From: Bush, Jodi
To: Betty Grizzle
Subject: peer review names
Date: Tuesday, October 17, 2017 11:49:02 AM
Attachments: Reviewers.docx
ATKINS_Wolverine_SSA_Peer_Review_Rev0.pdf
AmecFW Proposal - USFWS Wolverine SSA_10-16-2017 FINAL.pdf

Peer review names and 2 contracts. I am just wondering if you have any issue with any of the reviewers (ie. think they conflict of interest when they don't). Thanks. JB

Jodi L. Bush
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Montana State Ecological Services Office
585 Shepard Way, Suite 1
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(406) 449-5225, ext.205

Atkins Consultant

Jedediah Brodie, PhD, John J. Craighead Endowed Chair of Conservation, The University of Montana Univ

Dr. Daniel Harrison, Univ of Maine

Mike Schwarts, National Geonomics Center

JASON T. FISHER B.SC.H, M.SC., PH.D, Senior Research Scientist (Ecology), InnoTech Alberta, Adjunct Professor, University of Victoria, Associate Editor, Ecology & Evoluti

AMEC Consultants

Dawn L. Johnson, PhD Project Manager Amec Foster Wheeler	► 22 years of experience, as a biologist (ecology and evolution) ► Experience facilitating peer reviews and expert panels for Department of Interior agencies
James Beasley, PhD Carnivore Biologist Savannah River Ecology Lab University of Georgia	► 15 years of experience with mammals, including small carnivores ► Expertise in spatial ecology, genetics, population dynamics, wildlife diseases, and anthropogenic stressors ► Particular expertise in diverse methods of population estimation and genetics
Mark Boyce, PhD Wildlife Biologist University of Alberta	► 45 years of experience with carnivore conservation, management, and ecology, including with wolverines ► Emphasis on conservation, landscape ecology, and climate change in western US and Canada
Jennifer Frey, PhD Wildlife Biologist New Mexico State University	► 31 years of experience with mammals, including small carnivores ► Emphasis on conservation genetics, phylogeography, and natural history of als

Dan Harrison Carnivore Biologist University of Maine **(on both lists)**

► 37 years of experience with mammals, primarily with carnivores

► Experience with a range of mustelids and other small carnivores

► Expertise in management, population modeling, habitat selection, and anthropogenic change in northern forests

ATKINS

U.S. Fish and Wildlife Service

Scientific Peer Review for Species Status Assessment for North American wolverine (*Gulo gulo luscus*)

October 16, 2017

Plan Design Enable

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Contact
Matt Cusack, PWS
Senior Environmental Project Manager
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Project Approach

Scientific Peer Review of Species Status Assessment for North American Wolverine (*Gulo gulo luscus*)

Introduction

The U.S. Fish and Wildlife Service (Service) is requesting services of a contractor to coordinate and facilitate a formal, independent, external scientific peer review of the information in the USFWS species status assessment (SSA) prepared by the Service.
The peer review must also be independent of the Service and the specific study being reviewed. The long-term conservation implications of the status decision regarding formal listing require an external, independent scientific peer review before the decision to ensure that the status assessment is based on the best science-based information and analyses.

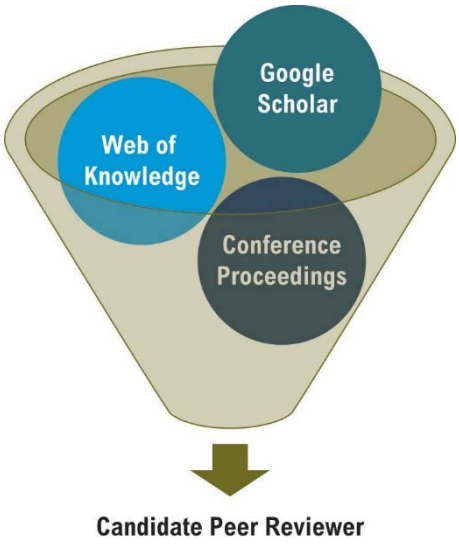
Atkins has assembled a qualified team with the experience and resources to successfully provide the requested services for independent, scientific peer review for the Service. We can be responsive to the Service's needs, provide support, and efficiently and effectively complete the work described in the Statement of Work (SOW).

Atkins offers the Service the experience of more than 10 facilitated peer review processes for U.S. Department of the Interior (DOI) agencies over the past 3 years. Based on the 2004 Office of Management and Budget (OMB) peer review guidance, we have developed a step-by-step approach to conducting peer reviews and refined it based on lessons learned over time (summarized on page 3). This rigorous approach has proven effective in maintaining the integrity of the review process and has produced fair and unbiased peer reviews to inform agency decision-making.

Select reviewers

Atkins' approach to identifying peer reviewers begins by reviewing the qualifications outlined in the SOW as well as subject matter of the report to be reviewed—in this case, the USFWS Species Status Assessment for the North American wolverine (*Gulo gulo luscus*). Atkins has screened potential reviewers based upon the criteria established in the SOW. In addition to ensuring appropriate expertise, we also considered the ideal composition of the panel so that it is balanced in terms of field of specialization, affiliation, scientific perspective, and other factors that may relevant to the review.

Once the expertise necessary for the review is fully considered, we begin the process of identifying reviewers.



Atkins uses a variety of sources to identify potential peer review candidates and convene an experienced and balanced panel.

Methods used include Internet searches (e.g., Google Scholar), recommendations from colleagues, and review of relevant scientific journals, conference proceedings, and other publications.

As potential qualified candidates begin to express their willingness to participate, other selection criteria must be examined in greater detail. Atkins uses the National Academy of Sciences' (NAS) Background Information and Confidential Conflict of Interest Disclosure form to establish screening criteria for candidates regarding balance, independence and conflict-of-interest. In consultation with Service staff, Atkins determines what constitutes "independence" for the peer review at hand. For example, factors to consider in determining independence may include employer, research funding sources and relationship to study authors. Potential conflicts of interest must also be determined, beyond those that have been provided in the SOW. The NAS form has a detailed definition of "conflict of interest," as well as questions related to personal or professional relationships and investment, property or other interests that may constitute a conflict. All potential candidates complete and sign the NAS form; Atkins conducts phone interviews with candidates to verify information and clarify responses as necessary.

During the process of identifying and selecting reviewers, Atkins also ascertains candidates' availability over the period of performance as well as flexibility to accommodate schedule changes.

Summary of Atkins' peer review approach



Provide direction to reviewers

Once reviewers have been selected and the task order is awarded, Atkins convenes a kick-off teleconference to discuss the peer review charge (as provided in the SOW), schedule, and materials prior to commencing the review. Atkins emphasizes the importance of focusing on the scope of the peer review and not commenting on areas that are the purview of the government (e.g., policy). Atkins also directs reviewers to protect information and make certain that their review comments consist of unbiased assessments. Additionally, all peer review-related inquiries from outside sources must be forwarded to the Atkins' project manager; reviewers should not communicate with those inquiring about the review. Atkins seeks clarification from Service staff whenever needed. The charge, schedule, and other information are included in the scope of services attached to each reviewer's subcontract with Atkins. Peer review files are distributed to reviewers via a secure, online storage site.

Conduct review

For this review, Atkins' has designated Benjamin Cogdell (environmental scientist) as the primary point of contact (POC) for the reviewers, similar to his role in previous peer reviews. Our senior project manager, Matt Cusack, will be the primary POC for Service staff. Atkins' staff maintain continual contact with one another to facilitate effective and transparent communication with all parties. Donald Deis will provide input and guidance to the process and offer a second level of scrutiny.

As questions or issues emerge from the reviewers, responses (from Atkins or Service staff via Atkins) are communicated to all reviewers via email. If necessary, a teleconference may be convened for further clarification.

Prepare summary report

Mr. Cogdell will review all comments so that they are clear and within the scope of the peer review. Reviewers are contacted for clarification, if needed. Mr. Cogdell will then draft a summary report of the reviewer's findings. The report typically includes:

- Background, purpose, and scope of the peer review including the specific questions for reviewers (charge)
- Peer review process including selection of reviewers, document review, and report development
- Summary of the reviewers' comments, organized by question, and any collective comments (if requested)
- Appendix of the reviewers' CVs
- Appendix of the full individual reviewer comments

Atkins Team roles and responsibilities

Team member	Labor category	Roles and responsibilities
Project manager Matt Cusack	Project Manager	Primary POC with Service staff. Facilitate kick-off call. Review draft and final summary reports.
Peer review consultant Donald Deis	Senior Scientist IV	Conduct QA/QC review of draft and final summary reports.
Peer review facilitator Benjamin Cogdell	Environmental Scientist II	Primary POC with reviewers. Facilitate kick-off call. Prepare draft and final summary reports. Compile administrative record files.
Technical editor Bob Bryant	Project Coordination Specialist	Review, edit, and format draft and final summary reports.

When collective comments are required from the panel, Atkins identifies areas of agreement and disagreement in the individual comments, then convenes a teleconference to allow reviewers to discuss these points and any others that emerge. Atkins then summarizes the collective comments and sends them to the reviewers for tailoring and approval prior to including them in the summary report.

Once the summary report has been drafted and reviewed by the senior project manager, Matt Cusack, Atkins' technical editor (Bob Bryant) will edit and format the draft report.
Concurrently, the peer review consultant (Don Deis) will review the report for clarity and adherence to the SOW, as well as an appropriate depth of discussion and the supportability of the reviewer's findings. As necessary, Atkins contacts reviewers to add more depth and/or discussion to their comments.

Following these internal reviews, the draft report is distributed to the reviewers for review and concurrence. Reviewers send their comments in track, and Atkins incorporates them into the draft report.

Agency review and questions/responses

Atkins communicates the results of the review to appropriate Service staff, through our senior project manager, prior to submitting the draft report. This prevents unnecessary surprises and potential conflict. Once the draft has been submitted and Service staff have conducted their review, a teleconference is convened to discuss agency questions and comments. Atkins then communicates those questions/comments to the reviewers via email and asks them to respond to those that pertain to their individual comments. For questions/comments that pertain to the reviewers' collective comments, the reviewers work together via email to prepare a response or a call is convened, if necessary. Atkins sends the reviewers' responses to Service staff via email and makes any necessary adjustments to the summary report.

Peer review lessons learned

Atkins continues to develop our own list of "lessons learned" (i.e., actions that most contributed to the success of a peer review project and those that could have gone better). Our "lessons learned" for peer review have been well documented by Atkins in dozens of projects over the past 10 years. These lessons learned are routinely shared throughout our peer review network and have been integrated into the way we do business. These lessons learned (listed below) are not from any specific project, but rather represent the accumulation of experiences from numerous projects and continue to improve our project execution.

1. **Panel member recruitment.** Recruitment of panel members is perhaps the most critical component in the peer review process, as the contractor must identify scientists with the appropriate expertise and availability, and with no conflicts-of-interest. Additionally, prospective panel members must have a reputation for effective team participation.
2. **Schedule flexibility.** A successful peer review contractor, and the panel they select, must be adaptable to schedule changes as Service staff respond to internal and external pressures.
3. **Coordination webinar.** A coordination meeting with all panel members prior to commencing the review has proven to be a very effective communication method. It allows all reviewers to hear the same information and ask questions regarding peer review protocol, charge, schedule, report format, and protocol for handling external inquiries. It also builds cohesiveness among panel members, which is particularly important when collective comments are required.
4. **Defining best available science.** What constitutes best available science needs to be clearly defined prior to (or early on during) conduct of the peer review so it does not hinder the peer review process or become a source of contention between reviewers and agency staff.
5. **Communication of summary report.** To avoid unnecessary surprises and potential conflict, results of the summary report should be carefully communicated to appropriate Service staff prior to submittal of the draft report.
6. **Management of differing opinions.** When the panel is directed to achieve consensus, differences of opinion can be managed by using a majority/minority approach, where both the majority and any minority opinions are documented in the summary report.
7. **Administrative record.** Record keeping for the administrative record is a continuous process, not something done at the completion of the peer review process. All files should be maintained and organized during the review process, then the guidelines for administrative record files should be followed, using best professional judgment, to prepare the final compilation.
8. **Quality assurance.** We achieve a high-quality standard through disciplined implementation of our corporate Quality Control and Assurance Program (QCAP). QCAP requires that each Atkins project is managed by a qualified task manager who serves as the single point of contact for all communications with the client. It also requires preparation of quality control plans prior to initiating work; specifies procedures for quality control reviews of data, calculations, and documents; and establishes a mechanism for tracking, documenting, auditing, and evaluating our performance. Additionally, Atkins requires subconsultants to comply with our QCAP or an equivalent plan.

Prepare final report and administrative record

After all comments have been addressed in the summary report, Atkins' technical editor conducts a final review and prepares a PDF version. Atkins submits the final report (as both Word and PDF files) to Service staff.

Atkins compiles relevant documents that have been maintained throughout the peer review process into a single PDF file, organized chronologically, for the administrative record. DOI guidance on compiling an administrative record is used to determine which files should be included. Example files include emails from Service staff to Atkins providing direction or clarification, the scope of services included in each reviewer's subcontract, emails from Atkins to reviewers providing direction or clarification, emails documenting draft and final report submittals, etc.

Peer Reviewer Experience and Qualifications

Scientific Peer Review of Species Status Assessment for North American Wolverine (*Gulo gulo luscus*)

In selecting peer reviewers specific to this project, our senior project manager has screened potential candidates with respect to NAS guidance on background and conflict of interest to ensure that selected reviewers have no conflicts and each candidate is independent of the study under review. These candidates are balanced in terms of expertise (wildlife biology, wildlife management, demographic management of mammals (especially carnivores), wildlife population dynamics, and/or wildlife population modeling), affiliation (associated with different organizations), and regional representation (different areas of the country).

Summary of peer review candidate expertise

Peer Reviewer	Jason Fisher	Jedediah Brodie	Daniel Harrison	Michael Schwartz
Relevant Education	PhD	PhD	PhD	PhD
Experience or expertise with carnivore management, especially wolverines (Criteria 2a)		X	X	X
Expert knowledge of wildlife biology, wildlife management, demographic management of mammals (especially mesocarnivores), genetics, population modeling and/or scientific literature on wolverines or other mustelids (Criteria 2b)	X	X	X	X
Expert knowledge of the effects of climate change and climate change modeling, specifically in the Mountain West area of the United States, (Criteria 2c)	X	X	X	X
Expert knowledge of genetics of meta-populations (2d)	X			X
Experience in performing peer review (2e)	X	X	X	X
Knowledge of wolverine management in Canada, Alaska, and/or Europe (2f)	X		X	

Schedule

Scientific Peer Review for Species Status Assessment of the North American Wolverine

	Task/deliverable	Calendar days after SSA Available (estimated 10/31/2017)	Estimated completion date
Task 1	Contracting officer and COR will provide access to materials needed for the review.	3	November 3, 2018
Task 2	The Atkins team will conduct a thorough, objective peer review of the Service's Species Status Assessment for the North American Wolverine (*Gulo gulo luscus*)	17 (+14 days)	November 17, 2018
Task 3	The contractor(s) will provide 3-5 expert peer reviews and a transmittal letter to the Service (to Classification and Recovery Biologist, Justin Shoemaker)	30 (+13 days)	November 30, 2018
Task 4	The project manager facilitates specific follow-up questions/ answers between the Service and the reviewers (task limited to a 10-day period, sometime before 65 days after delivering initial review comments to the Service).	65 (+35 days)	January 4, 2018
Task 5	The project manager will provide final report and all applicable official records to the Service Contracting Officer's Representative	75 (+10 days)	January 14, 2018

Atkins North America

Cost Proposal - Detail

Scientific Peer Review for Species Status Assessment for North American wolverine
U.S. Fish and Wildlife Service
Reference No.0092717001

Submittal Date: Oct-16-2017

Task#	Resource Category	Description	O/H Pool	Rate	Unit	Qtty	Extended Price
01	**Coordination on Review Materials**						
		Program/Project Manager	Home	170.39	Hr	14.0	2,385.46
		Scientist II	Home	86.33	Hr	24.0	2,071.92
01	**Coordination on Review Materials Total**						**4,457.38**
02	**SSA Peer Review**						
		Program/Project Manager	Home	170.39	Hr	5.0	851.95
		Senior Scientist IV	Home	225.26	Hr	2.0	450.52
		Scientist II	Home	86.33	Hr	3.0	258.99
	Labor Total					**10**	**1,561.46**
		Supervisor/Manager		170.4	Hour	40.0	6,815.60
		Supervisor/Manager		170.4	Hour	40.0	6,815.60
		Sr. Analyst		149.8	Hour	40.0	5,993.60
		Sr. Analyst		149.8	Hour	40.0	5,993.60
	Subcontract Total						**25,618.40**
02	**SSA Peer Review Total**						**27,179.86**
03	**Consolidation of Reviews**						
		Program/Project Manager	Home	170.39	Hr	2.0	340.78
		Senior Scientist IV	Home	225.26	Hr	4.0	901.04
		Scientist II	Home	86.33	Hr	4.0	345.32
03	**Consolidation of Reviews Total**						**1,587.14**

04	**Summary Report and Comment Incorporation**					
	Program/Project Manager	Home	170.39	Hr	10.0	1,703.90
	Senior Scientist IV	Home	225.26	Hr	4.0	901.04
	Scientist II	Home	86.33	Hr	22.0	1,899.26
	Labor Total				**36**	**4,504.20**
	Supervisor/Manager		170.4	Hour	10.0	1,703.90
	Supervisor/Manager		170.4	Hour	10.0	1,703.90
	Sr. Analyst		149.8	Hour	10.0	1,498.40
	Sr. Analyst		149.8	Hour	10.0	1,498.40
	Subcontract Total					**6,404.60**
04	**Summary Report and Comment Incorporation Total**					**10,908.80**
05	**Maintanence of Administrative Record**					
	Program/Project Manager	Home	170.39	Hr	4.0	681.56
	Scientist II	Home	86.33	Hr	4.0	345.32
05	**Maintanence of Administrative Record Total**					**1,026.88**
	Total Extended Price					**45,160.06**

ATTACHMENT 1
Peer Reviewer
Curriculum Vitae and
Conflict of Interest Forms

MICHAEL K. SCHWARTZ, PH. D.

National Genomics Center for Wildlife
and Fish Conservation
U.S.D.A. Forest Service
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Missoula, MT 59801

Office Phone: 406.542.4161
Office Fax: 406.543.2663
Mobile Phone: 406.370.0976
E-mail: mkschwartz@fs.fed.us

EDUCATION

2001	Ph.D., Wildlife Biology, University of Montana, Missoula, MT (Landscape genetics of carnivores)
1996	M.S., Biology (Ecology and Evolution), American University, Washington, D.C. (Behavioral ecology of Humboldt penguins in Peru)
1992-1994	Post-B.A., Coursework, University of Washington, Seattle, WA
1991	B.A., Psychology (Animal Behavior/Neurobiology) Colby College, Waterville, ME

RESEARCH INTERESTS

Threatened and Endangered Species Management, Protected Areas (Wilderness) Science and Management, Conservation Genetics, Genetic Monitoring, Landscape Genetics, Population Genetics, Molecular Ecology, Wildlife Biology, Marine Mammal Biology, Population Estimation with Non-Invasive Genetic Samples, Environmental DNA Sampling, Field Ecology, Trophic Relationships and General Ecology, and Species Distribution Modeling

PROFESSIONAL EXPERIENCE

Nov. 2014 – Present	**Director, National Genomics Center for Wildlife and Fish Conservation** *USDA Forest Service* Missoula, MT.
Sept 2015 – Present	**Adjunct Research Professor** *University of Montana – Department of Ecosystem and Conservation Sciences / Wildlife Biology Program* Missoula, MT.
Sept. 2012 – Sept. 2015	**Adjunct Research Associate Professor** *University of Montana – Department of Ecosystem and Conservation Sciences / Wildlife Biology Program* Missoula, MT.
June 2001 – Nov. 2014	**Wildlife Ecologist / Conservation Genetics Team Leader** *USFS Rocky Mountain Research Station* Missoula, MT.
July 2011 – Jan. 2012	**Acting Director** *Aldo Leopold Wilderness Research Institute*, Missoula, MT.
Sept. 2007 – Sept. 2012	**Adjunct Research Assistant Professor** *University of Montana – Department of Ecosystem and Conservation Sciences / Wildlife Biology Program* Missoula, MT.
Sept. 2001 – Dec. 2007	**Faculty Affiliate** *University of Montana – Wildlife Biology Program* Missoula, MT.

Jan. 2000 – Oct. 2001	**Biological Technician** *USFS Rocky Mountain Research Station* Missoula, MT.
Aug. 1996 – May 2001	**Graduate Research Assistant / Teaching Assistant** *University of Montana – Wildlife Biology Program* Missoula, MT.
Aug. 1994 – Aug. 1996	**Molecular Ecology / Field Biology Research Assistant** *Smithsonian Institution – Department of Conservation Biology* National Zoological Park, Washington D.C.
Feb. 1992 – July 1994	**Marine Mammal and Seabird Technician** *National Marine Mammal Laboratory Alaska Fishery Science Center* Seattle, WA. Worked in Arctic and Antarctic on marine predators (fur seals, leopard seals, and chinstrap penguins)
Nov. 1991 – Jan. 1992	**Biodiversity Education Outreach** *Smithsonian Institution – Department of Animal Health* National Zoological Park, Washington D.C.
July 1991 – Nov. 1991	**Technician** *Smithsonian Institution – Department of Conservation Biology* National Zoological Park, Washington D.C.
Jan. 1990	**Behavioral Ecology Technician (Volunteer)** *New England Aquarium – Marine Mammal Department* Boston, MA.
July 1989 – Aug. 1989	**School for Field Studies** *San Juan Islands* Washington State.

MAJOR GRANTS AWARDED
(Not including over 100 project grants under $30,000)

2017-Present	SERDP. Engaging a crowd-sourced eDNA database to enhance DoD-relevant conservation goals (Schwartz, McKelvey, Isaac, Young, Lance; $1,998,000)
2017-Present	NRCS Sage Grouse Initiative. Translating sage grouse connectivity science into management and public informational tools (Schwartz and Cross; $79,000)
2017-Present	US Fish and Wildlife Service. Identification of a carnivore community and its interactions via scat detection dogs (Pilgrim and Schwartz; $70,000)
2016-Present	National Fish and Wildlife Foundation – Development of Aquatic eDNAtlas for the American West (Isaak, Young, Schwartz; $89,000)
2016 - Present	USDA Forest Service RIM Funding for developing region wide carnivore monitoring – (Schwartz and McKelvey; $197,000)
2015 – Present	GNLCC - A rapid range-wide assessment of bull trout distributions: a crowd-sourced, eDNA-based approach with application to many aquatic species (Young, Isaak, McKelvey, Carim, and Schwartz PI; $150,000)
2015 - Present	Washington Office USFS / USFS R&D: Developing multi-species, metagenomics eDNA based approaches to detect aquatic invasive species (Schwartz PI; $80,000)
2014 – Present	USDA Forest Service Regional Funding for eDNA surveys of Bull Trout and Salmon in the Columbia River Basin (Young, McKelvey, and Schwartz PIs; $175,000)
2014 – Present	Funding of a National Genomics Center for Wildlife and Fish Conservation (Schwartz PI; $297,000)

2012 – 2014	US Fish and Wildlife Service / Bureau of Land Management: Genomics and range-wide connectivity of greater sage-grouse populations-the northern tier. (Schwartz PI; $459,690)
2012 – 2015	GNLCC – Sage grouse genomic tool development (Schwartz, Cross and Naugle Co-PI; $90,000)
2011 – 2012	USFS R&D Washington Office: Synthesis of connectivity modeling algorithms approaches and implementation. (McKelvey Co-PI; $50,000)
2010 – 2013	USFS R&D: Integration of ecological and social data to optimize economic decisions on wildlife corridors. (Block, Calkin, McKelvey, and Thompson Co-PI; $150,000)
2009 – 2012	RMRS Climate Change RFP: Providing decision support for assisted migration to mitigate climate change – preventing expensive failures through species distribution modeling. (McKelvey Co-PI; $247,000)
2007 – 2009	Joint NCEAS / NESCent: Genetic monitoring (Allendorf Co-PI; $114,000)
2007	USFS Diversity Strategy Award: Coordinating carnivore surveys with the Coeur d'Alene Tribes (Schwartz PI; $30,000)
2007	USFS Cross-Program Proposals: Combining multi-resource monitoring with vegetation and wildlife habitat modeling to infer the effects of climatic change on forest ecosystems and wildlife in the Northern Rockies (Cushman, McKelvey, and Little Co-PI; $89,000)
2006-Present	Italian Regional Parks / LIFE Wolf Alps. Monitoring of recolonizing wolves in the Italian Alps (Schwartz; $327,500 [part of a $6,544,800 funded project])
2006	USFS Region 1 Two Grants for non-invasive surveys of fisher in the Rocky Mountains (Schwartz PI; $103,000)
2004	Internal USFS RMRS Equipment Grant (Schwartz PI; $75,000)
2002	Montana Department of Transportation: Understanding wolverine movement in relation to highways (Squires, Copeland, McKelvey, and Ruggiero; Co-PI; $200,000)
2001	USFS / Northern Region: Using genetics for population viability analyses (McKelvey Co-PI; $80,000)

SCHOLARSHIPS AND AWARDS

2017	Western Association of Fish and Wildlife Agencies Special Recognition Award 2017
2017	RMRS Science in the Media Award
2017	Thomson Reuters Highly Cited Researcher 2016
2016	Thomson Reuters Highly Cited Researcher 2015
2015	RMRS Distinguished Scientist Award
2013	RMRS Best Science Award (co-author)
2013	Research Fellow – Ben Gurion University, Israel
2011	RMRS Visionary Science Award
2009	National Wilderness Award – Excellence in Wilderness Stewardship Research
2009	RMRS Performance Award – Step Increase
2007	RMRS Early Career Scientist Publication Award (co-author)
2007	Merit Award: Scientific Productivity
2007	Merit Award: Excellence in Technology Transfer
2006	RMRS Best Scientific Publication Award (co-recipient)
2005	Presidential Early Career Award for Science and Engineering
2003	USFS Chiefs Award for Early Career Scientist
2002	RMRS Early Career Scientist Publication Award

2000	Best Student Paper – Wildlife Society (MT Chapter)
1999-2000	Bertha Morton Scholarship – University of Montana
1998-1999	Clancy Gordon Environmental Scholarship – University of Montana
1997-1998	Les Pengelly Conservation Scholarship – University of Montana
1996-1998	Research Assistantship – University of Montana
1994-1995	Teaching Fellowship – American University
1995	Smithsonian Graduate Fellowship
1994	Antarctic Service Medal

MEMBERSHIP IN WORKING GROUPS AND SCIENCE TEAMS

State of Science for Non-native Invasive Species Leading experts on pathogens, pests, and climate change participated in a USFS led workshop to highlight science on invasive species and identify knowledge gaps in a diverse array of topics. The objective of the workshop was to solicit input from invasive species experts on a National Invasive Species Assessment. The product of this working group was a National Invasive Species Assessment. 2015-2016.

National Center for Ecological Synthesis and Analysis (NCEAS): **Red Flags – Development of Criteria for Assessing Extinction Risk Working Group** The group uses an empirically-based approach to developing risk criteria guidelines that takes advantage of large amounts of data for natural populations that have been compiled over the last 1-2 decades. 2010 – 2013.

National Center for Ecological Synthesis and Analysis (NCEAS) / National Evolutionary Synthesis Center (NESCent): **Genetic Monitoring Working Group** A team of 18 national and international scientists and managers co-lead by Dr. Schwartz and Dr. Allendorf to develop and facilitate implementation of genetic monitoring tools. The goal of this working group is to open significant new avenues for research in the field of genetic monitoring. 2008 – 2011.

Fisher Science Team A team of 4 scientists whose mission is to synthesize and develop new knowledge for fisher (*Pekania pennanti*) in the west coast states and the Rocky Mountains. The west coast fisher had been proposed for ESA listing, and in 2004 was given a "warranted but precluded by other higher priority actions" status by the USFWS. Given that this status recognizes that perils to persistence exist for this species, a Fisher Steering Committee, Biology Team, and Science Team were organized in 2005. 2004 – 2010.

National Vertebrate Monitoring Team Forest Service Regional Directors of Wildlife requested a team to provide recommendations for monitoring terrestrial animals and species on National Forests and Grasslands. The scientist must be a team member along with 4 other scientists and 8 NFS employees to develop strategies for monitoring animals and habitats. 2003 – 2005.

UPPER LEVEL TEACHING EXPERIENCE (See Also Class Talks)

2014	Conservation Genetics – University of Montana
2013	Conservation Genetics and Monitoring – Ben Gurion University, Israel

2013	Landscape Genomics – University of Montana
2012	Evaluating Landscape Connectivity of Plants and Animals – University of Montana
2009	Wildlife Conservation and Management– Northern Arizona University, Online
1999	Rocky Mountain Flora – Teaching Assistant, University of Montana
1997-1998	Readings in Conservation Biology (upper level course) – University of Montana
1995-1996	General Biology II (laboratory and occasional lectures) – American University
1995-1996	Evolution for Non-majors (lectures and discussions) – American University
1995-1996	General Biology for Non-majors (laboratory) – American University
1995	Genetics – Teaching Assistant, American University

ACADEMIC COMMITTEES: GRADUATE STUDENTS
(*students I advise or co-advise)

*Katie Zarn, University of Montana, M.S. *Wildlife Biology*
Multi-scale population structure of Alexander Archipelago wolves in Southeast Alaska. Fall 2016- Present

Sam Panonni, University of Montana, Ph.D. *Wildlife Biology*
Using microbial biomarkers to assess movement of wildlife. Spring 2015 – Present.

Sarah Bassing, University of Montana, M.S. *Wildlife Biology*
Occupancy estimates of wolves in Alberta. Fall 2014 – Spring 2017.

*Taylor Wilcox, University of Montana, Ph.D. *Wildlife Biology*
Using eDNA to monitor endangered and invasive char. Spring 2013 – Present.

Patrick Cross, University of Montana, M.S. *Systems Ecology*
Determining the origin, distinction, and significance of a high elevation population of red fox in the Greater Yellowstone Ecosystem. Spring 2013 – Spring 2016.

*Todd Cross, University of Montana, Ph.D. *Wildlife Biology*
Delineating greater sage grouse conservation units to preserve genetic variation across a changing landscape. Fall 2011 – Spring 2017.

*Julie Betsch, University of Montana, Ph.D. *Ecology of Infectious Diseases Program*
CDV spread in African lions by domestic dogs. Spring 2010 – Present.

*Gretchen Roffler, University of Montana, Ph.D. *Wildlife Biology*
Effects of climate change on connectivity of a sensitive mountain ungulate: Predicting long term persistence of wild sheep. Fall 2010 – May 2015.

*Keith Slauson, University of Montana, Ph.D. *Wildlife Biology*
Linking landscape scale change to population process in carnivorous mammals. Fall 2010 – Spring 2017.

Brett Addis, University of Montana, M.S. *Division of Biological Sciences*

Gene flow in western toads. Fall 2010 – Spring 2013. University of Montana, Ph.D. *Division of Biological Sciences* The evolutionary basis of dispersal in the stream salamander *Gyrinophilus porphyriticus*. Spring 2013-Present.

Ryan Bracewell, University of Montana, Ph.D. *Department of Ecosystem and Conservation Sciences – College of Forestry and Conservation* Coevolution and co-speciation between *dendroctonus* bark beetles and their symbiotic fungi. Fall 2009 – Fall 2015.

Kellie Carim, University of Montana, Ph.D. *Ecology of Infectious Diseases Program – Division of Biology* Human impacts on the environment mediating susceptibility to disease. Spring 2009 – Fall 2013.

Darin Newton, University of Montana, M.S. *Wildlife Biology*
Estimating actual and potential northern river otter population size in the Upper Clark Fork River. Fall 2009 – Fall 2012.

Adam Sepulveda, University of Montana, Ph.D. *Division of Biological Sciences*
Local and landscape scale processes that structure Idaho giant salamander distribution and coexistence patterns. Fall 2007 – Spring 2010.

Lindy Mullen, University of Montana, M.S. *Division of Biological Sciences*
Spatial structure and dispersal in the Idaho giant salamander. Fall 2007 – Spring 2009.

*Jody Tucker, University of Montana, Ph.D. *Wildlife Biology*
Developing a genetic based monitoring program for California fisher (*Martes pennanti*). Fall 2006 – Spring 2013.

Ben Jimenez, University of Montana, M.S. *Wildlife Biology*
Movement black bear habitat selection in relation to road density in the Idaho Panhandle National Forests. Fall 2006 – Spring 2011.

Barb McCall, University of Montana, M.S. *Wildlife Biology*
Monitoring black bears in northern Idaho using non-invasive DNA sampling. Fall 2006 – Spring 2009.

Tzeidle Wasserman, Western Washington University, M.S. *Environmental Sciences*
Landscape genetics of American marten in north Idaho. Fall 2005 – Spring 2008.

Megan Corrigan, University of Montana, M.S. *Environmental Studies*
When are ecologically marginal populations valuable for conservation? Fall 2005 – Fall 2007.

Ellen Cheng, University of Montana, Ph.D. *Wildlife Biology*
Snowshoe hair landscape genetics. Fall 2004 – Fall 2011.

Francesca Marucco, University of Montana, Ph.D. *Wildlife Biology*
Effects of habitat fragmentation on Italian Wolves. Fall 2003 – Spring 2009.

*Jennifer Woolf, University of Montana, Ph.D. *Wildlife Biology*
Demographic and genetic examination of black-backed woodpeckers. Fall 2003 – Fall 2009.

Megan Parker, University of Montana, Ph.D. *Wildlife Biology*
Behavioral ecology of wild dogs in Botswana, Africa. 2001 – 2010.

Melanie Hoffman, American University, M.S. *Biology*
Fluctuating asymmetry affects survival in South American sea lions. 1998 – 2000.

EXTERNAL EXAMINER: INTERNATIONAL PH.D. STUDENTS

Rachel van Heughten, University of Canterbury, Christchurch, New Zealand, *School of Biological Sciences* Weta affairs: an investigation into the population structure and possible hybridization of two tree weta species (Hemideina) in Canterbury. Examiner on Ph.D. thesis September 2015.

Josh Miller, University of Alberta, Edmonton, Canada, *Department of Biological Sciences* Genomics of wild sheep. Examiner on Ph.D. thesis June 2015.

Shannon Renan, Ben Gurion University, Sede Boker, Israel *Department of Desert Ecology* From behavioral patterns to genetic structure: the reintroduced Asiatic wild ass (*Equus hemionus*) in the Negev Desert. Examiner on Ph.D. thesis – December 2014.

Erin Koen, Trent University, Peterborough, Canada, *Environmental and Life Sciences Graduate Program* Evaluating the effects of landscape structure on genetic differentiation and diversity. Examiner on Ph.D. thesis – September 2013.

Nicolas Dussex, University of Otago, New Zealand, *Department of Zoology*
Conservation genetics of the alpine parrot, the kea *Nestor notabilis*. Examiner on Ph.D. thesis – August 2013.

Aritz Ruiz-González, Universidad del Pais Vasco, Spain, *Departamento Zoologia y Biologia Celular Animal* Phylogeography and non-invasive landscape genetics of the Euorpean pine marten (*Martes martes* L. 1758): Insights into ancient and contemporary processes shaping genetic variation. External Examiner on Ph.D. thesis – 2011.

David Pavlacky, University of Queensland, *School of Integrative Biology*
Avian patch occupancy and landscape genetics of logrunners (*Orthoonyx temminckii*) in fragmented subtropical rainforests of South East Queensland. Examiner on Ph.D. thesis – May 2008.

Anna-Karin Sundqvist, Uppsala University, *Department of Evolutionary Biology*
Conservation genetics of wolves and their relationship to dogs. Opponent on Ph.D. examination – February 2008.

ACADEMIC COMMITTEES: UNDERGRADUATE STUDENTS

Nathan Schafer, University of Montana, *Undergraduate Honors Committee – Wildlife Biology*. Using eDNA in soil and water to detect terrestrial mammals. Spring 2017 – Pres.

Grace Malato, University of Montana, Senior Thesis *Wildlife Biology*
Hybrids lost: fading introgression in two freshwater sculpin populations. Fall 2012 – Spring 2013.

Naomi Akaime, University of Montana, *Undergraduate Honors Committee – Biology*
Using viruses and DNA to determine relatedness of Yellowstone mountain lions. Fall 2001 – Spring 2004.

PEER-REVIEWED PUBLICATIONS

141. Isaak, D., M.K. Young. C. McConnell, B. Roper, E. Archer, B. Staab, C. Hirsch, D. Nagel, M.K. Schwartz, and G. Chandler. Accepted. Crowd-sourced databases as essential elements for Forest Service partnerships and aquatic resource conservation. Fisheries.

140. Tucker, J.M., F.W. Allendorf, R.L. Truex, M.K. Schwartz. 2017. Sex-biased dispersal and spatial heterogenetiy affect landscape resistance to gene flow in fisher. Ecosphere 8: e01839. 10.1002/ecs2.1839

139 Dysthe, J.C., K.J. carim, M. Ruggles, K.S. McKelvey, M.K. Young, and M.K. Schwartz. 2017. Environmental DNA assays for sister taxa sauger (*Sander canadensis*) and walleye (*Sander vitreus*). PLoS One 12: e0176459.

138. Schwartz, M.K. and D.J. Boness. 2017. Marine mammal subspecies in the age of genetics. Marine Mammal Science 33: 7-11.

137. Young, M.K., D.J. Isaak, K.S. McKelvey, T.M. Wilcox, M.R. Campbell, M.P. Corsi, D.L. Horan, and M.K. Schwartz. 2017. Ecological segregation moderates a climactic conclusion to trout hybridization. Global Change Biology DOI: 10.1111/gcb.13828.

136. Slauson, K.M, W.Zielinski, and M.K. Schwartz. 2017. Ski areas affect Pacific marten movement, seasonal habitat use, and density. *Journal of Wildlife Management* 81: 892-904.

135. Cross, T.B., D. Naugle, J.C. Carlson. M.K. Schwartz. 2017. Genetic recapture identifies long-distance dispersal in greater sage-grouse (*Centrocercus urophasianus*). *Condor*.

134. Carim, K.J., J.C. Dysthe, M.K. Young, K.S. McKelvey, and M.K. Schwartz. 2017. A noninvasive tool to assess the distribution of Pacific lamprey (*Entosphenus tridentatus*) in the Columbia River Basin. *PloS One* 12: e0169334.

133. Stetz, J.B., M.A. Sawaya, A.B. Ramsey, S.J. Amish, M.K. Schwartz and G. Luikart. 2016. Discovery of 20,000 RAD–SNPs and development of a 52-SNP array for monitoring river otters. *Conservation Genetics Resources*: 8, pp.299-302.

