-2.
8. Merrill, E.H. 2014. Time flies when there is no downtime. *Journal of Wildlife Management* 78:1321.
9. Merrill, E.H. 2014. Assassin or zealot: What makes a good manuscript review? *Journal of Wildlife Management* 78:1129-1130.
10. Merrill, E.H. and A. Cox. 2014. Reviewer overload and what can we do about it? *Journal of Wildlife Management* 78:961-962.
11. Merrill, E.H. and A. Knipps. 2014. What's in a title? *Journal of Wildlife Management* 78: 761-762.
12. Merrill, E.H. 2014. Should we be publishing more null results? *Journal of Wildlife Management* 78:569-570.
13. Merrill, E.H. 2014. Data sharing and reuse: What are the issues? *Journal of Wildlife Management* 78: 381-382.
14. Merrill, E.H. 2014. Why Publish in the *Journal of Wildlife Management*? *Journal of Wildlife Management* 78:181-182.
15. Merrill, E.H. 2014. The time had come. *Journal of Wildlife Management* 78:1-2.

**Theses**

1. Merrill, E.H. 1987. Population dynamics and habitat ecology of elk in the Mount St. Helens blast zone. Ph.D. Thesis. Univ. Washington, Seattle, Washington. 204 pp.
2. Merrill, E.H. 1978. Nutrient cycling in a vegetation-ungulate complex. M.Sc. Thesis. University of Idaho, Moscow, Idaho. 103 pp.

**Manuscripts of students while under my supervision but not co-authored**

1. MacAulay, K., J. Normandeau, and M. Boyce. 2016. The hairy truth: investigating predators and prey. *Alberta Outdoorsman*. Nov.
2. Moorter, B.V., D. Visscher, S. Benhamou, L. Borger, M.S. Boyce, and J-M Gaillard. 2009. Memory keeps you at home: a mechanistic model for home range emergence. *Oikos* 118:641-652.
3. Gillies, C.S., M. Hebblewhite, S.E. Nielsen, M.A. Krawchuk, C.L. Aldridge, J.L. Frair, D.J. Saher, C.E. Stevens, and C.L. Jerde. 2006. Application of random effects to the study of resource selection by animals. *Journal of Animal Ecology* 75:877-898.
4. Hurford, A., M. Hebblewhite, and M.A. Lewis. 2006. A spatially explicit model for the Allee effect: why wolves recolonize so slowly in Greater Yellowstone. *Theoretical Population Biology* 70:244-254.
5. Visscher, D.R. 2006. GPS measurement error and resource selection functions in a fragmented landscape. *Ecography* 29:458-464.
6. Jerde, C.L. and D.R. Visscher. 2005. GPS measurement error influences on movement model parameterization. *Ecological Applications* 15:806-810.

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**ORAL PRESENTATIONS** (co-author presented) since 2010 (student presentations not listed)**2023**

- Pathways to Decision Making on CWD, Office of the Chief Scientist, April 2024
- Time marches on: CWD in Alberta. Texas Univ, A&M-Kingsville, Kingsville, TX Dec 2024
- Lessons from long-term research on elk migration. Texas Univ, A&M-Kingsville, Kingsville, TX Dec 2024
- Building CWD management support tools. Govt. Alberta Modeling Community Seminar, 2 Nov
- What research tells us for the Ya Ha Tinda elk herd: Alberta Association of Trail Riders, 25 Oct
- Risky business: relating probability of contact to disease on the landscape. Saskatchewan Chapter of the Wildlife Society, Feb 3 2023. (Merrill/Dobbin)
- Bridging the gap between wildlife and science. Alberta Fish and Wildlife: Wildlife Community of Practice Meeting. Jan 19 2023

**2022**

- Taking the long view: Rewards and challenges in long-term research. The Wildlife Society Annual Conference, Spokane, WA Nov 6 2022. (Merrill/Hebblewhite).
- International Engagement in The Wildlife Society. Norway Student Chapter of the Wildlife Society, Inland Norway University of Applied Sciences, Evanstad, Norway.
- CWD Marching on in Alberta. Alberta Innovates - Clean Resources Team, Alberta Innovates. 16 Nov 2022 (Merrill)
- Models for managing wildlife diseases. Inland Norway University of Applied Sciences, Evanstad, Norway, 27 Aug 2022 (Merrill)

**2021**

- Modeling CWD spread: CWD Research Update, Alberta Prion Research Institute, Edmonton, AB (virtual) 27 April
- Alberta CWD Risk Modeling: final application demonstration. Alberta Environment and Parks. Edmonton, AB (virtual), 21 Jan. (Put/Merrill).

