



## CURRICULUM VITA

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**DR. EVELYN H. MERRILL**

**ASSOCIATE PROFESSOR**

**Work address:**

Department of Biological Sciences  
University of Alberta  
Edmonton, AB T6G 2E9  
CANADA

**Home address:**

11720 Edinboro Rd  
Edmonton, AB T6G 1Z8  
CANADA

**EDUCATION**

1987	Ph.D., University of Washington, Seattle
1978	M.S., University of Idaho, Moscow
1974	B.A., St. Lawrence University, Canton, New York
1973	University of Vienna, Vienna, Austria, Junior Year
1970	Diplome de Civilization Francaise, Sorbonne Univ., Paris

**Doctoral Dissertation:**

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.

**ACADEMIC POSITIONS**

<b>Associate Professor</b>	1999- present. Department of Biological Sciences, University of Alberta Tenured faculty- 50% teaching & service, 50 % research.
<b>Associate Professor</b>	1996-1999. University of Wisconsin-Stevens Point, Stevens Point, WI. Tenured faculty- 50% teaching, 25% outreach & 25% GIS lab coordinator.
<b>Associate Professor</b>	1994-1996. University of Wisconsin-Stevens Point, Stevens Point, WI. Tenure-track faculty. 50% teaching.
<b>Assistant Professor</b>	1993-1994. Dep. of Zoology and Physiology, Univ. of Wyoming, Laramie, WY. Tenure-track faculty. 50% teaching, 50% research.
<b>Assistant Professor</b>	1990-1993. Dep. Zoology and Physiology, Univ. of Wyoming, Laramie, WY. Tenure-track faculty. 25% teaching, 25% research.
<b>Visiting Professor</b>	1986-1989. Dep. of Zoology and Physiology, Univ. of Wyoming, Laramie, WY. 100% teaching.
<b>Affiliate Professor</b>	1983-1984 . San Francisco State University: Wildlands Institute Program.

**Project Leader** 1982-1983. School for Field Studies, Field studies program, Cambridge, MA.

**Teaching Assistant** 1984 Biology 442 - Mammalogy, Univ. Washington, Seattle, WA.

### **OTHER POSITIONS**

Graduate Research Assistant 1982-1986 Univ. of Washington, Seattle, WA.

Wildlife Research Biologist 1979-1982 Idaho Dep. Fish and Game, Soda Springs, ID.

Wildlife Technician 1979 Bureau of Land Management, Idaho Falls, ID.

Wildlife Biologist 1978 Bureau of Land Management, Washington, D.C.

Graduate Research Assistant 1975-1978 University of Idaho, Moscow, ID.

Wildlife Technician 1975 Glacier National Park, MT.

### **SCHOLARLY POSITIONS**

**Steering Committee Chair**, Ungulate Ecology and Management: Integrating Across Scales Conference, Nelson, B. C., 24-28 August 1999.

**Associate Editor** - *Journal of Wildlife Management*, 1997-1998

**Student Scholarship Advisory Board** – 1996, 1998 Milwaukee Zoological Society

**Abstract Review and Selection Committee:** *Forest Bird Ecology Subsection*  
1997 Annual Wildlife Society Conference - Snowmass CO.

**Steering Committee:** Fourth Midwest Oak-Savanna and Woodlands Conference,  
Madison WI – July 30 –1 Aug 1997

#### **Recent Session Chairs**

2001 Plenary Session: Annual Meeting Northwest Section of the Wildlife Society, Banff, AB

2000 Plenary Session: Alberta Chapter of the Wildlife Society, Leithbridge, AB

1997 Annual Meeting of The Wildlife Society,  
Forest Bird Management, Society, Snowmass, CO. Sep. 21-27.

1995 Western States and Provinces Joint Deer and Elk Workshop:  
Deer and elk as ecosystem components. Sun Valley, ID. May 24-26.

**Biological Consultant - 1995**

Book: Benson, M. 1995. Yellowstone. Wonders of the World. Educational Series. Raintree Publ. Austin, TX.