132. Young, M.K., D. Isaak, K.S. McKelvey, T.M. Wilcox, D. Bingham, K.L. Pilgrim, K.J. Carim, M. Campbell, M. Corsi, D. Horan, D. Nagel, and M.K. Schwartz. 2016. Climate, Demography, and Zoogeography Predict Introgression Thresholds in Salmonid Hybrid Zones in Rocky Mountain Streams. *PLoS One*: e0163563

131. Roffler, G.H., S.J. Amish, S. Smith, T. Cosart, M. Kardos, M.K. Schwartz, and G. Luikart. 2016. SNP discovery in candidate adaptive genes using exon capture in a free-ranging alpine ungulate. *Molecular Ecology Resources* 16: 1147-1164.

130. Dysthe, J.C.S., M.K. Young, K.S. McKelvey, K. Carim, and M.K. Schwartz. 2016. Quantitative PCR assays for detecting loach minnow (*Rhinichthys cobitis*) and spikedace (*Meda flugida*) in the southwestern United States. *PLoS One*: e0162200

129. Carim, K.J., J.C.S. Dysthe, M.K. Young, K.S. McKelvey, and M.K. Schwartz. 2016. An environmental DNA marker for detecting Arctic grayling in the upper Missouri River basin, North America. *Conservation Genetics Resources* 3: 197–199.

128. Cross. T.B., D. Naugle, J.C. Carlson and M.K. Schwartz. 2016. Hierarchical population structure in greater sage-grouse provides insight into management boundary delineation. *Conservation Genetics* 17: 1417-1433.

127. Carim, K., K. Christianson, K.S. McKelvey, W.M. Pate, B. Johnson, M.K. Young, and M.K. Schwartz. Accepted. Environmental DNA marker development with sparse biological information: a case study on opossum shrimp (*Mysis diluviana*). *PLoS One*: e0161664

126. Dilkina, B., R. Houtman, C.P. Gomes, C.A. Montgomery, K.S McKelvey, K. Kendall, T. Graves, R. Bernstein, and M.K. Schwartz. 2016. Trade-offs and efficiencies in optimal budget-constrained multispecies corridor networks. *Conservation Biology* 31: 192-202.

125. Hawley, J.E., P.W. Rego, A.P. Wydeven, M.K. Schwartz, T.C. Viner, R. Kays, K.L. Pilgrim, and J.A. Jenks. 2016. Long-distance dispersal of a subadult male cougar from South Dakota to Connecticut documented with DNA evidence. *Journal of Mammalogy* 97: 1435-1440.

124. Benestan, L. A.-L. Ferchaud, P. Hohenlohe, B.A. Garner, G.J.P. Naylor, I. Baums, M.K. Schwartz, J.L. Kelley, and G. Luikart. Conservation genomics of natural and managed populations: building a conceptual and practical framework. *Molecular Ecology* 25: 2967-2977.

123. Carim, K.J., T.M. Wilcox. M. Anderson, D. Lawrence, M.K. Young. K.S. McKelvey, and M.K. Schwartz. 2016. An environmental DNA marker for detecting nonnative brown trout (*Salmo trutta*). *Conservation Genetic Resources* 8:259-261.

122. Hanks, E.M., M.B. Hooten, S.T. Knick, S.J. Oyler-McCance, J.A. Fike, T.B. Cross, and M.K. Schwartz. 2016. Latent spatial models and sampling design for landscape genetics. *Annals of Applied Statistics* 10:1041-1062.

121. Shafer et al. 2016. Reply to: Genomics in Conservation – case studies and bridging the gap between data and application. *Trends in Ecology and Evolution* 31: 83-84.

120. Roffler, G.H. M.K. Schwartz, K.L. Pilgrim, S. Talbot, G.K. Sage, L. Adams, and G. Luikart. 2016. Identification of Landscape Features Influencing Gene Flow: How Useful Are Habitat Selection Models? *Evolutionary Applications* 9: 805-817.

119. Juarez, R.L., M.K. Schwartz, K.L. Pilgrim, D.J. Thompson, S.A.Tucker, J.B. Smith and J.A. Jenks. 2016. Assessing temporal genetic variation in a cougar population: influence of harvest and neighboring populations. *Conservation Genetics*, pp.1-10.

118. Kretser, H., M. Glennon, A. Whitelaw, A. Hurt, K.L. Pilgrim and M.K. Schwartz. 2016. Scat-detection dogs survey low density moose in New York. *Alces 52*:.55-66.

117. Schwartz, M.K., B. Hahn, and B.R. Hossack. 2016. Where the wild things are: a research agenda for studying the wildlife-wilderness relationship. *Journal of Forestry* 114: 311-319.

116. Schwartz, M.K. 2016. Recipient of the 2015 Molecular Ecology Prize: Fred Allendorf. *Molecular Ecology* 25: 450-453.

115. Wilcox, T. M, K. S. McKelvey, M. K. Young, A. J. Sepulveda, B. B. Shepard, S. F. Jane, A. R. Whiteley, W. H. Lowe, and M. K. Schwartz. 2016. Understanding environmental DNA detection probabilities: a case study using a stream-dwelling char (*Salvelinus fontinalis*). *Biological Conservation* 194: 209-216

114. McKelvey, K. S., Young, M. K., Knotek, W. L., Carim, K. J., Wilcox, T. M., Padgett-Stewart, T. M., and Schwartz, M. K. 2016. Sampling large geographic areas for rare species using environmental DNA: a study of bull trout *Salvelinus confluentus* occupancy in western Montana. *Journal of Fish Biology* 88: 1215-1222.

113. Proffitt, K.M., J.F. Goldberg, M. Hebblewhite, R. Russell, B.S. Jimenez, H.S. Robinson, K. Pilgrim, and M.K. Schwartz. 2015 Integrating resource selection function into spatial capture-recapture models for large carnivores. *Ecosphere* 6: 1-15.

112. Padgett-Stewart, T.M., T.M. Wilcox, K.J. Carim, K.S. McKelvey, M.K. Young, and M.K. Schwartz. 2015. Designing an eDNA Assay for River Otter Detection: A tool for discerning the efficacy of eDNA surveying on semi-aquatic mammals. *Conservation Genetics Resources* DOI 10.1007/s12686-015-0511-x.

111. Wilcox, T. M., K. S. McKelvey, M. K. Young, W. H. Lowe, and M. K. Schwartz. 2015. Environmental DNA particle size distribution from Brook Trout (*Salvelinus fontinalis*). *Conservation Genetics Resources* 7: 639-641.

110. Wilcox, T. M., K. J. Carim, K. S. McKelvey, M. K. Young, and M. K. Schwartz. 2015. The Dual Challenges of Generality and Specificity When Developing Environmental DNA

Markers for Species and Subspecies of Oncorhynchus. *PloS one, 10*(11), p.e0142008.

109. McKelvey, K. S., M. K. Young; T. M. Wilcox, D. Bingham, K. L. Pilgrim, and M. K. Schwartz. 2015. Patterns of hybridization among cutthroat and rainbow trout in northern Rocky Mountain streams. *Ecology and Evolution* 6: 688-706.

108. Keith, D., H.R. Akcakaya, S.H.M. Butchart, B. Collen, N.K. Dulvy, E.E. Holmes, J.A. Hutchings, D. Keinath, M.K. Schwartz, A.O. Shelton, R.S. Waples. 2015. Temporal correlation in population trends: conservation implications from time-series analysis of diverse animal taxa. *Biological Conservation* 192: 247-257.

107. Ellis, M.M., J.S. Ivan, J. Tucker, and M.K. Schwartz. 2016. rSPACE: Spatially-based power analysis for conservation and ecology. *Methods in Ecology and Evolution*.

106. Schoenecker, K., M.K. Watry, L. Ellison, G. Luikart, and M.K. Schwartz. 2015. Estimating bighorn sheep (*Ovis Canadensis*) abundance using noninvasive sampling at a mineral lick within a National Park Wilderness Area. *Western North American Naturalist*.

105. Dobrowski, S.Z., A.K. Swanson, J.T. Abatzoglou, Z.A. Holden, H.D. Safford, M.K. Schwartz, and D.G. Gavin. 2015. Forest structure and species traits mediate projected recruitment declines in western US tree species. *Global Ecology and Biogeography*. DOI 10.1111/geb.12302.

104. Shafer, A.B. et al. 2015. Genomics and the challenging translation into conservation practice. *Trends in Ecology and Evolution*. 30: 78-87.

103. Jane, S.F., T.M. Wilcox, K.S. McKelvey, M.K. Young, M.K. Schwartz, W.H. Lowe, B.H. Letcher, and A.R. Whiteley. 2014. Distance, flow and PCR inhibition: eDNA dynamics in two headwater streams. *Molecular Ecology Resources*. 15: 216-227.

102. Roffler, G.H., S.L. Talbot, G.H. Luikart, G.K. Sage, K.L. Pilgrim, L.G. Adams, and M.K. Schwartz. 2014. Lack of sex-biased dispersal promotes fine-scale genetic structure in alpine ungulates. *Conservation Genetics*. 15: 837-851.

101. Whiteley, A.R., K. McGarigal, and M.K. Schwartz. 2014. Pronounced differences in genetic structure despite overall ecological similarity for two Ambystoma salamanders in the same landscape. *Conservation Genetics*. DOI 10.1007/s10592-014-0562-7.

100. Landguth, E.L. and M.K. Schwartz. 2014. Evaluating sample allocation and effort in detecting population differentiation for discrete and continuously distributed individuals. *Conservation Genetics*. DOI 10.1007/s10592-014-0593-0.

99. Hand, B.K., S. Chen, N.J. Anderson, A. Beja-Pereira, P.C. Cross, M. Ebinger, H. Edwards, R.A. Garrott, M.D. Kardos, M. Kauffman, E.L. Landguth, A. Middleton, B. Scurlock, P.J. White, P. Zager, M.K. Schwartz, and G.H. Luikart. 2014. Sex-biased gene flow among elk in the Greater Yellowstone Ecosystem. *Journal of Fish and Wildlife Management*. 5: 124-132.

98. Lemoine, M., M.K. Young, K.S McKelvey, L. Eby, K.L. Pilgrim, and M.K. Schwartz. 2014. *Cottus schitsuumsh*, a new species of sculpin (Scorpaeniformes: Cottidae) in the Columbia River basin, Idaho-Montana, USA. *Zootaxa.* 3755: 241-258.

97. McKelvey, K.S., K.B. Aubry, N.J. Anderson, A.P. Clevenger, J.P. Copeland, K.S. Heinemeyer, R.M. Inman, J.R. Squires, J.S. Waller, K.L. Pilgrim, and M.K. Schwartz. 2014. Recovery of wolverines in the Western United States: Recent extirpation and recolonization or range retraction and expansion? *Journal of Wildlife Management*. 78: 325–334.

96. Wilcox, T.M., M.K. Schwartz, K.S. McKelvey, M.K. Young, and W.H. Lowe. 2014. A blocking primer increases specificity in environmental DNA detection of bull trout (*Salvelinus confluentus*). *Conservation Genetics Resources*. 6: 1-2.

95. Olson, L.E., J.D. Sauder, N.M. Albrecht, R.S. Vinkey, S.A. Cushman, and M.K. Schwartz. 2014. Modeling the effects of dispersal and patch size on predicted fisher (*Pekania [Martes] pennanti*) distribution in the U.S. Rocky Mountains. *Biological Conservation.* 169: 89-98.

94. Tucker, J., M.K. Schwartz, R.L. Truex, K.L. Pilgrim, and F.W. Allendorf. 2014. Historical and contemporary DNA indicate fisher decline and isolation occurred prior to the European settlement of California. *Conservation Genetics.* 15: 583-595.

93. Dilkina, B., K. Lai, R. Le Bras, Y. Xue, C.P. Gomes, A. Sabharwal, J. Suter, K.S. McKelvey, M.K. Schwartz, and C. Montgomery. 2014. Large landscape conservation-synthetic and real-world datasets. *Twenty-Seventh AAAI Conference on Artificial Intelligence.* 27: 1369-1372.

92. Le Bras, R., B. Dilkina, Y. Xue, C. Gomes, K. McKelvey, M.K. Schwartz, and C. Montgomery. 2014. Robust network design for multispecies conservation. *Twenty-Seventh AAAI Conference on Artificial Intelligence.* 27: 1305-1312.

91. Aubry, K.B., C.M. Raley, S.W. Buskirk, W.J. Zielinski, M.K. Schwartz, R.T. Golightly, K.L. Purcell, R.D. Weir, and J.S. Yaeger. 2013. Meta-analyses of habitat selection by fishers at resting sties in the Pacific Coastal Region. *Journal of Wildlife Management.* 77: 965-974.

90. Pierson, J.C., F.W. Allendorf, P. Drapeau, and M.K. Schwartz. 2013. Breed locally, disperse globally: fine scale genetic structure despite landscape-scale panmixia in a fire-specialist. *PLoS One.* 8: e67248.

89. Ellis, M.M., J.S. Ivan, and M.K. Schwartz. 2014. Spatially explicit power analysis for occupancy-based monitoring of wolverine populations in the U.S. Rocky Mountains. *Conservation Biology.* 28: 52-62.

88. McCall, B., M.S. Mitchell, M.K. Schwartz, J. Hayden, S.A. Cushman, P. Zager, and W.F.

Kasworm. 2014. Combined use of mark-recapture and genetic analyses reveals response of a black bear population to changes in food productivity. *Journal of Wildlife Management.* 77: 1572-1582.

87. Neel, M.C., K.S. McKelvey, N. Ryman, M.W. Lloyd, R. Short Bull, F.W. Allendorf, M.K. Schwartz, and R.S. Waples. 2013. Estimation of effective population size in continuously distributed populations: There goes the neighborhood. *Heredity.* DOI 10.1038/hdy.2013.37.

86. Schwartz, M.K., N.J. DeCesare, B.S. Jimenez, J.P. Copeland, and W. Melquist. 2013. Stand- and landscape-scale selection of large trees by fishers in the Rocky Mountains of Montana and Idaho. *Forest Ecology and Management.* 305:103-111.

85. Wilcox T.M., K.S. McKelvey, M.K. Young, S.F. Jane, W.H. Lowe, A.R. Whiteley, and M.K. Schwartz. 2013. Robust detection of rare species using environmental DNA: the importance of primer specificity. *PLoS ONE.* 8: e59520. DOI 10.1371/journal.pone.0059520.

84. McKelvey, K.S., J. Ramirez, K.L. Pilgrim, S.A. Cushman, and M.K. Schwartz. 2013. Genetic sampling of Palmer's chipmunks in the Spring Mountains, Nevada. *The Western North American Naturalist*. 73: 198-210.

83. Young, M.K., K.S. McKelvey, K.L. Pilgrim and M.K. Schwartz. 2013. DNA barcoding at riverscape scales: Assessing biodiversity among fishes of the genus *Cottus* (Teleostei) in northern Rocky Mountain streams. *Molecular Ecology Resources*. DOI 10.1111/1755-0998.12091.

82. Swanson, A.K., S.Z. Dobrowski, A.O. Finley, J.H. Thorne, and M.K. Schwartz. 2013. Spatial regression methods capture prediction uncertainty in species distribution model projections through time. *Global Ecology and Biogeography.* 22: 242-251.

81. Zielinski, W.J., F.V. Schlexer, T.L. George, K.L. Pilgrim, and M.K. Schwartz. 2013. Estimating abundance and survival in the endangered Point Arena mountain beaver using noninvasive genetic methods. *Northwest Science.* 87:126-139.

80. Tucker, J.M., M.K. Schwartz, R.L. Truex, K.L. Pilgrim, and F.W. Allendorf. 2012. Historical and contemporary DNA indicate fisher decline and isolation occurred prior to the European settlement of California. *PLOS One*. DOI 10.1371/journal.pone.0052803

79. Dobrowski, S.Z., J.T. Abatzoglou, A. Swanson, A. Mynsberge, J. Greenberg, Z. Holden, and M.K. Schwartz. 2012. The climate velocity of the contiguous United States during the 20th century. *Global Change Biology.* 19:241-251.

78. Zielinski, W.J., F.V. Schlexer, S.A. Parks, K.L. Pilgrim, and M.K. Schwartz. 2012. Small geographic range but not panmictic: How forests structure the endangered Point Arena mountain beaver (*Aplodontia rufa nigra*). *Conservation Genetics.* 14: 369-383.

77. Parks, S., K.S. McKelvey, and M.K. Schwartz. 2012. Effects of weighting schemes on the identification of wildlife corridors generated with least-cost methods. *Conservation Biology.* 27: 145-154.

76. Hutchings, J., S.H. Butchart, B. Collen, M.K. Schwartz, and R.S. Waples. 2012. Red Flags: Correlates of impaired species recovery. *Trends in Ecology and Evolution.* 27: 542-546.

75. Tallmon, D.A., R.S. Waples, D. Gregovich, and M.K. Schwartz. 2012. Detecting population recovery using gametic disequilibrium-based effective population size estimates. *Conservation Genetics Resources.* 4: 987-989.

74. Campbell, N.R., S.J. Amish, V.L. Pritchard, K.M. McKelvey, M.K. Young, M.K. Schwartz, J.C. Garza, G.H. Luikart, and S.R. Narum. 2012. Development and evaluation of 200 novel SNP assays for population genetic studies of westslope cutthroat trout and genetic identification of related taxa. *Molecular Ecology Resources.* 12: 942-949.

73. Pilgrim, K.L., W.J. Zielinski, F.V. Schlexer, and M.K. Schwartz. 2012. Development of a reliable method for determining sex for a primitive rodent, the Point Arena mountain beaver (*Aplodontia rufa nigra*). *Conservation Genetics Resources.* 4: 975-977.

72. Stetz, J.B., K.C. Kendall, C.D. Vojta and the Genetic Monitoring Working Group (M.K. Schwartz and F.W. Allendorf). 2011. Genetic monitoring for managers: A new online resource. *Journal of Fish and Wildlife Management.* 2: 216-219.

71. Perez-Figueroa, A., R.L. Wallen, T. Antao, J.A. Coombs, M.K. Schwartz, P.J. White, and G.H. Luikart. 2012. Conserving genomic variability in large mammals: Effect of population fluctuations and variance in male reproductive success on variability in Yellowstone bison. *Biological Conservation.* 150: 159-166.

70. Hansen, M.M., I. Olivieri, D.M. Waller, E.E. Nielsen, and the Genetic Monitoring Working Group (M.K. Schwartz and F.W. Allendorf). 2012. Monitoring adaptive genetic responses to environmental change. *Molecular Ecology.* 21: 1311-1329.

69. Jackson, J.A., L. Laikre, C.S. Baker, K.C. Kendall, and the Genetic Monitoring Working Group (M.K. Schwartz and F.W. Allendorf). 2012. Guidelines for collecting and maintaining archives for genetic monitoring. *Conservation Genetic Resources.* 4: 527-536.

68. Russell, R.E., J.A. Royle, R. DeSimone, M.K. Schwartz, V.L. Edwards, K.L. Pilgrim, and K.S. McKelvey. 2012. Estimating abundance from unstructured spatial samples: An example with Montana mountain lions (*Puma concolor*). *Journal of Wildlife Management.* 76: 1551-1561.

67. McKelvey, K.S., J.P. Copeland, M.K. Schwartz, J.S. Littell, K. B. Aubry, J.R. Squires, S.A. Parks, M. McGuire Elsner, and G.S. Mauger. 2011. Predicted effects of climate change on wolverine distribution and movement in western North America. *Ecological Applications.* 21: 2882-2897.

66. Lai, K.J., C.P. Gomes, M.K. Schwartz, K.S. McKelvey, D. Calkin, and C. Montgomery. 2011. The Steiner multigraph problem: applications in wildlife corridor design. *Symposium of the Advancement of Artificial Intelligence*.

65. Knaus, B.J., R. Cronn, A. Liston, K.L. Pilgrim, and M.K. Schwartz. 2011. Mitochondrial genome sequences illuminate maternal lineages of conservation concern in a rare carnivore. *BMC Ecology.* 11: DOI 10.1186/1472-6785-11-10.

64. Marucco, F., L. Boitani, D.H. Pletscher, and M.K. Schwartz. 2011. Bridging the gaps between non-invasive genetic sampling and population parameter estimation. *European Journal Wildlife Research.* 57: 1-13.

63. Magoun, A.J., C.D. Long, M.K. Schwartz, K.L. Pilgrim, R.E. Lowell, and P. Valkenburg. 2011. Integrating motion-detection cameras and hair snags for wolverine identification. *Journal of Wildlife Management.* 75: 731-739.

62. Schwartz, M.K., P.B. Landres, and D.J. Parsons. 2011. Wildlife scientists and wilderness managers finding common ground with non-invasive and non-intrusive sampling of wildlife. *International Journal of Wilderness.* 17: 4-8.

61. Short Bull R., S.A. Cushman, R. Mace, T. Chilton, K. Kendall, E.L. Landguth, M.K. Schwartz, K.S. McKelvey, F.W. Allendorf, and G.H. Luikart. 2011. Why replication is important in landscape genetics: American black bear in the Rocky Mountains. *Molecular Ecology*. 20: 1092-1107.

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Mills, L.S., M.K. Schwartz, D.A. Tallmon, and K.P. Lair. 2003. Measuring and interpreting changes in connectivity for mammals in coniferous forests. In Zabel, C., R.G. Anthony (eds). Mammal community dynamics in Western coniferous forests: Management and conservation in the new millennium. Island Press, Washington D.C. 587-613.

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IN PROCESS MANUSCRIPTS

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Schwartz, M.K., B. Penaluna, T. Wilcox. In Review. Environmental DNA sampling: not just for fisheries biologists anymore. The Wildlife Professional.

Golding, J, M.K. Schwartz, K.S. McKelvey, J.R. Squires, S.D. Jackson, C. Staab, and R.B. Sadak. In Review. Multispecies mesocarnivore monitoring. . Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Cross, T., M.K. Schwartz, Rowe, J., S. Oyler-McCance, D. Naugle, and B. Fedy. The genetic network of greater sage-grouse: range-wide identification of keystone hubs of connectivity. Molecular Ecology.

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Wilcox, T.M., Carim, K.J., Young, M.K., McKelvey, K.S., Franklin, T.W., Schwartz, M.K. In Review. The importance of sound methodology in environmental DNA sampling. Journal of the American Fisheries Society.

Roffler, G., E. Landguth, MK Schwartz, G. Luikart. Detecting natural selection across environmental gradients: A performance evaluation of statistical genetic methods using simulations. Molecular Ecology

Carim, K.J., J.C.S. Dysthe, T. Horton, M.K. Young, K.S. McKelvey, and M.K. Schwartz. In Review. An environmental DNA marker for detecting northern pike (Esox lucius) invasions and illegal introductions in the western United States. PLOS One.

Green, D., Swiers, S. Matthews, R. Swiers, R. Callas, S. Farber, M.K. Schwartz, R.A. Powell. In Review. Hierarchical modeling reveals interspecific interactions among three species within a mesopredator guild: fishers, gray foxes, and ringtails. *Journal of Animal Ecology*.

Schwartz, M.K. et al. (Internal Review, submit in May 2015) Validation of connectivity methods. *Bioscience*.

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OTHER PUBLICATIONS

Inman et al. 2013. Restoration of wolverines: Considerations for translocation and post-release monitoring. April 2013. http://www.wcsnorthamerica.org/Wildlife/Wolverine.aspx.

"Contributor" to Manley et al. 2006. Multiple species inventory and monitoring technical guide. *General Technical Report WO-73*.

McKelvey, K.S., S.A. Cushman, M.K. Schwartz, and L.F. Ruggiero. 2007. Wildlife monitoring across multiple spatial scales using grid-based sampling. *Proceedings of the Eighth Annual Inventory and Assessment Symposium*.

Schwartz, M.K., K. Ralls, D. Williams, K.L. Pilgrim, and P. Kelly. 1999. Estimates of gene flow and genetic variation in San Joaquin kit fox show metapopulation structure. *California Water Board Administrative Report*.

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Jansen, J.K., W.R. Meyer, M.K. Schwartz, and J.L. Bengtson. 1994. Seabird research at Seal Island Antarctica in 1993/94. In Antarctic Marine Living Resources 1993/94 Field Season Report. Rosenberg, J. (ed). *Administrative Report LJ-94-13*.

Reiche, G.A., M.K. Schwartz, and J.L. Quan. 1994. Seabird and marine mammal observations around the Elephant Island area. In Antarctic Marine Living Resources 1992/93 Field Season Report. Rosenberg, J. (ed). *Administrative Report LJ-94-13*.

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SYMPOSIA / PANELS ORGANIZED

Science leadership in the 21st Century. *International Congress for Conservation Biology*, Cartagena, Colombia, July 26, 2017.

Status of Fishers in the U.S. Rocky Mountains. *Idaho Chapter of the Wildlife Society,* Coeur D'Alene, Idaho. March 13, 2013.

Wildlife genomics: Keeping up with next generation technologies. Co-organized symposium with K. Mock. *The Wildlife Society 19th Annual Conference,* Portland, OR. October 15, 2012.

Delineating wildlife corridors using landscape genetics. *Carnivores 2009,* Denver, CO. November 17, 2009.

Co-organized Western Forest Carnivore Conference. Lead a Wildlife Genetics Section and a Marten and Fisher Conservation Section. *Western Forest Carnivore Committee,* Missoula, MT. October 20-22, 2009.

Can noninvasive and nonintrusive methods for wildlife improve our understanding and management of wilderness? Co-organized with P. Landres. *Rethinking Protected Areas in a Changing World – George Wright Society Biennial Conference on Parks, Protected Areas, and Cultural Sites.* Portland, OR. March 2-5, 2009.

Genetic Monitoring Symposium. Co-organized with G. Spong. *International Union of Game Biologists XXVIII Congress,* Uppsala, Sweden. August 13-18, 2007.

Carnivore Genetics Symposium. Co-organized with L.F. Ruggiero. *Defenders of Wildlife: Carnivore 2004,* Santa Fe, NM. November 2004.

Hybridization of threatened and endangered species. Co-organized with S. Haig. *Society of Conservation Biology 2004*, Columbia University, NY. August 2004.

WORKSHOPS LEAD

Validation of Corridor Models Co-lead a workshop in association with the Western Governors Association and Connectivity Working Group focusing on how to use empirical data to validate GIS based corridor models. Missoula, MT. January 23-24, 2012.

Rocky Mountain Fisher Working Group 1 day workshop for agency, tribal, industry, academic, and environmental biologists concerned about the geographic distribution of fisher in the Rockies. Forum for coordinating fisher research in the Rocky Mountains. Missoula, MT and Plummer, ID. September 2005, December 2006, May 2009, December 2011.

Landscape Genetics Workshop in a Landscape Ecology course for USFS and USFWS personnel. Flagstaff, AZ. January 15, 2008-2010.

Fisher Detection Workshop I was invited to present approximately 1 – 1 ½ days of workshop material on the detection of fisher using non-invasive methods and the genetic tools used to assess species and individual identification. I delivered 3 talks titled: Mesocarnivore Genetics, DNA analysis, and Sampling Devices and Schemes. Arcata, CA. May 2007.

A Sample of Wildlife Sampling including Genetic Sampling Half day workshop for USFS Region 4 Biologists co-lead with K.S. McKelvey. Logan, UT. December 2004.

Sampling and Sample Design for Wildlife Biologists 1 day symposium for USFS-Northern Region Biologists co-lead with K.S. McKelvey and S.A. Cushman. Missoula, MT. December 2003.

INVITED SEMINARS (NATIONAL AND INTERNATIONAL)

Can we predict genetic responses to climate change. *The Wildlife Society Annual Meeting*, (Symposium on adaptation to climate change.) Winnipeg, Manitoba, CA. October 18, 2015

Genetic considerations for the recovery of lynx: substructure and hybridization. USFWS Lynx Species Status Assessment. Minneapolis, MN October 13-14 2015.

Is Genomics living up to its promise for Conservation Biology and Wildlife Management? Conservation Genomics Course. Flathead Lake Biological Station. September 2015.

Western white pine, mixed mesic forests, fisher, and climate change. *Wildlife and Silviculture Annual Meeting*, Missoula, MT. April 2015.

A synthesis of genetic monitoring. *Society for Conservation Biology North American Meeting*. Missoula, MT. July 2014.

Ecological causes and genetic consequences of introgression. *LIFE Sponsored Hybridization in Wolves Workshop*, Grosetto, Italy. November 2-4, 2014.

Wilderness and wildlife: A framework. Co-lead with B. Hahn and B. Hossack. *Wilderness Act 50th Anniversary Conference,* Albuquerque, NM. September 2014.

Genomics and real world applications. *European Science Foundation ConGenomics Workshop*, Wiks Slott, Sweden. March 19, 2014.

Will genomics help us manage wildlife populations: is more always better? Co-lead with G.H. Luikart and F.W. Allendorf. *Idaho Wildlife Society Plenary Symposium*. Boise, ID. March 5, 2014.

The conservation of connectivity for wolverine based on landscape genetic results. *Colorado Wildlife Society*, Ft. Collins, CO. February 5, 2014.

Landscape genetics, climate change, and the conservation of connectivity in the U.S. Rocky Mountains. *Hawaii Institute of Marine Biology*, Coconut Island, HI. February 29, 2014.

Wolverines and climate change in the high divide and northern Rocky Mountains. Co-lead with K.S. McKelvey. *Carnivores, connectivity, and climate in the high divide: Science to move conservation forward in Northern Rocky Mountain Ecosystems*, Three Forks, MT. January 9, 2014.

Connectivity science for wolverines in the high divide and northern U.S. Rockies. Co-lead with K.S. McKelvey and J.P. Copeland. *Carnivores, connectivity, and climate in the high divide: Science to move conservation forward in northern Rocky Mountain ecosystems*, Three Forks, MT. January 8, 2014.

Landscape genetics in the management and conservation of sage grouse. Co-lead with T.B. Cross. *Montana Governor's Council and Wildlife*, Helena, MT. September 3, 2013.

Fishers in white pine ecosystems. Co-lead with multiple scientists. *Region 1 Joint Silviculture and Wildlife Meetings*, Clearwater-Nez Pierce Forest, Powell Ranger Station, ID. July 9, 2013.

New research findings on fishers (*Pekania pennanti*) in the northern Rocky Mountains and west coast DPS. *Defenders of Wildlife*, Washington D.C. June 3, 2013.

Plenary address: Range margins in a rapidly changing world. Co-lead with F.W. Allendorf. *Canadian Society for Ecology and Evolution*, Kelowna, B.C., Canada. May 15, 2013.

Landscape genetics of fishers. Co-lead with multiple scientists. *Idaho Wildlife Society*, Boise, ID. March 13, 2013.

The use of new genomic techniques to manage species of conservation interest. Co-lead with multiple scientists. *The Wildlife Society Meetings Transformative Research Symposium*. Portland, OR. October 17, 2012.

Recovery of carnivores in the western United States: The role of molecular genetics and genomics. *Cornell University*, Ithaca, NY. September 25, 2012.

Cougars expand east from a contemporary eastern refugia: Implications for connectivity model validation. *Webinar: USFS R&D*, Washington D.C. May 22, 2012.

Cougars expand east from a contemporary eastern refugia. *Marlboro College*, Marlboro, Vermont. April 10, 2012.

Genomic information reveals threatened species isolated before European settlement: Implications for reintroduction efforts. Co-lead with B. Knaus, A. Liston, K.L. Pilgrim, and R. Cronn. *Conservation Genomic Symposium Society for Conservation Biology 25th International Congress for Conservation Biology*, Auckland, New Zealand. December 9, 2011.

Genomics provides new insights for managing endangered species: Fisher in the Rocky Mountains and lynx in Switzerland. Co-lead with J. Tucker. *International Exploratory Workshop on the Genetic Status and Conservation Management of Reintroduced and Small Autochthonous Eurasian Lynx Populations in Europe*, Saanen, Switzerland. October 24-27 2011.

Genetic monitoring of terrestrial and marine vertebrates: Successes and failures of the molecular genetic approach to cost-effective monitoring. Keynote Speaker. *19th Biennial Conference on the Biology of Marine Mammals*, Tampa Bay, FL. November 27, 2011.

Coordinated efforts needed to detect trend in occupancy in wolverine across the western United States. Co-lead with M.M. Ellis and J. Ivan. *Video Teleconference for Wolverine Steering Committee.* September 1, 2011.

Multiple scales and objectives of landscape connectivity. Co-lead with K.S. McKelvey and F.W. Allendorf. *Great Northern Landscape Conservation Cooperative Steering Committee Meeting*, Whitefish, MT. September 22, 2011.

Habitat connectivity: Everybody's doing it, but everybody's doing it differently: The who, what, where, why and how of wildlife connectivity. Co-lead with K.S. McKelvey and F.W. Allendorf. *Federal Land Managers Workshop*, Missoula, MT. September 8, 2011.

The beguiling reality of genotypic errors and toilsome process of their detection: How genotype reliability affects substructure, relatedness, and abundance estimates. *Smithsonian Institution*, Front Royal, VA. May 25, 2011, 2013. All Day Talk.

Conservation genetics I: Introduction to molecular markers and sampling for monitoring natural populations. Workshop on applications of genetic data to ecological and evolutionary biology. University of San Francisco, Quito, Ecuador. February 8-9, 2011.

Conservation genetics II: Population connectivity. Workshop on applications of genetic data to

ecological and evolutionary biology. University of San Francisco, Quito, Ecuador. February 8-9, 2011.

Fisher in the Rocky Mountains: A research and monitoring update. *USFS Region 1 Wildlife Council*, Missoula, MT. December 9, 2010.

Wolverine monitoring: Putting power estimates behind the methods. Co-lead with J. Ivan and M.M. Ellis. *Region 1 Wildlife Council*, Missoula, MT. December 9, 2010.

Assisted migration and corridors: Two adaptation strategies for wildlife in an era of climate change. Co-lead with K.S. McKelvey. Lewis and Clark National Forest and Helena National Forest, MT. December 7, 2010.

Evaluating the climate change adaptation strategies of connectivity and assisted migration. Co-lead with multiple scientists. *NFS and USFS Research WO*, Washington D.C. August 24-25, 2010.

Genetic monitoring of a recovering wolf population in the Alps. Co-lead with F. Marucco, K.L. Pilgrim, and L. Boitani. *Wolves, people, and territories: European wolf management, conservation, monitoring, damage prevention, and conflict mitigation,* Turin, Italy. May 24-26, 2010.

Assisted migration of plant and animals: We account for uncertainty to predict species distributions? Co-lead with K.S. McKelvey and S.Z. Dobrowski. *Climate Change Science Talks*, Lewis and Clark National Forest and Helena National Forest, Helena Forest Supervisor's Office. January 20, 2010.

Martes conservation genetics: Using molecular genetics to assess within species movements, barriers, and corridors. Co-lead with A. Ruiz-Gonzalez, R. Masuda, and C. Pertoldi. *5th International Martes Meeting*, Seattle, WA. September 2009. Invited Talk.

Lolo Pass carnivores studies: What have we learned about animal movement relative to transportation corridors? Co-lead with multiple scientists. *Idaho Transportation Department Project Development Conference*, Boise, ID. April 8, 2009.

How well do effective population size estimators reflect changes in abundance?: Results from Wright-Fisher and spatially structured populations. Co-lead with NCEAS Working Group. *International Marine Conservation Congress Effective Population Size Symposium*, Washington D.C. May 21 2009.

Using landscape genetics to understand carnivore connectivity in the northern U.S. Rocky Mountains. *Biology Seminar Series*, Northern Arizona University, Flagstaff, AZ. December 4, 2008.

Detecting genotyping and scoring errors for population estimation. *Conservation Genetic Data Analysis Course*, Vairo, Portugal. September 12, 2008.

La metodologia di laboratorio per le analisi genetiche non-invasive (Laboratory methods for analyzing non-invasive genetics). *Piedmont Region Natural Science Museum*, Turin, Italy. June 25, 2008. This talk was fully funded and discussed ongoing collaborative research with the European Union wolf recovery programs.

Detecting (and correcting) genetic errors for the management of natural populations. *Piedmont Region Natural Science Museum*, Turin, Italy. June 25, 2008. This talk was fully funded and discussed ongoing collaborative research with the European Union wolf recovery programs.

Climate change and mammals in Montana. Co-lead with multiple scientists. *Climate Change Workshop*, Missoula, MT. February 2008. Invitation to Schwartz, but talk delivered by K.S. McKelvey.

Wolverine movement in Montana defined by a narrow habitat niche. *Montana Wildlife Society Meetings*, Missoula, MT. February 2008.

Landscape genetics and endangered species. *Evolutionary Biology Seminar Series*, Uppsala University, Sweden. February 7, 2008.

Genetic monitoring of carnivores. *Grimso Biological Field Station*, Sweden. February 4, 2008.

Testing early naturalist's observations using ancient DNA. *Ecology Seminar Series*, University of Montana, Missoula, MT. November 7, 2007.

Applying landscape genetic approaches to aide in the conservation and management of species. *Department of Ecology, Evolution, and Organismal Biology***,** Iowa State University, Ames, Iowa. October 18-19, 2007.

Detecting errors. *Conservation Genetics Data Analysis Course*, Flathead Lake Biological Station, Yellow Bay, MT. September 11-16, 2007.

Genetic monitoring: A cost-effective approach to determining trends in species abundance and demography. Co-lead with G.H. Luikart. *International Union of Game Biologists XXVIII Congress*, Uppsala, Sweden**.** August 13-18, 2007.

Fisher conservation in the northern U.S. Rockies: Combining genetics and field biology to assess distribution, connectivity, and demography. *Center for Research on Invasive Species and Small Populations*, University of Idaho, Moscow, ID. May 4 2007.

Wildlife genetics: Estimating the distribution, population size, and connectivity of carnivore populations. *USFS Skills for Tree Improvement Workshop*, Coeur D'Alene, ID. March 14, 2007.

Monitoring abundance using molecular markers and non-invasive genetic sampling. *Conservation Genetics Data Analysis Course: Recent Approaches*, Porto, Portugal. August 30-September 2, 2006.

Landscape genetics reveals wildlife corridors. Co-lead with S.A. Cushman and K.S. McKelvey. *The Wildlife Society*. Anchorage, AK. September 25, 2006.

Use of landscape genetics to evaluate barriers to movement in black bears in North Idaho. Co-lead with S.A. Cushman and K.S. McKelvey. *Ecological Society of America,* Nashville, TN. August 9, 2006.

Hybridization between lynx and bobcats: Management implications and scientific findings. Co-lead with McKelvey. *New York Chapter of The Wildlife Society***,** Brookhaven, NY. March 28, 2006.

Conservation genetics of marten and fisher: What we know and what we have to learn. Co-lead with K.S. McKelvey and L.F. Ruggiero. *Symposium Preceding Western Section of The Wildlife Society,* Sacramento, CA. February 7, 2006.

Guidelines on the use of molecular genetics for reintroductions. *European Union LIFE Nature Symposium on Reintroductions*, Caramanico, Italy. March 21, 2005.

An overview of wildlife genetics. *US Forest Service's National Genetics Meeting,* Placerville CA. April 27, 2004.

How molecular genetic technology can assist forest service management. *USDA Seminar Series,* Washington D.C. June 22, 2004.

Combining field and genetics data for managing western forest carnivores. Co-lead with multiple scientists. Biology Seminar Series, Colby College, Waterville, ME**.** April 2003.