**2020**

- Alberta CWD Risk and Spread Modeling, Alberta Environment Scientific Series, Edmonton, AB, (virtual) Dec 6.
- Alberta CWD Risk Modeling: progress and update. Alberta Environment and Parks. Edmonton, AB (virtual), Jun 18. (Put/Merrill).

**2019**

- Invited speaker: Long-term research at the Ya Ha Tinda, AB. Alberta Trail Riding Association, Edmonton, AB 20 Jan 26.
- Invited speaker: Research, training and Career Opportunities, Second Training Conference, University of Alberta, Nov 13 (Merrill)

**2018**

- Invited speaker: Twenty years of predators and prey in Alberta. BC Wildlife Federation Convention, Fort St John, BC, 8 May 2019. (Merrill)
- Invited speaker: Women in Wildlife: Advocating for yourself. *Alberta Chapter of the Wildlife Society Annual Meeting*, Canmore, AB 23 Mar (Merrill).
- Invited speaker: Ontario Fish and Anglers General Meeting: Two talks: Chronic Wasting Disease – the basics; 14 Mar.; CWD management and research in Alberta, Mississauga, ON Mar 15. (Merrill)
- Invited speaker: Winter Get Away, Challenges to Chronic Wasting Disease, Manitoba Chapter, Pinawa MB, 8 Feb. (Merrill)
- Plenary Speaker: Six degrees of separation: Looking North at Wildlife Management in Canada. *The Wildlife Society Annual Meeting, Cleveland, OH, USA*, 10 Oct (Merrill)

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- Invited Speaker – Using Animal Movement and Network Models to Understand Disease Transmission and Spread. *9th International Deer Biology Congress Estes Park, CO. USA - 7 Aug*
- Invited Speaker - From animal movement to management: predator-prey interaction, *US Regional Assoc. of the International Association for Landscape Ecology (US – IALE) Chicago, IL. USA - 9 April*
- Invited Speaker – Prions, wolves and elk movements in heterogeneous landscape. *University College, Dublin. Dublin, Ireland - 5 Apr (Merrill).*
- Invited Speaker - CWD: field studies in support of management. *Alberta Prion Research Institute Scientific Meeting Calgary, AB - 28 Feb (Merrill).*
- Invited Speaker - Animal movements in heterogeneous landscapes. *Dep. Zoology, Oxford University. Oxford, England - 19 Feb (Merrill)*

**2017**

- Invited Speaker - CWD: An update from Alberta. *International Workshop on Chronic Wasting Disease: Emerging Questions in Science and Policy (November 8-9, 2017) Canmore, AB - 9 Nov (Merrill).*
- Invited Speaker - Migratory elk herds at Ya Ha Tinda, *B.C. Government, Cranbrook, BC - 23 Oct. (Merrill)*
- Do winter elk densities influence elk movement and trade-offs in winter habitat selection. *The Wildlife Society Animal Meeting, Albuquerque, NM, USA - 24 Sep. (Merrill)*
- Invited Speaker - Long-term research reveals unexpected flexibility in migratory behaviors: its drivers and population consequences in a large herbivore *Ecological Society Annual Meeting, Portland, OR, USA - 8 Aug (Hebblewhite)*
- Invited Speaker - Modeling animals' movements in heterogeneous landscapes. *University of Melbourne, Melbourne, Australia - July 29. (Merrill).*
- Invited Speaker - Changing migration in the Ya Ha Tinda elk population: When where and why to migrate? *12th International Mammalogical Congress, Perth, Australia - 14 Jul. (Merrill & Hebblewhite)*
- Keynote - Chronic wasting disease: where is it leading us? Natural resources and environment program, *University of Northern British Columbia, Prince George, BC - 24 March. (Merrill)*
- Invited Speaker - Chronic Wasting Disease – updating the situation in Alberta. *Alberta Prion Research Institute Scientific meeting, Edmonton, AB - 28 Feb. (Merrill)*
- Keynote - Mount St. Helens: a story of recovery. *Alberta Wilderness Association, Calgary, AB - 2 Feb. (Merrill)*

**2016**

- Invited Speaker - Bridging the gap between wildlife research and management: where do we stand? *Special Symposium, Annual Meeting of The Wildlife Society, Raleigh, NC, USA - 19 Oct.*
- Compensation and density dependence, *Columbia Mountains Institute of Applied Ecology, Revelstoke, BC - 6 Apr. (Boyce)*
- Keynote - From movement to management. *R.E. Dick Peter Biology Conference, Edmonton, AB - 10 Mar. (Merrill)*
- Invited Speaker - Chronic wasting disease in Alberta: an update. *Alberta Prion Research Institute Scientific Mtg, Calgary, AB - 3 Feb. (Merrill)*