**Referee for the following journals:**

Acta Theriologica  
Conservation Biology            Northwest Science  
Journal of Range Management        Wildlife Diseases  
Journal of Wildlife Management      Wildlife Monographs  
Landscape Ecology                    Wildlife Society Bulletin  
Natural Areas Journal                Trans. Wisconsin Academy of Science

**RECENT POSITIONS IN PROFESSIONAL ORGANIZATIONS**

**Executive Board** – Alberta Chapter of The Wildlife Society, 2000-2001  
**Membership chairperson** - Alberta Chapter of The Wildlife Society, 1999-2001  
**Treasurer** - University of Wisconsin-Stevens Point Chapter of Sigma Xi - 1995-1996  
Wyoming Chapter of the Wildlife Society:  
**Awards Committee Chairperson**, 1992-1993  
**Resolutions and Position Statements**, Chairperson, 1990-91  
**Newsletter Editor**, 1988-89, 1989-90

**PROFESSIONAL MEMBERSHIPS**

Ecological Society of America, since 1988  
International Association for Landscape Ecologists, since 1996  
Rocky Mountain Elk Foundation, since 1985  
Society of Conservation Biologists, since 1993  
The Wildlife Society, since 1976  
    Alberta Chapter - 1999  
    Wisconsin Chapter - 1994  
    Wyoming Chapter - 1986  
Sigma Xi, since 1995

**AWARDS AND ACCOMPLISHMENTS**

1997 Outstanding College Faculty Member, College of Natural Resources,  
    University of Wisconsin-Stevens Point: Voted by students in entire college

1997 Undergraduate Teaching Award, University of Wisconsin-Stevens Point

1996 Milwaukee Zoological Society: Recognition for participation in scholarship  
    evaluation program

1992 Faculty Growth Award, University of Wyoming.

## COURSES TAUGHT

<u>Undergraduate Courses</u>	<u>Number of Semesters Taught</u>	<u>Number Credits</u>
General Biology	1	3
Principles of Game Biology	3	3
Wildlife Management	3	3
General Biology	1	4
Introduction to Fish & Wildlife Magt	1	3
Vertebrate Natural History	2	4
Introduction to Birds & Mammals	1	2
Natural History of Fishes, Amphibians & Reptiles	1	2
Wildlife Techniques	7	3
Introduction to Wildlife-Lect (2 sections)	5	3
Introduction to Wildlife-Labs (2 sections)	2	1
<u>Graduate Courses</u>		
Landscape ecology	1	3
Wildlife Habitat Ecology	2	2
Plant-Herbivore Dynamics	3	2
Biodiversity	1	2
GIS Applications in Environmental Modeling	1	2
Spatial statistics and modeling	1	2
Advanced statistics: kriging techniques	1	3 (4-wk portion of course)
<u>Graduate Seminars</u>		
Riparian Ecology & Management Seminar	1	1
Game Harvest Management Seminar	1	1
Fire Ecology Seminar	1	1
Multivariate Statistics Seminar	1	1
Issues of scale in ecology	1	2

## COMPLETED THESES

<u>Completion</u>	<u>Student</u>	<u>Topic</u>	<u>Degree</u>
University of Wyoming:			
1993	Doug McWhirther	Winter foraging ecology of bighorn sheep	M.S.
1995	Greg McDaniel	Deer ecology on Devils Tower National Monument	M.S.
1995	Sean Kelly	Elk and cattle impacts on riparian areas, Idaho	M.S.
1996 <sup>1</sup>	Tom Kohley	Habitat modeling approaches in Gap Analysis	M.S. <sup>1</sup> Co-advisor
University of Wisconsin-Stevens Point			
2001	Jerry Hartigan	Loon foraging behavior and survival in acid lakes	M.S.

## PROFESSIONAL DEVELOPMENT ACTIVITIES

- 2001 Color Photography and Videography in Resource Assessment Workshop, Amherst, MA. May 16-18.
- 1998 Workshop on Geostatistics, Rutgers University, New Jersey, June 22-26.
- 1998 ArcInfo Unix. College of Agricultural and Life Sciences, Univ. Wisconsin-Madison, June 9-12.
- 1997 Chemical Immobilization of Animal, Safe-capture International, Univ.-Wisconsin-Stevens Point. October 25-26.
- 1997 Workshop on GIS and Internet Instruction: *Integrating dynamic geography into the undergraduate classroom*. University of Wisconsin-Stevens Point, Aug. 18-22.
- 1996 University of Wisconsin-Stevens Point Personnel Development Award: StatSci Splus Statistical Workshop: *Linking Splus and GIS*, Houston, TX. 15-19 Jan.
- 1993/1994 National Science Foundation, Biomodeling Workshop, University of Montana, Missoula, MT. Selected participant.
- 1993 Resolving Natural Resource Conflict: a meeting of the minds. Conflict Resolution Workshop, Casper, WY.
- 1993 The Biodiversity Challenge Workshop, Bureau Land Management, Cheyenne, WY.
- 1991 U.S. Forest Service New Perspectives University Program, U.S. Forest Service-Colorado State University.