Estimating gene flow and effective population size for ecology and wildlife biology. Co-lead with multiple scientists. *NW Section Wildlife Society,* Hood River, OR. April 16, 2002.

Gaining new insights into Canada lynx management using DNA. Co-lead with multiple scientists. *Montana Wildlife Society Meetings*, Great Falls, MT. February 28-March 2, 2001.

Using DNA-based census and effective population size estimators with wild populations. Co-lead with multiple scientists. *Swiss Wildlife Society Monitoring Conference,* Zurich, Switzerland. February 3, 2000.

Using non-invasive genetic sampling to estimate geographic range and population size of Canada lynx. Co-lead with multiple scientists. *Swiss Wildlife Society Monitoring Conference*, Zurich, Switzerland. February 3, 2000.

OFFERED PRESENTATIONS

21st Century Science Leadership in Conservation Biology. *International Congress for Conservation Biology*, Cartagena, Colombia, July 26, 2017.

Spatially explicit power analyses to assess the power to detect trend for the southern Sierra Nevada fisher population. *The Wildlife Society*. Winnipeg, Manitoba, Canada. October 20, 2015.

Evaluating carnivore connectivity and corridors for conservation planning in the northern U.S. Rocky Mountains: A landscape genetics perspective. *Western Section of the Wildlife Society,* Sacramento, CA. January 23, 2009.

Should an "umbrella corridor" concept be used for landscape planning?: Empirical results from Rocky Mountain carnivores. *Montana Chapter of the Society for Conservation Biology: Applying Conservation Science to Action Conference***.** Missoula, MT. October 10, 2008.

Monitoring genetic change in natural populations. *Ecological Society of Australia,* Perth, Western Australia, Australia. November 25-30, 2007. Presentation by F.W. Allendorf.

Assessing fisher distribution and connectivity in the U.S. Rocky Mountains using non-invasive genetic sampling. *Montana Chapter of the Wildlife Society*, Bozeman, MT. February 6-9, 2007.

Hybridization in carnivores: What we know and what we have to learn. *Carnivores 2004*, Santa Fe, NM. November 14-17, 2004.

Hybridization in threatened and endangered species: An overview. *Society for Conservation Biology,* Columbia University, NY. August 1-3, 2004.

Carnivores and highways: An overview of the Lolo Pass projects. *Western Forest Carnivore Meetings,* Spokane, WA. May 1-2, 2002.

Combining genetic and demographic data to understand lynx population dynamics. *NW Section of The Wildlife Society*, Spokane, WA. April 17-19, 2002.

Wolverine research in the U.S. Rocky Mountains. *Society for Northwestern Vertebrate Biology*, Hood River, OR. April 3-5, 2002.

Genetic variation and the conservation of Canada lynx. *Society for Conservation Biology Annual Meeting*, Hilo, HI. July 29-Aug 2, 2001.

Gene flow, genetic variation, and ESUs for Canada lynx. *Defenders of Wildlife Carnivore Symposium,* Denver, CO. November 17, 2000.

Genetic variation in and gene flow between San Joaquin kit fox populations. *Ecological Society of America Annual Meeting,* Snowbird,UT. August 5-10, 2000.

Genetic variation in core and peripheral populations of Canada lynx (*Lynx canadensis*). *Society for Conservation Biology Annual Meeting,* Missoula, MT. June 9-12, 2000.

Estimating population size and genetic variation in Canada lynx (*Lynx canadensis*) populations using microsatellite DNA. *Western Forest Carnivore Meetings*, Whitefish, MT. May 2, 2000.

DNA-based estimates of genetic variation, gene flow and population size of San Joaquin kit fox. *San Joaquin Valley Wildlife Society Meetings*, Bakersfield, CA. March 24, 2000.

Estimating census and effective population size: What's new, what works, and what doesn't. *Montana Wildlife Society Meetings*, Great Falls, MT. February 22-24, 2000.

Sustainable versus unsustainable conservation efforts along the Peruvian Coast. *Montana Wildlife Society Meetings*, Missoula, MT. March 1997.

Humboldt penguin extra-pair mating: A selective advantage or a random occurrence. *Department of Zoological Research, Smithsonian Institution*, National Zoological Park, Washington D.C. August 16 1996.

Evidence of mixed mating strategies in the Humboldt penguin. *Graduate Student Conference*. College of Arts and Sciences, American University, Washington D.C. February 1996.

TALKS FOR GENERAL PUBLIC

Wolverines: Myths and truths. *UM Chapter of SCB / Defenders of Wildlife event at the Roxy Theater*, Missoula, MT. April 9, 2013.

Wildlife connectivity in the era of climate change. *Montana Natural History Center*, Missoula, MT. December 8, 2010. Missoula, MT.

The state of wolverine genetics: What we know and where do we go from here. *The Wolverine Foundation*, Puyallup, WA. June 27, 2010.

Wildlife CSI. *Montana Natural History Center*, Missoula, MT. November 5, 2008.

Wild fisher: A forgotten species. *Montana Natural History Center*, Missoula, MT. April 30, 2008.

Conservation genetics of fisher and other forest species. *Bitterroot Audubon*, Hamilton, MT. February 2007.

Conservation genetics of birds and other wildlife. *Five Valley Audubon Society*, Missoula, MT. August 2005.

Panel for the reintroduction of the grizzly bear into the Bitterroot Ecosystem. *Sponsored by the International Wildlife Film Festival*, Teller Wildlife Refuge, Stevensville, MT. 1997.

Understanding population viability analysis with regard to reintroduction of the grizzly bear into the Bitterroot Ecosystem. *Sponsored by the Alliance for the Wild Rockies*. September

1997.

INVITED CLASS TALKS

Agency research leads to effective conservation. *Senior capstone in Wildlife Biology*, College of Forestry and Conservation, University of Montana, Missoula, MT. April 2015.

Landscape ecology and genetics in practice. *Landscape Ecology*, Lead field trip to Clearwater Lake/Flathead Lake Biological Station, Yellow Bay, MT. June 2013, 2014.

Landscape ecology meets genetics. *Foundations of Landscape Ecology*, College of Forestry and Conservation, University of Montana, Missoula, MT. May 7, 2013.

Common sampling mistakes in conservation genetics. *Research Design*, Wildlife Biology Program, University of Montana, Missoula, MT. November 2, 2012.

Use of molecular genetics to inform management decisions under the National Forest Management Act and the Endangered Species Act. *Conservation of Wildlife Populations / Population Dynamics*, Wildlife Biology Program, University of Montana, Missoula, MT. September 7, 2012.

Ran a field sampling lab on non-invasive genetic sampling, followed by an afternoon in the laboratory. *Foundations of Wildlife Biology*, Wildlife Biology Program, University of Montana, Missoula, MT. February 21-23, 2012.

The role of agencies in providing scientific information for land management decisions. *Conservation Biology*, Flathead Lake Biological Station, Yellow Bay, MT. July 29, 2010, July 22, 2011.

Genetics and Wildlife Management. *USFS Carnivore Class*, Yellowstone National Park, WY. May 2003, 2005, June 2006-2013.

Spatial Genetics. *Ecology*, Division of Biological Sciences, University of Montana, Missoula, MT. October 2009.

Effects of sampling on population genetic results. *Research Design*, Wildlife Biology Program, University of Montana, Missoula, MT. April 20, 2009.

Graph theory and networks: New tools for landscape genetics. *Advanced Population Genetics*, Division of Biological Sciences, University of Montana, Missoula, MT. April 14, 2009.

Discussion on landscape genetics and sampling issues. *Beier Lab Group Meeting*, School of Forestry, Northern Arizona University, Flagstaff, AZ. December 4, 2008

Gene flow in ecological genetics: The good, the bad, and the ugly? *Ecology*, Division of Biological Sciences, University of Montana, MT. October 2008.

Wildlife genetics. *Introductory Biology,* Division of Biological Sciences, University of Montana, Missoula, MT. April 21, 2008.

Spatial genetics. *Landscape Ecology,* Lolo National Forest, Missoula, MT. August 2007, January/July 2008, January 2009.

Do we need to worry about sampling when evaluating gene flow? *Evolution and Organismal Wildlife Lunch Seminar,* Department of Ecology, Iowa State University, Iowa City, IA. October 19, 2008.

Forest management, sensitive species, and DNA. *School of Forestry,* University of Montana, Missoula, MT. March 2007.

Fisher detectability, presence, and absence. *USFS Regional Training Academy,* Missoula, MT. March 29, 2007.

How sampling influences genetic substructure results: an evaluation of program STRUCTURE. *Division of Biological Sciences,* University of Montana, Missoula, MT. February 2007.

Genetic monitoring of wildlife. *USFS Regional Training Academy,* Missoula, MT. March 30, 2006, March 29, 2007.

History of research in the USFS. *Conservation Ecology,* Flathead Lake Summer Course, Big Fork Ranger Station, Hungry Horse, MT. August 2006.

Use of landscape genetics for evaluating management options. *Division of Biological Sciences,* University of Montana, MT. February 2006.

What is valid data for estimating species distributions? *Ecology,* Yellow Bay Biological Station, Yellow Bay, MT. July 2005.

Estimating gene flow and effective population size for ecology and wildlife biology. *Wildlife Biology* , University of Montana, Missoula, MT. March 2005.

Detecting movement in carnivores using new technology. *Environmental Studies,* University of Montana, Missoula, MT. September 2004.

Conducting science for land management. *Conservation Ecology,* Yellow Bay Biological Station, Yellow Bay, MT. August 2004.

Does hunting effect the genetics and ecology of bighorn sheep? *Graduate Wildlife Science,* University of Montana, Missoula, MT. January 2004.

Combining conservation and conservation biology: A case study of the Lynx. *Conservation Genetics,* University of Montana, Missoula, MT. December 2003.

Detecting carnivores. *Conservation Ecology,* Flathead Lake Biological Station, Yellow Bay, MT.

July 2003.

The use of genetics in population viability analysis. *Conservation Genetics,* University of Montana, Missoula, MT. November 2001 – 2011.

Bottlenecks I: Causes and effects. *Advanced Population Genetics,* University of Montana, Missoula, MT. March 2003.

Bottlenecks II: New detection techniques. *Advanced Population Genetics,* University of Montana, Missoula, MT. March 2003.

A case study: El Nino and marine life along the coast of Peru – an example of environmental stochasticity. *Evolution (Biology),* American University, Washington D.C. April 1996.

SIGNIFICANT CONSULTATIONS / PRESENTATIONS (See Also Workshops)

USFWS Lynx Species Status Assessment. Served as an expert presenter for the USFWS at a multi-state / multi-agency species status assessment. My role was to advise on lynx genetics and genomics. October 13-14, 2015.

USFWS West Coast DPS Fisher Peer Reviewer Served as a peer reviewer for the UFSWS decision to list one or multiple DPS units on the West Coast for fishers. January 2015.

USFWS Sage Grouse DPS and Management Unit Assessment. Attended a multiday meeting to assess if Distinct Population Segments exist for Sage Grouse, and what activities could be used to maintain connectivity with a DPS. September 2014.

USFS Multi-Carnivore Monitoring Strategy I have lead a group to devise a comprehensive Region 1 carnivore monitoring strategy. This group is R1 Wildlife leadership members, RMRS scientists, and USFWS listing coordinators and is focused on lynx, wolverines, and fishers. 2014-2015

Montana Fish Wildlife and Parks I was requested to participate in a small 4 person working group to find ways to improve relationships and reduce conflict between the US Forest Service and the State of Montana's Fish Wildlife and Parks. June 2014-May 2015.

Rocky Mountain Research Station Leadership Assigned to a restructuring team to evaluate ways to improve station efficiency. June – Sept 2014

USFWS Lynx Substructure. Consulted with USFWS on latest information on lynx substructure on both the East Coast and the Rocky Mountains. April 2014.

USFS Region 1 Fisher Assessment Provided scientific guidance towards Region 1 of the USFS' species assessment and conservation plan for the fisher. 2013-2014.

USFS Region 1 Fisher NEPA Studies Served as a scientific advisor to Region 1 of the USFS on several administrative studies to understand how fishers use dry forests and rare forest types. I consulted on how to design a study and how to interpret results from ongoing fisher research at RMRS. Meeting biweekly. 2012 – 2013.

Congressman Daines Staffer Consulted and provided tour for staffer at Congressman Daines office on opportunities to develop a genomics facility and its benefits to conservation and management. June 25, 2013.

USFWS Wolverine Monitoring Consulted with USFWS on monitoring issues associated with designing a large-scale genetic monitoring program for wolverines. April 25, 2013.

Idaho Wolverine Substructure Consulted with Idaho Fish and Game on genetic issues associated with substructure of Idaho wolverines. April 25, 2013.

Managed Relocation Consulted with the USFS National Program Leader in Genetics and Global Change Research on best management practices for managed reloction. March 13-2013 – Present.

California Black-backed Woodpecker Listing Decision I worked with scientists from the California Department of Fish and Wildlife and The Institute for Bird Populations to understand if the California black-backed woodpeckers are contiguous with the Oregon populations as this species has recently been proposed for listing under the US Endangered Species Act. December – June 2013.

Peer Reviewer for Wolverine Listing Decisions Was formally asked by USFWS to review their listing decision to list the northern Rocky Mountain population of wolverines and their decision to initiate a reintroduction of the species into Colorado. April – May 2013.

Clearwater / Nez Pierce National Forest Carnivore Monitoring Worked with forest biologists to design a joint monitoring program for fishers, lynx, and wolverine. December 19,2012, January 18/April 2013.

Humboldt Marten Conservation Group I presented genomic data on the subspecies status of the Humboldt marten and other subspecies of marten to help determine the validity of ESA listing status. October 30, 2012.

Wolverine and Lynx Biology Team I presented research findings and consulted with team members to demonstrate the power and efficacy of various monitoring efforts to detect trends in carnivore population decline and recovery. October 25, 2012.

Olympic National Park Fisher Reintroduction We are helping USGS and NPS design a monitoring study to examine the success of fishers in Olympic National Park. Multiple meetings. 2011 – 2013.

Wolverine Biology Team I presented our first round of statistical power modeling results to the Wolverine Biology Team. These data show the effort required across agencies and NGOs

to actually detect trend in wolverine populations over time. September 1, 2011.

Fisher Genomic Data I met with biologists, managers, and policy makers in the Sierra Nevada to discuss the implications of our recent findings on ESA listing decisions. See Knaus et al. 2011. June 27, 2011.

Fisher Habitat Use Multiple consultations with rangers and forest personnel concerning management of forest units and how these landscape altering actions may influence threatened fisher populations. Bitterroot National Forest – April 29, 2011, Flathead National Forest – January 31, 2011.

Large Scale Landscape Connectivity Multiple consultations with agencies such as Montana Fish Wildlife and Parks, USFWS (LCCs), and Northwest Landscape Integrity Group (multi-agency group) on interpretation of largescale landscape mapping efforts. August 4, 2011, September 8/21, 2011, respectively.

National Park Service, Biological Resource Management Division Reviewed a Bison Conservation Genetic Workshop Report and Recommendations, which provides options for the management of the Department of Interiors bison herds. Additional conference calls with the chief of the Biological Resource Management Division and the Endangered Species Program Manager. June – July 2010.

Potlatch Timber Company Consultation with company biologists regarding new fisher genetic information and how it may impact future forestry practices. Idaho. June 21, 2010.

USFS Washington Office of Planning (NFS). Consultation regarding the use of genetics in the new planning rule. May 10, 2010.

Penobscot Indian Nation and USFWS. Consultation on the species of canids (grey wolf, eastern wolf, coyote) found in Maine. December 11, 2009.

National Wildlife Federation, Northern Rockies Regional Center Consultation with sage steppe coordinator at NWF office regarding sharp tailed grouse genetics data and the delineation of subspecies boundaries. Missoula, MT. December 1, 2009.

Chief of the USFS Review, Northern Region. Presentation and panel: Challenges and opportunities in sustaining forest and grassland health. Whitefish, MT. November 2, 2009.

Aldo Leopold Wilderness Research Institute Participated in a wilderness workshop to help determine the direction of the Institute and the future of wilderness research. Missoula, MT. April 28-30, 2009.

American Wildlands Provided staff at American Wildlands information on connectivity of wolverine and bears and discussed appropriate use of information and how to avoid GIS abuses. May 1, 2009.

USFWS, Ecological Services. Reviewed synthesis of wolf taxonomy in the United States, including red wolves, eastern wolves, Mexican wolves, great lakes wolves, and grey wolves. Consulted with USFWS senior scientists regarding their status and synthesized information. May 2009.

Wolverine Biology Team Delivered a presentation on the genetics of wolverine. Missoula, MT. October 2. 2007.

USFWS, Listing Branch Gave a presentation on the genetics, ESUs, and effective population size of wolverine in the contiguous United States. Consultation continued until September 2010. Missoula, MT. September 19, 2007.

Department of Justice Expert witness presenting DNA statistical data for a federal court case involving poaching of lynx in Duluth, MN. August 21, 2007.

USFWS, Division of Scientific Authority for CITES Consultation on how hybridization of lynx and bobcats and the similarity of appearance between these species should impact the US position on delisting bobcats from CITES. May 10, 2007.

USFS, Washington Office Reviewing the proposed removal of bobcats from CITES. January – March 2007.

Coeur D'Alene Tribes Coordinating fisher surveys in the Rocky Mountains. December 8, 2006.

Department of Interior Genetics and taxonomy of endangered species workshop. May 23-24, 2005.

USFS National Wildlife Strategic Monitoring Steering Committee January – September 2004.

USFS Region 10 Joint USFS and Fish and Game Seminar. *Genetic technology and capabilities for estimating abundance of sitka black-tail deer.* April 2004.

USFWS *What can DNA provide for management.* Juneau, AK. April 2004.

USFS Region 1 Workshop on forest carnivore biology. *Carnivore genetics: Implications for management and conservation.* May 2003.

Watershed, Wildlife, Fisheries, and Rare Plants, USFS, Northern Region *Wildlife genetics: Providing new information to old problems.* June 2003.

Rocky Mountain Research Station Leadership Team *Wildlife Genetics in RWU 4201*. July 2003.

IDT, USFWS, and USFS Lolo Pass partner's meeting. *Overview and Updates on Lolo Pass Research Projects*. July 2003.

USFS Regional wildlife leaders meeting. *The use of genetics for Forest Service Research.* July

2003.

USGS Meeting on procedures for estimating population size of grizzly bears in the Northern Continental Divide Ecosystem. *Recommendations for laboratory processes*. September 2002.

USFS, Northern Region RIM board. *Genetic approaches to monitoring and population viability*. December 2002.

USFS, Northern Region RIM board. *New approaches to predator viability in the Rocky Mountain west*. December 2001.

CONFERENCE POSTERS

Leopard seal hunting behavior. Co-lead with L.M. Hiruki and P.L. Boveng. *Eleventh Biennial Conference on the Biology of Marine Mammals*, Orlando, FL. 1995.

Male harbor seal visual and acoustic underwater displays. Co-lead with D.J. Boness and B. Buhleier. *Eleventh Biennial Conference on the Biology of Marine Mammals*, Orlando, FL. 1995.

The effect of leopard seal predation upon Antarctic fur seals at Seal Island, Antarctica. Co-lead with L.M. Hiruki, P.L. Boveng, and J.L. Bengston. *Scientific Committee of Antarctic Research Symposium on Biology*, Venice, Italy. 1994.

Breeding success and morphological variability of cape petrels on Seal Island, Antarctica. Co-lead with J.L. Bengston. *Scientific Committee of Antarctic Research Symposium on Biology*, Venice, Italy. 1994.

RESEARCH FEATURED IN POPULAR PRESS

- *This Week's eWildlifer & TWS Talks. Talk:* "Can we predict genetic adaptation to climate change" *October 13, 2016*
- *Science You Can Use (RMRS Bulletin).* "Here today, here tomorrow: managing Forests for Fisher Habitat in the Northern Rockies. *Sept/Oct.*
- *Missoulian.* Missoula scientists' wildlife DNA work tops global ranking. January 18, 2016
- *Lewiston Tribune, Missoulian, Helena Air.* Study holds out hope for cutthroat trout. January 20, 2016
- *Helena Independent Record*. We all have a responsibility: biologists launch unprecedented multistate wolverine study. January 14, 2016.
- *Billings Gazette, Missoulian, Helena Independent Record.* Scientists try to coordinate rare carnivore research. December 26, 2015.
- *Montana Magazine*. Wonders of the wild. Nov/Dec 2015
- *Quartz News Digest.* Superwolves, new butterflies, and all the hybrid species evolving before our eyes. June 4, 2015.
- *KPAX-TV*. Missoula lab revolutionizing use of DNA in animal studies. March 30, 2015.

- *Billings Gazette*, *Missoulian*, U.S. Forest Service: New Missoula lab uses DNA to expose hidden wildlife. March 3, 2015.
- *LA Times*, California's only known wolverine nearing end of his natural life. January 16, 2015.
- *Huffington Post, AP, ABCNews.* California's only wolverine spotted in Sierra Nevada. January 10, 2015.
- *On Earth*, Forging a new path. September 2014. http://www.onearth.org/articles/2014/09/designing-wildlife-corridors-how-to-build-a-better-mouse-trap
- *Montana Outdoors*, Reading an animal's "fingerprints". March-April, 2014.
- *Reuters / NBC,* New species of ugly, big-headed fish found in Idaho and Montana. January 30, 2014
- *Spokesman Review*, Cedar sculpin fish species discovered in region's streams. January 30, 2014
- *Missoulian / KPAX TV*, Study finds twice as many mountain lions in Bitterroot as expected. January 9, 2014
- *LA Times*, Furry fishers, don't blame the gold rush. March 8, 2013
- *National Wildlife*, On the trail of the ghost cat. March 2013
- *High Country News*, Wildlife Biology Goes High-Tech, December 27, 2012.
- *Adirondack Daily Enterprise*, April 21, 2012. Moose genealogy.
- *Inside Science / US News and World Report*, January 19, 2012. Designing Wildlife Corridors in the Digital Age
- *Science News*, August 27, 2011. Genes, sightings, retrace path of cougar's journey.
- *CBS News*. Tale of Wandering Cougar Seen as Harbinger, July 29, 2011.
- *Live Science*, July 29, 2011. Cougar's record-breaking trek reveals larger trend.
- *National Public Radio*, July 27, 2011. Connecticut mountain lion likely came from the Black Hills
- *New York Times*, July 26, 2011. Wild cougar traveled east 1,500 miles, tests find.
- *Land Letter*, April 28, 2011. "Scientists probe genetic component of climate-hardy species."
- *Montana Magazine*, March/April 2011. "Protecting a predator."
- *The Missoulian*, February 24, 2011. "Biologists hunt for fisher hair in Fish Creek"
- *The Sacramento Bee*, Feb. 20, 2011. "Lone wolverine continues to roam Sierra"
- *Big Ideas for a Small Planet* (*Sundance Channel*) October 2009. – Detector dogs.
- *The Missoulian*, April 10 2009. "Super sniffers - Group trains canines to pinpoint scat, snails - even noxious weeds "
- *The New York Times*, March 2009. "Tools That Leave Wildlife Unbothered Widen Research Horizons"
- *Chicago Wilderness Magazine*, Summer 2008. "Cougar Killed in Chicago"
- *Bloomberg News*, May 14, 2008. "Wolverines Return to California, Scaring Bears, Mountain Lions"
- *Chicago Tribune*, April 30, 2008. "Scientists clamor to study cougar shot in Chicago"
- *Wichita Eagle*, April 18, 2008. "Cougar killed in Chicago may be from S. Dakota"
- *Sioux Falls Argus Leader*, April 17, 2008. "Likely Black Hills cat shot in Chicago"
- *Washington Post*, April 16, 2008. "Young, Restless Cougars Roaming Eastward"

- *Redding Record Searchlight*, April 13, 2008. "Scientist: Wolverine seen in Sierra Nevada came from Rockies"
- *San Francisco Chronicle*. April 3, 2008. "Scientists: Tahoe Wolverine not from state". Story also covered by Sacramento Bee, Sierra Sun (Truckee CA), KNCO Radio, and Redding Record Searchlight.
- *Defenders*. Summer 2007. "Quest for a forest phantom."
- *Coloradoan.* May 7, 2007. "Why are bighorn sheep struggling in Rocky Mountain National Park."
- *Casper Star Tribune*. January 29, 2007. "Decade long cougar study nears end"
- *Great Falls Tribune.* Jan 18, 2007. "Lion lessons"
- *Great Falls Tribune.* Jan 18, 2007. "Follow that cat!"
- *Horizon Air Magazine*. July 2006. "Fascinating Fishers."
- *Woods-N-Water Magazine*. May 2006. DNA analysis from the Michigan Thumb Wolverine.
- *Missoulian*. June 14, 2005. "Missoula researcher honored as top young scientist."
- *New Scientist*. November 10, 2004. "Moas on decline before humans arrived."
- *Cali. Acad. of Sci.: California Wild*: Nov. 17, 2004. "Moas on decline prior to human arrival."
- *Bangor Daily News*. August 28, 2003. "Canada lynx bobcat hybrids confirmed in Maine"
- *Portland Press Herald*. August 28, 2003. "A rare, curious hybrid"
- *Duluth News Tribune* June 3, 2003. "Cross-breed of bobcat lynx found"
- Minnesota Public Radio April 24, 2003. "The missing lynx"
- CBC North Radio February 6, 2002. Radio Interview
- *Denver Rocky Mnt. News* February 2, 2002. "Study shows lynx really get around" (AP Wire)
- *Science News* February 2, 2002. "Genetic Lynx"
- *National Geographic News* February 2002. "Lynx needs habitat corridor protection, study suggests"

PUBLISHED PHOTOGRAPHS

Book Cover (Zielinski 2011) Photo of a fisher. 2011
Missoulian Fisher (*Martes pennanti*) photo in April 26 paper. 2010.
USFS Kids in the Woods Photo Contest Honorable mention. 2009.
Bluebird Cover photograph spring issue. 2002.
Science News February 2 issue. 2002.
Proceedings of the National Academy of Sciences May 8 issue. 2001.
Ecological Society of America Bulletin Cover photograph January. 1999.
Bioscience Cover photograph October. 1996.
General Biology Laboratories Cover photographs (3). 1996.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Ecological Society of America
- Society for Conservation Biology
- Fauna and Flora International

ASSOCIATE EDITOR OR REVIEWER

Associate / Handling Editor

- *Conservation Biology (Handling Editor, 2011-present)*
- *Marine Mammal Science (Guest Associate Editor - 2009-Present)*
- *Conservation Genetics (Associate Editor, 2006-2012)*
- *North Eastern Naturalist (Guest Associate Editor in 2008)*

Reviewer

- National Science Foundation
- USFS & USFWS –Internal Grants and Panels
- *Acta Theriologica*
- *Alaska Sea Grants*
- *Animal Conservation*
- *Arctic*
- *Auk*
- *Biodiversity and Conservation*
- *Biological Conservation*
- *Biology Letters*
- *BioScience*
- *BMC – Evolutionary Biology*
- *Conservation Biology*
- *Ecology*
- *Ecological Applications*
- *Ecology and Society*
- *European Journal of Wildlife Research*
- *Global Change Biology*
- *Journal of Mammalogy*
- *Landscape Ecology*
- *Marine Biology*
- *Marine and Coastal Fisheries*
- *Marine Mammal Science*
- *Molecular Ecology*
- *Molecular Ecology Resources*
- *Movement Ecology*
- *National Geographic Society – Conservation Grants*
- *Oikos*
- *Proceedings of the Royal Society of London (Biological Series)*
- *PLOS One*
- *Science*
- *Trends in Ecology & Evolution*
- *Ursus*
- *Wildlife Biology*
- *Journal of Zoology (London)*
- *Journal of Wildlife Management*

SERVICE AND VOLUNTEER ACTIVITES (See Also Public Talks)

2016-2017	Level 1 Certified Ice Hockey Referee
2012-2015	Level 3 Certified Ice Hockey Coach
2014	Little League Baseball Head Coach (U10)
2011-2012	Level 2 Certified Ice Hockey Coach
2010-2011	Level 1 Certified Ice Hockey Coach
2011-2009	Coach – U6 Boys Soccer, U8 Boys Soccer
2003-2004	Neighborhood Council Leadership Team
2001-2004	NSF: IBScore Undergraduate Mentor
1998-2002	Film Judge: International Wildlife Film Festival
1999-2000	SCB 2000 Local Organizing Committee
1998	Montana Science Fair Final Judge
1997-1999	Montana Public Radio – Wrote and Read “Field Notes”
1997	Quantitative Ecologist Search Committee – University of Montana
1997	Training Peruvian Students in Field Ecology (Radio-tracking)
1997	Forest Pathology and Entomology Search Committee – University of Montana

1996	Smithsonian Folklife Festival, Washington D.C.
1995-1996	Field Biologist: Cave Invertebrates Studies, Organ Cave, WV
1994-1996	LIFE Education Program, National Zoological Park, Washington D.C.
1994-1996	Graduate Student Evaluation Committee, Biology Department, American Univ.
1994	Chairman Search Committee, Graduate Rep., American University

OTHER SKILLS AND TRAINING

2016	Wilderness First Responder
2004, 2009, 2011, 2014	Wilderness First Aid and CPR
2004-2009, 2014	Defensive Driving, USFS
2003	Supervisor Training
2003, 2009	Bear Spray Training
2003, 2007, 2012	Media Training, USFS
2002	First Aid Training, USFS
2002	Sawyer Class B (Limited), USFS
2002	Snowmobile Certified, USFS
2002	Avalanche Awareness, USFS
1999	Animal Handling and Immobilization
1996	DNA Fingerprinting and Microsatellite Development
1996	Radiation Safety, Smithsonian Institution
1992	Wildlife Inflicted Injury First Aid
1992	First Aid Training, NOAA
1988	YMCA Certified Scuba Diver

BI/COI FORM 3

The National Academies of
SCIENCES · ENGINEERING · MEDICINE

BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE
For General Scientific and Technical Studies and Assistance

NAME: Michael Schwartz

TELEPHONE: 406-542-4161

ADDRESS: National Genomics Center for Wildlife & Fish Conservation, 800 E. Beckwith Ave Missoula MT

EMAIL ADDRESS: mkschwartz@fs.fed.us

CURRENT EMPLOYER: USDA Forest Service

COMMITTEE: _____

_____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for the project and committee activity to which this form applies. **Retain a copy for your records.**

INSTRUCTIONS

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to -- and might reasonably be of interest to others concerning -- your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS. Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

See C.V.

II. GOVERNMENT SERVICE. Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

See C.V.

III. RESEARCH SUPPORT. Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

See C.V.

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

See C.V.

V. ADDITIONAL INFORMATION. If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

See C.V.

PART II **CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest,* ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic.* They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests.* It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is <u>not</u> a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a

fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making recommendations to sponsors regarding specific contract or grant awards, etc. -- careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the institution in the development of reports to be provided by the institution to sponsoring agencies.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, fellowships, etc., this institution is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you have been invited to serve.

1. FINANCIAL INTERESTS. (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than $10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here _X_ (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS. (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?

(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications -- or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here _____ (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

EXPLANATION OF "YES" RESPONSES:

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.

YOUR SIGNATURE

16 OCT 2017
DATE

Reviewed by: _____
Executive Director

_____
Date

Attachment 01

Potential additional conflicts of interest may include employment or affiliation with the Service, the States of California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, or Wyoming, or the Canadian Federal government; and peer reviewers, who have been or are directly or indirectly employed by any organization that has either litigated the federal government concerning wolverines or taken a position on one side or the other about the status of the North American wolverine in the contiguous United States. In addition, individuals who served as peer reviewers for previous proposed rules or who were participants in the April 2-3, 2014 facilitated wolverine workshop held by the Service should be disqualified from this peer review process. Finally, the reviewers should have no financial or other conflicts of interest with the outcome or implications of the report.

If the reviewer has no potential conflicts of interest as described under ATTACHMENT 01, check here X (NO).

If the reviewer has any potential conflict of interest as described under ATTACHMENT 01, check here_____(YES), and briefly describe the circumstances below.

EXPLANATION OF "YES" RESPONSES:

Revised to March 27, 2017

DANIEL J. HARRISON

Department of Wildlife Ecology
University of Maine, 5755 Nutting Hall
Orono, ME 04469-5755
(207) 581-2867 (Work)
(207) 852-1871 (Cell)
harrison@maine.edu

PROFESSIONAL EXPERIENCES

9/2000-8/2013 & 9/2016-present: ***Professor of Wildlife Ecology***, Dept. of Wildlife Ecology, University of Maine; ***Cooperating Professor***, Center for Research on Sustainable Forests (2007-present); ***Cooperating Scientist*** **,** Maine Cooperative Forestry Research Unit (1999-present); ***Cooperating Professor***, Department of Forest Ecosystem Science (1999-2005) and Center for Research on Sustainable Forests (2008-present); and ***Faculty Associate***, Maine Cooperative Fish and Wildlife Research Unit, Univ. of Maine (1988-present). Tenured, academic year appointment with shared research (50%) and teaching (50%) responsibilities; appointment changed to 75% research, 25% teaching, effective 9/1/2005. Course instruction: Wildlife-Habitat Relationships (WLE 450, Cr. 4), Introduction to Wildlife Resources (WLE 100, Cr. 1), Graduate Course in Habitat Ecology (WLM 650, Cr. 4; team-taught), Graduate Course in Carnivore Ecology and Management (WLE 565, Cr. 3). Serve as academic advisor to undergraduate students and as thesis advisor for graduate students (Responsible for: base-funded research program in wildlife-forestry relationships supported through the Maine Agricultural and Forest Experiment Station; extramurally funded research program in habitat relationships of forest wildlife and ecology of meso-carnivores and their prey; public service; technology transfer. Provide research advisement and technology transfer to large private forest landowners, state and federal resource management agencies, and NGO's.

9/2013-8/2016: ***Chair, Professor, and Undergraduate Coordinator*****,** Department of Wildlife, Fisheries, and Conservation Biology, University of Maine; 70% administration, 20% research, 10% instruction. Administer an academic department including 7 university faculty, a federal USGS research unit (2-3 scientists), 2 support personnel, post-doctoral scientists, research associates, approximately 25 graduate research and teaching assistants, and 125 undergraduate wildlife majors. Taught co-capstone senior-level undergraduate course, administered and supervise research grants, and led a lab comprised of graduate students, technicians and a post-doctoral scientist.

7/2001-6/2002: ***Interim Chair***, Department of Wildlife Ecology, University of Maine.

9/93-8/00: ***Associate Professor of Wildlife Ecology***, Dept. of Wildlife Ecology, University of Maine; duties listed above plus served as administrator and instructor for mandatory 3-week summer field camp, Wildlife Field Survey (WLE 250, Cr. 3, 1994-97).

1/88-8/93: ***Assistant Professor of Wildlife***, Dept. of Wildlife, University Maine. 50%-50%, shared research-teaching appointment (9-month). Additional responsibilities included serving as advisor to the Student Chapter of The Wildlife Society, and administration and instruction of the summer field camp, Wildlife Field Survey (WLE 250, Cr. 3, 1988-93). Twice served as instructor in senior-capstone course in wildlife policy and administration (Cr. 3). Developed and taught 4 credit undergraduate habitat

course with 2 sections of lab (1988-93), and a graduate course in predator ecology (Cr. 3).

2/86-12/87: ***Wildlife Research Supervisor*** (Staff Associate-Wildlife), Wildlife Bureau, Connecticut Department of Environmental Protection. Responsible for overall supervision, administration, budgeting, and coordination of statewide research and management programs for Nongame and Endangered Species, Upland Wildlife (small game), and Mammals (except deer). Supervised a staff of 6 wildlife biologists and 2 clerical staff.

6/85-2/86: ***Mammal Program Leader*** (Wildlife Biologist I and II), Wildlife Bureau, Connecticut Department of Environmental Protection. Administered statewide research and management programs for 14 species of harvested and non-harvested mammals.

EDUCATION

1982-1985: University of Maine, ***Ph. D. in Wildlife***, August 1986; Dissertation: Coyote Dispersal, Mortality, and Spatial Interactions with Red Foxes in Maine.

1980-1982: University of Maine, ***M.S. in Wildlife Management***, May 1983; Thesis: Denning Ecology, Movements, and Dispersal of Coyotes in Eastern Maine.

1976-1980: University of Wyoming, ***B.S. in Wildlife Management***, May 1980.