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- Invited Speaker - Mount St. Helens: The power of nature. *Alberta Wilderness Association, Speaker series. Edmonton, AB* - 13 Jan. (Merrill)

**2015**

- Invited speaker - Which habitat model for elk? *Canadian Society of Ecology & Evolution, Saskatoon, SK* - 22 May (Merrill)
- Invited speaker – Cumulative effects of industrial development and wolves on elk habitat. University of Idaho, Moscow, ID 8 Apr (Merrill)
- Invited speaker – Perspectives on Canadian Wildlife Management, University of Idaho, Moscow, ID 7 Apr (Merrill)
- Invited Speaker - Experimental harvest for CWD control. *AB Prion research Institute, Edmonton, AB* - 26 Jan (Merrill)

**2014**

- Invited Speaker - Understanding gender bias. *Idaho Chapter of The Wildlife Society, Boise, ID, USA* - 6 Mar (Merrill)

**2013**

- Invited Speaker - Advocating for your career. *Women's symposium: The Wildlife Society. Milwaukee, WI, USA* - 26 Oct (Merrill)
- Invited Speaker - Mechanisms of CWD transmission in deer. *The Wildlife Society. Milwaukee, WI, USA* - 26 Oct (Merrill)
- Invited Speaker - Deer and CWD in Alberta. *Alberta Prion Research Institute Symposium. Edmonton, AB* - 19 Nov (Merrill)
- Incorporating movement-based landscape connectivity into assessments of chronic wasting disease. *Western States and Provinces Deer and Elk workshop. Missoula, MT, USA* - 8 May (Merrill)
- Invited Speaker - Status of Chronic Wasting Disease in Alberta. *Alberta Prion Institute. Banff, AB* - 28 May (Merrill)
- Invited Speaker - Long-term studies of the Ya Ha Tinda elk herd. *Northern Alberta Chapter of the Safari Club, Edmonton, AB* - 8 Jan. (Merrill)

**2012**

- Invited Speaker - Loss of more than migration: Is the Ya Ha Tinda elk herd imperiled? *The Wildlife Society, Portland, OR, USA* - 15 Oct. (Merrill)
- Invited Speaker - Connecting the dots: Chronic wasting disease in Alberta's wild deer. *Alberta Innovates and Bio Solutions Impact Innovation Speakers Series with Jay Ingram. Edmonton, AB* - 16 May; *Calgary, AB* - 17 May (Merrill) Mark
- Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta. *National Fish and Wildlife Conservation Congress, Ottawa, ON* - Mar 23 (Merrill)
- Invited Speaker - Dynamics of the Ya Ha Elk herd: What research has taught us. *Sundre Trappers Association, Sundre, AB* - 20 Mar. (Merrill)
- Predicting the spread of chronic wasting disease in east-central Alberta. *Annual Mtg. Alberta Chapter of The Wildlife Society. Medicine Hat, AB* - 16 Mar (Merrill)
- Invited Speaker - Ya Ha Tinda research next steps. *Parks Canada Research Mtg., Sundre, AB* - 10 Mar. (Merrill)
- Dynamics of the Ya Ha Elk herd: What research has taught us. *Alberta Fish and Game Association. Sundre, AB* - 11 Dec. (Merrill)

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**2011**

- Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta. *Dep. Biology, Univ. Calgary, Calgary, AB - 2 Dec. (Merrill)*
- Spread of chronic wasting disease: Did mule deer draw the short straw? *Annual Mtg. The Wildlife Society, Waikoloa, HI, USA - 9 Nov (Merrill)*
- Industrial activities and elk in the eastern slopes of Alberta. *GIS Day. Univ. Alberta, Edmonton, AB - 18 Nov (Merrill)*
- Invited Speaker - Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta. *Annual Mtg. Canadian Section of The Wildlife Society. Thunder Bay, ON - 24 Sept. (Merrill)*
- The Alberta Advantage: integrated surveillance, management, and research during the early stages of CWD intrusion- look early, act quickly, learn as you go. *Annual Mtg. Wildlife Disease Association - Aug 23 (Pybus)*
- Invited Speaker - Wolf predation in heterogeneous landscapes of Alberta, Canada. *Norwegian University of Science and Technology, Trondheim, Norway - 15 Aug (Merrill)*
- Invited Speaker - Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta. *Hedmark University, Evanstad, Norway - 10 Aug (Merrill)*
- Chronic wasting disease in Alberta: Did mule deer draw the short straw? *The Wildlife Society Meeting, Waikoloa, HI, USA - 7 Nov. (Merrill)*
- Of large herbivores and men: Long-term studies at Ya Ha Tinda, *A.R.E Sinclair Symposium, Vancouver, BC - 17 Sep (Merrill)*
- Time and CWD marches on. *Wildlife Disease Association 60th Annual International Conference, Quebec City, QC - 15 Aug. (Pybus)*
- Chronic wasting disease in Alberta: Did mule deer draw the short straw? *Elk and Deer Workshop, Albuquerque, NM USA - 18 May. (Merrill)*
- Partial migration at Ya Ha Tinda: Do residents have the home advantage? *Elk and Deer Workshop, Albuquerque, NM USA - 16 May (Merrill)*
- Resource selection, use and choice: modeling the differences. *Grismo, Sweden - 27 Mar (Merrill)*
- Invited Speaker - Wolf selection and predation: models for time-to-kill. *Grismo, Sweden - 26 Mar.*
- Landscape heterogeneity and predation: Time-to-kill models. *Imperial College, Silwood Park, England - 21 Mar. (Merrill)*