## **CONTRACTS & GRANTS RECEIVED OR PENDING**

- 2001-2003      Wolves in Yellowstone: Multi-trophic level responses to the addition of a top carnivore. R.O. Peterson, M. S. Boyce, E. H. Merrill, L. D. Mech. National Geographic. \$50,000 USD/yr for 2 yrs.
- 2001            Assessing the effects of elk herbivory on soil and vegetation in grassland communities of Alberta. E. Merrill. Rocky Mountain Elk Foundation. \$12,000 Can.
- 2001            Precision Ranching: Innovation and Scientific Research Investement, M. Price, E. Bork, R. Hudson, E. Merrill, J. Cahill, D. Hik, R. Pelletier, S. Jeffery, S. Moore. Canadian Foundation of Innovation. \$440,000
- 2000-2004      Population monitoring and land-use impacts on resident and translocated elk in the central foothills of Alberta. E.H. Merrill and M.S. Boyce. Sun Pine Forestry, Rocky Mountain Elk, Foundation-Canada, Weyerhaeuser-Canada, Alberta Environment. \$ 200,000 CD/yr for 3-4 yrs.
- 2001-2004      Building a mechanistic basis for landscape ecology of ungulates. P.Turchin, M. Turner, J. Fryxell, M. Boyce and E. Merrill. National Science Foundation, Alberta Study Area: \$ 98,000 USD/yr for 3 yrs.
- 2000-2002      Effects of seasonal grazing on grassland communities in Jasper National Park. E. Merrill, Parks Canada. \$10,000 Can./yr for 2 yrs.
- 2000            Biotelemetry analysis system: infrastructure for cumulative effects. New Opportunities Equipment grant. M. Boyce, E. Merrill, S. Lele. \$340,000 Can.
- 1997-98        Integrating Courses with GIS Technology: The wildlife example Undergraduate Teaching Improvement Grant, University of Wisconsin System, Madison, WI. \$15,000
- 1996-1998      Deer browsing effects on woodland communities at Devils Tower National Monument, WY. National Biological Service, Denver, CO. \$17,000
- 1996            Loon foraging ecology in acidic lakes. Loon Watch Association, Rhinelander, WI. \$1,000.
- 1995-1998      Effects of mercury contamination on loon foraging behavior and survival. Wisconsin Dep. Natural Resources. Madison, WI. \$36,000

- 1994-1997 Effects of forest fragmentation on birds species diversity: the importance of scale. Environmental Protection Agency, Washington, D.C. \$280,000.
- 1992-1995 Elk-cattle interactions in the Lemhi Mountains, ID. Idaho Dep. Fish and Game. Boise, ID. \$40,000.
- 1993-1995 Effects of cattle and elk grazing on riparian areas in the Lemhi Mountains, ID. Rocky Mountain Elk Foundation. Missoula, MT. \$6,000.
- 1994-1995 Model of deer-woodland dynamics on Devils Tower National Monument. University of Wyoming Park Service. UW-NPS Center, Laramie, WY. \$4,000.
- 1993-1994 Plant responses to multiple disturbances: flooding and grazing. Basic research grant. University of Wyoming, Laramie, WY. \$2,900.
- 1992-1993 State-wide habitat modeling of vertebrates in Wyoming. Wyoming Game and Fish Department. Cheyenne, WY. \$56,000.
- 1992 Effects of deer browsing on oak woodlands at Devils Tower, National Park Service, Devils Tower National Monument, WY. \$3,000.
- 1991-1996 GAP Analysis of Wyoming, E. Merrill - PI, W. Reiners, Co-PI, S. Anderson, CO-PI. U.S. Fish and Wildlife Service. Washington, D.C. \$500,000.
- 1990-1994 Devils Tower National Monument deer ecology study, National Park Service, Devils Tower National Monument, WY. \$48,000.
- 1990 Plant responses to above and below ground herbivory, E. Merrill and N. Stanton, University of Wyoming, Laramie, W. \$5,000.
- 1989-1995 Remote sensing of vegetation recovery in Yellowstone National Park after the 1988 fires. E. Merrill and R. Marris. National Park Service. \$27,000.
- 1987 Grassland phytomass, climatic variation, and ungulate population dynamics in Yellowstone National Park, E. H. Merrill, M. S. Boyce, and R. W. Marris, University of Wyoming-National Park Service. \$14,000.