PROFESSIONAL SERVICES

Affiliations

Society for Conservation Biology
American Society of Mammalogists
The Wildlife Society (national, section, chapter)
Martes Working Group

Committees/Professional Service

Invited external reviewer, Species Status Assessment for U.S. population of Canada lynx (2017)
Chair of DWFCB Alumni Awards Committee, (2016-present)
Undergraduate Program Coordinator, Dept. Wildlife, Fisheries, and Conserv. Biol. (2013-2015)
Search Committee, Assistant Professor of Wildlife Habitat Ecology, University of Maine (2015)
Institutional Animal Care and Use Committee, University of Maine (2012-2014)
Chair of Search Committee, Assistant Professor of Wildlife Population Ecology (2013)
Peer Committee Chair, Department of Wildlife Ecology, University of Maine (2012-2013)
Faculty Senator, University of Maine (2010-2012)
Financial and Institutional Planning Committee, Faculty Senate (2010-2012)
Board of Directors, The Forest Society of Maine (2008-2011)
Land Conservation Committee, Forest Society of Maine (2009-present)
Scientific Advisor, Carnivores 2006 Conference, St. Petersburg, Florida (2005-06)
External Program Review Team, Dept. Natural Resources, Univ. New Hampshire (2006)
Search Committee for Asst. Professor Fisheries, Dept. Wildlife Ecology, Univ. Maine (2006)
Invited Peer Reviewer, U.S. Fish &Wildlife Service, Critical Habitat Proposal for Lynx (2006)
Research Council, Maine Agricultural and Forest Experiment Station (2005-2008)
Peer Review Team, Endangered Wolf Delisting Proposal, U.S. Fish Wildlife Service, (2004)
Scientific Advisor, Carnivores 2004 Conference, Santa Fe, New Mexico (2003-04)

Cooperating Scientist, Maine Cooperative Forestry Research Unit, (1999-present)
Scientific Advisor to Newfoundland Model Forest, marten research, (1997-2010)
Invited Member, Recovery Team for Endangered Newfoundland Marten, (1998-2010)
University Representative on Northern Maine Landscape Planning Comm. (2002-2008)
Committee of Whole for Curriculum and Graduate Issues, Dept. of Wildlife Ecology (1988-present)
Awards Committee, Maine Chapter of The Wildlife Society, (1992-present)
Peer Review Committee, Dept. Wildlife Ecology, University Maine (1988-present)
Hosted 4 landscape planning workshops for agencies and environmental groups (2002-2010)
Coauthored position on coyote snaring bill, Maine Chapter, The Wildlife Society (2003)
Member of Search Committee, Assistant Coop. Unit Leader for Fisheries (2003)
Invited External Review Participant for Maine Dept. Inland Fisheries and Wildlife (2003)
Nongame/Endangered Species Advisory Council, MDIFW (1999-2002)
Chair, Search Committee for Instructor in Wildlife Ecology (2001-02)
Search Committees for Faculty Sabbatical Replacements (2) (2001-2002)
Co-author on Forestry-Wildlife Alumni Newsletter, Univ. Maine (2002)
U.S.D.A. Forest Service Expert Review Panel for Species at Risk WMNF, GMNF (2002)
Forest Biodiversity Benchmarks Working Group, Maine Forest Service (2001-02)
Advisor to Huber Corp. on forest wildlife habitat supply planning (2001-2002)
Expert Panelist, Eastern Wolf Conference (2002)
Scientific Advisor, Carnivores 2002 Conference, Monteray, California (2001-02)
Program Chair/Co-Convenor, 3rd Int. *Martes* Symp., Newfoundland, (2000)
Consulting Scientist to industry on biocontaminants issues with aquatic mammals, (2000)
Search Committee for Finance/Communications Coordinator, Maine Coop. Forest Res.Unit, (1999)
Search Comm. for Asst. Leader/Wildlife, Maine Coop. Fish and Wildlife Research Unit, (1999)
College Committee for Development of Green Endowment policies (1999)
Research and Public Service Committee, Faculty Senate, (1994-95, 1998-1999)
Forest Research Center Steering Committee, College of NFA (1998-2000)
Restructuring Committee for Maine Cooperative Forestry Research Unit (1998-1999)
Usniversity of Maine Faculty Senate (elected), (1993-1999)
Lynx Research Working Group, MDIFW & USFWS (2000-present)
Timber Wolf Advisory Committee, Maine Dept. Inland Fisheries & Wildlife (1997-2000)
Search Committee for Silvicultural Program Leader, CFRU, (1997-98)
Search Committee for Instructor, Dept. Wildlife Ecology, (1997)
Academic Affairs Committee, Faculty Senate, (1997-98)
Constitution and Bylaws Committee, Faculty Senate, (1996-97)
Search Committee for Program Scientist, CFRU (1996)
Search Committee for Assistant Professor of Wildlife Ecology (1995)
Admissions Committee, Graduate Program in Ecology and Environmental. Sciences, (1994-96)
Forest Ecosystem Research Committee, University Maine, (1993-95)
Auditing Committee, NE Section, The Wildlife Society, (1989-94)
Scholarship Committee, College Forest Resources, (1989-94)
Scholarship Committee, Department of Wildlife Ecology, (1988-96)
University Forest Advisory Committee, College of Forest Resources, (1989-94)
Predator Management Committee, Baxter State Park, (1993)
Presidential Public Service Awards Committee, University Maine, (1993-94)
Faculty Research Funds Committee, University Maine, (1988-91), Chair, (1990-91)
Evaluation Committee for Dean of Graduate School, (1991)

Executive Committee of the Graduate School, (elected), (1989-90)
Graduate Board, (elected), University Maine, (1988-91)
Northeast Fur Resource Technical Committee, (1985-1991)
Facilities and Safety Committee, College of Forest Resources, (1988-89)
Cooperative Extension-College of Forest Resources Working Group, (1988-89)
Advisor, Student Chapter of the Wildlife Society, University Maine, (1988-92)
Executive Board (elected), Maine Chapter of The Wildlife Society (1989)

Editorships

-Associate Editor for *Wildlife Biology*, September 2009 – 2012
-Senior Editor for a Contributed book: ***Ecology and management of <u>Martes</u> in human altered landscapes: An International Perspective***. Reviewed, edited, and revised 22 contributed chapters, wrote Preface, and coordinated publication (published by Springer, New York in 2004).
-Guest editor for Northeastern Naturalist (2005-06)
-Consulting Editor for Wildlife Monographs (2000)

Manuscript Reviews (in order of number of manuscripts reviewed: range 1-49)

Journal of Wildlife Management
Wildlife Biology
Journal of Mammalogy
Wildlife Society Bulletin
Forest Ecology and Management
Landscape Ecology
Conservation Biology
Canadian Journal of Zoology
Northeastern Naturalist
Wildlife Monographs
Bioscience
Behavioral Ecology
Ecology
Ecological Applications
Ecography
Environmental Monitoring and Assessment
Southeast Proceedings
Southwest Naturalist
Northeast Wildlife
American Midland Naturalist
Wildlife Biology
Wildlife Research
Proceedings of 5th International *Martes* Symposium
Proceedings of 2nd International *Martes* Symposium
Proceedings of 1st International *Martes* Symposium
Maine Agricultural and Forest Experiment Station Miscellaneous Reports

Other Professional Contributions

Granted > 130 media interviews; contributed to 3 film documentaries, presented legal and public testimony on numerous occasions, have provided technical advice to natural resource agencies and non-governmental organizations in Maine, Alaska, Rocky Mountain states, Ontario, New Brunswick, Nova Scotia and Newfoundland Canada, and Tanzania; hosted numerous field trips for visiting scientists, organizations, and businesses; provided technology transfer (newsletters, phone calls, presentations, field visits) for forest products businesses in Maine, handled hundreds of requests for information from public; presented >100 public talks; frequently review scientific proposals for business, federal agencies, and other universities.

Honors and Awards

2009:	Distinguished Alumnus Award, Department of Wildlife Ecology, University of Maine
2008-2009:	University Research Sabbatical, University of Maine (competitive system-wide award)
2008:	Award of Professional Excellence, Department of Wildlife Ecology, The University of Maine (awarded to alumni)
2007:	Maine Chapter of the Wildlife Society's Meritorious Service Award
2007:	Appointed Cooperating Professor, Center for Research on Sustainable Forests
2006:	G. Peirce and Florence Pitts-Webber Award to the Outstanding Researcher in Forest Resources, University of Maine
2000:	G. Peirce and Florence Pitts-Webber Award to the Outstanding Researcher in Forest Resources, University of Maine
1998:	Appointed Cooperating Scientist, Maine Cooperative Forestry Research Unit
1992:	Distinguished College of Forest Resources Professor of the Year, University of Maine
1985:	Dow-Griffee Award to Outstanding Graduate Students in Agriculture, Forestry and Wildlife at the University of Maine
1984:	New England Outdoor Writer's Scholarship to Outstanding Wildlife Student in New England (selected from regional competition among state-level awardees).
1984:	New England Outdoor Writer's Scholarship to Outstanding Wildlife Student in Maine
1979:	Phi Kappa Phi, University of Wyoming

GRADUATE ADVISING:

-Served as major advisor for 19 M.S., 3 non-thesis Masters and 7 Ph.D. students; 25 dissertations, theses, and final project reports completed to date.
-Served on 42 graduate committees where I did not serve as major advisor.
-Mentored 4 post-doctoral Research Scientists and several post-M.S. Research Associates.

TEACHING EXPERIENCE:

Taught 37 sections of 6 undergraduate semester courses (median instructor rating 1.42; 1=excellent, 5=poor); managed and taught the required 3-week, summer field session for wildlife students annually for 10 years (median instructor rating 1.50); advised 8-33 undergraduate wildlife students annually, taught 12 semesters of graduate courses in Predator Ecology and Habitat Analysis (median instructor rating 1.50), and instructed graduate thesis (54 semesters).

PUBLICATIONS (* = refereed)**:**

Books, Journal Articles, Book Chapters, and Published Conference Proceedings

*xxxx - Loman, Z. G., W. V. Deluca, D. J. Harrison, P. B. Wood, C. S. Loftin, and W. S.Schwenk. Submitted. Forest birds usefulness as representatives using fine scale proxy models. ***Diversity and Distributions***.

*xxxx – Rolek, B. W., D. J. Harrison, C. S. Loftin, and P. B. Wood. Submitted. Regenerating clearcuts and post-harvest treatments promote spruce-fir avian assemblages and richness in managed stands. ***Forest Ecology and Management***

*xxxx – Simons-Legaard, E. M., D.J. Harrison, and K. R. Legaard. Submitted. Efficacy of regulations to reduce winter habitat loss and fragmentation in deer wintering areas. ***Biological Conservation***.

*In press - Loman, Z. G., W. V. Deluca, D. J. Harrison, C. S. Loftin, B. W. Rolek, and P. B. Wood. Submitted. Landscape capability models as a tool to predict fine-scale forest bird occupancy and abundance. ***Landscape Ecology***.

*2017 - Loman, Z. G., E. J. Blomberg, W. V. Deluca, D. J. Harrison, C. S. Loftin, and P. B. Wood. Landscape capability predicts upland game bird abundance and occurrence. ***Journal of Wildlife Management*** DOI:10.1002/jwmg.21265

*2016 – Simons-Legaard, E.M., D.J. Harrison and K.R. Legaard. Habitat monitoring and projections for Canada lynx: linking the Landsat archive with carnivore occurrence and prey density. ***Journal of Applied Ecology*** 53:1260-1269.

*2013 - Fuller, A. K,. and D. J. Harrison. Modeling the influence of forest structure on microsite habitat use by snowshoe hares**.** ***International Journal of Forestry Research***: Volume 2013, Article ID 892327, 7 pages, http://dx/doi.org/10.1155/2013/892327.

*2013 - Fuller, A. K., S. M. Spohr, D. J. Harrison, and F. A. Servello. Nest survival of wild turkeys in a mixed-use landscape: influences at nest-site and patch scales. ***Wildlife Biology*** 19:138-146.

*2013 - Simons-Legaard, E. M., D. J. Harrison, W. B. Krohn, and J. H. Vashon. Canada lynx occurrence and forest management in the Acadian forest. ***Journal of Wildlife Management*** 77:567-578.

*2012 - I. D. Thompson, J. Fryxell, and D. J. Harrison. Improved insights into use of habitat by American martens, since the 2nd International Martes Symposium in 1991. ***Pages 209 – 229 in K.B. Aubry, W.J. Zielinski, M.G. Raphael, G. Proulx, and S.W. Buskirk,*** **editors,** ***Biology and conservation of martens, sables, and fishers: a new synthesis.*** Cornell University Press, Ithaca, New York, USA.

*2010- Fuller, A. K., and D. J. Harrison. Movement paths reveal scale-dependent habitat decisions by Canada lynx. ***Journal of Mammalogy*** 91:1269-1279.

*2010- Hearn, B. J., D. J. Harrison, A. K. Fuller, C. G. Lundrigan, and W. J. Curran. Paradigm shifts in habitat ecology of threatened Newfoundland martens. ***Journal of Wildlife Management*** 74:719-728.

*2007 - Fuller, A. K., D. J. Harrison, and J. H. Vashon. Winter habitat selection by Canada lynx in Maine: prey abundance or accessibility? ***Journal of Wildlife Management*** 71:1980-1986.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, A. K. Fuller, and C. L. Hoving. Multi-scalar habitat preferences of snowshoe hares: how does a prey specialist coexist with a specialist predator? Page 175 *in* K. Sjoberg and T. Rooke, editors, ***International Union of Game Biologists Conference Proceedings***, Department of Wildlife, Fish, and Environmental Studies, Swedish University of Agricultural Sciences (SLU), Umea, Sweden.

*2007- Homyack, J. A., D. J. Harrison, and W. B. Krohn. Effects of precommercial thinning on snowshoes hares in Maine. ***Journal of Wildlife Management*** 71: 4-13.

*2006 - Homyack, J.A., D. J. Harrison, J.A. Litvaitis, and W.B. Krohn. Quantifying densities of snowshoe hares in Maine using pellet plots. ***Wildlife Society Bulletin*** 34: 74-80.

*2005 - Fuller, A. K. and D. J. Harrison. Influence of partial timber harvesting on American martens in north-central Maine. ***Journal of Wildlife Management*** 69:710-722.

*2005- Homyack, J. A., D. J. Harrison, and W. B. Krohn. Long-term effects of precommercial thinning on small mammals in northern Maine. ***Forest Ecology and Management***: 205:43-57.

*2005 - Hoving, C. L. D. J. Harrison, W. B. Krohn, R. A. Joseph, and M. O'Brien. Broad-scale predictors of Canada lynx occurrence in eastern North America. ***Journal of Wildlife Management*** 69:739-751.

*2004 - Fuller, A. K., D. J. Harrison, and H. J. Lachowski. Stand-scale effects of partial harvesting and clearcutting on small mammals and forest structure. ***Forest Ecology and Management*** 191:373-386.

*2004 - Harrison, D. J., A. K. Fuller, and G. Proulx. Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. *Springer, New York, New York (edited, peer-reviewed book).***

*2004 - Homyack, J. A., D. J. Harrison and W. B. Krohn. Structural differences between precommercially thinned and unthinned conifer stands. ***Forest Ecology and Management*** 194:131-143.

*2004 - Hoving, C. L., D. J. Harrison, W. B. Krohn, W. J. Jakubas, and M. A. McCollough. Canada lynx habitat and forest succession in northern Maine, United States. ***Wildlife Biology*** 10(4):285-294.

*2004 - Krohn, W. K., C. L. Hoving, D. J. Harrison, D. Phillips, and H. Frost. Martes foot-loading and snowfall patterns in eastern North America: Implications to broad-scale distributions and interactions of mesocarnivores. Pages 115-131 *in* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. Springer, New York, New York.

*2004 - Payer, D. C. and D. J. Harrison. Relationships between forest structure and habitat use by American martens in Maine, USA. Pages 173-186 i*n* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International***

Perspective. Springer, New York, New York.

*2004 -Payer, D. C., D. J. Harrison, and D. M. Phillips. Territoriality and Home-Range Fidelity of American Martens in Relation to Timber Harvesting and Trapping. Pages 99-114 i*n* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. *Springer*, New York, New York.

*2004 - Spohr, S. M., F. A. Servello, D. J. Harrison, and D. W. May. Survival and reproduction of wild turkey hens in a suburban environment. ***Northeast Naturalist*** 11*: 363-374.*

2003 - Fuller, A. K. and D. J. Harrison. Occurrence, distribution, and survey methods for native terrestrial mammals in Acadia National Park, Mount Desert Island, Maine. ***Maine Agricultural and Forest Experiment Station Miscellaneous Publication 752***, Orono, Maine, 28 pp.

*2003 -- Payer, D. C., and D. J. Harrison. Influence of forest structure on habitat use by American marten in an industrial forest. ***Forest Ecology and Management*** 179:145-156.

*2000 - Payer, D. C., and D. J. Harrison. Structural differences between forests regenerating following spruce budworm infestation and clearcut harvesting: implications for American marten. ***Canadian Journal of Forest Research*** 30:1965-1972.

1999 - Harrison, D. J. Response of wildlife to thinning in forests of the northeastern U.S. Pp. 35-40 *in* ***Proceedings of Conference on Thinning in the Maine Forest***, Cooperative Forestry Research Unit and Office of Professional Development, University of Maine, Orono.

*1998 - Harrison, D. J., and T. G. Chapin. Extent and connectivity of habitat for wolves in eastern North America. ***Wildlife Society Bulletin*** 26:767-775.

*1998 - Chapin, T. G., D. J. Harrison, and D. D. Katnik. Influence of landscape pattern on habitat use by American marten in an industrial forest. ***Conservation Biology*** 12:1327-1337.

*1998 - Long, R. A., A. F. O'Connell, Jr., and D. J. Harrison. Mortality and survival of white-tailed deer Odocoileus virginianus fawns on a north Atlantic coastal island. ***Wildlife Biology*** 4:237-247.

*1998 - Phillips, D. M., D. J. Harrison, and D. C. Payer. Seasonal changes in home-range area and fidelity of martens. ***Journal of Mammalogy*** 79:180-190.

1997 - Bissonette, J. A., D. J. Harrison, C. D. Hargis, and T. G. Chapin. The influence of spatial scale and scale-sensitive properties on habitat selection by American marten. Pages 368-385 in J.A. Bissonette (editor). ***Wildlife and Landscape Ecology: effects of pattern and scale*.** Springer-Verlag, New York.

*1997 - Chapin. T. G., D. J. Harrison, and D. M. Phillips. Seasonal habitat selection by marten in an untrapped forest preserve. ***Journal of Wildlife Management*** 61:707-717.

*1997 - Chapin, T. G., D. M. Phillips, D. J. Harrison, and E. C. York. Seasonal selection of habitats by resting marten in Maine. Pages 166-181 *in* G. Proulx, H.N. Bryant, and P.M. Woodard (editors). ***Martes: taxonomy, ecology, techniques and management***. Provincial Museum of Alberta,

Edmonton, Alberta, Canada. 474pp.

*1997 - Hodgman, T. P., D. J. Harrison, D. M. Phillips, and K. D. Elowe. Survival of American marten in an untrapped forest preserve in Maine. Pages 86-99 *in* G. Proulx, H.N. Bryant, and P.M. Woodard (editors). ***Martes: taxonomy, ecology, techniques and management***. Provincial Museum of Alberta, Edmonton, Alberta, Canada. 474pp.

*1996 - Chilelli, M., B. Griffith, and D. J. Harrison. Interstate comparisons of river otter harvest data. ***Wildlife Society Bulletin*** 24(2):238-246.

1995 - Harrison, D. J. Foreword. Pp. 1-4 in G. Parker. ***Eastern coyote: the story of its success***. Chelsea Green Publishing Company, White River Junction, Vermont.

*1994 - Hodgman, T. P., D. J. Harrison, D. D. Katnik, and K. D. Elowe. Survival in an intensively trapped marten population in Maine. ***Journal of Wildlife Management***. 58:593-600.

*1994 - Katnik, D. D., D. J. Harrison, and T. P. Hodgman. Spatial relations in a harvested population of marten in Maine. ***Journal of Wildlife Management*** 58:600-607.

*1992 - Harrison, D. J. Dispersal characteristics of coyotes in Maine. ***Journal of Wildlife Management*** 56:128-138.

*1992 - Harrison, D. J. Social ecology of coyotes in northeastern North America: relationships to dispersal, food resources, and human exploitation. Pages 53-72 *in* A. Boer (editor) ***Ecology and Management of the Eastern Coyote***. Wildlife Research Unit, University of New Brunswick, Frederickton.

1992 - Harrison, D. J., and N. E. Famous. Effects of peat harvesting on a large mammalian carnivore: a case study with coyotes (Canis latrans). Pages 77-96 *in* D. Grubich (editor) ***Peat and Peatlands: the Resource and Its Utilization***. Proceedings International Peat Symposium, Duluth, Minnesota.

*1992 – O'Connell, A. F., Jr., D. J. Harrison, B. Connery, and K.B. Anderson. Food use by an insular population of coyotes. ***Northeast Wildlife*** 49:36-42.

*1991 - Harrison, D. J., J. A. Harrison, and M. O'Donoghue. Pre-dispersal movements of coyote (Canis latrans) pups in eastern Maine. ***Journal of Mammalogy*** **72:**756-763.

*1989 - Harrison, D. J., J. A. Bissonette, and J. A. Sherburne. Spatial relationships among coyotes and red foxes in eastern Maine. ***Journal of Wildlife Management*** 52:181-185.

*1989 - Litvaitis, J. A., and D. J. Harrison. Bobcat-coyote niche relationships during a period of coyote population increase. ***Canadian Journal of Zoology*** 67:1180-1188.

1986 - Harrison, D. J., and W. B. Krohn. Population characteristics of Maine coyotes. ***U.S. Fish and Wildlife Service Research Information Bulletin No. 86***:112.

*1986 - Harrison, D. J. Coyotes in the northeast: their history, origin, and ecology. ***Appalachia*** 46:30-39.

1986 - Major, J. T., J. A. Sherburne, J. A. Litvaitis, and D. J. Harrison. Resource use by and interspecific relations between bobcats and other large mammalian predators in Maine. Pages 291 *in* S.D. Miller and D.D. Everett, (editors) ***Cats of the World: Biology, Conservation and Management***. Natl. Wildlife Federation, Washington, D.C.

*1985 - Harrison, D. J., and J. R. Gilbert. Denning ecology and movements of coyotes in Maine during pup rearing. ***Journal of Mammalogy*** 66:712-719.

*1984 - Harrison, D. J., and J. A. Harrison. Foods of adult Maine coyotes and their known-aged pups. ***Journal of Wildlife Management*** 48:922-926.

1984 - Harrison, D. J. Use of white-tailed deer by coyotes during pup rearing in Maine. ***Transactions of the Northeast Deer Technical Committee*** 20:34-35.

Technical Reports and Miscellaneous Publications:

2017 – Dunham, S. and D. Harrison. Spruce grouse habitat in the Acadian forests of Maine: Results and recommendations for forest managers. CFRU Research Note 17-01, Maine Cooperative Forestry Research Unit. University of Maine. Orono, ME.

2016 – Harrison, D., S. Morano, and S. Olson. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 52-56 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2016 – Tebbenkamp, J., E. Blomberg, D. Harrison, and S. Dunham. Population dynamics of spruce grouse in the managed forest landscapes of northern Maine. Pages 57-61 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2016 – Rolek, B., D. Harrison, C. Loftin, and P. Wood. Bird communities of coniferous forests in the Acadian region: habitat associations and responses to forest management. Pages 57-61 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2015 – Harrison, D., and S. Olson. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 68-74 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2015 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 75-79 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2015 - Rolek, B., D. Harrison, C. Loftin, and P. Wood. Bird communities of coniferous forests in the Acadian Region: Habitat associations and response of birds to forest management. Pages 80-88 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2014 – Harrison, D., S. Olson, D. Mallett, A. Fuller, and J. Vashon. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 57-62 *in* B.E. Roth, editor, Cooperative Forestry

Research Unit: 2013 Annual Report, University of Maine, Orono.

2014 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 63-66 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2013 Annual Report, University of Maine, Orono.

2014 – Rolek, B., D. Harrison, and C. Loftin. Bird communities of coniferous forests in the Acadian Region: habitat associations and response of birds to forest management. Pages 67-73 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2013 Annual Report, University of Maine, Orono.

2013 – Harrison, D., E. Simons-Legaard, K. Legaard, and S. Sader. Effectiveness of zoning to protect deer wintering habitats in Maine: Did the designation of LURC-zoned deeryards achieve desired objectives during the period 1975-2007? Final Report to Northeastern States Research Cooperative and USDA Forest Service. http://nsrcforest.org/sites/default/files/uploads/harrison08full.pdf

2013 – Harrison, D., S. Olsen, D. Mallett, A. Fuller, and J. Vashon. Relationships among commercial forest harvesting, snowshoe hares and Canada lynx in Maine. Pages 79-84 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2012 Annual Report, University of Maine, Orono.

2013 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 85-89 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2012 Annual Report, University of Maine, Orono.

2012 - Harrison, D., S. Olson, D. Mallet, J. Vashon, and A. Fuller. Relationships among commercial forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 95-98 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2011 Annual Report, University of Maine, Orono.

2012 - Harrison, D., and S. Dunham. Relative densities, patch occupancy, and population performance of spruce grouse in managed and unmanaged forests in northern Maine. Pages 99-104 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2011 Annual Report, University of Maine, Orono.

2011 – Fuller, A. K. and D. J. Harrison. A landscape planning initiative for northern Maine using area-sensitive umbrella species: Evaluating baseline conditions and effects of alternative management scenarios and silvicultural portfolios on future timber harvest volumes, standing forest inventory, and marten and lynx habitat supply on The Nature Conservancy's St. John lands in northern Maine. ***Final Report to the Maine Chapter of The Nature Conservancy***. 133 pp.

2011 – Harrison, D., W. Krohn, S. Olson and D. Mallett. Snowshoe hares spatio-temporal dynamics and implications for Canada lynx in managed landscapes. Pages 43 - 48 *in* Mercier***, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report***, The University of Maine, Orono.

2011 – Simons, E. M., D. J. Harrison, K. R. Legaard, and S. A. Sader. The effectiveness of state regulation to protect deer wintering areas in Maine: Did the designation of LURC-zoned deer yards achieve desired objectives during the period 1975-2007? Pages 38-42 *in* ***Mercier, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report***, The University of Maine, Orono.

2011 – Vashon, J., D. Harrison, A. Fuller, D. Mallet, W. Jakubas, and J. Organ. Documenting the response of

Canada lynx to declining snowshoe hare populations in an intensively managed private forest landscape in northern Maine. Pages 49-51 *in* ***Mercier, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report,*** The University of Maine, Orono.

2010 – Simons, E., D. Harrison, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine. ***Final Report to the Maine Cooperative Forestry Research Unit,*** University of Maine, Orono. 29 pp.

2010 - Harrison, D. J., W. B. Krohn, and S. Scott. Effects of changing hare densities on probability of lynx occurrence throughout the commercially managed landscape of northwestern Maine. Pages 61-64 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2010 - Simons, E., D. Harrison, K. Legaard, and S. Sader. The effectiveness of zoning to protect deer wintering areas during the period 1975-2007: Does compromising forest productivity to protect deer habitat achieve desired ecological objectives? Pages 51-56 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2010 - Simons, E., D. Harrison, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine - Year # 3 Progress Report. Pages 66-75 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

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2009 - Fuller, A.K, and D. J. Harrison. Home range, habitat use, edge relationships, mortality sources, age structure,, and survival of white-tailed deer on Mount Desert Island, Maine, 1992-1994. ***Final contract report to Natural Resource Stewardship Science Office***, Northeast Region, U.S. Department of Interior, National Park Service. 69 pp.

2008 – Simons, E., D. Harrison, A. Whitman, J. Hagan and E. Wilkerson. Quantifying biodiversity values across managed landscapes in northern and western Maine. Pages 52-54 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 444***, Orono, Maine.

2008 – Simons, E. K. Legaard, D. Harrison, S. Sader, J. Wilson, and W. Krohn. Predicting responses of forest landscape change on wildlife umbrella species. Pages 55-59 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 444***, Orono, Maine.

2007 – Fuller, A.K, D. J. Harrison, B. J. Hearn. Application and testing of models to predict probability of occupancy and density of endangered Newfoundland martens. ***Final Contract Report to Natural Resources Canada, Newfoundland-Labrador Wildlife Division, and Western Newfoundland Model Forest***, Corner Brook, Newfoundland. 75 pp.

2007 - Harrison, D., W. Krohn, L. Robinson, and J. Homyack. Temporal and spatial relationships among hares, lynx and forestry. Pages 53-57 *in* CFRU Annual Report 2005-2006, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 440***, University of Maine, Orono.

2007 - Robinson, L., W. Krohn, and D. Harrison. Responses of snowshoe hare and Canada lynx to forest harvesting in northern Maine. Pages 58-64 *in* CFRU Annual Report 2005-2006, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 440***, University of Maine, Orono.

2007 - Simons, E., K. Legaard, D. Harrison, S. Sader, J. Wilson, W. Krohn, and L. Robinson. Predicting responses of forest landscape changes on wildlife umbrella species. Pages 48-52 *in* CFRU Annual Report 2005-2006, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 440***, University of Maine, Orono.

2006 - Fuller, A. K. and D. J. Harrison. Ecology of red foxes and niche relationships with coyotes on Mount Desert Island, Maine. ***Final contract report to U. S. National Park Service***, Boston, Massachusetts. 41 pp.

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2006 – Fuller, A.K, D. J. Harrison, B. J. Hearn, and J. A. Hepinstall. Landscape thresholds, occupancy models, and responses to habitat loss and fragmentation by martens in Newfoundland and Maine. ***Final Contract Report to Canadian Forest Service and the Western Newfoundland Model Forest.*** 92 pp.

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2006 – Kittredge, D. B., D. J. Harrison, R. Smardon, and L. Blum. ***Final Program Evaluation of the External Review Team: Department of Natural Resources, University of New Hampshire***. 31 pp.

2006 - Robinson, L., D. J. Harrison, W.B. Krohn, J. Vashon, and M.A. McCollough. Ecological factors associated with the distribution of Canada lynx occurrence in northern Maine. ***Published abstract of paper presented at Carnivores 2006 Conference***, St. Petersburg, FL.

2006 – Robinson, L., D. Harrison, W. Krohn, and A. Fuller. Responses of snowshoe hares and lynx to alternative forest harvesting practices. Pages 60-68 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 438***, Orono, Maine.

2005 - Fuller, A. K. and D. J. Harrison. Influence of forest practices on stand-scale habitat selection by lynx in northern Maine: preliminary results. In L. S. Kenefic, M. J. Twery, eds. Changing Forests – Challenging times: ***Proceedings of the New England Society of American Foresters 85th Winter Meeting Gen. Tech. Rep. NE-325***, Newton Square, PA: U. S. Department of Agriculture, Forest Service, Northeastern Research Station: 13.

2005 - Fuller, A. K. and D. J. Harrison. Influence of forest practices on stand and sub-stand scale selection and movements of Canada lynx. Pages 56-60 *in* Maine Cooperative Forestry Research Unit Annual

Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 435***, Orono, Maine.

2005 - Harrison, D. J. and J. A. Hepinstall. Evaluating the umbrella species approach for biodiversity conservation on commercial forestlands in Maine. Pages 64-67 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 435***, Orono, Maine.

2005 - Hearn, B. J., D. J. Harrison, C. Lundrigan, W. J. Curran, and A. K. Fuller. Stand-scale habitat selection by Newfoundland marten. ***Final contract report to Western Newfoundland Model Forest, Newfoundland-Labrador Wildlife Division, Canadian Forest Service, Corner Brook Pulp and Paper and Abitibi Consolidated.*** 65 pp.

2005 - Homyack, J. D. Harrison, and W. Krohn. Temporal changes in abundance of snowshoe hares in Maine: 1995-2002. Pages 61-63 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 435***, Orono, Maine.

2005 - Krohn, W. B. and D. J. Harrison. Canada lynx in the North Maine Woods. Pages 8-9 *in* ***North Maine Woods 2005*** (annual publication of North Maine Woods, Ashland, Maine).

2004 - Hepinstall, J.A. and D.J. Harrison. Development of a statewide habitat modeling tool and an assessment of habitat supply for marten in 1993 and 2000. ***Final Report submitted to Maine Outdoor Heritage Fund, Maine Department of Inland Fisheries and Wildlife, Maine Cooperative Forestry Research Unit***, Orono, Maine, 121pp.

2003 - Fuller, A. K. and D. J. Harrison. Sub-stand scale habitat selection by lynx in northern Maine: implications for forest management**.** Pages 53-56 *in* Maine Cooperative Forestry Research Unit 2003 Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 2684***, University of Maine, Orono.

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2000 - Payer, D.C., and D.J. Harrison. Managing harvested areas to maintain habitat for marten. ***CFRU Research Notes/CFRU RN 00-01***, Maine Cooperative Forestry Research Unit, Univ. Maine, Orono, 2pp.

2000 - Hepinstall, J.A., and D.J. Harrison. Marten as a tool for landscape-scale habitat planning in northern Maine. Pp. 39-40 *in* Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 424***, University of Maine, Orono.

2000 - Homyack, J., D.J. Harrison, and W.B. Krohn. Effect of precommercial thinning on selected wildlife species with special emphasis on snowshoe hare. Pp. 41-43 *in* Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 424***, University of Maine, Orono.

1999 - Payer, D.C., and D.J. Harrison. Influences of timber harvesting and trapping on habitat selection and demographic characteristics of marten. ***Final Contract Report to Maine Department of Inland Fisheries and Wildlife , Maine Cooperative Forestry Research Unit, and Maine Forest Service.*** 67pp.

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1999 - Harrison, D. J. and D.C. Payer. Effects of timber harvesting and trapping on population characteristics, habitat selection, and area occupancy by American martens. Pp. 28-32 *in* 1998 Annual Report and Research Summary of the Cooperative Forestry Research Unit, ***CFRU Information Report #43 and Maine Agricultural and Forest Experiment Station Miscellaneous Report #411***, Orono, Maine.

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1997 - Harrison, D.J., and T.G. Chapin. An assessment of potential habitat for eastern timber wolves in the northeastern United States and connectivity with occupied habitat in southeastern Canada. ***Wildlife Conservation Society Working Paper No. 7***, Bronx, New York. 12pp.

1997 - Long, R.A., D.J. Harrison, and A.F. O=Connell, Jr. Annual survival and cause-specific mortality of white-tailed deer fawns on Mount Desert Island, Maine. U.S. ***National Park Service Technical Report NPS/NESO-RNR/NRTR /97-04.*** 56pp.

1996 - Chapin, T.G., D.J. Harrison, D.D. Katnik, D.M. Phillips, and E.C. York. Influence of landscape pattern, forest type, and forest structure on use of habitat by marten in Maine. ***NCASI Technical Bulletin No. 728***, Research Triangle Park, North Carolina. 78pp.

1996 - Harrison, D.J. Effects of timber harvesting and trapping on population characteristics, habitat selection, and area occupancy by American martens in northern Maine: the Baxter park study. Pages 37-41 *in* W. Ostrofsky (editor). 1996 Annual Report and Research Summary of the Cooperative Forestry Research Unit., ***Miscellaneous Report 401, Maine Agricultural and Forest Experiment Station***, University of Maine, Orono.

1995 - Harrison, D.J. Effects of timber harvesting and trapping on American martens in northern Maine. Pages 27-32 in 1995 Annual Report and Research Summary of the Cooperative Forestry Research Unit. ***Miscellaneous Report No. 397, Maine Agricultural and Forest Experiment Station***. University of Maine, Orono.

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1993 - Harrison, D.J. A landscape approach to habitat quality assessment: a case study with American martens. Pages 10-12 *in* SJ.G. Lusk, ed., ***Methodology for deriving quantitative definitions of forest wildlife habitat***, New Brunswick Department Natural Resources and Energy, Frederickton.

1991 - Chilelli, M., B. Griffith, and D.J. Harrison. ***Analysis of river otter harvest and reproductive data in the northeastern U.S., 1970-89.*** Final Contract Report, Northeast Region, U.S. Fish and Wildlife Service. 48pp.

1990 - Harrison, D.J., and D. Wood. ***An educational and resource management strategy for Lake Manyara National Park, Tanzania: alternative approaches for meeting park management goals***. Report submitted to Tanzania National Parks and Protected Areas. 31pp.

1989 - Harrison, D.J. ***Coyote habitat use versus availability and ecotonal associations adjacent to the Denbo and Rock Dam peatlands, eastern Maine***. Final Contract Report to Downeast Peat L.P., Bangor, ME. 16pp.

1981 - Caturano, S.L., and D.J. Harrison. The coyote: a look at his lifestyle. ***Maine Fish and Wildlife*** 23(4):19-23.

Scientific Publications *In Prep*:

Fuller, A. K., D. J. Harrison, J. A. Hepinstall-Cymerman, and B.J. Hearn. A quantitative method for detecting ecological thresholds: nonlinear responses to habitat loss by American martens. ***Ecological Applications***: (in revision).

Fuller, A. K., and D. J. Harrison. Competition and resource partitioning between island red foxes and recently colonized coyotes. ***Wildlife Biology*** (in revision).

Hepinstall, J. A., and D. J. Harrison. A method for simulating home ranges and determining habitat currencies. ***Journal of Wildlife Management*** (in prep).

Fuller, A. K., and D. J. Harrison. Effects of habitat loss versus fragmentation on habitat occupancy by endangered Newfoundland martens. ***Conservation Biology*** (in prep).

Harrison, D.J. Influence of dispersal on social ecology of coyotes: do social pressures or prey size promote pack formation? ***Animal Behaviour*** (in preparation).

Hepinstall, J. A., and D. J. Harrison. Prediction and validation of occupancy models for American martens. ***Journal of Wildlife Management*** (draft manuscript complete).

Hearn, B. J. and D. J. Harrison. Home range and body scaling in American martens in Maine and Newfoundland: why are home ranges in Newfoundland so large? ***Oikos*** (draft manuscript complete).

Hearn, B. J. and D. J. Harrison. When the sink becomes the source: survival of martens in relation to timber harvesting in Newfoundland. ***Oikos*** (manuscript in preparation)

Hepinstall, J.A. and D. J. Harrison. The relative effects of habitat loss versus fragmentation in determining habitat occupancy by American marten. ***Conservation Biology*** *(manuscript complete and undergoing pre-submission review).*

D. J. Harrison, W. B. Krohn, S. Scott, and L. D. Robinson. Effects of partial forest harvesting on habitat and densities of snowshoe hares. ***Forest Ecology and Management*** *(manuscript in prep).*

Payer, D.C., and D.J. Harrison. Influences of timber harvesting and trapping on habitat selection and home range characteristics of marten. ***Journal of Wildlife Management*** *(analyses ongoing).*

GRANTS AND PROPOSALS:

External (total funded >4.3 million, direct funding to University of Maine =$3,858,897 and is presented in

bold):

Responses of marten populations to 30 years of habitat change in commercially managed landscapes of northern Maine. Maine Cooperative Forestry Research Unit, 2018-2020, **$79,200**, funded.

Responses of marten populations to 30 years of habitat change in commercially managed landscapes of northern Maine. Matching funds of $67,218 requested from Maine Department of Inland Fisheries and Wildlife, 2018-2020, $67,218, not funded.

Spatio-temporal dynamics of snowshoe hares in northern Maine from 2001-2015. Post-doctoral matching support requested from Maine Department of Inland Fisheries and Wildlife, 2017-2018, $33,250, not funded.

Linking habitat associations with demographics to inform conservation of spruce grouse throughout the Northern Forest. Northeastern States Research Cooperative, Theme Four, not funded, $63,633 requested, Co-investigator with Erik Blomberg.

Studies of snowshoe hare population cycles. U.S. Fish and Wildlife Service, funded **$21,290** 1/15/2015-12/31/2017.

Demography and populations status of spruce grouse in northern Maine forests, Co-investigator with Erik Blomberg, Maine Outdoor Heritage Fund, funded **$17,835**, 2014-2015.

Population dynamics of spruce grouse in the managed forest landscapes of northern Maine. Co-investigator with Erik Blomberg, Maine Cooperative Forestry Research Unit, funded, **$89,238** 2015-2017.

Evaluation of representative bird species Landscape Capability models. Co-investigator with Cynthia Loftin, USGS Science Support Program, funded, **$276,731**, 2015-2017

Effects of forest management practices in the Acadian northern hardwood/conifer forests of Maine on forest bird communities. Co-investigator with Cynthia Loftin. U.S. Fish and Wildlife Service and USGS Science Support Partnership Program, funded, **$380,884**, 2012-2016.

Effects of forest management practices in the Acadian conifer forests of Maine on forest bird communities, with emphasis on species of federal conservation priority. Co-investigator with Cynthia Loftin, **$87,000**, Maine Cooperative Forestry Research Unit, funded 2013-2015.

Studies of snowshoe hare densities and forest succession following forest harvesting. U.S. Fish and Wildlife Service. Cooperative Agreement 2011-2015. **$15,000**, funded.

Long-term studies of snowshoe hares, Canada lynx and forest structure associated with forest succession following clearcutting and various forms of partial harvests. **$157,110**, Maine Cooperative Forestry Research Unit, funded 2012-2015.

Cost-shared funding and base support for a Cooperating Scientist in wildlife-forestry relationships. Proposal to Maine Cooperative Forestry Research Unit, The Nature Conservancy,and other forest stakeholders. $510,000 funded, 2010-2015 – but project cancelled due to candidate taking faculty

position at another university.

Relative densities, patch occupancy, and population performance of spruce grouse in clearcut, precommercially thinned, mid-late successional conifer forests, and in coniferous forested wetlands in northern Maine**. $118,007**, funded, Maine Cooperative Forestry Research Unit, funded 2010 –2013.