**2010**

- Invited Speaker - Implications of wolf movements for functional responses. *Dep. Biological Sciences Univ. Adelaide, Adelaide, Australia - Nov 20 (Merrill)*

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- Invited Speaker - Habitat selection: confusing terminology, *Univ. Queensland, Brisbane, Australia* - Nov 14 (Merrill)
- Invited Speaker - Influence of landscape heterogeneity on wolf path selection and time-to-kill. *Society for Behavioral Ecology, Perth, Australia* - 29 Sep. (Merrill)
- Invited Speaker - Wolves moving in heterogeneous landscapes with human disturbance. *Landcare, Lincoln, New Zealand* - 6 Oct (Merrill)
- Invited Speaker - Translocating wildlife species: elk in Alberta. *CSIRO, Brisbane, Australia* - 12 Oct (Merrill)
- Modeling elk movements in heterogeneous landscape, *Univ. Queensland, Brisbane, Australia* – 21 Sept. (Merrill)
- Invited Speaker - Modeling CWD spread using hunter surveillance data from SK: implications for Alberta. *Alberta Chapter of The Wildlife Society, Annual Mtg, Plenary session, Red Deer, AB* - 13 Mar
- Invited Speaker - Risk of CWD in mule deer and white-tailed deer populations in Alberta and Saskatchewan, *Alberta Chapter of The Wildlife Society, Annual Mtg, Plenary session, Red Deer, AB* - 13 Mar (Merrill)
- Invited Speaker - Field studies in support of CWD studies: *Alberta Fish and Game Association Youth Group. Edmonton, AB* - Feb 23 (Merrill)
- Invited Speaker - Modeling the cumulative effects of industry and wolves on habitat effectiveness for elk. *Institute for Complex Data Structure statistical workshop, Montreal, QC* - 4-5 Mar. (Merrill)
- Invited Speaker - Landscapes of fear: Wolf-elk behavioral responses in the Canadian Rocky Mountains. *Univ. Washington, WA, USA* – 25 Jan (Merrill)

**Recent Media Outlets**

1. CWD Podcast, Rude Corporation, 20 May 2021
2. Women in Wildlife: Interview, Oregon Chapter of The Wildlife Society: Personal history
3. Featured research: Ya Ha Tinda Elk project: Oulett, N. 2019. Fading migrations: historic migrations have dwindled sharply over the past 20 year. *Bugle* July:93-105.
4. Featured talk on The Wildlife Society Newsletter: Do winter densities influence trade-off in the movements and habitat selection of elk.
5. Faculty of Science news: From wild boars to elephants, mammals move less in human landscapes - Katie Willis, Jan 2018
6. TWS Newsletter: RMEF honors TWS member: Evelyn Merrill, Aug 15, 2017
7. CKUA Radio FM- Genotypes of deer and modeling CWD risk, Jul 2017
8. Safari Club International: First Big Bulls in N. American's longest running elk study, Jan 4, 2017
9. Rocky Mountain Foundation Bugle Magazine: Wildlife Researcher Award Interview, 2017
10. Science News - Eggeman et al. 2016: Behavioural flexibility in migratory behavior in a long-lived large herbivore, 2016
11. Craig and Canyon – Changing elk migration at Ya Ha Tinda, 2016

**Technical Contributions**

Beyer, H. Hawth's Analysis Tools for ArcGIS: GIS spatial tools initially developed in response to research and teaching efforts associated with my lab from 2003-2005. These tools are now used world-wide. See: <http://www.spatial ecology.com/htools>.