## **PUBLICATIONS**

- 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. *J. Veg. Sci.* 8:133-146.

- 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 Sci.* 69:9-18.
- Merrill, E. H. 1994. Summer foraging ecology of elk in the Mount St. Helens blast zone. *Can. J. Zool.* 72:303-311.
- Merrill, E. H., N. L. Stanton and H.C. Hak. 1994. Responses of bluebunch wheatgrass, Idaho fescue, and nematodes to ungulate grazing in Yellowstone National Park. *Oikos* 69:231-240.
- Merrill, E. H., L. E. Kuck, and T. A. Hemker. 1994. Impacts of mining facilities on fall migration of mule deer. *Wildl. Soc. Bull.* 22:68-73.
- 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, *J. Range Manage.* 46:151-157.
- Merrill, E. H. 1992. Population and habitat characteristics of recolonizing elk herd. Pages 225-227 in B. Bobek, K. Perzanowki and W. L. Reglin, eds., *Global trends in wildlife management*. Vol 2. Swiat Press, Krakow, Poland.
- Merrill, E. H., 1991. Thermal constraints on the use of cover types and activity patterns of elk in the Mt. St. Helens blast zone. *Appl. Anim. Behav. Sci.* 29:251-267.
- Boyce, M. S. and E. H. Merrill, 1991. Ungulate responses to the 1988 fires in Yellowstone National Park, *Tall Timbers Fire Ecol. Proc.* 17:121-132.
- Merrill, E. H. and M. S. Boyce, 1991. Summer range and elk population dynamics in Yellowstone National Park, Pages 263-272 in: *Greater Yellowstone Ecosystem: redefining America's wilderness heritage*, R.B. Keiter and M.S. Boyce, eds., Yale Univ. Press, New Haven.
- 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, ed., *Ungulate behavior and management*. Elsevier Publ. Co., Amsterdam.
- Kuck, L. E., G. L. Hompland, and E. H. Merrill, 1985. Elk calf response to stimulated mine disturbances in Southeast Idaho, *J. Wildl. Manage.* 49: 751- 757.
- Merrill, E. H., H. F. Mayland, and J. M. Peek, 1982. Shrub responses after fire in an Idaho Ponderosa pine community, *J. Wildl. Manage.* 46: 496-502.
- 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. *J. Range Manage.* 33: 363-367.



Merrill, E. H. 1978. Bear depredation at back country campgrounds in Glacier National Park, Wildl. Soc. Bull. 6: 123-127.

### **Popular Articles:**

Merrill, E. H., 1990. Ashes to elk: Mount St. Helens elk recolonizing elk herds. Bugle 7:75-80.

### **Symposia:**

Merrill, E. H., R. W. Marris, 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, ed. Effects of grazing by wild ungulates in Yellowstone National Park- a report to the director. National Park Service, Natural Resource Information Division. Denver, CO.

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.

McWhirter, D., S. Smith, E. Merrill, and L. Irwin. 1992. The significance of agricultural lands to the winter foraging behavior of bighorn sheep. Northern Wild Sheep and Goat Symp. 8:264-278.

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.

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.

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.

### **Recent Reports**

Merrill, E.H. 1998. Prairie Chicken Surveys in Central Wisconsin. University of Wisconsin-Stevens Point. Stevens Point, WI. 11 pp.

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: Environmental Protection Agency, Washington, D.C. 65 pp.

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: National Biological Service. 242 pp.

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: Yellowstone National Park, Mammoth, WY. 22 pp.

## **PRESENTATIONS**

2001 **Resilience and stability of oak woodlands with deer browsing on Devils Tower National Monument.** Forest Dynamics and Ungulate Herbivory Conference, Davos, Switzerland. Oct 4.

2001 **Gap Analysis: the good, the bad and the ugly.** Landscape ecology series, Dep. Renewable resources, January 12.

2000 **Gap Analysis: the good, the bad and the ugly.** Dep. Biological Sciences, Univ. Alberta April 6.