Genetic-based analyses of lynx diets from scats collected with aid of detection dogs. Funded $6,812, 2013. Funded by Maine Department of Inland Fisheries and Wildlife and paid directly to genetics subcontractor.

Effectiveness of zoning to protect deer wintering areas**. $17,500** funded by Northeastern States Research Cooperative, USDA Forest Service for 2008-2010.

Trends in habitat supply for wildlife species whose habitat requirements are not addressed using coarse-filter umbrella species approaches, with a focus on deer wintering areas**. $77,000** funded by Maine Cooperative Forestry Research Unit for 2009-2011.

An evaluation of course filter umbrella species for landscape planning: trends in habitat supply for wildlife species whose habitat requirements are not addressed using umbrella species approaches. Pre-proposal submitted to Northeastern States Research Cooperative, Theme 4, USDA Forest Service for 2008-2010, $45,629, not funded.

Long-term monitoring of snowshoe hare populations to inform stand and landscape-scale forest management and the recovery planning for Canada lynx in Maine, and collaboration with Maine Department of Inland Fisheries and Wildlife to address changes in lynx demography and spatial ecology associated with declining hare populations. **$97,083** funded by Maine Cooperative Forestry Research Unit for 2008-2011and **$14,637** funded by U.S. Fish and Wildlife Service.

An evaluation of coarse-filter umbrella species for landscape planning. $59,311 requested from Northeast Regional Conservation Needs Grants Program, not funded.

Long-term habitat management planning for lynx and marten across the managed landscapes of northern Maine. **$265,000** funded by U.S. Natural Resource Conservation Service, Healthy Forest Reserve Program (The Nature Conservancy and Natural Resource Conservation cooperating) for 2007-2010.

Developing a black bear model system of skeletal mechanotransduction. $2,105,885 requested from U.S. Department of Human Services (with R. Seger as lead P.I. and others), not funded.

Forecasting and assessing the future of Maine's forests using LiDAR. $2,098,924 requested from Maine Technology Institute (with B. Wiersma as lead P.I. and others), not funded.

Documenting relationships among forest management and the occurrence patterns of Northern Goshawks in Maine. Proposal to Maine Cooperative Forestry Research Unit, $64,000 for 2008-2009 (not funded).

Application and testing of models to predict probability of occupancy and density of endangered Newfoundland marten. **$26,329** funded by Canadian Forest Service and Newfoundland-Labrador Wildlife Division 2006-2007.

Integrating landscape-scale biodiversity conservation with diverse forest management goals on large ownerships in Maine. **$115,427** funded by Maine Cooperative Forestry Research Unit for 2006-2009 (with Manomet Center for Conservation Sciences).

Responses of snowshoe hares and lynx to forest harvesting across multiple spatial scales. **$96,000** funded by Maine Cooperative Forestry Research Unit, **$20,000** funded by U.S. Fish and Wildlife Service, **$15,000** by National Council for Air and Stream Improvement; 2005 - 2009 (with W. Krohn).

Trends in deer-vegetation relationships in Acadia National Park from 1980-2007: relationships of an unhunted insular deer population to forage carrying capacity. $99,830 requested from U.S. National Park Service (not funded).

Completion of deer studies in Acadia National Park. **$8,900** funded by U.S. National Park Service, 2006.

Support for lynx-hare research at The University of Maine, 2005-2007. **$20,000** in grants funded by International Paper Company through the Department of Industrial Cooperation, University of Maine (with W. Krohn).

Gift from The Nature Conservancy to support lynx-hare research projects, May 2006, **$5,000**.

Predicting responses of forest landscape change on wildlife umbrella species: Modeling future effects of alternative forest harvesting scenarios on vertebrate diversity across multiple spatial scales on commercial forestlands in Maine. **$124,00**0 funded by USDA Forest Service, Agenda 20/20 Program 2005-2007, and **$17,000** funded by Maine Cooperative Forestry Research Unit. This project is in collaboration with Drs. Steve Sader, Jeremy Wilson, and William Krohn and supports 2 graduate students.

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across spatial multiple scales in northern Maine. Science Support Program, USGS/FWS, **$89,810** funded for 2004-2007 (with W.B. Krohn, MCFWRU, M. McCollough, FWS).

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across multiple spatial scales. **$50,000** funded by CFRU for 2005-2006, **$10,500** funded by U. S. Fish and Wildlife Service (with W. B. Krohn).

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across spatial multiple scales. **$30,000** funded by National Council for Air and Stream Improvement and Plum Creek Corporation for 2004-2006 (with W. B. Krohn).

Evaluating the umbrella species approach for biodiversity conservation on commercial forestlands in Maine. **$28,850** funded by CFRU for 2004. This project supported a collaboration with post-doctoral scientist Jeff Hepinstall at the University of Washington, Seattle.

Development of a stand-scale model for predicting snowshoe hare densities for forest measurements. **$22,000** funded by CFRU for 2004 (with W. B. Krohn). This project supported a research collaboration with Jessica Homyack, Research Associate, U.S. Fish and Wildlife Service, Cheyenne, Wyoming.

Gift from The Nature Conservancy to support lynx-hare research projects, August 2004, **$5,000**.

Support for publication of edited book titled: *Martens and Fishers (Martes) in Human-Altered environments: An International Perspective*. Gift of **$8,000** from Canadian Forest Service (2002) and **$3,000** from Newfoundland-Labrador Wildlife Division.

Influence of forest practices on stand- and sub-stand scale habitat selection of lynx in northern Maine. Maine Cooperative Forestry Research Unit, **$63,046**, (funded, 2001-2003), Fraser Paper Company **$3,000**.

Influence of forest practices on stand- and sub-stand scale habitat selection of lynx in northern Maine. U.S. Fish and Wildlife Service and Maine Department of Inland Fisheries and Wildlife, **$12,000** (funded 2001-2003).

Landscape thresholds and response to fragmentation by endangered Newfoundland marten. Canadian Wildlife Service, Canadian Forest Service, Western Newfoundland Model Forest, Parks Canada, Newfoundland Wildlife Division, **$180,600**(US$) (funded, 2002-2007).

National Commission on Science for Sustainable Forestry – authored preproposal in collaboration with Manomet scientists requesting $160,000 to support landscape planning for biodiversity in northern Maine. The preproposal was selected as one of 3 finalists (2 to be funded) nationally and we were invited to develop a full proposal. Preproposal was withdrawn because of administrative responsibilities associated with Interim Chair position.

Lynx research projects in northern Maine. The Nature Conservancy, **$7,000** (gift) in 2003.

Influence of pre-commercial thinning on wildlife habitat in northern Maine, with special emphasis on snowshoe hares. Maine Cooperative Forestry Research Unit, U.S. Fish and Wildlife Service, National Council of the Paper Industry for Air and Stream Improvement, **$177,176** (funded, 2000-2003).

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. Maine Cooperative Forestry Research Unit, **$45,000** (funded 2000-2002).

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. National Council of the Paper Industry for Air and Stream Improvement, $30,000 (not funded).

Marten as a tool for landscape-scale habitat planning in northern Maine. Maine Outdoor Heritage Fund and Maine Dept. Inland Fisheries and Wildlife, **$71,498**, (funded, 1999-2002).

Marten as a tool for landscape-scale habitat planning in northern Maine. Maine Chapter of The Nature Conservancy $15,000 requested, **$7,500** funded, 2000-2002).

A GIS-based evaluation of lynx habitat at multiple spatial scales. National Council of the Paper Industry for Air and Stream Improvement (NCASI), U.S. Fish and Wildlife Service, Maine Dept. Inland Fisheries

and Wildlife $59,503 requested, **($52,003**, funded, 1998-2001), co-investigator: W. Krohn.

Population demography of marten in Newfoundland, Canada. Natural Resources Canada, **$20,000**, (funded 1998-99).

Influence of partial harvesting on habitat selection by marten and primary prey species in northern Maine. Maine Cooperative Forestry Research Unit, **$37,151** (funded, 1997-99).

Effects of timber harvesting and trapping on marten populations in northern Maine: the industrial forest site. Maine Department of Inland Fisheries and Wildlife, **$169,259** direct funding, $60,800 *in-kind* (funded, 1993-99).

Effects of timber harvesting and trapping on marten populations in northern Maine: the forest preserve site. Maine Cooperative Forestry Research Unit, **$90,889** (funded, 1993-98), Maine Forest Service, **$71,689** (funded, 1994-98), Maine Department of Inland Fisheries and Wildlife, $25,500 *in-kind* (funded 1994-98). Influence of microhabitat characteristics on intensity of forest use and productivity of martens in Maine: implications for forest practices. National Council of the Paper Industry for Air and Stream Improvement, **$38,214** (funded, 1995-98).

Factors influencing nesting success of wild turkeys in Connecticut. National Wild Turkey Federation and Wildlife Division, Connecticut Dept. of Environmental Protection **$25,000** + *in-kind* support (funded 1996-98), co-investigator F. Servello.

Potential habitat for wolves in the northeastern U.S. and connectivity with habitat occupied by extant wolf populations in southeastern Canada. Wildlife Conservation Society, **$4,559**, (funded, 1996).

Opportunities for management of habitat of American marten on Crown lands leased and managed by Fraser, Inc., in New Brunswick. Fraser Paper, Inc., New Brunswick, $69,334, (not funded, 1996).

Effects of timber harvesting and residual stand characteristics on habitat selection by martens in northern Maine. National Council for the Paper Industry for Air and Stream Improvement. **$28,232**, (funded 1993-95).

White-tailed deer mortality, population dynamics, movements, and spatial interactions with coyotes in Acadia National Park, Maine. U.S. National Park Service. **$208,547**, (funded 1991-95, 1999-2000), co-investigator A. O'Connell, Jr.

Predation on white-tailed deer fawns by coyotes on Mount Desert Island, Maine. U.S. National Park Service. **$69,103**, (funded 1992-94), co-investigator A. O'Connell.

Influence of trapping and timber harvesting on pine martens in northern Maine. New Brunswick Executive Forest Research Committee, Inc. $248,000, (not funded).

Occurrence, distribution, and interactions among mammalian carnivores in Acadia National Park. U.S. National Park Service, **$59,000**, (funded 1988-90).

Effects of browsing by white-tailed deer and snowshoe hare on vegetation at Acadia National Park. U.S.

National Park Service, **$39,000**, (funded 1988-90).

Fecal nitrogen as an index to white-tailed deer nutritional condition in Acadia National Park. U.S. National Park Service , **$1,300**, (funded 1990).

Interactions among trapping, timber harvesting, and pine marten populations. Submitted to Maine Department of Inland Fisheries and Wildlife; $73,000 contractual requested, **$58,000** of *in kind* were provided (1988-92).

A review of methodologies and harvest data used to manage river otter populations in northeastern North America. N.E. Region, U.S. Fish & Wildlife Service, **$52,000**, (funded 1989-90), Co-investigator with B. Griffith.

Internal

Add $2k support for Zach Loman in June 2017 from CRSF and new M-Stennis project October 2015-September 2020

A very high resolution aircraft mounted digital imaging system for remotely sensing forest vegetation. University of Maine Competitive Research Funds, Co-Investigator with Stephen Sader and Robert Wagner, **$14,972**, funded, 4/2012.

Received a competitive University Sabbatical ($15,000) that funded Linda Ilse as an Adjunct Professor and provided additional funds to DWE during my sabbatical in spring 2008.

Multi-scalar effects of forestry on an early-and a late-successional forest obligate across commercially managed lands in northern Maine: How are densities of snowshoe hares and occurrence patterns of spruce grouse differentially affected by broad-scale forest harvesting. Maine Agricultural and Forest Experiment Station, McIntire-Stennis Project funded October 2010 – September 2015. Funding includes 25-50% of P.I. salary, 1 graduate research assistantship (12 months), and ca. $3,000 in annual support for research expenses.

Secured funding for 50% ($25,000 per year, plus fringe benefits for 2 years) of an Assistant Scientist salary (Erin Simons) from the Center for Research on Sustainable Forest's ForCAST initiative 2008-2009.

Landscape-Scale Effects of Forestry on Forest Carnivores and Other Vertebrates. This project forms the basis for my McIntire-Stennis (MAFES) associated research program and is approved for the period 10/2004-9/2009. Funding includes 50% of P.I. salary, 1 graduate research assistantship (12 months), and ca. $6,000 in annual support for research expenses.

Influence of partial harvesting on American marten and primary prey species. McIntire-Stennis proposal, base funded 1998-2004.

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. $22,500 requested from research and development funding, College of Natural Sciences Forestry and Agriculture, University of Maine (not funded, 2002).

A research scientist to complete analyses and report writing for long-term studies in Acadia National Park. Department of Wildlife Ecology, Office of the Dean of College of Natural Sciences, Forestry and Agriculture, and Office of the Vice Provost for Research and Graduate Studies, Univ. Maine, $15,000, funded, 1999-2000.

A GIS-based evaluation of potential habitat for lynx in eastern North America at geographic and landscape scales. $7,500, funded, 11/98. Competitive funding for research and development, College of Natural Sciences, Forestry and Agriculture, University of Maine.

Synthesis and application of data from long-term studies of mammalian carnivores and prey. $31,980, not funded, 11/98. Competitive funding for research and development, College of Natural Sciences, Forestry and Agriculture, University of Maine.

A real-time, differentially corrected, global positioning system for studying animal movements. $6,500, funded, 12/97. Faculty Research Funds - Equipment Grant Competition, Univ. Maine.

Influence of partial harvesting on American marten and primary prey species. McIntire-Stennis proposal, base funded 1998-2003, included $7,900 in annual research funding, plus a graduate assistantship.

Effects of timber harvesting on population performance and habitat selection by American martens in northern Maine. McIntire-Stennis proposal, base funded, 1993-1998.

Interaction of forest management practices and pine marten populations. McIntire-Stennis proposal, base funded 1989-1993.

Submitted proposals requesting supplemental McIntire-Stennis funding in 1988, 1989, 1990, 1991, 1992: $44,190 requested, $40,310 funded.

Effects of trapping on pine marten populations in northern Maine. $5,000, funded, 1991. Faculty *Research Funds - Summer Research Grant Competition, Univ. Maine.*

SCIENTIFIC PRESENTATIONS (abridged to include January 1988 – June 2017: presenter is listed first):

2016 – Tebbenkamp 2 posters at TWS Conference, October 2016

2017- Dunham, S. W., D. J. Harrison, and E. J. Blomberg. Spruce Grouse Habitat Ecology in Maine's Commercially Managed Acadian Forest. *Presented at the Adapt, Adopt, Advance: Resiliency in Natural Resource Management Conference,* Bangor, Maine. March 9.

2017 - Harrison, D. J., B. W. Rolek, C.S. Loftin, P.B. Wood. Effects of forest management practices in Acadian conifer forests on spruce-fir bird communities. *Presentation to Irving Corporation Wildlife Biologists and Foresters and to the New Brunswick Forest Research Advisory Committee Advisory,* Sainte Anne de Madawaska, New Brunswick, Canada, May 30.

2017 - Harrison, D. J., B. W. Rolek, C.S. Loftin, P.B. Wood. Effects of forest management practices in

Acadian conifer forests on forest bird communities, with emphasis on species of conservation priority. *Presentation to Advisory Committee of Maine Cooperative Forestry Research Unit*, Orono, Maine, April 12.

2017 - Loman, Z., D. Harrison, C. Loftin, P. B. Wood. Validation of Designing Sustainable Landscapes Models using forest game birds, passerine birds, and a representative species approach. *Workshop presented to U.S. Fish and Wildlife Service, Migratory Bird Division.* Hadley, MA, USA. 12 January.

2017 - Loman, Z., D. Harrison, C. Loftin, P. B. Wood. Designing sustainable landscapes evaluation: where we're going and where we've been. USGS Maine Coop Unit Cooperators Meeting. Orono, ME, March 22.

2017 – Loman, Z. G. Loman, .W. V. Deluca, D. J. Harrison, C. S. Loftin,, Petra B. Wood. Do representative forest songbirds effectively predict occurrences of ecologically similar species? *Paper presented at Northeast Association of Fish and Wildlife Agencies Annual Conference, Rayleigh, NC*, April 11.

2017 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Spruce-fir birds and forest management in Northern New England. *Workshop presented to U.S. Fish and Wildlife Service, Migratory Bird Division.* Hadley, MA, USA. 12 January.

2017 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Softwood forest birds and forestry in New England. *Presentation to Cooperating Committee Meeting for Maine Cooperative Fish and Wildlife Research Unit*, Orono, Maine, USA. 22 March.

2016 - Dunham, S.W., and D.J. Harrison. Female spruce grouse habitat selection during the brood-rearing season in managed conifer forests. *Poster. 6th North American Ornithological Conference. Joint meeting of American Ornithological Union, Cooper Ornithological Society, Wilson Ornithological Society, Association of Field Ornithologists, and Society of Canadian Ornithologists.Washington, DC.* August 17.

2016 - Harrison, D. and S. Dunham. Final project report: Relative densities, patch occupancy, and population performance of spruce grouse in managed and unmanaged forests in northern Maine. *Presentation to Advisory Committee of Maine Cooperative Forestry Research Unit*, Orono, Maine, April 20.

2016 - Loman, Z.G., E. J. Blomberg, W. D. Deluca, D. Harrison, C. Loftin, and P. B. Wood. 2016. Landscape capability as a predictor of upland game bird space use in the northeastern United States. *Presentation at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2016 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Opportunities to enhance habitat for spruce-fir passerines using commercial forest management. *Paper at North American Congress for Conservation Biology, Society for Conservation Biology, Madison, Wisconsin*, July 17-20.

2016 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Softwood forest birds and forestry in New England. *Presentation at Cooperating Committee Meeting for Maine Cooperative Fish and Wildlife Research Unit, Orono, Maine,* March 23.

2016 - N. S. Parkhill, N. S., J. Tebbenkamp, S. Dunham, D. Harrison, and E. Blomberg. Effect of forest structure on nest site selection by spruce grouse across two scales. *Poster presented at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2016 - Tebbenkamp, J., E.Blomberg, D. Harrison, and R. Holberton. Is autumnal display associated with territorial defense or mate prospecting? A case study with spruce grouse. *Poster presented at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2015 - Dunham, S. W., D. J. Harrison, and E. J. Blomberg. 2015. Spruce grouse (*Falcipennis canadensis)* patch occupancy and abundance estimates in the commercially managed forests of Maine. *Presentation at the 13th International Grouse Symposium, Reykjavik, Iceland*, September 8.

2015 - Harrison, D. J. Updates on wildlife projects funded by the Maine Cooperative Forestry Research Unit (CFRU). *Presentation at CFRU Advisory Committee Meeting, Houlton, Maine*, October 28, 2015.

2015 - Olson, S. J., D. J. Harrison, A. K. Fuller, J. H. Vashon. Canada lynx food habits responses to seasons, and to low vs. high hare density periods: Always a specialist? *Poster presentation at The Wildlife Society Annual Conference, Winnipeg, Manitoba, Canada*, October 21-22.

2015 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. *Workshop on spruce-fir birds and forest management in Northern New England at U.S. Fish and Wildlife Service Migratory Bird Division. Hadley, MA, USA*, October 8.

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Effects of forest management on avian abundance in spruce-fir forests of New England. *Joint Meeting of the Canadian Ornithological Society, Association of Field Ornithologists, and Wilson Ornithological Society. Wolfville, NS*, Canada, July 17.

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Softwood forest birds and silviculture in New England. *Annual Meeting of the Research Committee for Baxter State Park, Augusta, Maine*, March 27.

2014 - Dunham, S. W., and D. J. Harrison. 2014. Spruce grouse breeding season patch occupancy and female home range use across forest management treatments in Maine. *Poster presented at the Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania*, October 27-28.

2014 – Harrison, D. Origin, spatial and social ecology, and predator-prey relationships of eastern coyotes: a review. *Invited lead presentation in Symposium on Ecology and Management of Coyotes in Eastern North America: Synthesizing Information from Contemporary Studies, The Wildlife Society 21st Annual Conference, Pittsburg, Pennsylvania*, October 27.

2014 – Dunham, S. and D. Harrison. Spruce grouse breeding season patch occupancy and home range comparisons across forest management treatments in Maine. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 - Dunham, S. and D. Harrison. Habitat selection of female spruce grouse during brood rearing in commercially managed forests. Presentation at Annual Meeting of the American Ornithologists

Union, Estes Park, Colorado. September 27.

2014 – Harrison D. and E. Blomberg. Population dynamics of spruce grouse on commercially managed forestlands in Maine: a proposal. *Presentation at winter meeting of CFRU Advisory Committee, Orono, Maine,* January 22.

2014 – Harrison, D., S. Olson, S. Dunham, B. Rolek, and C. Loftin. Updates of research findings from studies of snowshoe hares, Canada lynx, spruce grouse and forest songbirds funded by the Maine Cooperative Forestry Research Unit (CFRU). *Presentation at winter meeting of CFRU Advisory Committee, Orono, Maine,* January 22.

2014 – Olson, S. and D. Harrison. Seasonal influences of vegetation on snowshoe hare pellet densities across forest management types in Maine. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 – Olson, S. and D. Harrison. Snowshoe hare response to seasonal changes in Acadian managed forests of northern Maine. *Presentation at American Society of Mammalogists Annual Conference, Oklahoma City, Oklahoma,* June 10.

2014 – Parkhill, N. S., D. Harrison, and S. Dunham. Effects of forest vegetation on spruce grouse nest-site selection across 2 spatial scales. *Poster at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 – Rolek, B., C. Loftin, D. Harrison, and P. Bohall Wood. The influence of silviculture on New England bird communities in northern coniferous forests. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 15.

2014 - Simons-Legaard, E. and D. Harrison. Trends in habitat conditions in LURC-zoned deer wintering Areas: implications for management of deer on commercially-owned forestlands. *Invited presentation and panel discussion at Maine Industrial Forest Forum, Bangor, Maine,* February 16.

2013 – Fuller, A. K. and D. J. Harrison. Trade-offs among forest management objectives, focal wildlife species, and ecological reserves: implications for future forest biodiversity and timber harvests. *Invited Seminar to Department of Wildlife Ecology, University of Maine, Orono, Maine,* October 28.

2013 – Harrison, D., D. Mallett, A. K. Fuller, and J. H. Vashon. Snowshoe hares, forests, and Canada lynx: a dynamic interaction between populations, forestry and habitat. *Presentation at Meeting of Maine Cooperative Forestry Research Unit, Orono, Maine,* April 24.

2013 – Harrison, D.J. Conserving sustainable landscapes: using Canada lynx and American martens as umbrella species to enhance landscape planning. *Invited presentation at 2013 Kennebec Land Trust Lyceum, Wayne, Maine,* March 21.

2013 - Rolek, B., C.S. Loftin, D. Harrison, and P. B. Wood. Softwood forest birds and forest management in New England, *USGS-Maine Cooperative Fish and Wildlife Research Unit Annual Coordinating Committee Meeting, Wells Conference Center, Orono, Maine,* March 21.

2012 – Harrison, D., C. Loftin, and P. Wood. Forestry and forest birds: trends in FWS priority bird species in managed forest landscapes. *Presentation to U.S. Fish and Wildlife Service Refuge Biologists, Portland, Maine*, December 18.

2012 - Harrison, D., and E. Simons-Legaard. 2012. Trends in biodiversity in Maine's northern forest. *Presentation at Annual Program and Executive Board Meeting of The Maine Chapter of The Wildlife Society, Brewer, Maine,* May 10.

2012 - Harrison, D. Effects of forest management on Maine's forest bird communities. *Presentation at Advisory Meeting of the Maine Cooperative Forestry Research Unit, Orono, Maine,* January 25.

2012 - Simons-Legaard, E. and D. Harrison. Trends in habitat conditions in LURC-zoned deer wintering areas. *Presentation at Annual Program and Executive Board Meeting of The Maine Chapter of The Wildlife Society, Brewer, Maine,* May 10.

2012 - Simons-Legaard, E. and D. Harrison. Habitat trends in Maine's LURC-zoned deer wintering areas. *Seminar, Department of Wildlife Ecology, The University of Maine,* October 15.

2011 - Fuller, A., D. Harrison, and W. Krohn. 2011. The role of ecological reserves to maintain American marten and Canada lynx in a working forest landscape. *Poster presented at The Wildlife Society, 18th Annual Conference, Waikoloa, Hawaii,* November 9.

2011 - Fuller, A. and D. Harrison Trade-offs among forest management objectives, focal wildlife species, and ecological reserves: implications for future biodiversity and timber harvests. *Poster presented at the Society of Annual Foresters Annual Conference, Honolulu, Hawaii*, November 4

2011 – Harrison, D., E. Simons, A. Fuller, and W. Krohn. Trends in habitat for forest wildlife in Maine's great north woods: the need for landscape planning. *Invited presentation at U.S. Fish and Wildlife Service Northeast Region Biologists Conference, Baltimore, Maryland*, February 14.

2011- Harrison, D., E. Simons, A. Fuller, and W. Krohn. Habitat planning and assessment for forest vertebrates in northern Maine. *Invited Presentation at Annual Coordinating Committee Meeting of the U. S. Geological Survey, Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono, Maine,* April 12.

2011 – Harrison, D. J. Effects of wind power development on American martens and Canada lynx: an issue of scale. *Invited Presentation at Wind Energy and Wildlife Forum, The Maine Chapter of The Wildlife Society, Orono, Maine,* May 5.

2011 – Simons-Legaard, E. M., D. J. Harrison, K. Legaard, and S. Sader. The effectiveness of zoning to protect deer wintering areas during the period 1975-2007: Does compromising forest productivity to protect deer habitat achieve desired ecological objectives? *Invited Presentation at Advisory Committee Meeting, Maine Cooperative Forestry Research Unit, University of Maine*, Orono, January 26.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Applications of habitat modeling for wildlife umbrella species to landscape planning on commercial forestlands. *Presentation at meeting of Maine Cooperative Forestry Research Unit, Orono, Maine,* April 14.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. A wildlife-based modeling approach to forest landscape planning. *Presentation at The Wildlife Society Annual Conference, Snowbird, Utah*, October 6.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Required steps to develop a habitat classification and structured decision-making framework for use in planning for multiple biodiversity and forest objectives on TNC's St. John Lands. *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Results from a structured process for deciding among alternative management scenarios on TNC's St. John lands: trends in habitat supply for martens and lynx and resulting inventory and forest-related metrics. *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 – Harrison, D., W. Krohn, and S. Scott. Spatio-temporal relationships of snowshoe hare populations to forest harvesting, succession, and natural population cycles: implications for forest managers. *Final project report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine*, January 27.

2010 - Harrison, D., W. Krohn, and S. Scott. Snowshoe hares, forestry and Canada lynx: A dynamic interaction. *Invited Paper presented at Lessons From the Past- Research for the Future: A Workshop for CFRU members*, Orono, Maine, May 20.

2010 - Harrison, D. J. and W.B. Krohn. Ongoing research efforts to link landscape conservation with wildlife habitat planning on commercial forestlands in northern Maine. *Invited Presentation to Directors of Resource Conservation, Wildlife, and Planning, Maine Department of Inland Fisheries and Wildlife, Augusta, Maine,* June 15.

2010 – Harrison, D. J., E. Simons, A. Whitman, J. Wilson. Present and future status of biodiversity on managed forest landscapes in Maine, U.S.A. *Presentation at the Annual Meeting of the Society for Conservation Biology*, Edmonton, Alberta, July 7.

2010 – Harrison, D. J. Incorporating landscape planning into the conservation of sensitive forest wildlife species in the northeastern U.S. *Invited presentation at Landscape Workshop for U.S. Fish and Wildlife Service Refuge Biologists and Refuge Managers, Moosehorn National Wildlife Refuge*, Calais, Maine, August 18.

2010 – Harrison, D. J. Stand- and landscape-scale responses of forest mammals to the various forms of siliviculture applied in the Acadian forests of Maine. *Invited presentation and field tour for U.S. Forest Service biologists, foresters and managers. U.S. Forest Service Northern Forest Research Station*, Bradley, Maine, September 9.

2010 – Harrison, D. J. The need for landscape planning on commercially managed landscapes in Maine: *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 - Mallet, D. G., D. J. Harrison, and A. K. Fuller. Variable fix success of GPS collars across habitats used by Canada lynx: influences of habitat structure, topography, and satellite configuration. *Paper presented at 66th Annual Northeast Fish and Wildlife Conference*, Newton, Massachusetts, April 27.

2010 - Simons, E., D. Harrison, A. Whitman, and J. Wilson. 2010. Quantifying biodiversity: seeing the big picture. *Invited Paper presented at Lessons From the Past- Research for the Future: A Workshop for CFRU members*, Orono, Maine, May 20.

2010 – Simons, E., D. Harrison, A. Whitman, and J. Wilson. Present and future status of biodiversity in Maine's commercial forests as indicated by a suite of condition indicators. *Seminar presented at Department of Wildlife Ecology Spring Seminar Series, University of Maine*, Orono, March 29.

2010 - Simons, E. M., W. B. Krohn, and D. J. Harrison. Influences of past and future forest management on the spatiotemporal dynamics of habitat supply for Canada lynx and American marten. *Invited Presentation at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2010 - Simons, E., W. Krohn, and D. Harrison. Predicting responses of forest landscape changes on wildlife umbrella species: future projections results for Canada lynx and American marten. *Poster presented at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2010 - Scott, S. A., W. B. Krohn, and D. J. Harrison. Influence of declining snowshoe hare densities on Canada Lynx occurrence in northern Maine. *Poster presented at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2009 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Landscape planning on The Nature Conservancy lands in northern Maine. *Invited presentation to executive director and staff of The Nature Conservancy*, Brunswick, Maine. February 24.

2009 - Fuller, A. K. D. J. Harrison, B. J. Hearn, and J. A. Hepinstall. Spatial responses to habitat loss in two populations of forest martens. Paper presented at *5th International Martes Symposium – Biology and Conservation of Martens: a New Synthesis*, Seattle, Washington. September 10.

2009 – Harrison, D. J. Forests, forest mustelids, and forest fragmentation: what happens when mammals don't read? *Invited presentation at Symposium on Behavioral Ecology of Mammals, W. M. Keck Center for Behavioral Ecology, North Carolina State University*, September 4.

2009 – Harrison, D. J. and B. J. Hearn. Ecological comparisons of home-range characteristics of American martens in Newfoundland and Maine: why are home ranges of threatened Newfoundland martens so large? Paper presented at *5th International Martes Symposium – Biology and Conservation of Martens: a New Synthesis*, Seattle, Washington. September 10.

2009 – Harrison, D. J. and A. K. Fuller. Ecology of white-tailed deer in Acadia National Park: Results from Research Conducted at The University of Maine. *Presentation to Resource Management Staff, Acadia National Park, Bar Harbor, Maine*, November 6.

2009 – Harrison, D .J., E. Simons, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine. *Presentation to the Maine Cooperative Forestry Research Unit, Mars Hill, Maine*, October 28.

2009 – Harrison, D. J. The growing need to fund additional scientists working on forest-wildlife interactions in Maine: a proposal. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. February 26.

2009 – Harrison, D. J. Forestry and Forest Wildlife, Chaired session at New England Society of American Foresters 89th Winter Meeting**.** Bio: Mass, Fuel, Products, Diversity - Resource Management in a Changing World. Portland, Maine. March 19**.**

2009 – Harrison, D. J., and A. K. Fuller. Relative Densities, Patch Occupancy, and Population Performance of Spruce Grouse in Regenerating Conifer, Precommercially Thinned, Mature Conifer, and Conifer Wetlands Stands: a proposal. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2009 – Harrison, D. J., E. M. Simons, and W. B. Krohn. Habitat changes for wildlife umbrella species: implications for landscape conservation strategies in northern Maine. *Invited presentation to northern Appalachians landscape conservation committee*, The Nature Conservancy, Brunswick, Maine. May 21.

2009 – Harrison, D. J., W. B. Krohn, and E. M. Simons. Past and future trends in habitat supply for forest carnivores in northern Maine: implications for forest policy. *Invited presentation to leadership of Maine Forest Service, Maine Department of Inalnd Fisheries and Wildlife and Maine Natural Areas Program*, Augusta, Maine. June 30.

2009 - Patterson W. and A. K. Fuller. Silvicultural prescriptions for maintaining marten and lynx habitat requirements. Field tour of the Nature Conservancy St. John ownership for staff of The Nature Conservancy, U.S. Fish and Wildlife Service, and Huber Resources Group. May 4-6.

2009 - Scott, S. A, D.J. Harrison, and W. B. Krohn. The relative effects of forest practices and natural population processes on the temporal dynamics of hare populations in northern Maine. *Invited Paper at New England Society of American Foresters 89th Winter Meeting***,** Portland, Maine. March 19**.**

2009 - Scott, S.A., D.J. Harrison, and W.B. Krohn. Spatio-temporal dynamics of snowshoe hares in northern Maine**.** *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2009 – Scott, S. A., D. J. Harrison, and W. B. Krohn. Spatio-temporal dynamics of snowshoe hares in northern Maine. *Paper presented at Northeast Fish and Wildlife Conference*, Lancaster, Pennsylvania. April 27.

2009 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, J. S. Wilson, and S. A. Sader. Past and future trends in habitat supply for martens and lynx across the landscapes of northern Maine, 1973-2032. . *Invited Paper at New England Society of American Foresters 89th Winter Meeting*, Portland, Maine. March 19**.**

2009 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, J. S. Wilson, and S. A. Sader. Past and future trends in habitat supply for martens and lynx across the landscapes of northern Maine, 1973-2032. .

Invited presentation to executive director and staff of The Nature Conservancy, Brunswick, Maine. February 24.

2009 – Simons, E. M. Influences of past and future forest management on the spatiotemporal dynamics of habitat supply for Canada lynx and American martens in northern Maine. *Ph.D. defense seminar, The University of Maine,* Orono. March 25.

2009 - Simons, E. M., J. S. Wilson, D. J. Harrison, W. B. Krohn,. Future trends in habitat supply for martens and lynx across the landscapes of northern Maine under alternative forest management scenarios, 2007-2032. . *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2008 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. 2008. Application and testing of models to predict probability of occupancy and density of endangered Newfoundland martens. *Presentation to Newfoundland Marten Recovery Team*, Corner Brook, Newfoundland. January 4.

2008 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. 2008. Spatial responses to habitat loss in two isolated populations of forest martens. *Invited talk in the Ecology, Evolution, and Behavior seminar series. Virginia Tech. University*, Blacksburg. February 1.

2008 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Landscape planning initiative for northern Maine using area sensitive umbrella species. *Invited presentation at USDA Natural Resources Conservation Service and U.S. Fish and Wildlife Service workshop on the Healthy Forest Reserve Program in Maine*, Bangor, Maine. July 1.

2008 – Fuller, A. K., D. J. Harrison, B. K. Hearn, and J. A. Hepinstall. Spatial responses to habitat loss in 2 populations of forest martens. *Paper presented at The Wildlife Society 15th Annual Conference*, Miami, Florida. November 11.

2008 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Applications of lynx and marten models to operational forest management. *Invited presentation at Lynx on the landscape: workshop and fall field tour*, Cooperative Forestry Research Unit, Greenville, Maine. October 28.

2008 – Harrison, D. J., W. B. Krohn, and A. K. Fuller. Long-term monitoring of snowshoe hare populations to inform stand- and landscape-scale forest management and recovery planning for Canada lynx in Maine. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono. April 9.

2008 – Harrison, D. J., A. K. Fuller, and E. Simons. Trends in habitat supply for wildlife species whose habitat requirements are not addressed using coarse-filter umbrella species approaches, with a focus on deer wintering areas. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono. April 9.

2008 – Harrison, D. J., W. B. Krohn, S. Scott, A. K. Fuller, and L. Robinson. Stand-scale management to increase hare and lynx populations. *Invited presentation at Bridging Science and Stewardship Workshop*, Maine Cooperative Forestry Research Unit, Brewer, Maine. May 14.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, and E. Simons. Forests, forest carnivores, and fragmentation: Wildlife-habitat relationships in the Acadian forests of Maine, USA. *Invited seminar, Department of Ecology and Natural Resource Management*, Norwegian University of Life Sciences, As, Norway. September 16.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, and E. Simons. Forests carnivores as a tool for landscape conservation: Case studies focusing on American martens and Canada lynx. *Seminar presented at Grimso Wildlife Research Station*, Lindesberg, Sweden. September 19.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, E. Simons, B. J. Hearn, and D. Payer. Forests, forestry, and forest martens: a landscape perspective. *Invited presentation at conference titled: Pour une sylviculture adaptee a al feret irreguliere et sa faune*, Faculty of Forestry, University of Laval, Baie Comeau, Quebec. October 8.

2008 - Krohn W. B., D. J. Harrison, S. A Scott, L. L. Robinson, C. L. Hoving, A. K. Fuller, and E. M. Simons. Variation in snowshoe hare densities as related to Canada lynx and forest management in eastern North America. *Presentation at Eastern CANUSA Forest Science Conference*, Orono, Maine. October 17.

2008 - Scott, S., D.J. Harrison, and W. B. Krohn. Partial harvests: contributing to foraging habitat?. *Presentation at Lynx on the Landscape Workshop*, Maine Cooperative Forestry Research Unit , Workshop. Greenville, ME. October 28.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. Sader. Trends in American marten habitat on the commercial forestlands of northern Maine. *Presented at Impact of Wildlife on the Forest Industry Workshop*, New England Regional Council on Forest Engineering, University of Maine, Orono. March 10.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. Sader. Predicting responses of forest landscape change on wildlife umbrella species. *Presentation to the Maine Cooperative Forestry Research Unit Advisory Committee*, Orono. April 7.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, S. Sader, and J. S. Wilson. Landscape indicators of forest biodiversity: application of American marten, Canada lynx, and snowshoe hares. *Presentation at Bridging Science and Stewardship Workshop*, Maine Cooperative Forestry Research Unit, Brewer. May 14.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard and S. A. Sader. Ecological factors associated with landscape-scale occurrences of Canada lynx in northern Maine. *Invited Presentation at Lynx on the Landscape: What You Need to Know Workshop and Field Tour*, Maine Cooperative Forestry Research Unit, Greenville, Maine. October 29.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. A. Sader. Retrospective changes in habitat supply for Canada lynx and snowshoe hares resulting from timber harvesting: Implications for lynx recovery? *Paper presented at The Wildlife Society 15th Annual Conference*, Miami, Florida. November 9.

2008 - Simons, E. M., K. R. Legaard (Co-Presenters), D. J. Harrison, W. B. Krohn, and S. Sader. Evaluating broad-scale changes in timber harvesting patterns, forest landscape structure, and wildlife habitat supply for umbrella species in northern Maine. *Invited presentation at Friends of ForCAST, Center for Research on Sustainable Forests*, Orono. November 20.

2007 - Fuller, A. K., and D. J. Harrison. "The relative roles of fine- and coarse-grained habitat choices by Canada lynx during winter." *Paper presented at The Wildlife Society 14th Annual Conference*, Tucson, Arizona. September 23.

2007 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. 2007. Landscape planning initiative for northern Maine using area sensitive umbrella species: an overview. *Presented to Beginning with Habitat Steering Committee*, Orono, Maine. October 17.