1997 **The influence of scale on measuring bird diversity in forested landscapes.** Environmental Monitoring and Assessment Program, Third Emap Research Symposium. Albany, New York. April 7-11.

1996 **Influences of landscape patterns on bird diversity in forested habitats** International Workshop of Forestry Research Organizations. Portland, OR.

1996 **Foraging and thermal constraints on elk recolonizing the Mount St. Helens blast zone,** Dep. Biology, University of Wisconsin, Madison.

1995 **Deer-woodland dynamics at Devils Tower National Monument: an ecosystem modeling approach.** Second Annual Wildlife Society Meeting. Portland, Oregon.

1995 **Elk and Cattle Range Relations on the Lemhi Mountains,** Idaho. Western States and Provinces Joint Deer and Elk Workshop. Sun Valley, ID.

- 1995 **Managing for single species vs. ecosystem/regional approach**, College Natural Resources, University of Wisconsin-Stevens Point. Forest Management and Endangered Species Seminar.
- 1994 **Strategies for conserving biological diversity**. College of Natural Resources, Seminar Series. University of Wisconsin, Stevens Point, WI.
- 1994 **Conservation of biological diversity: the gap analysis approach** Ripon College, Dept. Biology Senior Seminar Series. (**Invited speaker**)
- 1994 **Flooding and grazing affects on biomass and nitrogen allocation patterns in *Deschampsia caespitosa***. Society for Range Management, 47th Annual National Meeting, Colorado Springs, CO.
- 1993 **Large-scale effects of fire on ungulate summer range in Yellowstone National Park**. Symposium: The ecological implications of fire in the greater Yellowstone, Yellowstone National Park, Mammoth, WY.
- 1992 **Conservation strategies for biodiversity in Wyoming**, Dep. Botany Seminar Series, University of Wyoming, WY. **Invited speaker**.
- 1992 **Searching for gaps: targeting biodiversity for conservation**. Wyoming Chapter of The Wildlife Society, Annual meeting, Casper, WY.
- 1992 **Elk population dynamics in relation to summer range in Yellowstone National Park**, Indian Institute of Science, Bangalore, India.
- 1991 **Plant and nematode responses to ungulate grazing**. Symposium: Yellowstone plants and their Environment, Yellowstone National Park, Mammoth, WY.
- 1990 **Summer range and elk population dynamics in Yellowstone National Park**, International Congress of Ecology, Poster session, Yokohama, Japan.
- 1990 **Ungulate response to the 1988 Yellowstone National Park fires**, Special Symposium: Ecology of the 1988 Yellowstone Fires. Ecological Society of America, **Invited speaker**, Snowbird, UT.

Other presentations:

- 1998 **Wildlife Management in Mongolia**. Women in Natural Resources, Univ. Wisconsin-Stevens Point, WI. 10 Dec. 1998.

- 1998 **Why I teach.** Board of Visitors, University of Wisconsin-Stevens Point, Stevens Point. Dec. 4, 1998.
- 1998 **Woman in Science: Wildlife Managers.** Woman in Science Day, University of Wisconsin Stevens Point, Stevens Point, WI. 4 Oct.
- 1997 **Computer Applications in Natural Resources.** Careers in Natural Resources. Central Wisconsin Environmental Station, Amherst, WI. 8 Oct
- 1997 **Woman in Science: Wildlife Biologists.** Woman in Science Day, University of Wisconsin-Stevens Point, Stevens Point, WI. 17 Oct.
- 1996 **Careers In Wildlife Management.** Careers in Natural Resources Workshop for Guidance Counselors and Science Teachers, Schmeekle Forest Reserve. 9 Oct.
- 1994 **Wyoming's Gap Analysis Project.** Annual Gap Analysis Meeting, Seattle, WA, 23 July.
- 1994 **Modeling deer-woodland dynamics in Devils Tower National Monument.** NSF Biomodeling workshop: presentation session, Univ. Montana, Cody, WY. 23 May.
- 1993 **Biodiversity planning in Wyoming.** State Water Forum- State Engineer's Office. Cheyenne, WY. 20 Mar.
- 1993 **Spatial modeling of vertebrate species in Wyoming.** Spatial analyses at the University of Wyoming, Wyoming GIS User's Group Meeting, Laramie, WY. 6 May.
- 1992 **Remote sensing applications in wildlife and habitat assessment,** Remote sensing applications and Landsat policy workshop, Univ. of Wyoming, Laramie, WY. 18 Feb.