2007 - Fuller, A. K., and D. J. Harrison. Foraging paths reveal scale-dependent habitat decisions by Canada lynx. *Paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 26.

2007 - Harrison, D.J. Forest carnivores, forestry, and fragmentation: modeling landscape sustainability using marten and lynx. *Seminar presented to Division of Biological Sciences and School of Forest Resources*, University of Montana, Missoula. April 30.

2007 - Harrison, D. J. The role of predation on population dynamics of white-tailed deer. *Presentation to Commissioner's Task Force to Assess the Northern and Eastern Maine Deer Population*. June 12.

2007 - Harrison, D. J., E. Simons, and K. Legaard. Forest carnivores, forestry and fragmentation: Using American marten as the canary in the coal mine. *Department of Biological Sciences Seminar Series*, University of Maine. May 4.

2007 - Harrison, D. J. and J. McCloskey. Documenting occurrence patterns of northern goshowks in Maine. *Proposal presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, Maine. April 25.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, A. K. Fuller, and C. L. Hoving. 2007. Multi-scalar habitat preferences of snowshoe hares: how does a prey specialist coexist with a specialist predator? Paper *presented at International Union of Game Biologists XXVIII Congress*, Uppsala, Sweden. August 17.

2007 – Harrison, D. J. Effects of forest practices on habitat for wintering deer. *Workshop and Field Tour for Maine Cooperative Forestry Research Unit Advisory Committee*. October 10.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, S. Scott, A. K. Fuller, and C. L. Hoving. Temporal and spatial variation in snowshoe hare densities in eastern North America: relationships to lynx and forest management. *Invited paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 26.

2007 – Harrison, D. J. The influence of predators on overwinter deer survival: interactions with habitat. *Invited presentation at Deer Wintering Area Workshop*, Orono, Maine. December 10.

2007 - Hearn, B. J., D. J. Harrison, C. Lundrigan, W. J. Curran, and A. K. Fuller. Multi-scale habitat selection by the endangered Newfoundland marten. *Paper presented at The Wildlife Society 14th Annual Conference*, Tucson, Arizona. September 23.

2007 - Simons, E. M., L. Robinson, D. J. Harrison, W. B. Krohn, and K. R. Legaard. Ecological factors associated with landscape-scale occurrences of Canada lynx in northern Maine. *Paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 24.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 3.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Paper presented at 2006 Carnivores Conference*, St. Petersburg, Florida, November 14.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Invited presentation at Forestry Noontime Seminar Series*, University of Maine, Orono, March 3.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 25.

2006 – Harrison, D. J. Interactions among forestry and forest wildlife in the Acadian forest: the need for landscape planning. *Invited lecture in FES 508: Industrial Spruce-Fir Ecosystems*, University of Maine, Orono, December 15.

2006 – Harrison, D. J., W. B. Krohn, J. A. Homyack, L. Robinson, and A. K. Fuller. Temporal and spatial variation in hare populations in relation to forest harvesting in Maine. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 - Harrison, D. J., W. B. Krohn, A. K. Fuller, and L. Robinson. Hare population dynamics and lynx and hare habitat selection in Maine. *Presentation at National Interagency Lynx Biology Team Meeting, Duluth, MN*. October 20.

2006 - Harrison, D. J. and W. K. Krohn. Long-term results from research on snowshoe hares and lynx in relation to forest management activities in Maine. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, University of Maine. October 4.

2006 – Harrison, D. J., W. K. Krohn, L. Robinson, J. A. Homyack, and A. K. Fuller. Temporal and spatial variation in hare densities within the geographic range of lynx in Maine. *Invited paper presented at Symposium on Lynx Conservation in the lower 48 states, The Wildlife Society Annual Conference*, Anchorage, Alaska, September 27.

2006 – Harrison, D. J. Managing forest stands and landscapes to maintain wildlife biodiversity. *Invited presentation at Research, Results and the Resource Workshop*, sponsored by Maine Cooperative Forestry Research Unit, Orono, Maine, May 25.

2006 – Harrison, D. J. Research results and applications for management: stand and landscape management for marten and lynx on commercial forestlands in Maine. *Invited presentations and field tour, Annual meeting of Foresters, Wagner Land Management Corp*., Bethel, Maine, May 3.

2006 – Harrison, D. J. Quantifying biodiversity values across managed landscapes in northern and western Maine. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, April 26.

2006 – Harrison, D. J. Wildlife, forest succession, vegetation management, and biodiversity. *Invited lecture in FES 435/535: Managing Forest Succession*, University of Maine, Orono, April 13.

2006 – Krohn, W. B., D. J. Harrison, C. Hoving and L. Robinson. Factors influencing patterns of lynx occurrence across multiple spatial scales in eastern North America. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 - Krohn, W. B., D. J. Harrison L. Robinson, and C. Hoving. Results for species occurrence modeling with lynx across 3 spatial scales in Maine. *Presentation at National Interagency Lynx Biology Team Meeting*, Duluth, MN. October 20.

2006 – Robinson, L., D. J. Harrison, W. B. Krohn, J. Vashon, and M. McCollough. Modeling habitat occupancy of lynx in northern Maine. *Paper presented at Carnivores 2006 Conference*, St. Petersburg, Florida, November 14.

2006 – Robinson, L., D. J. Harrison, W. B. Krohn. Ecological relationships between partial harvesting, snowshoe hares, and lynx in Maine. *Presentation and Wiscussion for Forestry and Wildlife Professionals in Maine*, University of Maine, Orono, August 24.

2006 – Simons, E., K. Legaard, D. J. Harrison, S. Sader, and W. B. Krohn. Forest harvesting trends affecting lynx and marten habitat in Maine as revealed by change detection of multiple LANDSAT TM images, 1988-2004. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 – Simons, E., K. Legaard, D. J. Harrison, S. Sader, and W. B. Krohn. Trends in forest harvesting in Maine as revealed by change detection of multiple LANDSAT TM images. *Poster presented at 2006 CANUSA Conference*, Quebec City, Canada, October.

2005 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. Modeling habitat occupancy of marten in western Newfoundland: management and planning applications. *Invited presentation to the Newfoundland Marten Recovery Team*, Corner Brook, Newfoundland, November 2.

2005 – Fuller, A. K., D. J. Harrison, and B. J. Hearn. Modeling habitat occupancy of marten in western Newfoundland: management and planning applications. *Final contract report presentation to Canadian Forest Service, Western Newfoundland Model Forest, and other project cooperators*, Corner Brook, Newfoundland, November 1.

2005 - Fuller, A. K., D. J. Harrison, and J. Vashon. Stand-scale habitat selection by lynx on commercial forestlands in northern Maine. *New England Chapter of Society of American Foresters Conference*, Portland, ME. March 17.

2005 - Fuller, A. K., D. J. Harrison, and J. H. Vashon. Effects of forest practices on habitat selection by Canada lynx during winter. *Lynx Research Working Group Meeting*, Orono, ME. April 14.

2005 - Harrison, D. J. An overview of the research program in the Department of Wildlife Ecology. Presentation to the *Office of the Vice President for Research*, University of Maine, Orono, ME. February 1.

2005 - Harrison, D. J. Predators, prey, and forestry in northern and eastern Maine: a historical perspective. *University of Maine at Machias Science Club and Downeast Salmon Federation*, Machias, ME. March 2, 2005.

2005 - Harrison, D. J. Overview of research conducted by The University of Maine during 1980-1994 regarding the population status and relationships of deer and vegetation in Acadia National Park. *Acadia National Park Resource Management Staff*, Bar Harbor, ME. July 26.

2005 - Harrison, D. J. and J. A. Hepinstall. Evaluating the utility of forest carnivores as umbrella species to promote biodiversity conservation. Final contract report presentation, *Maine Cooperative Forestry*

Research Unit, University of Maine, Orono, ME. January 26.

2005 - Harrison, D. J., and W. B. Krohn. Relationships among partial harvesting, snowshoe hares, Canada lynx and forest harvesting: a survey of research activities at the University of Maine and Maine Cooperative Fish and Wildlife Research Unit. *National Lynx Biology Team Meeting*, Minneapolis, MN. August 17.

2005 – Harrison, D. J., W. B. Krohn, and J. A. Hepinstall. A landscape planning framework for northern Maine: an overview of recent research results for marten, lynx and other forest vertebrates. *Maine Department of Inland Fisheries and Wildlife*, Augusta, December 21.

2005 - Harrison, D. J. and W. B. Krohn. A summary of preliminary research findings from studies of snowshoe hares and lynx conducted by the University of Maine and the Maine Cooperative Fish and Wildlife Research Unit. *Eastern Science Team, National Council for Air and Stream Improvement*, Sugarloaf, U.S.A. August 24.

2005 - Hearn, B. J., D. J. Harrison, and A.K. Fuller. Landscape-scale habitat selection by Newfoundland marten & an update on efforts to model habitat for Newfoundland marten. *Newfoundland Marten Recovery Team*, Corner Brook, NL. May 17, 2005.

2005 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University*, Frostburg, VA. April 26.

2004 - Fuller, A. K. and D. J. Harrison. Preliminary results of studies of substand-scale habitat selection by lynx in northern Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Fuller, A. K. and D. J. Harrison. Preliminary results of studies of substand-scale habitat selection by lynx in northern Maine. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 21.

2004 – Fuller A. K. and D. J. Harrison. Influence of forest practices on stand-scale habitat selection of lynx in northern Maine. *Paper presented at Eastern CANUSA Forest Science Conference,* Frederickton, New Brunswick, October 15.

2004 - Fuller, A. K. and D. J. Harrison. Stand-scale habitat selection by lynx in northern Maine: preliminary results. *Invited presentation at Fourth Northeastern Mesocarnivore Workshop: Lynx and marten in the northern Appalachians*, Portland, Maine, December 9.

2004 - Harrison, D. J., J. A. Homyack, A. K. Fuller, and W. B. Krohn. Effects of precommercial thinning and partial harvesting on snowshoe hares in Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Harrison, D. J., J. A. Homyack, J. A. Litvaitis, and W. B. Krohn. Quantifying densities of snowshoe hare in Maine using pellet plots. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Harrison, D. J., C. L. Hoving, and W. B. Krohn. Distribution and extent of lynx habitat in eastern North America and Maine from GIS modeling. *Presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 7.

2004 - Harrison, D. J. Status of lynx litigation, critical habitat designations, and recovery planning in the U.S. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 21.

2004 - Harrison, D. J. Effects of clearcutting, precommercial thinning, and partial harvesting on forest dependent wildlife species. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research,* Ashland Maine, May 12.

2004 – Harrison, D. J. and J. A. Hepinstall. Predicting marten and lynx occurrences across the landscape: Evaluating the utility of forest carnivores as umbrella species to promote biodiversity conservation. *Wildlife Ecology Seminar Series, University of Maine*, Orono, 6 December.

2004 – Harrison, D. J., W. B. Krohn, L. Robinson, and A. K. Fuller. Lynx and hare research sponsored by the Maine Cooperative Forestry Research Unit. *Field tour at sites in northern Maine for forest industry representatives.* October 28.

2004 – Harrison, D. J. and J. A. Hepinstall. Broad-scale viability habitat modeling, habitat supply trends, and umbrella species applications for marten and lynx in Maine. *Invited presentation at Fourth Northeastern Mesocarnivore Workshop: Lynx and marten in the northern Appalacians, Wildlife Conservation Society*, Portland, Maine, December 9.

2004 – Harrison, D. J., A. K. Fuller, and B. Hearn. Updates of results on habitat selection and fragmentation studies on Newfoundland marten. *Presentation to Newfoundland marten recovery team*, Corner Brook, Newfoundland, December 15.

2004 – Hepinstall, J. A. and D. J. Harrison. Utility of forest carnivores (American marten and Canada lynx) as umbrella species for biodiversity conservation. *Carnivores 2004 Conference*, Sante Fe, New Mexico, November 15.

2004 – Homyack, J. A., D. J. Harrison, W. B. Krohn, A. K. Fuller, and C. L. Hoving. *Comparing conservation issues affecting Canada lynx within the northeastern U.S. and the Rocky mountains*. *Presentation to Wyoming Chapter of The Wildlife Society*, Laramie, November 11.

2004 - Krohn, W. B., D. J. Harrison, and M. A.,McCollough. An overview of the lynx-hare landscape modeling project in northern Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2003 - Harrison, D.J., and J.A. Hepinstall. Marten as a tool for landscape-scale habitat planning in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* January 29.

2003 - Harrison, D.J. Ecological aspects of coyote predation and the potential for effective control of predation via snaring. *Invited presentation and panel discussion at winter meeting of Maine Chapter of The Wildlife Society, Augusta, Maine.* January 30.

2003 - Harrison, D.J. and J.A. Hepinstall. Using marten as a landscape-scale conservation tool for maintaining diversity of forest-dependent vertebrates. *Presentation and workshop conducted for Maine Department of Inland Fisheries and Wildlife Habitat Planning Committee, Bangor, Maine.* March 10.

2003 - Harrison, D.J., and J.A. Hepinstall. Marten as a tool for landscape-scale habitat planning and biodiversity conservation. *Presentation to Recovery Team for the Endangered Newfoundland Marten, Deer Lake, Newfoundland.* April 1.

2003 - Harrison, D.J. Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D.J. Relative densities, habitat selection, and population performance of spruce grouse in clearcut, intensively managed, and "classic" habitat in northern Maine. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D.J. Evaluating the umbrella species approach for biodiversity conservation on commercial forestlands in Maine. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D. J. Effects of coyotes on Maine's deer herd: Is there a need for a snaring program. *Talk presented to Student Chapter of The Wildlife Society*, University of Maine, Orono, December 6.

2003 - Harrison, D. J. A. K. Fuller, J. A. Homyack, and W. B. Krohn. How do clearcutting, pre-commercial thinning, and partial harvesting influence wildlife habitat? Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Harrison, D. J. and J. A. Hepinstall. Landscape planning for wildlife. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Harrison, D. J., D. C. Payer, and A. K. Fuller. Maintaining structural requirements of wildlife within forest stands. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Hepinstall, J.A., and D. J. Harrison. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Paper presented at Resource Selection Conference, Laramie, Wyoming.* January 5-8.

2003 - Hepinstall, J.A., and D.J. Harrison. Does the umbrella leak?: Biodiversity conservation based on marten habitat. *Paper presented at the 10th Annual Conference of The Wildlife Society, Burlington, VT*. September 9.

2003 - Homyack, J.A. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Seminar presented to Department of Wildlfe Ecology, University of Maine.* February

27.

2003 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Krohn, W.B., J.A. Homyack,and D.J. Harrison. "Changes in the Acadian Forest: Implications for Wildlife." *Invited paper presented in Special Wildlife Session on Early Successional Habitats: A Critical Problem, 59th Northeast Fish and Wildlife Conference, Newport, Rhode Island*. April 15.

2002 - Fuller, A. K. and D. J. Harrison. "Resource partitioning and interspecific competition between coyotes and red foxes on an island during recent colonization by coyotes." *Paper presented at the Northeast Fish and Wildlife Conference*, Portland, ME. April 23.

2002 - Fuller, A. K., and D.J. Harrison. Resource partitioning and interspecific competition between coyotes and red foxes on an island during recent colonization by coyotes. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 18.

2002 - Harrison, D.J., and J. A. Hepinstall. "A workshop on approaches to evaluate habitat requirements and to inventory habitat supply for endangered marten in Newfoundland." *Workshop presented to Canadian Forest Service Scientists, Newfoundland Government Scientists, and Western Newfoundland Model Forest Scientists,* Cornerbrook, Newfoundland, January 9.

2002 - Harrison, D.J. "Forestry and forest carnivores: conflict or opportunity." *Talk presented to Student Chapter of The Wildlife Society,* Orono, Maine, February 7.

2002 - Harrison, D.J. "Forestry and forest carnivores: conflict or opportunity." *Department of Biology Seminar Series, Colby College*, Waterville, Maine, March 8.

2002 - Harrison, D.J., C. L. Hoving, A. K. Fuller, and W.B. Krohn. "A summary of research needs for lynx in eastern North America: what do we know, what are we researching, and what is left?" *Presentation at Northern Appalachians Lynx Science Workshop*, Portland, Maine, April 24.

2002 - Harrison, D.J. "Landscape considerations for conserving habitat for wolves, American marten, and lynx in the White and Green Mountain National Forests." *Presentation at Species Viability Workshop, U.S. Forest Service*, Manchester, New Hampshire, May 22.

2002 - Harrison, D. J. and A.K. Fuller. Effects of partial harvesting on forest mammals. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Harrison, D.J., and J.A. Hepinstall. Landscape management for fragmentation-sensitive species. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Harrison, D.J. and A.K. Fuller. Substand-scale responses of Canada lynx to habitat and prey: an ongoing study. . *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002 - Harrison, D.J., W.B. Krohn, and C. Hoving, Broad-scale habitat ecology of Canada lynx in eastern North

America. *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002 - Harrison, D.J., and J.A. Hepinstall. Modeling habitat supply as a tool for marten conservation. *Invited presentation at Newfoundland Marten Habitat Supply Workshop, Grand Falls, Newfoundland.* December 3.

2002 - Harrison, D.J., and J.A. Hepinstall. Predictive modeling and trends in marten occurrence across the landscape of Northern Maine: marten as a tool for conserving forest biodiversity. *Invited presentation at Wildlife Division Meeting, Maine Department of Inland Fisheries and Wildlife, Bangor, Maine.* December 17.

2002 - Hearn, B., and D.J. Harrison. Home range characteristics of Newfoundland marten. *Invited presentation at Newfoundland Marten Habitat Supply Workshop, Grand Falls, Newfoundland.* December 3.

2002 - Hepinstall, J. A. and D. J. Harrison, and W. B. Krohn. "Spatially explicit wildlife habitat modeling; case studies from Maine." Seminar presented at the *Department of Wildlife Ecology Seminar Series*, Orono, ME. April 8.

2002 - Hepinstall, J. A., D. J. Harrison, D. C. Payer and A. K. Fuller. "Habitat supply modeling for American marten in the managed forests of northern Maine." *Poster presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 21- 24.

2002 - Hepinstall, J. A., D. J. Harrison, D.C. Payer, and A. K. Fuller. "Can marten serve as an umbrella species for forest management in northern Maine?" *Paper presented at the 17th annual symposium of the International Association for Landscape Ecology – United States Regional Association (US-IALE),* Lincoln, NE. April 23-27.

2002 - Hepinstall, J. A. and D. J. Harrison. "Applications of Field Research to Forest Landscape Planning: A Case Study Using American Marten in Maine." Paper presented at *Beyond the Data: Integrating Research Findings into Forest Management Planning and Operations,* Moncton, New Brunswick, Canada. May 3-4.

2002 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Poster presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of intensive forest management on small mammals and snowshoe hare in northern Maine." *Presentation at the Spring 2002 Evening Seminar Series of the University of Maine Student Chapter of the Wildlife Society, Orono, ME*. April 14.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of precommercial thinning on small mammals in northern Maine." *Paper presented at the Northeast Fish and Wildlife Conference, Portland, ME.* April 23.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Preliminary results of the effects of precommercial thinning on snowshoe hare." *Poster presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 21- 24.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of precommercial thinning on snowshoe hare in northern Maine." *Paper presented at The Annual Meeting of The Wildlife Society, Bismarck, ND*. September 27.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. Precommercial thinning effects on hare habitat. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on abundance of snowshoe hare in northern Maine. *Paper presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on small mammals in northern Maine. *Paper presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002- Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hares in northern Maine: implications for Canada lynx. *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002- Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hare: implications for Canada lynx. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 - Hoving, C. L., D. J. Harrison, W. B. Krohn, and W. J. Jakubas. "Canada lynx habitat, forest harvest strategies and regeneration in northern Maine." *Paper presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 24.

2002 – Hoving, C., D.J. Harrison, W.B. Krohn, and W. Jakubas. Canada lynx habitat, forest harvest strategies and regeneration in northern Maine. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 – Hoving, C., D.J. Harrison, W.B. Krohn, R.A. Joseph, and M. O'Brien. Climate change and lynx: spatial occurrence models for eastern North America. *Poster presented at Carnivores 2002 Conference, Monteray, California.* November 17-20.

2002 - Spohr, S., D.J. Harrison, and F.A. Servello. "Effects of landscape and cover characteristics on nest success of eastern wild turkeys in southeastern Connecticut." *Paper presented at the Northeast Fish and Wildlife Conference,* Portland, Maine, April 23.

2001 - Fuller, A.K., and D.J. Harrison. "Partial harvest guidelines for maintenance of marten in Maine." *Invited lecture presented at the "Newfoundland Marten Endangered Species Recovery Team Meeting*", St. John's, Newfoundland, January 12.

2001 - Harrison, D.J. Landscape scale habitat requirements and fragmentation thresholds of marten. *Lecture at workshop attended by Canada Parks scientists and invited advisors to address habitat needs of endangered marten in western Newfoundland*. Gros Morne National Park Newfoundland, January 9.

2001 – Harrison, D.J., and D.C. Payer "Influences of trapping mortality on current distribution and population dynamics of marten: a biogeographical and empirical perspective." *Invited paper presented at "Newfoundland Marten Accidental Trapping and Snaring Workshop*", St. John's, Newfoundland, January 12.

2001 - Harrison, D.J. An update of lynx and marten issues related to forest management. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit,* Orono, January 25.

2001 – Harrison, D. J. "Marten and Forestry: Conflict or Opportunity." *Invited paper presented at J. D. Irving, Limited's 2001 Science Forum*, Frederickton, NB, April 3, 2001.

2001 - Harrison, D.J. "Forestry and Forest Carnivores: Conflict or Opportunity." *Presented at the University of Maine, Forestry Noontime Seminar Series,* April 6.

2001 - Harrison, D.J. Potential forest management issues and research opportunities with federally threatened lynx in Maine. *Presentation to to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, Maine, May 3.

2001 – Harrison, D.J. "Extent and distribution of wolf habitat in eastern North America and niche characteristics of wolves versus eastern coyotes." Served as *invited panelist and presenter at Wolf Symposium for invited government agencies, university personnel and non-governmental organizations*, Burlington, VT, May 16.

2001 - Harrison, D. J., D.C. Payer, J. A. Hepinstall, A. K. Fuller and D. J. Katnik. "Landscape thresholds and nonlinear responses to fragmentation by American marten." *Paper presented at 15th Annual Meeting of the Society for Conservation Biology*, Hilo, Hawaii, July 31.

2001 - Harrison, D. J., and J. A. Hepinstall. "Habitat supply planning for American marten in Maine and Newfoundland." *Seminar presented to Canadian Forest Service and Newfoundland Provincial Scientists,* Cornerbrook, Newfoundland, August 26.

2001 - Harrison, D. J. "Marten habitat supply assessment." *Presentation at meeting of Maine Cooperative Forestry Research Unit Advisory Committee*, Millinocket, Maine, October 17.

2001 - Harrison, D.J. "Habitat potential for wolves and niche overlap with eastern coyotes in eastern North America." *Paper presented at Eastern Wolf Workshop,* Dixville Notch, New Hampshire, October 19.

2001 – Hepinstall, J. A., D. J. Harrison, D. C. Payer, A. K. Fuller, and D. D. Katnik. "Using marten as an umbrella species for forest management." *Invited paper presented at the 37th Annual North American Moose Conference and Workshop,* Sugarloaf, ME, May 14, 2001.

2001 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting the occurrences of American

marten in harvested landscapes. *Paper presented at the 8th Annual Conference of The Wildlife Society, Reno, Nevada*, September 25-29.

2001 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Update on the effects of precommercial thinning on snowshoe hare and small mammals in northern Maine." *Field tour and presention to Advisory Committee, Maine Cooperative Forestry Research Unit*, Millinocket, Maine, October 17.

2001 - Hoving, C. L. "Historical occurrence and habitat ecology of Canada lynx in eastern North America." *Talk presented at the Maine Audubon's Wildlife Conference, Maine Audubon Society*, Falmouth, ME, April 7.

2001 - Hoving, C.L, D. J. Harrison, and W.B. Krohn. Historical occurrence and habitat ecology of Canada lynx in eastern North America. *Final contract seminar to Maine Department of Inland Fisheries and Wildlife*, Bangor, ME, March 22.

2001 - Hoving, C.L. Historical occurrence and habitat ecology of Canada lynx in eastern North America. *Final thesis seminar presented to Department of Wildlife Ecology, University of Maine*, April, 12.

2001 – Hoving, C. L., R. A. Joseph, and W. B. Krohn. "Historical and current distributions of lynx in Maine, 1833-1999." *Paper presented at the 57th Northeast Fish and Wildlife Conference*, Saratoga Springs, NY, April 22-26.

2001 – Hoving, C. L., D. J. Harrison, W. K. Krohn, W. J. Jakubas, R. A. Joseph, R. Lafond, and M. O'Brien. "A probability model of Canada lynx occurrence in eastern North America." *Poster presented at the 57th Northeast Fish and Wildlife Conference*, Saratoga Springs, NY, April 22-26.

2001 - Hoving, C.L., D. J. Harrison and W. B. Krohn. " Habitat ecology of Canada lynx in eastern North America." *Poster presented at the U. S. Fish and Wildlife Service regional office, Hadley, MA*, April 26.

2001 - Hoving, C. L., D. J. Harrison, and W. K. Krohn. " Multi-scale habitat relations of Canada lynx in eastern North America." *Paper presented at the 2001 Meeting of the Northeast Fur Technical Committee*, Providence, Rhode Island, September 13.

2001 - Hoving, C. L., D. J. Harrison, W. K. Krohn, W. J. Jakubas, R. A. Joseph, R. Lafond, and M. O'Brien. "Canada lynx habitat associations in eastern North America." *Paper presented at The Wildlife Society 8th Annual Conference*, Reno, Nevada, September 27.

2001 - Hoving, C. L., D. J. Harrison, and W. B. Krohn. "Canada lynx habitat in eastern North America." *Presented at the Alice Steward Lecture Series, Maine Center for the Arts*, Orono, ME. October 31.

2000 - Fuller, A.K., H. J. Lachowski, and D. J. Harrison. Responses of mammals at two trophic levels to partial harvesting. *Paper presented at 80th Annual Meeting of the American Society of Mammalogists*, University of New Hampshire, Durham, June 19.

2000 - Fuller, A.K. and D.J. Harrison. Influence of partial harvesting on habitat selection by American marten in an industrially forest landscape. . *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Fuller, A., H.J. Lachowski, and D. Harrison. 2000. Stand-level responses of American marten and prey to forest management: do marten respond to distribution of prey? *Paper presented at 3rd International Martes Symposium, Corner Brook*, Newfoundland, August 15.

2000 - Fuller, A.K., and D.J. Harrison. Fuller, A.K. and D.J. Harrison. Influence of partial harvests on American marten habitat selection in Maine. *Final contract seminar presented to Advisory Committee, Maine Cooperative Forestry Research Unit*, Sugarloaf Mountain, Maine, October 3.

2000 - Harrison, D.J. Presented a seminar of final results of 10 year study on effects of forest harvesting and trapping on American martens to Advisory Committee, *Cooperative Forestry Research Unit*, University of Maine, Orono, February 2.

2000 - Harrison, D.J. Extent and distribution of potential wolf habitat in eastern North America; an international issue. *Presentation at "Northeast Wolf Forum: a discussion of issues and concerns"*, Rumford, Maine, July 12.

2000 - Harrison, D.J. Served as Program Chair and provided opening comments for *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D., D. Payer, A. Fuller, J.Hepinstall, D. Katnik. Landscape thresholds and response to fragmentation by American marten. Paper presented at *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D. Served as chairperson for session titled: Planning and Managing Landscapes for *Martes*, *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D. Served as an invited panelist for discussion of : What is suitable habitat for North American *Martes*? *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Harrison, D. Chaired plenary session titled: Status of *Martes* and their habitats from a global perspective. *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Harrison, D.J. Fragmentation thresholds for American marten: preliminary results. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Sugarloaf Mountain, Maine, October 3.

2000 - Harrison, D.J., J.Homyack, and A.K. Fuller. Led a field trip and presented preliminary data on effects of forest harvesting on snowshoe hares and small mammals at field tour for Maine forest industry representatives, *Maine Cooperative Forestry Research Unit Fall Field Tour*, October 4.

2000 - Harrison, D. J. Presentation on wolf ecology , habitat potential in Maine, and behavior of wolf-hybrids. *7th grade science and literature classes at the Reeds Brook Middle School*, Hampden, November 8.

2000 – Harrison, D.J. T.G. Chapin, and C.L. Hoving. Distribution, extent, and connectivity of potential habitat for wolves in Maine and eastern Canada. *Poster presented at Carnivores 2000 Conference*, Denver, Colorado, November 13-15.

2000 - Harrison, D.J. Influence of dispersal on social ecology of coyotes: do social pressures or prey size promote pack formation? *Invited paper at Carnivores 2000 Conference*, Denver, Colorado, November 14.

2000 - Krohn, W.B., C.L. Hoving, D.J. Harrison, D.M. Phillips, and H.C. Frost. Martes foot-loading and snowfall distribution in eastern North America: implications to broad-scale distributions and mesocarnivore interactions. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Payer, D.C., and D.J. Harrison. Influence of forest structure on habitat use by American marten. *Paper presented at 10th Northern Furbearer Conference*, Fairbanks, Alaska, April 17.

2000 - Payer, D.C., and D.J. Harrison. 2000. Effects of timber harvesting and trapping on demographic characteristics of marten. *10th Northern Furbearer Conference*, Fairbanks, Alaska, April 18.

2000 - Payer, D.C., and D.J. Harrison. Demographic characteristics of American marten in relation to clearcutting and trapping. . *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Payer, D.C., and D.J. Harrison. Effects of timber harvesting and trapping on habitat selection by American marten. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Payer, D.C., and D.J. Harrison. Territoriality and home-range fidelity of American marten in relation to timber harvesting and trapping. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 16.

1999 - Harrison, D.J. Response of wildlife to thinning in forests of the *northeastern U.S. Invited* presentation at *Conference on Thinning in the Maine Forest*, Augusta, Maine. November 15.

1999 - Harrison, D. J. Influence of dispersal on social ecology of coyotes: Comparison of a mainland and island population. *The Wildlife Society 6th Annual Conference*, Austin, Texas. September 11.

1999 - Harrison, D. J. Responses of wide ranging carnivores to forest characteristics at multiple spatial scales. *North American Forest Ecology Workshop*, University of Maine, Orono. June 28.

1999 - Harrison, D. J. Session summary: stand- and landscape-scale responses of wildlife to forest practices. *North American Forest Ecology Workshop*, University of Maine, Orono. June 30.

1999 - Harrison, D. J. Habitat associations of marten in Maine: responses to forestry and trapping. Invited presentation at *Pine Marten Symposium*, Corner Brook, Newfoundland. January 27.

1999 - Fuller, A.K. and D.J. Harrison. Influence of partial harvests on American marten habitat selection in Maine. *The Wildlife Society 6th Annual Conference*, Austin, Texas. September 11.

1999 - Fuller, A.K., H. J. Lachowski, and D. J. Harrison. Responses of mammals at two trophic levels to stand-

scale forest harvesting in Maine. *North American Forest Ecology Workshop*, University of Maine, Orono. June 28.

1998 - Harrison, D. J. Using carnivores as a model for landscape-scale forest planning. Invited paper at *Maine Forest Biodiversity Conference*, Orono, Maine. November 19.

1998 - Harrison, D. J. Wolves, science, and the future of Maine=s forests. Lecture to *Forum for Undergraduate Science Majors*, University of Maine. December 10.

1998 - Harrison, D. J. A summary from 10 years of marten research with a look to the future. Invited seminar presented to *Resource Assessment Staff, Maine Department of Inland Fisheries and Wildlife.* November 19.

1998 - Fuller, A.K., and D.J. Harrison. Use of partially harvested stands by American marten: a preliminary analysis. Poster presented at *Euro-American Mammal Congress*, Santiago de Compostela, Spain. July 23.

1998 - Harrison, D.J. Habitat ecology of American marten: specialist or generalist? Invited Paper presented in symposium: *Mustelids in a Modern World*, Euro-American Mammal Congress, Santiago de Compostela, Spain. July 23.

1998 - Harrison, D.J. A summary of results from ongoing studies of American marten in Maine. Invited presentation at *Newfoundland Marten Recovery Team Meeting*, Grand Falls-Windsor, Newfoundland. May 13.

1998 - Harrison, D.J. Potential habitat for eastern timber wolves in Maine. Invited presentation at *Eastern Wolf Recovery Meeting*, Pinkham Notch, NH. September 29.

1998 - Harrison, D.J. and D.C. Payer. Substand-level habitat use by American marten: recommendations for foresters. Presentation to Advisory Committee, *Maine Cooperative Forestry Research Unit*, Orono, Maine. April 29.

1997 - Harrison, D.J. An assessment of potential habitat for eastern timber wolves in the northeastern United States. Invited presentation at *meeting of eastern wolf experts*, Sherbrook, Quebec. October 23.

1997 - Harrison. D.J. Habitat selection by American marten at multiple spatial scales. Invited seminar presented to *Wildlife Division, Department of Natural Resources, St. Johns, Newfoundland*, Canada, March 3.

1997 - Harrison, D.J. "Results from coyote-deer studies in Acadia National Park: insights into predator social ecology and prey demography." Seminar presented to *Dept. of Wildlife Ecology, Univ. Maine*, Orono, April 7.

1997 - Harrison, D.J. Influence of forest harvesting and trapping on populations of American marten. Invited seminar presented to forest industry personnel, *Corner Brook, Newfoundland*, Canada, March 4.

1997 - Harrison, D.J. Influence of forest harvesting and fur trapping on populations of American marten.

Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison D.J. Influence of landscape composition and configuration on habitat occupance by American marten. Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison, D.J. Integrating marten and forest management: the Maine experience. Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison, D.J. Microhabitat-, stand-, and landscape-scale habitat selection by marten in Maine. Invited paper presented at *Workshop on Lynx and Marten Management in Eastern Boreal Forests*, White Mountain National Forest, Gilead, ME, August 26.

1997 - Harrison, D.J. Results from ongoing studies of American marten on industrial forestland in Maine. Seminar presented to *Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, ME, January 21.

1997 - Harrison, D.J. Ecology and habitat relationships of American martens in Maine. *Penobscot Valley Chapter, Maine Audubon Society*, February 7.

1997 - Harrison, D.J. "The influence of partial harvesting on American marten: a proposal." Presentation to *Advisory Committee, Cooperative Forestry Research Unit*, Univ. Maine, Orono, April 29, 1997.

1997 - Harrison, D.J., and W.B. Krohn. What do, and don=t, we know about lynx and marten in Maine? Invited paper presented at *Workshop on Lynx and Marten Management in Eastern Boreal Forests*, White Mountain National Forest, Gilead, ME, August 25.

1997 - Payer, D.C., and D.J. Harrison. Influence of site-level habitat characteristics on spatial patterns of habitat use by American marten in an industrial forest and a forest preserve in Maine. *The Wildlife Society National Conference*, Snowmass, Colorado, September 25.

1997 - Payer, D.C. and D.J. Harrison. Influence of microsite characteristics on patterns of habitat occupancy by American marten. Presentation at seminar series sponsored by the *Department of Wildlife Ecology, University of Maine*. November 3.

1997 - Payer, D.C., and D.J. Harrison. Structural differences between forests regenerating following spruce-budworm infestations and clearcutting, with implications for merican marten. Presentation at seminar series sponsored by the *Department of Wildlife Ecology, University of Maine*. November 3.

1996 - Chapin, T. G. and D. J. Harrison. Seasonal Selection of Habitats by Resting Marten in Maine. Paper presented at *52nd Northeast Fish and Wildlife Conference*, Farmington, CT. April 2.

1996 - Chapin, T. G. and D. J. Harrison. Seasonal habitat selection by marten in an untrapped forest preserve. Paper presented at *Ecological Society of America and Society for Conservation Biology*

Meeting, Providence, RI. August 14.

1996 - Harrison, D. J. Habitat requirements of American marten in northeastern forests. Seminar presented to *Fraser Paper, Inc. and J. D. Irving Corporation's foresters*. Edmundston, New Brunswick. February 27.

1996 - Harrison, D. J. Marten, forests, and biodiversity: a model for conservation. Invited presentation at *Maine Forest Biodiversity Conference*, Ellsworth, Maine. March 12.

1996 - Harrison, D. J. Funding, infrastructure, and partnerships for wildlife conservation in the U.S. Invited seminar presented to *Department of Ecosystem Planning, Tokyo Noko University*, Japan. March 20.

1996 - Harrison, D. J. Habitat relationships of American marten: specialist or generalist. Seminar presented to *U. S. Forest Service Redwood Sciences Laboratory and College of Natural Resources, Humboldt University*, Arcata, CA. March 28.

1996 - Harrison, D. J. Influence of spatial and body scaling on habitat selection by mammalian carnivores. Seminar presented to *Utah Cooperative Fish and Wildlife Research Unit and Dept. of Fisheries and Wildlife, Utah State University*, Logan. April 5.

1996 - Harrison, D. J. Influence of spatial and body scaling on habitat selection by mammalian carnivores. Seminar presented to *Dept. of Zoology and Physiology, University of Wyoming, Laramie*. April 11.

1996 - Harrison, D. J. Marten as a barometer of forest health in Maine. Seminar presented at *Annual Meeting, Maine Chapter of The Wildlife Society*, Brewer, ME. April 25.

1996 - Harrison, D.J. A conservation model for habitat of American martens in Maine. Seminar presented to *Executive Council, Maine Audubon Society*, Ellsworth, ME, November 11.

1996 - Harrison, D. J., D. Payer, and H. J. Lachowski. Influence of forest harvesting and forest structure on habitat selection by American marten Presentation and field tour to *National Council of the Paper Industry (NCASI)* scientists and other forest industry representatives, Millinocket, ME. August 22.

1996 - Harrison, D. J., and S. L. Glass. Comparative social ecology of coyotes: does large prey cause pack formation? Paper presented at *Ecological Society of America and Society for Conservation Biology Meeting*, Providence, RI. August 13.

1996 - Long, R .A., D. J. Harrison, and A. F. O'Connell, Jr. Survival and cause-specific mortality of white-tailed deer fawns on Mount Desert Island, Maine. Paper presented at *Ecological Society of America and Society for Conservation Biology Meeting*, Providence, RI. August 14.

1995 - Chapin, T.G., and D.J. Harrison. Marten use of residual stands in an industrial forest landscape in Maine. Presented at the *51st Annual Northeast Fish and Wildlife Conference*, Ocean City, MD. April 8-12.

1995 - Chapin, T.G., and D.J. Harrison. Marten use of residual stands in an industrial forest landscape in Maine. Paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August

12-16.

1995 - Chapin, T.G and D.J. Harrison. Influence of landscape pattern and forest type on use of habitat by marten in Maine. Seminar presented to *Department of Wildlife Ecology, University of Maine*, Orono. June 15.

1995 - Chapin, T. G. and D. J. Harrison. Influence of landscape pattern on spatial us of habitat by marten in an industrial forest. Paper presented at *National Conference of the Society of American Foresters*, Portland, ME, November 1.

1995 - Harrison, D. J. Influence of Forest Harvesting on Marten Populations in Northern Maine. Invited paper presented at *Society of American Foresters National Convention*, Portland, ME. October 28-29.

1995 - Harrison, D. J. Ecology and life history of the northeastern coyote. Invited seminar presented to *Illinois Natural History Museum*, University of Illinois, Urbana. November 14.

1995 - Harrison, D. J. Social ecology and prey relationships of the eastern coyote: the influence of prey size on pack formation. Invited seminar presented to *Dept. of Ecology, Ethology, and Evolution*, University of Illinois, Urbana. November 15.

1995 - Harrison, D. J. Habitat Requirements of American Marten: Reassessing Paradigms. Seminar presented to *Department of Wildlife Ecology, Univ. Maine*, November 28.

1995 - Harrison, D.J. Relative influences of timber harvesting and trapping on marten populations in Maine. Presentation at the *Spring Meeting of Forest Resources Research Advisory Committee*, University of Maine, Orono. April 11**.**

1995 - Harrison, D.J. Incorporating marten habitat requirements into forest management activities. Presentation and field tour, *Cooperative Forestry Research Unit Annual Conference*, Millinocket, ME. September 20-21.

1995 - Harrison, D.J., D.M. Phillips, T.G. Chapin, D.P. Katnik, and T.P. Hodgman.. Population performance and habitat selection by American marten: a need to reassess accepted paradigms and conservation practices. Invited paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1995 - Hodgman, T.P., and D. J. Harrison. 1995. Survival in a heavily harvested marten population: a preliminary assessment. Poster presented at *Annual Conference of the Maine Cooperative Forestry Research Unit*, Millinocket, ME. September 20.

1995 - Hodgman, T.P., D.J. Harrison, D.M. Phillips, and K.D. Elowe. Survival of marten in an untrapped forest preserve in Maine. Paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1995 - Long, R.A., S.L. Glass, D.J. Harrison, and A.F. O'Connell. Cause-specific mortality of white-tailed

deer fawns on Mount Desert Island, Maine. Presented at the *51st Annual Conference of the Northeast Fish and Wildlife Conference*, Ocean City, MD. April 9-12.

1995 - Long, R.A., D.J. Harrison, S.L. Glass, and A.F. O'Connell. Annual survival and cause-specific mortality of white-tailed deer fawns on Mount Desert Island, Maine. Paper presented at the *21st Maine Biological and Medical Sciences Symposium*, Bar Harbor, ME. June 8-9.

1995 - Long, R.A., D.J. Harrison, and A.F. O'Connell, Jr. Annual survival and cause-specific mortality of white-tailed deer fawns, and relative abundance of snowshoe hare on Mount Desert Island, Maine. Seminar presented to *Department of Wildlife Ecology, University of Maine, Orono*. June 16.

1995 - Long, R, D.J. Harrison, S. L. Glass, and A. F. O'Connell. Mortality of white-tailed deer fawns in Acadia National Park. Seminar presented to research and management staff, *Acadia National Park*, Bar Harbor, ME. August 30.

1995 - Phillips, D.M., and D.J. Harrison. Seasonal changes in density, range area, and range fidelity of American marten in a forest preserve. Paper presented at *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1994 - Chilelli, M., B. Griffith, and D.J. Harrison. Utility of regional furbearer data: the river otter example." Paper presented at *First Annual Conference of The Wildlife Society*, Albuquerque, New Mexico, September 21.

1994 - Harrison, D.J. "A proposal to study the relationships among trapping, forest harvesting, and marten populations in northern Maine." Presentation to *Maine Cooperative Forestry Research Unit Advisory Committee*, University of Maine, January 25.

1994 - Harrison, D.J. "Preliminary results from ongoing research to assess influences of forest harvesting and trapping on marten populations in northern Maine." Invited presentation at *Wildlife Division Meeting, Maine Department of Inland Fisheries and Wildlife*, Rockland, ME, April 14.

1994 - Harrison, D.J. The effects of scale on habitat selection. Guest presentation in graduate course in *Evaluation of Wildlife Habitats*, University of Maine, Orono. October 7.

1994 - Harrison, D.J. Evidence for external regulation in an unmanaged deer population. Paper presented at the *Conference on Science of Overabundance*, Front Royal, VA. November 10-11.

1994 - Harrison, D.J., and T.D. Chapin. "Effects of forest fragmentation on martens in northern Maine: preliminary results from ongoing studies." Presentation to *National Council of the Paper Industry for Air and Stream Improvement*, Albuquerque, NM, September 23.

1994 - Phillips, D.M., and D.J. Harrison. "Density, home-range, and spatial overlap of marten in an industrial forest and forest preserve." Paper presented at *Northeast Fish and Wildlife Conference*, Burlington, VT, May 3.

1993 - Harrison, D.J. "Potential forest management issues associated with habitat requirements of the marten." Presentation to *Maine Chapter, Association of Consulting Foresters*, Bangor, ME,

October 12.

1993 - Harrison, D.J. "Objectives and preliminary results of a study to assess the influence of trapping and forest harvesting on marten populations in northern Maine." Presentation to foresters of *Scott Paper, Inc., Rockwood, Maine*, December 14.

1993 - Harrison, D.J. "Habitat associations of the marten: does the species deserve spotted owl status?" Invited paper presented at *Conserving Species Dependent on Older Forests: a Population Viability Workshop*. Fundy National Park, Alma, New Brunswick, October 27.

1993 - Harrison, D.J. The role and effectiveness of predator control to enhance game populations. Presentation to *Maine Chapter of The Wildlife Society,* April 5.

1993 - Harrison, D.J. Feasibility and issues associated with restoring wolves to Maine. Presentation to *Maine Chapter of The Wildlife Society*, April 5.

1992 - Saeki, M., and D.J. Harrison. Influence of food availability and fire history on dietary quality of white-tailed deer (Odocoileus virginianus). Paper presented at Seventy-second annual meeting of *American Society of Mammalogists*, Salt Lake City, Utah.

1992 - Harrison, D.J. Significance of pine martens to future forest practices in Maine. Presentation to *Woodlands staff, Great Northern Corp*., Millinocket, Maine.

1992 - Harrison, D.J. Pine marten habitat requirements: will the Forest Practices Act safeguard marten habitat? Presentation to *Maine Chapter of The Wildlife Society*, Orono, Maine.

1991 - Harrison, D. J. Chaired session and provided summative comments for session titled: "Habitat management of martens and fishers," *International Symposium on the Biology and Management of Martens and Fishers*, Laramie, Wyoming.

1991 - Harrison, D. J. Coyote social organization and relationships to dispersal and food resources: predictions with an unpredictable animal. Invited paper presented at *Eastern Coyote Symposium*, Fredericton, New Brunswick.

1991 - Harrison, D.J., A.F. O'Connell, and J.A. Subijanto. Seasonal food habits of a recently established insular population of coyotes. Poster presented at *Northeast Fish and Wildlife Conference*, Portland, Maine.

1991 - Harrison, D.J., A.F. O'Connell, Jr., and J. A. Subijanto. Seasonal food habits of a recently established insular coyote population. Invited paper presented at *Second National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region*, Newport, RI.

1991 - Harrison, D.J., and N.E. Famous. Effects of peat harvesting on a large mammalian carnivore: a case study with coyotes (*Canis latrans*). Paper presented at *International Peat Symposium*, Duluth, Minnesota.

1991 - Harrison, D.J., T.P. Hodgman, and D.D. Katnik. Survival in a heavily harvested marten population, a preliminary assessment. Paper presented at *International Symposium on the Biology and Management of Martens and Fishers*, University of Wyoming, Laramie.

1991 - Giuliano, W., and D.J. Harrison. A preliminary assessment of spatial-temporal relationships in an unexploited pine marten population. Poster presented at *International Symposium on the Biology and Management of Martens and Fishers*, University of Wyoming, Laramie.

1991 - Saeki, M. and D. J. Harrison. Trends in browse use and preference in an unhunted deer and hare population. Paper presented at *Second National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region*, Newport, Rhode Island.

1990 - Harrison, D.J. Status of ongoing mammal research. Seminar presented to regional management staff, *Maine Department of Inland Fisheries and Wildlife*, Bar Harbor.

1990 - Harrison, D.J. Status, ecology, and inter-specific relationships of mammalian predators in Acadia National Park. Seminar presented to *North Atlantic Region, science staff, U.S. National Park Service*, Bar Harbor, Maine.

1990 - Harrison, D.J. An abstract of results from ongoing research involving coyote-fox spatial interactions, deer-hare browsing relationships, and marten population characteristics in Maine. Seminar presented at annual Wildlife Division meeting, *Maine Department of Inland Fisheries and Wildlife*, Rockland, Maine.

1990 - Harrison, D.J. Ecology and interspecific relationships among Maine's predators. Seminar presented to faculty and staff, *Suffolk University*, Edmunds, ME.

1990 - Harrison, D.J. Pre-dispersal movements of coyote pups in eastern Maine. Paper presented at *70th annual meeting of the American Society of Mammalogists*, Frostburg, Maryland.

1989 - Harrison, D.J. Dispersal characteristics of juvenile coyotes: implications for social organization. Paper presented at *69th Annual Meeting of the American Society of Mammalogists*, Fairbanks, Alaska.

1989 - Harrison, D.J. Distribution, productivity, and food habits of a recently established coyote population in Connecticut. Paper presented at *Northeast Fish and Wildlife Conference*, Ellenville, NY.

1989 - Harrison, D.J. Spatial dynamics and inter-specific relationships among Maine predators. Seminar presented at *Unity College*, Unity, Maine.

1989 - Harrison, D.J. Ecology and management of coyotes in Maine. Seminar presented to *Department of Animal Science*, University of Maine.

1988 - Harrison, D.J. A proposal to assess the utility and interstate comparability of river otter sex, age, and reproductive data. Invited presentation at *Northeast Furbearer Resources Technical Committee Meeting*, Quebec City.

1988 - Harrison, D.J. Interaction of forest management practices and pine marten populations. Invited presentation at *Northeast Furbearer Resources Technical Committee Meeting*, Quebec City.

1988 - Harrison, D.J. A proposal to reintroduce fishers to northwest Connecticut. Paper presented at *Second Natural Diversity Conference*, Rocky Hill, Connecticut.

1988 - May, D,W., D.J. Harrison, and P. Rego. Characteristics and diet of colonizing coyote populations in Connecticut. Paper presented at *Second Natural Diversity Conference*, Rocky Hill, Connecticut.

Public Talks and Workshops (abridged to include since 2007 only):

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Habitat associations, forestry, and coniferous forest birds. *Downeast Birding Festival. Machias, Maine*, May 2015.

2015- Harrison, D. Eastern coyotes and wolves: their history, origin, and ecology in the northeastern U.S. *Invited presentation at the Maine State Museum, Augusta*, April 8.

2013 – Dunham, S., and D. Harrison. Habitat ecology of the spruce grouse in Maine's northern forests. *Presentation sponsored by the Bangor Nature Club, Bangor, Maine*. May 15.

2013 – Olson, S., and D. Harrison. Seasons of the snowshoe hare. *Presentation at Sunkhaze Café, hosted by Friends of Sunkhaze National Wildlife Refuge, Old Town, Maine*. April 20.

2011 - Harrison, D. J. Lynx, forests, and forestry in northern Maine. *Presentation at SummerMeeting of The Forest Society of Maine*, Greenville, ME. August 15.

2008 – Harrison, D. J. "Wildlife in Winter". *Presentation at Maine Audubon's Fields Pond Nature Center*. January 8.

2007 - Harrison, D. J. "Applying umbrella species as tools for land conservation: case examples using martens and lynx in Maine." Presentation to the Board of Directors, Forest Society of Maine, Falmouth, Maine. September 11.

2007 - Harrison, D. J. "What is a predator ecologist and what does it do?" Presentation to first year students in WLE 100. October 12.

2007 - Harrison, D. J. Co-led a field tour for professional foresters highlighting the management of deer wintering habitat in northern Maine. October 10.

2007 - Harrison, D. J. Presented invited guest lecture in WLE 100. October 12.

2007 – Harrison, D. J., W. B. Krohn, E. Simons and A. K. Fuller. Co-led a northern Maine landscape planning workshop for NGO's and state agency personnel. October 17.

2007- Harrison, D. J., W. B. Krohn, and M. McCollough. Contributed to an article titled "Cats in a Quandry" that highlighted finding from our lynx research and appeared in National Wildlife Magazine December-January 2008 issue.

BI/COI FORM 3

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BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE
For General Scientific and Technical Studies and Assistance

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CURRENT EMPLOYER: The University of Maine

~~COMMITTEE~~: Department of Wildlife, Fisheries and Conservation Biology

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for the project and committee activity to which this form applies. **Retain a copy for your records.**

PART I **BACKGROUND INFORMATION**

INSTRUCTIONS

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to -- and might reasonably be of interest to others concerning -- your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS. Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

The Wildlife Society
Society for Conservation Biology
American Society of Mammalogists
Forest Society of Maine (Land Conservation Committee)

II. GOVERNMENT SERVICE. Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

1985-1987 Wildlife Biologist,
CT Dept. Environmental Protection,
Wildlife Bureau (see resume)

III. RESEARCH SUPPORT. Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

Extensive — see resume

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

Numerous - see resume

V. ADDITIONAL INFORMATION. If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

none that are apparent to me.

PART II **CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest,* ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic.* They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is <u>not</u> a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a

fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making recommendations to sponsors regarding specific contract or grant awards, etc. -- careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the institution in the development of reports to be provided by the institution to sponsoring agencies.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, fellowships, etc., this institution is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you have been invited to serve.

1. FINANCIAL INTERESTS. (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than $10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here X (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS. (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?
(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

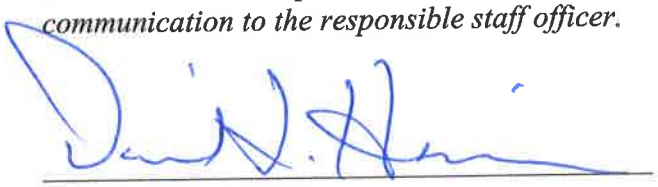
(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications -- or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here X (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

EXPLANATION OF "YES" RESPONSES:

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.



YOUR SIGNATURE

10/16/2017

DATE

Reviewed by: _____

Executive Director

_____

Date

Attachment 01

Potential additional conflicts of interest may include employment or affiliation with the Service, the States of California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, or Wyoming, or the Canadian Federal government; and peer reviewers, who have been or are directly or indirectly employed by any organization that has either litigated the federal government concerning wolverines or taken a position on one side or the other about the status of the North American wolverine in the contiguous United States. In addition, individuals who served as peer reviewers for previous proposed rules or who were participants in the April 2-3, 2014 facilitated wolverine workshop held by the Service should be disqualified from this peer review process. Finally, the reviewers should have no financial or other conflicts of interest with the outcome or implications of the report.

If the reviewer has no potential conflicts of interest as described under ATTACHMENT 01, check here X (NO).

If the reviewer has any potential conflict of interest as described under ATTACHMENT 01, check here_____(YES), and briefly describe the circumstances below.

EXPLANATION OF "YES" RESPONSES:

JASON T. FISHER *B.SC.H, M.SC., PH.D.*

Senior Research Scientist (Ecology), InnoTech Alberta
Adjunct Professor, University of Victoria
Associate Editor, Ecology & Evolution
Email: jason.fisher@innotechalberta.ca
Phone: +1 (250) 483-3297

RESEARCH INTERESTS

I am a wildlife ecologist specializing in large-scale research applied to conservation issues – *conservation macroecology*. I examine spatial patterns of physical and biotic processes affecting species' persistence in complex, human-dominated landscapes, and species recolonization of restored landscapes. My research goals are to understand how landscapes function to support biodiversity, and ultimately to inform effective policies to conserve species and their habitats. I advocate for those policies in my secondary role as scientific advisor to several government bodies.

My research spans terrestrial and marine ecosystems across Canada, has been published on over two dozen peer-reviewed journals, and has been highlighted in multiple international media articles, radio, and television, (including BBC Earth) as well as popular books and textbooks. My research has been integrated into management programs across Canada to help conserve species and restore disturbed ecosystems.

EDUCATION

Ph.D., **University of Victoria**, Ecology, Biology Department 2010
Dissertation: Cross-scale habitat selection by terrestrial and marine mammals.
Supervisors: Bradley Anholt & John P. Volpe

M.Sc., University of Alberta, Ecology, Department of Biological Sciences 1999
Thesis: The role of landscape structure in predicting the distribution of Tamiasciurus hudsonicus *in a heterogeneous boreal mosaic.*
Supervisor: Stan Boutin

B.Sc. (Hon.), Carleton University, Highest Honours in Biology 1995
Thesis: Resource patch array use by two squirrel species in a fragmented agricultural matrix.
Supervisor: Gray Merriam

ACADEMIC AND RESEARCH HIGHLIGHTS

- I head the *Applied Conservation Macro Ecology (ACME) Lab*, a collaboration between InnoTech Alberta and the University of Victoria. I am principal investigator and director, and manage teams of affiliated researchers, graduate students, and researchers.
- My conservation macroecology program integrates aspects of landscape ecology, population ecology, behavioural ecology, community ecology, conservation genetics, and spatial distribution dynamics; these I apply to issues of anthropogenic landscape change, climate change, and species restoration.
- My research experience spans Canadian terrestrial and marine ecosystems, focussing on 'trouble spots' and biodiversity hotspots, such as the Alberta oil patch, the highly impacted east slopes of the Canadian Rocky Mountains, the central Caucasus, and British Columbia's Clayoquot Sound.
- I have published 24 peer-reviewed publications in journals including Frontiers in Ecology and Environment, Conservation Biology, Ecography, and Journal of Applied Ecology. I have published 40

technical reports. Google Scholar Citations: 711, h-index 11. Top 2 papers have 250 and 111 citations. ResearchGate score: 24.4.

- My research has received international BBC Earth, CBC, Canadian Geographic, Globe & Mail, Huffington Post, and CanWest Media. I have provided scientific commentary to National Geographic, Discovery Channel, New York Times, Inside Science, and Science Borealis.
- I have experience researching numerous mammal species including marten, fisher, wolverines, tree squirrels, boreal bats, snowshoe hares, sea otters, seals, sea lions, gray whales, moose, caribou, and black bears. I have also conducted research on microbial communities, marine fish, and songbird communities.

RESEARCH: JOURNAL PUBLICATIONS

1. Heim, N.A., A.P. Clevenger, J. Paczkowski, J.P. Volpe, and **J.T. Fisher**. Cumulative effects of climate and landscape change drive spatial distribution of Rocky Mountain wolverine. *Ecology and Evolution*, online early. http://onlinelibrary.wiley.com/doi/10.1002/ece3.3337/epdf
2. Stewart, F.E.C., J.P. Volpe, J.S. Taylor, and **J.T. Fisher**. 2017. Distinguishing reintroduction from recolonization with genetic testing. Biological Conservation 214: 242-249. https://doi.org/10.1016/j.biocon.2017.08.004
3. Frey, Sandra, **J.T. Fisher**, and A.C. Burton. 2017. Investigating animal activity patterns and temporal niche partitioning using camera trap data: Challenges and opportunities. *Remote Sensing in Ecology and Conservation* August 2017: 1-10. DOI: 10.1002/rse2.60
4. Torres-Romero, E.J., S. Varela, **J.T. Fisher**, and M. Olalla-Tárraga. 2017. The relationship between mammal faunas and climatic instability since the Last Glacial Maximum: a Nearctic vs. Western Palearctic comparison. *Acta Oecologica* 82: 10-15. DOI: 10.1016/j.actao.2017.05.004
5. Steenweg, R., M. Hebblewhite, R. Kays, J. Ahumada, **J.T. Fisher**, C. Burton, S.E. Townsend, C. Carbone, J. M. Rowcliffe, J. Whittington, J. Brodie, J. A. Royle, A. Switalski, A.P. Clevenger, N. Heim, and L.N. Rich. 2016. Scaling up camera traps — monitoring the planet's biodiversity with networks of remote sensors. *Frontiers in Ecology and Evolution* 15(1): 26-34. DOI: 10.1002/fee.1448.
6. **J.T. Fisher**, N. Heim, S. Code, and J. Paczkowski. 2016. Grizzly bear noninvasive genetic tagging surveys: estimating the magnitude of missed detections. *PloS One 11*(9): e0161055.
7. Stewart, F.E.C., N.A. Heim, A.P. Clevenger, J. Paczkowski, J.P. Volpe, and **J.T. Fisher**. 2016. Wolverine behaviour varies spatially with anthropogenic footprint: implications for conservation and inferences about declines. *Ecology & Evolution* 6(5): 1493-1503. doi: 10.1002/ece3.1921
8. Burton, C., E. Neilson, D. Moreira, A. Ladle, R. Steenweg, **J.T. Fisher**, E. Bayne, and S. Boutin. 2015. Wildlife camera trapping: a review and recommendations for linking surveys to ecological processes. *Journal of Applied Ecology* 52(3): 675-685. doi: 10.1111/1365-2664.12432.
9. F. Jean, A. Branzan Albu, D. Capson, E. Higgs, **J.T. Fisher**, and B.M. Starzomski. Visualizing category-specific changes in oblique photographs of mountain landscapes. In *Proceedings of the Workshop on Visualization in Environmental Sciences (EnvirVis)*, May 25-29, Cagliari, Sardinia, Italy, 2015.
10. F. Jean, A. Branzan-Albu, D. Capson, E. Higgs, **J.T. Fisher**, and B.M. Starzomski. 2015. The mountain habitats segmentation and change detection dataset. *Proceedings of the IEEE Winter Conference on*

Applications of Computer Vision (WACV) 2015. http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7045624

11. **Fisher, J.T.**, C. Pasztor, A. Wilson, J.P. Volpe, and B. Anholt. 2014. Recolonizing sea otters spatially segregate from pinnipeds on the Canadian Pacific coastline: The implications of segregation for species conservation. *Biological Conservation* 177: 148-155. http://www.sciencedirect.com/science/article/pii/S0006320714002523.
12. **Fisher, J.T.**, and S. Bradbury. 2014. Quantifying bias in noninvasive genetic tagging studies with multi-state hierarchical models. *Journal of Wildlife Management* 78(6): 1087-1095. http://onlinelibrary.wiley.com/doi/10.1002/jwmg.750/abstract
13. **Fisher, J.T.**, M. Wheatley, and D. MacKenzie. 2014. Spatial patterns of breeding success of grizzly bears derived from hierarchical multistate models. *Conservation Biology* 28(5): 1249-1259. http://onlinelibrary.wiley.com/doi/10.1111/cobi.12302/abstract.
14. Fisher, A.C., J.P. Volpe and **J.T. Fisher**. 2014. Occupancy dynamics of escaped farmed Atlantic salmon in Canadian Pacific coastal salmon streams. *Biological Invasions* 2014: 1-10. http://link.springer.com/article/10.1007%2Fs10530-014-0653-x.
15. **Fisher, J.T.**, S. Bradbury, M. Wheatley, B. Anholt, L. Roy, J.P. Volpe, and L. Nolan. 2013. Wolverines on the Rocky Mountain slopes: natural heterogeneity and landscape alteration as predictors of distribution. *Canadian Journal of Zoology* 91: 706-716.
16. **Fisher, J.T.,** M.T. Wheatley, S. Bradbury, B. Anholt, and J.P. Volpe. 2012. Spatial segregation of sympatric marten and fishers: the influence of landscapes and species-scapes. *Ecography* 36(2): 240-248.
17. **Fisher, J.T.,** B. Anholt, and J.P. Volpe. 2011. Body mass explains characteristic scales of habitat selection in terrestrial mammals. *Ecology and Evolution* 1(4): 517-528.
18. **Fisher, J.T.,** and S. Bradbury. 2006. Understorey protection harvest expedites recolonisation of boreal forest stands by North American red squirrels. *Forest Ecology and Management* 234: 40-47.
19. **Fisher, J.T.**, and L. Wilkinson. 2005. The response of mammals to forest fire and timber harvesting in the North American boreal forest. *Mammal Review* 35(1): 51-81.
20. **Fisher, J.T.**, S. Boutin, and S.J. Hannon. 2005. The protean relationship between boreal forest landscape structure and red squirrel distribution at multiple spatial scales. *Landscape Ecology* 20: 73-82.
21. **Fisher, J.T.**, C. Twitchell, E. Jenson, W. Barney, and J. Sharpe. 2005. Utilizing behavioral biophysics to mitigate accidental mortality of snared endangered Newfoundland marten. *Journal of Wildlife Management* 69(4): 1743-1746.
22. Wheatley, M., **J.T. Fisher**, J. Litke, K.W.L. Larsen, and S. Boutin. 2005. Using GIS to relate small mammal abundance and landscape structure at multiple spatial extents: Northern flying squirrels in Alberta, Canada. *Journal of Applied Ecology* 42: 577-586.
23. **Fisher, J.T.**, and G. Merriam. 2000. Resource patch array use by two squirrel species in an agricultural landscape. *Landscape Ecology* 15(4): 333-338.
24. Chauret, C., N. Armstrong, **J. Fisher**, R. Sharma, S. Springthorpe, and S. Sattar. 1995. Correlating Cryptosporidium and Giardia with microbial indicators. *J. American Waterworks Association* 87: 76-84.

Submitted

a. **Fisher, J.T.**, and A.C. Burton. Wildlife winners and losers in an oil sands landscape. In revisions, *Frontiers in Ecology and Environment*.

b. Stewart, F.E.C., **J.T. Fisher**, A.C. Burton, and J.P. Volpe. Species movement, not location, best predicts species occurrence data. Submitted to *Ecosphere*.

c. Burgar, J.M., F.E.C. Stewart, J.P. Volpe, **J.T. Fisher**, and A.C. Burton. Camera trap spatial count models are comparable to genetic spatial capture-recapture models when estimating the density of a carnivore population. Submitted to *Conservation Biology*.

RESEARCH: PEER-REVIEWED CONTRIBUTIONS*

*Published institutionally as per funding and data-sharing agreements.

1. Eaton, B.R., **J.T. Fisher**, G.T. McKenna, and J. Pollard. 2014. An Ecological Framework for Wildlife Habitat Design for Oil Sands Mine Reclamation. OSRIN Report No. TR-67. 83 pp. http://hdl.handle.net/10402/era.40338
2. Eaton, B.R., L. Ross, **J.T. Fisher**, T. Charette, and D. Vitt. 2014. Natural Wetlands in the Oil Sands Region. pp 69-110 In *Guidelines for Wetland Establishment on Reclaimed Oil Sands Leases. 3rd Edition.* Cumulative Environmental Management Agency, Calgary, Alberta, Canada. Available at http://library.cemaonline.ca/
3. Eaton, B.R., **J.T. Fisher,** T. Muhly**,** and S-L. Chai. 2013. *Potential Impacts of Beaver on Oil Sands Reclamation Success – an Analysis of Available Literature*. Oil Sands Research and Information Network, University of Alberta, School of Energy and the Environment, Edmonton, Alberta. OSRIN Report No. TR-37. 65 pp. http://hdl.handle.net/10402/era.32764.
4. Eaton, B.R., and **J.T. Fisher**. 2011. The state of existing empirical data and scientific knowledge on habitat-species relationships for wildlife that occupy aquatic habitats, with a focus on the boreal region of Alberta. Report to CEMA - Cumulative Environmental Management Agency – Aquatics Subgroup of the Reclamation Working Group. Alberta Innovates – Technology Futures, Vegreville, AB. 121 pp. Available at http://library.cemaonline.ca/
5. **Fisher, J.T.**, S. Bradbury, A.C. Fisher, and L. Nolan. 2009. Wolverines on the Edge of Alberta's Rockies. Alberta Research Council Inc., Vegreville, AB. 80 pp.
6. **Fisher, J.T.,** L. Roy, and M. Hiltz. 2009. *Barren-Ground Caribou Management in the Northwest Territories: An Independent Peer Review*. *Report to* Minister of Environment and Natural Resources, Government of the Northwest Territories. Alberta Research Council, Vegreville, AB. Available http://www.enr.gov.nt.ca/_live/documents/content/ARC_NWT_Caribou_Review_January_2009.pdf. *Government Response at* http://www.enr.gov.nt.ca/_live/documents/content/Management_Response_ARC_Review.pdf
7. **Fisher, J.T.** 2004. The effects of mixedwood understorey protection harvesting on red squirrels and flying squirrels. *In* S. Bradbury, (Ed.) *Mixedwood Stand Biodiversity: The Influence of Understorey Protection Harvesting on Forest Structure and Biodiversity in Alberta Boreal Mixedwood Stands.* Alberta Research Council Inc., Vegreville, Alberta. **DOI:** 10.13140/RG.2.1.5057.7364
8. **Fisher, J.T.** and L. Wilkinson. 2004. The effects of mixedwood understorey protection harvesting on bat diversity. ***In*** S. Bradbury, (Ed.) *Mixedwood Stand Biodiversity: The Influence of Understorey Protection*

Harvesting on Forest Structure and Biodiversity in Alberta Boreal Mixedwood Stands. Alberta Research Council Inc., Vegreville, Alberta. **DOI:** 10.13140/RG.2.1.5057.7364

9. **Fisher, J.T.** 2002. Adaptive boreal forestry. ***In*** S. Song, (Ed.) *The Ecological Basis for Stand Management*. Alberta Research Council, Vegreville, Alberta. **DOI:** 10.13140/RG.2.1.3747.0169
10. **Fisher, J.T.** and L. Wilkinson. 2002. Mammalian response to wildfire and harvesting. ***In*** S. Song, (Ed.) *The Ecological Basis for Stand Management*. Alberta Research Council, Vegreville, Alberta. **DOI:** 10.13140/RG.2.1.3747.0169
11. Corkum, C.V., **J.T. Fisher**, and S. Boutin. 1999. Investigating influences of landscape structure on small mammal abundance in Alberta's boreal mixed-wood forest. ***In*** T. Veeman *et al.* (Eds.). *Proceedings of the Sustainable Forest Management Network Conference. Science and Practice: Sustaining the Boreal Forest*. Edmonton, AB.

EXPERIENCE: RESEARCH AND APPLIED ECOLOGY

INNOTECH ALBERTA (Government of Alberta research agency, formerly *Alberta Research Council*)
Senior Research Scientist - Wildlife Ecology *2001 to present*

- Principal research scientist responsible for leading research on mammal ecology, habitat conservation, species-at-risk, and wildlife management.
- Work collaboratively with federal and provincial governments, academia, industry, and NGOs to identify conservation research priorities; form partnerships; implement multi-faceted research projects; and create new policy stemming from this research.
- Lead collaborative writing of effective grant proposals to secure funding from a variety of sources.
- Design novel natural experiments using new, innovative techniques to better understand our effect on natural systems, and directly apply this knowledge to management plans and policies.
- Implement experimental designs, co-ordinate field research, collect and analyse data to test hypotheses about ecological processes and the efficacy of management strategies.
- Manage budgets, and supervise a team of research technicians on concurrent projects.
- Conduct statistical data analysis using diverse platforms including R software, SPSS, and JMP; occupancy modelling, home-range analysis, and mark-recapture analysis; wildlife habitat selection modelling using GIS data and information-theoretic model selection techniques.
- Publish research in top-ranked, high-impact peer-reviewed journals.
- Provide expert advice to government and industry on ecological issues including invasive species, game species management, habitat conservation and restoration, and species-at-risk recovery.
- I have extensive field experience surveying plant and animal populations and communities using traditional and new noninvasive surveys, including aerial, terrestrial, and marine surveys, as well as wildlife live-trapping, handling, chemical immobilisation and net-gun capture.
- I am certified in Wildlife Care & Handling (Carnivores & Ungulates) by the Canadian Council on Animal Care and Chemical Immobilisation of Wildlife by the Canadian Association of Zoo and Wildlife Vets.

GOVERNMENT OF NEWFOUNDLAND & LABRADOR, Inland Fish and Wildlife Division
Big Game Management Biologist *1999 to 2001*

- Biologist responsible for moose, caribou, and black bear management for the Province.
- Aerially surveyed and classified populations across the province.
- Analysed population data and modelled population dynamics through time.
- Captured, collared, and monitored caribou for research and applied recover planning.
- Drafted annual Management Plans for all big game species, for Divisional input and Ministerial review, outlining management options, repercussions, and proposed management strategies.
- Media contact on big game management issues.

ACADEMIC COMMUNITY SERVICE

- Associate Editor, *Ecology & Evolution* (Wiley Open Access Journal)
- President-Elect , President, and Past- President, Alberta Chapter–The Wildlife Society, 2014-2017
- Director-at-Large, Alberta Chapter–The Wildlife Society, 2012-2014.
- Founded and Chair the *Alberta Wolverine Working Group*, a research group dedicated to promoting wolverine conservation through mainstream and social media: albertawolverine.com; facebook.com/AlbertaWolverine; twitter @AltaWolverine.
- Member of the Canadian Society for Ecology and Evolution, Society for Conservation Biology, Ecological Society of America, and The Wildlife Society (Canadian Section and Alberta Chapter)
- Chairman of the Alberta Research Council's *Animal Care and Use Committee*, 2002-2004.
- Volunteer in educational outreach, engaging school groups, seniors' groups, natural history societies, interest groups, and the general public on wildlife ecology and the importance of conservation.
- Radio (CBC National, Regional, "Sounds like Canada" *etc.*), TV (Knowledge Network), print and web media (BBC Earth, Canadian Geographic, *etc.*) appearances to discuss research in the context of species-at-risk recovery, conservation and restoration.
- Proposal reviews for National Geographic, NSERC, Sweden's Environmental Protection Agency, and other national and international funding sources.
- Manuscript peer reviews for journals; most recently:

Acta Theriologica	*Ecosystems*	*Landscape Ecology*
Animal Conservation	*Forest Ecology & Management*	*Mammalian Biology*
Biological Conservation	*Global Ecology & Biogeography*	*PLOS One*
Diversity & Distributions	*J. Mammalogy*	*Proceedings of Royal Society B*
Ecology & Evolution	*Journal- Royal Society Interface*	
Ecoscience	*J. Wildlife Management*	

EXPERIENCE: SELECTED RECENT PRESENTATIONS (5-year)

1. **Fisher, J.T.** 2017. Large mammals in changing landscapes and a changing climate: Ecological insights through the camera lens. Canadian Society for Ecology and Evolution Conference, May 7-11 2017, Victoria, British Columbia, Canada. (Invited Symposium Presentation)
2. Burgar, Joanna, Frances Stewart, Cole Burton, John P. Volpe, and **J.T. Fisher**. 2017. A comparison of multiple spatial capture-recapture models for estimating carnivore densities using field data. Canadian Society for Ecology and Evolution Conference, May 7-11 2017, Victoria, British Columbia, Canada. (Invited Symposium Presentation)
3. Burke, L., **J.T. Fisher**, and J.P. Volpe. 2017. Fish on film in the temperate deep: an underwater method comparison. Canadian Society for Ecology and Evolution Conference, May 7-11 2017, Victoria, British Columbia, Canada. (Invited Symposium Presentation)
4. Frey, Sandra, **J. T. Fisher**, and John P. Volpe. 2017. Carnivore activity patterns in relation to landscape development and competitor co-occurrence. Canadian Society for Ecology and Evolution Conference, May 7-11 2017, Victoria, British Columbia, Canada.
5. Stewart, F.E.C.*, A.C. Burton, M. Pybus, D. Vujnovic, G. Hood, J.P. Volpe, and **J.T. Fisher**. 2017. Species occurrence data tells us where animals are, but more importantly where they move. Canadian Society for Ecology and Evolution Conference, May 7-11 2017, Victoria, British Columbia, Canada.

6. Burton, A.C., F.E.C. Stewart* and **J.T. Fisher**. 2017. Scaling-down for the long-term: Do provincial scale models predict landscape-scale species distributions? Wildlife70 Long-term Research Symposium, Peterborough, Ontario.
7. Burgar, Joanna, Cole Burton, and **J.T. Fisher**. 2017. Using camera trap surveys to estimate mammal densities in the northern boreal: trials and tribulations of a Bayesian modeller. Annual Meeting of the Alberta Chapter of the Wildlife Society, 17-20 March 2017, Lac La Biche, Alberta.
8. Frey, Sandra, **J.T. Fisher**, and John P. Volpe. 2017. Carnivore activity patterns in relation to landscape development and competitor co-occurrence. Annual Meeting of the Alberta Chapter of the Wildlife Society, 17-20 March 2017, Lac La Biche, Alberta.
9. Stewart, F.E.C., A.C. Burton, M. Pybus, D. Vujnovic, G. Hood, J.P. Volpe, and **J.T. Fisher**. 2017. Biological interpretation, accuracy, and precision of species occurrence data. Annual Meeting of the Alberta Chapter of the Wildlife Society, 17-20 March 2017, Lac La Biche, Alberta.
10. Steenweg, R., M. Hebblewhite, J. Whittington, M. Musiani, C. Burton, **J.T. Fisher**, A. Ladle, and J. Paczkowski. 2017. Testing and expanding umbrella species — how large carnivore occupancy correlates with species diversity and food-web structure. Annual Meeting of the Alberta Chapter of the Wildlife Society, 17-20 March 2017, Lac La Biche, Alberta.
11. Darlington, Siobhan, **J. T. Fisher**, Cole Burton, and John P. Volpe. Modelling predator avoidance by White-Tailed Deer (*Odocoileus virginianus*) in the Alberta boreal forest. Pacific Ecology and Evolution Conference, February 25-26 2017, Bamfield, British Columbia, Canada.
12. Fraser, Gillian**, J.T. Fisher** and John P. Volpe. 2017. The influence of human footprint on energetic trade-offs on a multi-predator landscape. Pacific Ecology and Evolution Conference, February 25-26 2017, Bamfield, British Columbia, Canada.
13. Stewart, F.E.C., A.C. Burton, J.P. Volpe, and **J.T. Fisher**. 2017. What does species occurrence data really mean when individuals are mobile? Pacific Ecology and Evolution Conference, February 25-26th, Bamfield, British Columbia. [Awarded Best Presentation].
14. Frey, Sandra, **Jason T. Fisher**, and John P. Volpe. 2017. Carnivore activity patterns in relation to landscape development and competitor co-occurrence. Pacific Ecology and Evolution Conference, February 24-26 2017, Bamfield, British Columbia, Canada.
15. **Fisher, J.T.**, A. Cole Burton, Siobhan Darlington, and Nicole Heim. 2016. White-tailed deer behavioural response to anthropogenic features. Petroleum Technology Alliance of Canada Ecological Issues Forum, November 23 2016, Calgary, Alberta, Canada. [Invited presentation.]
16. Burton, A.C., and **J.T. Fisher***p*. 2016. Efficient monitoring of wildlife responses to seismic line restoration. Petroleum Technology Alliance of Canada Ecological Issues Forum, November 23 2016, Calgary, Alberta, Canada. [Invited presentation.]
17. **Fisher, J.T.** 2016. Large mammals in a changing landscape and a changing climate: The good, the bad, and the ugly. University of Victoria School of Environmental Studies Seminar Series. November 2 2016, Victoria, BC. [Invited presentation.]
18. **Fisher, J.T.**, N. Heim, and J.P. Volpe. 2016. Three's a crowd: Interspecific spatial interactions and the effects of anthropogenic footprint. 23rd Annual Conference of The Wildlife Society, Raleigh, North Carolina, USA. October 15-19 2016. [Invited presentation.]
19. **Fisher, J.T.**, and A.C. Burton. 2016. A new kind of landscape? Anthropogenic features affect the entire mammal community of the Alberta oil sands. Canadian Society for Ecology and Evolution Conference, July 6-12 2016, St. John's, Newfoundland.

20. Burton, A.C., and **J.T. Fisher**. 2016. Does industrial footprint buffer white-tailed deer against severe winters in Alberta's oil sands? Canadian Society for Ecology and Evolution Conference, July 6-12 2016, St. John's, Newfoundland.
21. **Fisher, J.T.** 2016. Fisher (*Pekania pennanti*) in the Alberta oil sands: Friends, foes, & fragmentation. Annual Western Canadian Mesocarnivore Conference. June 9-12 2016, Williams Lake, British Columbia.
22. Stewart, F.E.C., Nicole Heim, Tony Clevenger, John Paczkowski, J.P. Volpe, and **J.T. Fisher**. 2016. Using wolverine behaviour as a metric of landscape change. Annual Western Canadian Mesocarnivore Conference. June 9-12 2016, Williams Lake, British Columbia.
23. Stewart, F.E.C., J.P. Volpe, and **J.T. Fisher**. 2016. Questioning fisher re-introduction success in central
24. Alberta: Genetic evidence for provincial scale connectivity. Annual Western Canadian Mesocarnivore Conference. June 9-12 2016, Williams Lake, British Columbia.
25. **Fisher, J.T.**, and A.C. Burton. 2016. Extensive landscape disturbance explains boreal mammals' distribution in the Alberta oil sands. Annual Meeting of the Alberta Chapter of the Wildlife Society, 5 March 2016, Drumheller, Alberta.
26. Burton, A.C., and **J.T. Fisher**. 2016. Validating species distribution models: Can provincial-scale models predict landscape-scale wildlife distribution? Annual Meeting of the Alberta Chapter of the Wildlife Society, 5 March 2016, Drumheller, Alberta.
27. Fisher, A.C., J.P. Volpe, and **J.T. Fisher**. 2016. Swimming upstream: Invading Atlantic salmon occupancy dynamics, and the science of public apathy. Annual Meeting of the Alberta Chapter of the Wildlife Society, 5 March 2016, Drumheller, Alberta.
28. Stewart, F.E.C., M. Pybus, D. Vujnovic, G. Hood, J.P. Volpe, and **J.T. Fisher**. 2016. Genetic evidence for fisher recolonization success in central Alberta: implications for provincial-scale connectivity. Annual Meeting of the Alberta Chapter of the Wildlife Society, 5 March 2016, Drumheller, Alberta.
29. Stewart, F.E.C., M. Pybus, D. Vujnovic, G. Hood, J. Volpe, and **J.T. Fisher**. 2016. Life on the Cooking Lake Moraine through the eyes of the fisher. Invited public presentation from the Friends of Elk Island Society and the Beaver Hills Initiative. January 22, 2016.
30. Frey, S., J.P. Volpe, and **J.T. Fisher**. 2016. Changes to predator distribution and activity patterns across a gradient of landscape development. [Poster]. Pacific Ecology and Evolution Conference, 27 February 2016, Bamfield, British Columbia.
31. Frey, S., J.P. Volpe, and **J.T. Fisher**. 2016. Is sharing scaring? Changes to predator distribution and activity patterns across a gradient of landscape development. [Poster]. Annual Meeting of the Alberta Chapter of the Wildlife Society, 5 March 2016, Drumheller, Alberta.
32. **Fisher, J.T.**, and C. Burton. 2015. Moose and Predator Numerical Response to Anthropogenic Features in the Northeast Boreal Forest. Petroleum Technology Alliance of Canada (PTAC) Resource Access and Ecological Issues Forum, Calgary, Alberta, November 23rd 2015. (Invited presentation)
33. Burton, C., and **J.T. Fisher**. 2015. White-tailed deer density in the northeast boreal forest derived from camera data. Petroleum Technology Alliance of Canada (PTAC) Resource Access and Ecological Issues Forum, Calgary, Alberta, November 23rd 2015. (Invited presentation)
34. **Fisher, J.T.** 2015. Species at risk restoration in terrestrial and marine landscapes: conceptual foundations and practical challenges. University of Victoria School of Environmental Studies, Restoration Seminar Series (Invited Presentation). October 19th, 2015.

35. Stewart, F.E.C., N. Heim, A.P. Clevenger, J. Paczkowski, J.P. Volpe, and **J.T. Fisher**. 2015. Wolverine behavior varies with anthropogenic footprint: Implications for conservation and inferences about declines. Canadian Society for Ecology and Evolution Conference, Saskatoon, Saskatchewan, 21-25 May 2015.
36. **Fisher, J.T.**, Cole Burton, Hannah Britton-Foster, Michelle Hiltz, Luke Nolan, and Larry Roy. 2015. White-tailed deer in boreal Alberta: occupancy dynamics and habitat associations driving expansion. Western States & Provinces Deer & Elk Workshop, Canmore, Alberta. May 15, 2015.
37. **Fisher, J.T.** 2015. Sea otter recolonization of a coastline of fear, and why Alberta wildlife should care. 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
38. Burton, A.C., **J.T. Fisher**, et al. 2015. Wildlife camera trapping: a review and recommendations for linking surveys to ecological processes. 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
39. Eaton, B.R.E., **J.T. Fisher**, G. McKenna, and J. Pollard. 2015. An ecological framework for wildlife habitat design for oil sands mine reclamation in Alberta. 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
40. James, K., **J.T. Fisher**, M. Wheatley, and J. Gould. 2015. Scale(s) of habitat selection among a Rocky Mountain soingbird community: Implications for conservation and management. 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
41. Paczkowski, J., N. Heim, J. Whittington, and **J.T. Fisher**. 2015. Monitoring grizzly bears at various spatial scales using camera scent lure in the Kananaskis Country region of Alberta. 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
42. Stewart, F.E.C., **J.T. Fisher**, et al. 2015. Landscape-scale behavioral response by wolverine to landscape development: evidence for a human-driven landscape of fear? 2015 Conference of Alberta Chapter – The Wildlife Society, Edmonton, Alberta. March 20-22 2015.
43. **Fisher, J.T.**, Cole Burton, Hannah Britton-Foster, Michelle Hiltz, Luke Nolan, and Larry Roy. 2014. White-tailed deer in boreal Alberta: The contribution of fawning rates and movement to expansion. PTAC Ecological Issues and Access Forum, Calgary, Alberta. November 27 2014. (Invited presentation)
44. **Fisher, J.T.** 2014. The Lens of Science: Wildlife Cameras on the Cooking Lake Moraine. Elk Island Society Public Lecture Series, Sherwood Park, Alberta. December 3rd 2014. (Invited presentation)
45. **Fisher, J.T.**, and N. Heim. 2014. Wolverines, Grizzlies, Statistics and Skeptics: Bridging carnivore research and species-at-risk management. University of Victoria School of Environmental Studies Seminar Series, October 16 2014. (Invited presentation)
46. **Fisher, J.T.**, N. Heim, A.P. Clevenger, J. Paczkowski, and J.P. Volpe. 2014. Carnivore community conservation: measuring ecological impacts with camera trapping. North American Congress for Conservation Biology, Missoula, Montana, July 13-17 2014.
47. Heim, N., **J.T. Fisher**, A.P. Clevenger, J. Paczkowski, and J.P. Volpe. 2014. Wolverine range contraction in the Canadian Rockies: Camera trapping reveals cumulative effects of climate and landscape change. North American Congress for Conservation Biology, Missoula, Montana, July 13-17 2014.
48. C. Burton, **J.T. Fisher**, and D. Huggard. 2014. Assessing cumulative effects to wildlife in Alberta's oil sands. . North American Congress for Conservation Biology, Missoula, Montana, July 13-17 2014.
49. C. Burton, E. Neilsen, D. Moreira, A. Ladle, R. Steenweg, **J.T. Fisher**, E. Bayne, S. Boutin. 2014. Wildlife camera trapping: a review and recommendations for improvement. North American Congress for Conservation Biology, Missoula, Montana, July 13-17 2014.

50. **Fisher, J.T.**, N. Heim, T. Clevenger, and J. Paczkowski. 2014. Wolverine range contraction in the Canadian Rockies: Is it the weather, or the neighbourhood? Genomes to Biomes – Canadian Society for Ecology and Evolution Conference, Montreal, Quebec, May 25-28 2014.
51. **Fisher, J.T.**, M. Hiltz, B. Maile, G. Chapmanp, L. Roy, L. Nolan, C. Burton, C. Dockrill, and P. MacMahon. 2014. Caribou declines and alternate wolf prey: expanding white-tailed deer populations in boreal Alberta. 15th Annual North American Caribou Workshop, Whitehorse, YT, May 14-16 2014.
52. **Fisher, J.T.**, M. Hiltz, L. Nolan, and L. Roy. 2014. White-tailed deer expansion in boreal Alberta: The effects of winter severity and landscape development on expansion. Alberta Chapter of the Wildlife Society Conference, Jasper, Alberta, March 7-9 2014.
53. **Fisher, J.T.**, M. Wheatley, and D. MacKenzie. 2014. Cubs on cameras: Grizzly bear breeding success and implications for climate change. Alberta Chapter of the Wildlife Society Conference, Jasper, Alberta, March 7-9 2014.
54. **Fisher, J.T.**, and J.P. Volpe. 2014. Learning from bears, to look for salmon: Hierarchical models and their applications to breeding grizzly bears and Atlantic salmon escapes. University of Victoria, School of Environmental Studies, Statistical Seminar Series. February 25th 2014. (Invited Presentation)
55. Heim, N.A., **J.T. Fisher**, T. Clevenger, J. Paczkowski, and J.P. Volpe. 2014. Of seismic, snow, and surviving your neighbors: cumulative effects drive wolverine (Gulo gulo) occurrence along the Rocky Mountain Range Margin. Alberta Chapter of the Wildlife Society Conference, Jasper, Alberta, March 7-9 2014.
56. Cole Burton, Dario Moreira, Eric Neilson, John Paczkowski, **Jason T. Fisher**, Erin Bayne, Jim Schieck, Stan Boutin. 2014. Effect of lure on wildlife detections with camera traps in Alberta. Alberta Chapter of the Wildlife Society Conference, Jasper, Alberta, March 7-9 2014.
57. **Fisher, J.T.,** M. Hiltz, L. Nolan, and L. Roy. 2013. White-tailed deer in boreal Alberta: The effects of winter severity and landscape development on expansion. Petroleum Technology Alliance of Canada (PTAC) Resource Access and Ecological Issues Forum, Calgary, Alberta, November 28th 2013. (Invited presentation)
58. **Fisher, J.T.** 2013. Wolverines and applied ecology. Ecology@UVIC Seminar Series, University of Victoria, British Columbia. October 28th 2013. (Invited Presentation).
59. **Fisher, J.T.** 2013. Wolverines and applied ecology in the age of information theory. Keynote Address. University of Calgary Ecology and Evolution Symposium, Calgary Alberta. September 21-22 2013. (Invited Presentation).
60. **Fisher, J.T**., M. Wheatley, and D. MacKenzie. 2013. Spatial patterns of grizzly bear breeding success: Implications for climate change. Canadian Society for Ecology and Evolution, Kelowna, British Columbia, May 12-15 2013.
61. Heim, N.A., **J.T. Fisher**, T. Clevenger, J. Paczkowski, and J.P. Volpe. 2013. Spatial patterns of wolverine (Gulo gulo) occurrence and distribution at the Rocky Mountain Range Margin. Annual Meeting of the Canadian Society for Ecology and Evolution, Kelowna, British Columbia, May 12-15 2013.
62. **Fisher, J.T**., S. Bradbury, T. Clevenger, N.A. Heim, J. Paczkowski, and M. Wheatley. 2013. Wolverine +10: A decade of lessons, and the future of Alberta wolverine research. Alberta Chapter of the Wildlife Society Conference, Canmore, Alberta, March 7-9 2013.
63. Paczkowski, J., **J.T. Fisher**, and N.A. Heim. Evaluation of wildlife cameras and scent lure as a mechanism to monitor grizzly bears in Kananaskis Country, Alberta. Alberta Chapter of the Wildlife Society Conference, Canmore, Alberta, March 7-9 2013.

64. Heim, N.A., **J.T. Fisher**, T. Clevenger, J. Paczkowski, and J.P. Volpe. 2013. Spatial patterns of wolverine (Gulo gulo) occurrence in Alberta's Kananaskis Country region. Annual Meeting of the Alberta Chapter and Canadian Section of the Wildlife Society, Canmore AB, March 7-9 2013.
65. **Fisher, J.T.**, M. Hiltz, L. Nolan, and L. Roy. 2012. White-tailed deer density and habitat selection in the northeast boreal forest. Petroleum Technology Alliance of Canada (PTAC) Resource Access and Ecological Issues Forum, Calgary, Alberta, November 2012. (Invited presentation)
66. **Fisher, J.T.**, B. Anholt, S. Bradbury, M. Wheatley, and J.P. Volpe. 2012. Spatial segregration of sympatric marten and fishers: landscapes as species-scapes. 19th Annual Conference of the Wildlife Society, Portland, Oregon. October 2012.
67. **Fisher, J.T.**, C. Pasztor, A. Wilson, J.P. Volpe, and B. Anholt. 2012. Shared predation and spatial segregation: Sea otter recolonisation of a coastline of fear. Bamfield Marine Sciences Centre Seminar Series. Bamfield, British Columbia. June 13th 2012. (Invited presentation).
68. **Fisher, J.T.**, M. Hiltz, L. Nolan, and L. Roy. 2012. White-tailed deer in boreal Alberta: A multi-method approach for estimating white-tailed deer density and habitat selection. Alberta Chapter of the Wildlife Society Conference, Medicine Hat, Alberta, March 2012.
69. **Fisher, J.T.,** B. Anholt, S. Bradbury, M. Wheatley, and J.P. Volpe. 2012. Spatial segregration of sympatric marten and fishers: landscapes as species-scapes. Alberta Chapter of the Wildlife Society Conference, Medicine Hat, Alberta, March 2012.

BI/COI FORM 3

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BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE
For General Scientific and Technical Studies and Assistance

NAME: Dr. Jason Thomas Fisher

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EMAIL ADDRESS: jason.fisher@innotechalberta.ca

CURRENT EMPLOYER: InnoTech Alberta

COMMITTEE: _____

_____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for the project and committee activity to which this form applies. **Retain a copy for your records**.

PART I **BACKGROUND INFORMATION**

INSTRUCTIONS

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to -- and might reasonably be of interest to others concerning -- your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS. Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

Please see attached CV. I work for InnoTech Alberta, a corporation fully owned by the Government of Alberta (Canada), with a mandate to execute research and provide research and development to benefit Alberta. I am also an Adjunct Professor at the University of Victoria, School of Environmental Studies. I am a member of The Wildlife Society, Ecological Society of America, Society for Conservation Biology, and Canadian Society for Ecology and Evolution.

II. GOVERNMENT SERVICE. Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

I do not work in the United States; I work for the Province of Alberta (Canada).

III. RESEARCH SUPPORT. Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

My research is supported by the Government of Alberta; Natural Sciences and Engineering Research Council of Canada (NSERC - through student grants); Petroleum Technology Alliance of Canada; Alberta Innovates; Alberta Biodiversity Monitoring Institute; several environmental NGOS (such as the Beaver Hills Initiative) and various oil and gas companies.

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

Please see attached CV for a comprehensive list.

V. ADDITIONAL INFORMATION. If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

I can think of no aspects of my background or present circumstances with might be construed as affecting my judgment in matters of the assigned task. My corporation's mandate is to provide honest, purely impartial research information, as well as scientific advice, to decision makers in Alberta, and across Canada and beyond. My research on wolverines has been well published in scientific journals and is a matter of public record; it is this research, as well as the research of others, upon which my review will be based.

PART II **CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest,* ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic.* They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is <u>not</u> a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a

fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making recommendations to sponsors regarding specific contract or grant awards, etc. -- careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the institution in the development of reports to be provided by the institution to sponsoring agencies.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, fellowships, etc., this institution is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you have been invited to serve.

1. FINANCIAL INTERESTS. (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than $10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here __NO__ (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS. (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?
(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

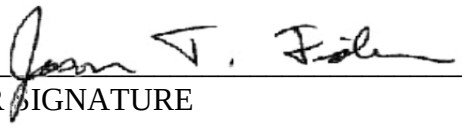
(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications -- or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here NO (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

EXPLANATION OF "YES" RESPONSES:

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.



YOUR SIGNATURE

October 16 2017

DATE

Reviewed by: _____

Executive Director

_____

Date

Attachment 01

Potential additional conflicts of interest may include employment or affiliation with the Service, the States of California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, or Wyoming, or the Canadian Federal government; and peer reviewers, who have been or are directly or indirectly employed by any organization that has either litigated the federal government concerning wolverines or taken a position on one side or the other about the status of the North American wolverine in the contiguous United States. In addition, individuals who served as peer reviewers for previous proposed rules or who were participants in the April 2-3, 2014 facilitated wolverine workshop held by the Service should be disqualified from this peer review process. Finally, the reviewers should have no financial or other conflicts of interest with the outcome or implications of the report.

If the reviewer has no potential conflicts of interest as described under ATTACHMENT 01, check here_____(NO).

If the reviewer has any potential conflict of interest as described under ATTACHMENT 01, check here_____(YES), and briefly describe the circumstances below.

EXPLANATION OF "YES" RESPONSES:

Jedediah Farrell Brodie

John J. Craighead Endowed Chair of Conservation
The University of Montana

Division of Biological Sciences
32 Campus Drive
Missoula, MT 59812, USA

+1 (406) 243-5528
jedediah.brodie@mso.umt.edu
www.jedediahbrodie.weebly.com

EDUCATION

David H. Smith Conservation Research Postdoctoral Fellow. Advisors: Dr. Eric Post, Penn State University, and Dr. Joel Berger, Wildlife Conservation Society (2007-2009)

PhD. Biology, University of Montana. Advisor: Dr. John Maron (2007)

BA. Biology and Environmental Studies (double major), University of California, Santa Cruz. Thesis advisor: Dr. Karen Holl (1997)

PROFESSIONAL POSITIONS

John J. Craighead Endowed Chair of Conservation, Division of Biological Sciences and Wildlife Biology Program, University of Montana, Missoula, USA (2016-present)

Assistant Professor of Conservation Ecology, Departments of Zoology and Botany, University of British Columbia, Vancouver, Canada (2012-2016)

Curator of Mammals, Beaty Biodiversity Museum, University of British Columbia, Vancouver, Canada (2014-2016)

Member of IUCN Species Survival Commission, Cat Specialist Group, and Small Carnivore Specialist Group (2015-present)

Society for Conservation Biology Asia Section, Board member and Communications Director (2009-2015)

Fulbright Research Fellow to Malaysia. Based at the Institute for Tropical Biology and Conservation, Universiti Malaysia Sabah (2011-2012)

Research Associate, Denver Zoological Foundation (2011-present)

SYMPOSIA, PLENARIES, and SPECIAL SECTIONS

Symposium co-organizer, "Defaunation and ecosystem services". Association for Tropical Biology and Conservation annual meeting, Merida, Mexico (2017)

Keynote speaker, French-American-Canadian Climate Talks (FACTS) Conference in Vancouver, hosted by the French Embassy (2016)

Plenary address, World Wildlife Fund Malaysia & Sarawak Forest Department conservation forum, Kuching, Malaysia (2015)

Co-editor of special section in *Conservation Biology*: "Conservation challenges and opportunities in Asia" (2015)

Symposium moderator, "Wildlife and restoration ecology". Society for Conservation Biology North America meeting, Missoula, Montana (2014)

Plenary Session moderator, "Tackling the future's most pressing conservation challenges in a changing world". Society for Conservation Biology annual meeting, Edmonton, Canada. Panel discussion among 6 leaders in Conservation Biology (2010)

Symposium co-organizer, "Drivers of the global wildlife trade in the 21st century: key challenges and opportunities for sustainability". Society for Conservation Biology annual meeting, Beijing, China (2009)

BOOKS

BRODIE, J.F., and C. Francis. In Prep. Mammals of the Indo-Malay Archipelago.

BRODIE, J.F., E. Post, and D. Doak (editors). 2012. Wildlife conservation in a changing climate. University of Chicago Press, Chicago.

MANUSCRIPTS IN REVIEW & REVISION

Brodie, J.F. and P. McIntyre. Submitted. Bushmeat biogeochemistry: hunting tropical mammals impacts ecosystem phosphorus budgets. Science

Granados, A., H. Bernard, and J.F. **BRODIE**. In Review. The importance of mast fruiting for vertebrates in a faunally intact ecosystem. Ecological Monographs

Granados, A., H. Bernard, and J.F. **BRODIE**. In Revision. Experimental defaunation alters seedling functional traits but not diversity. Proceedings of the Royal Society B

BRODIE, J.F. In Review. Carbon costs and bushmeat benefits of hunting in tropical forests. Ecological Economics

Strimas-Mackey, M., and J.F. **Brodie**. In Review. Reserve design to ensure the long-term persistence of multiple species. Ecological Applications

Loken, B., A. Royle, and J.F. **BRODIE**. In Review. The impact of unmodeled capture heterogeneity on population density estimates for the Sunda clouded leopard *Neofelis diardi*. Biological Conservation

Paudel, P.K., J. Sipos, and J.F. **BRODIE**. In Revision. Range size, not human densities or spatial constraints, influences threatened species richness along an elevational gradient. Ecological Indicators

Chu, W., D. Congcong, J.F. **BRODIE**, J.R. Muntifering, H. Defu, and C. Hongjun. In Review. First approximation of free-ranging gray wolf and lynx abundance in an arid conservation area in northwest China. Animal Conservation

Mohd-Azlan, J., N. Hidayah, A. Tuen, A. Simon, G. Jenis, L. Engkamat, D. Nuriza, A. Abdillah, M. Rahman, T. Jailan, and J.F. **BRODIE**. Revisions submitted. Camera trapping medium to large terrestrial mammals in Tanjung Datu National Park, Sarawak, Borneo. Tropical Ecology

Mohd-Azlan, S. Kaicheen, L. Lok, and J.F. **BRODIE**. In Review. The distribution of small carnivores along an elevation gradient in Gunung Gading National Park, Sarawak, Borneo. Oryx

PUBLICATIONS

2017 and in press

BRODIE, J.F. In Press. Evolutionary cascades induced by large frugivores. Proceedings of the National Academy of Sciences, USA

BRODIE, J.F., J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and O. Helmy. 2017. Lowland biotic attrition revisited: body size and variation among climate change 'winners' and 'losers'. Proceedings of the Royal Society B 284: 20162335

BRODIE, J.F., O. Helmy, J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and E. Zipkin. In Press. Habitat partitioning at microhabitat but not landscape scales in tropical mammals. Biotropica

BRODIE, J.F., O. Helmy, M. Pangau-Adams, G. Ugiek, G. Froese, A. Granados, J. Mohd-Azlan, H. Bernard, A. Giordano, M. Agil, and A. Mustari. In Press. Crossing the (Wallace) Line: local abundance and distribution of mammals across biogeographic barriers. Biotropica

Granados, A., J.F. **BRODIE**, H. Bernard, and M. O'Brien. In Press. Experimental defaunation and habitat disturbance influence seed mortality but not seedling establishment. Ecological Applications

BRODIE, J.F., J. Hon, and J. Mohd-Azlan. 2016. Sarawak wildlife corridors: meeting the aspirations of future generations. Biodiversity and Environmental Conservation 12: 13

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Hearn, A., J. Ross, D. Macdonald, G. Bolongon, S. Cheyne, J. Mohd-Azlan, H. Samefima, J.F. **BRODIE**, A. Giordano, R. Alfred, R. Boonratana, S. Meiri, Rustam, H. Bernard, B. Loken, D. Augeri, M. Heydon, J. Hon, L. Liat, M. Nakabayashi, J. Pilgrim, M. Bezuijen, J. Hall, M. Lammertink, E. Meijaard, C. Breitenmoser-Wursten, S. Kramer-schadt, and A. Wilting. 2016. Predicted distribution of the Sunda clouded leopard *Neofelis diardi* in Borneo. Raffles Bulletin of Zoology 33: 149-156

Wilting, A., S. Cheyne, J. Mohd-Azlan, L. Liat, A. Hearn, J. Ross, H. Samejima, R. Boonratana, A. Marshall, J.F. **BRODIE**, A. Giordano, J. Eaton, J. Hall, J. Pilgrim, M. Heydon, G. Semiadi, D. Macdonald, C. Breitenmoser-Wursten, and S. Kramer-Schadt. 2016. Predicted distribution of the flat-headed cat *Prionailurus planiceps* in Borneo. Raffles Bulletin of Zoology 33: 173-179

Duckworth, J., A. Hearn, J. Ross, H. Samejima, J. Mohd-Azlan, S. Cheyne, R. Alfred, D. Augeri, J. Mathai, M. Heydon, R. Boonratana, Rustam, G. Semiadi, T. van Berkel, J.F. **BRODIE**, A. Giordano, A. Peter, J. Eaton, G. Fredriksson, J. Hall, Y. Nakashima, D. Macdonald, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of short-tailed mongoose *Herpestes brachyurus* in Borneo. Raffles Bulletin of Zoology 33: 132-141

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BRODIE, J.F., E. Post, F. Watson, and J. Berger. 2012. Climate intensification of herbivore impacts on tree recruitment. Proceedings of the Royal Society B 279: 1366-1370 *[Faculty of 1000]*

McConkey, K., S. Prasad, R. Corlett, A. Campos-Arceiz, J. **BRODIE**, H. Rogers, and L. Santamaria. 2012. Seed dispersal in changing landscapes. Biological Conservation 146: 1-13 *[ISI "Highly Cited" article]*

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BRODIE, J.F., J. Muntifering, M. Hearn, B. Loutit, R. Loutit, B. Brell, S. Uri-khob, N. Leader-Williams, and P. du Preez. 2011. Population recovery of black rhinoceros in northwest Namibia following poaching. Animal Conservation 14: 354-362

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Williams, J., M. Ellis, M. Bricker, J.F. **BRODIE**, and E. Parsons. 2011. Distance to stable stage distribution in plant populations and implications for near-term population projections. Journal of Ecology 99: 1171-1178

BRODIE, J.F., and A. Giordano. 2011. Small carnivores of the Maliau Basin, Sabah, Borneo, including a new locality for Hose's Civet. Small Carnivore Conservation 44: 1-6

2010

BRODIE, J.F., E. Post, and W. Laurance. 2010. How to conserve the tropics as they warm. Nature 468: 634

Kauffman, M.J., J.F. **BRODIE**, and E. Jules. 2010. Are wolves saving aspen? A landscape-level test of a behaviorally mediated trophic cascade. Ecology 91: 2742-2755

BRODIE, J.F., and E. Post. 2010. Non-linear responses of wolverine populations to declining winter snowpack. Population Ecology 52: 279-287

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2009

BRODIE, J.F., and H. Gibbs. 2009. Bushmeat hunting as climate threat. Science 326: 364-365

BRODIE, J.F., O. Helmy, W. Brockelman, and J. Maron. 2009. Functional differences among tropical mammalian frugivores. Ecology 90: 688-698

BRODIE, J.F., O. Helmy, W. Brockelman, and J. Maron. 2009. Bushmeat poaching reduces the seed dispersal and population growth rate of a mammal-dispersed tree. Ecological Applications 19: 854-863

Post, E., J.F. **BRODIE**, M. Hebblewhite, A.D. Anders, J.A.K. Maier, and C.C. Wilmers. 2009. Global population dynamics and hot spots of response to climate change. Bioscience 59: 489-497

BRODIE, J.F., and W. Brockelman. 2009. Bed site selection of red muntjac (*Muntiacus muntjak*) and sambar (*Rusa unicolor*) in a tropical seasonal forest. Ecological Research 24: 1251-1256

BRODIE, J.F. 2009. Is research effort allocated efficiently for conservation? Felidae as a global case study. Biodiversity and Conservation 18: 2927-2939

2008 and earlier

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BRODIE, J.F. 2008. A review of American bison (*Bos bison*) demography and population dynamics. Working paper No. 35, Wildlife Conservation Society, New York *[Peer-reviewed report published jointly by WCS and the American Bison Society]*

BRODIE, J.F., and M. Gibeau. 2007. Brown bear population trends from demographic and monitoring-based estimators. Ursus 18: 137-144

BRODIE, J.F. 2006. An experimentally determined persistence rate correction factor for scat-based abundance indices. Wildlife Society Bulletin 34: 1216-1219

BRODIE, J.F. 2003. Factors affecting the rooting ability of *Dryobalanops oblongifolia* and *Shorea splendida* (Dipterocarpaceae) stem cuttings. Journal of Tropical Forest Science 15: 109-116

BRODIE, J.F., and C. Lee. 2000. A new record of a mammal-catching *Nepenthes*. Carnivorous Plant Newsletter 29: 54

TECHNICAL REPORTS

Brodie, J., J. Mohd-Azlan, & J. Hon. 2015. Sarawak Wildlife Corridors. University of British Columbia, Universiti Malaysia Sarawak, World Wildlife Fund Malaysia

Mathai, J., Hearn, A., Brodie, J., Wilting, A., Duckworth, J.W., Ross, J., Holden, J., Gemita, E. & Hon, J. 2015. *Herpestes semitorquatus*. The IUCN Red List of Threatened Species 2015: e.T41616A45208027

Mathai, J., Duckworth, J.W., Wilting, A., Hearn, A. & Brodie, J. 2015. *Diplogale hosei*. The IUCN Red List of Threatened Species 2015: e.T6635A45197564

Hearn, A., Ross, J., Brodie, J., Cheyne, S., Haidir, I.A., Loken, B., Mathai, J., Wilting, A. & McCarthy, J. 2015. *Neofelis diardi*. The IUCN Red List of Threatened Species 2015: e.T136603A50664601

Ross, J., Brodie, J., Cheyne, S., Hearn, A., Izawa, M., Loken, B., Lynam, A., McCarthy, J., Mukherjee, S., Phan, C., Rasphone, A. & Wilting, A. 2015. *Prionailurus bengalensis*. The IUCN Red List of Threatened Species 2015: e.T18146A50661611

Ross, J., Brodie, J., Cheyne, S., Hearn, A., Loken, B., Lynam, A., McCarthy, J., Phan, C., Rasphone, A., Singh, P. & Wilting, A. 2015. *Pardofelis marmorata*. The IUCN Red List of Threatened Species 2015: e.T16218A50661236

OTHER PUBLICATIONS

BRODIE, J.F., J. Berger. 2009. The Peel River watershed: ecological crossroads and Beringian hotspot of arctic and boreal diversity. Canadian Parks and Wilderness Society, Yukon Chapter, Whitehorse, Yukon Territory

McGinnis, D., C. Whitlock, S. Running, and J. **BRODIE**. 2009. For economy and ecology, climate bill deserves our support. Editorial in *The Missoulian*, August 3

TEACHING EXPERIENCE & AWARDS

Biology 475 "Mammalogy"; University of Montana. Upper-division undergrad course with lab. Fall 2017

Biology 595 "International Conservation"; University of Montana. Graduate course. Spring 2017

Biology 548M "Population Ecology"; University of British Columbia. Graduate seminar. Spring 2016

Biology 230 "Fundamentals of Ecology"; University of British Columbia. Second-year course with lab. Fall 2013 & 2015

Biology 416 "Principles of Conservation Biology"; University of British Columbia. Upper-division undergraduate course with lab. Fall 2012

Quantitative analysis of camera trapping data; short-course at Universiti Malaysia Sabah, February. 2012

Wildlife Biology 470 "Conservation of Wildlife Populations"; University of Montana. Senior-level undergraduate and graduate student course for Wildlife Biology majors. 2010

Wildlife Biology 105 "Wildlife and People"; University of Montana. Freshman-level course for non-majors. 2010

Biology 350 "Rocky Mountain Flora"; University of Montana. Lab Instructor. 2010

Round River Conservation Studies, Namibia Program. 3-month field course focused on black rhino conservation. Co-taught with Olga Helmy. 2006

Outstanding Teaching Assistant Award, University of Montana. 2004

Teaching Assistant, University of Montana (3 semesters). 2002-2004

GRANTS & FELLOWSHIPS (USD currency unless noted)

Rainforest Trust. J. Brodie, D. Burslem, J. Hill, and the Southeast Asia Rainforest Research Partnership. $1,250,000 (2017)

Murie Science & Learning Center, Denali National Park. C. Roland, C. McIntyre, and J. Brodie. $15,000 (2016)

United Nations Development Programme & Sabah Forest Department. J. Brodie and D. Burslem. $1,060,000; $200k cash to UBC, $200k to Aberdeen University (co-PI Burslem), and 660k in-kind support from Sabah Forest Department (2015)

National Geographic Waitt Grant. $14,800 (2014)

Private donation. CAD$40,800 (2014)

Research Fellowship, University Sustainability Initiative, University of British Columbia. CAD$10,000 (2013)

Early Career Scholars Fellowship, Peter Wall Institute for Advanced Studies. CAD$10,000 stipend plus CAD$10,000 teaching buy-out (2013)

British Columbia Knowledge and Development Fund. CAD$125,000 (2013)

Canada Foundation for Innovation (CFI). CAD$125,000 (2013)

National Science and Engineering Research Council (NSERC), Canada, Discovery Grant. CAD$125,000 (2012-2017)

Denver Zoological Foundation –research grant (year 2). $5,000 (2012)

Fulbright Research Fellowship, US State Department (2011)

US National Park Service. $11,479 (2011)

Denver Zoological Foundation –research grant (year 1). $12,500 (2010)

Panthera Foundation small-cat research grant (year 2). J. Brodie and A. Giordano. $24,900 (2010)

Denver Zoological Foundation –research grant. $4,995 (2010)

Columbus Zoo –small research grant. A. Giordano and J. Brodie. $3,000 (2010)

Clouded Leopard Project –small research grant. A. Giordano and J. Brodie. $1,000 (2010)

Panthera Foundation small-cat research grant. J. Brodie and A. Giordano. $14,740 (2009-2010)

USGS Climate change research grant. Kauffman, M., J., BRODIE, G. Chong, P. Cross, E. Jules, R. Klaver. $322,990 (2008-2011)

David H. Smith Conservation Research Postdoctoral Fellowship (Society for Conservation Biology). $136,662 (2007-2010)

Environmental Protection Agency, Science to Achieve Results (EPA-STAR) Fellowship. $112,032 (2005-2008)

National Science Foundation, Doctoral Dissertation Improvement Grant (NSF-DDIG). $9,850 (2005)

Jack E. Schmautz Graduate Research Fellowship, University of Montana. $3,000 (2005)

Sigma Xi Grants-In-Aid-of-Research (US National Academy of Sciences). $997 (2002)

Achievement Rewards for College Scientists (ARCS) Fellowship. $15,000 (2001-2003)

University of Washington, Botany Department Fellowship. $39,814 (2001-2003)

STUDENTS

Current

-Adrienne Contasti, PhD (UBC) "Harvest strategies to simultaneously optimize hunter success, mammal persistence, and zoochorous tree persistence in Sulawesi, Indonesia." Estimated completion: July 2017

-Patrick Burke, MSc (UBC) "Landscape connectivity for small carnivores in the North Cascades Ecosystem." Estimated completion: December 2017

-Mairin Deith, MSc (UBC) "Mapping and mitigating bushmeat hunting pressure in Malaysian Borneo". Estimated completion: December 2017

-Peter Williams, PhD (UM-Div Biol Sci) Multi-species connectivity and persistence in a mixed-use tropical landscape. Estimated completion: June 2021

-Shu Woan Teoh, PhD (UM-Wildlife Biology) Land use legacies and the landscape ecology of tropical mammals. Estimated completion: December 2021

Past

-Alys Granados, PhD (UBC) "Positive and negative impacts of terrestrial mammals on tree seedling establishment, growth, and survival in logged and unlogged forests." Completed in August 2017.

-Sam Yue, MSc (UBC) "How oil palm plantation traits affect the persistence of forest mammals in Malaysian Borneo". Completed in July 2014, now a PhD student at Hong Kong University.

-Matthew Strimas-Mackey, MSc (UBC) "Using remote sensing and machine-learning algorithms to predict road expansion in tropical wilderness areas." Completed in May 2016, now working at Cornell Lab of Ornithology.

-Meagan Grabowski, MSc (co-advised with Charles Krebs; UBC). "Long-term impacts of herbivory, climate, and fertilization on shrub demography in the Yukon". Completed in December 2015, now working for the Yukon Territorial government.

-Cheng Chen, MSc (UBC) "Assessing the relative influence of enforcement, funding, and public attitudes toward conservation on the efficacy of protected areas in southern China." Completed in May 2017, now a PhD student at UBC.

-Graden Froese, Honour's Thesis (UBC) "Occurrence and conservation status of large mammals in Sulawesi, Indoneisa". Completed in 2014, now a PhD student at Duke University.

-Kyle Crowther. Honour's Thesis (UBC) "Effects of selective logging on large mammals in lowland Borneo rainforests". Completed in 2014.

-Megan Young. Honour's Thesis (UBC) "Acoustical monitoring of birds and bats in primary rainforest in Borneo". Completed in 2015.

REVIEWER & EDITOR SERVICES

-Subject editor for Biotropica

-Peer reviewer for: Animal Conservation, Biological Conservation, Biotropica, Conservation Biology, Ecography, Ecological Applications, EcoHealth, Ecology, Ecology Letters, International Journal of Zoology, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Biogeography, Oikos, Oryx, PNAS, Population Ecology, Ursus, Wildlife Biology

OTHER PROFESSIONAL SERVICES

-2014-2015 IUCN Red List assessment team member for 12 carnivore species: Sunda clouded leopard (*Neofelis diardi*), marbled cat (*Pardofelis marmorata*), bay cat (*P. badia*), flat-headed cat (*Prionailurus planiceps*), leopard cat (*Prionailurus bengalensis*), Hose's civet (*Diplogale hosei*), banded civet (*Hemigalus derbyanus*), masked palm civet (*Paguma larvata*), otter civet (*Cynogale bennettii*), banded linsang (*Prionodon linsang*), collared mongoose (*Herpestes semitorquatus*), and Sulawesi civet (*Macrogalidia musschenbroekii*)

-2014-2015 IUCN Red List assessment team member for 2 ungulate species: sambar (*Rusa unicolor*) and Bornean muntjac (*Muntiacus atherodes*)

-Contributing Lead Author, Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) Asia-Pacific Assessment (2015-2017)

-Member of Society for Conservation Biology (lifetime member), Association for Tropical Biology and Conservation, Ecological Society of America

-International Conservation Fund of Canada, Scientific Advisor (2012-present)

BI/COI FORM 3

The National Academies of
SCIENCES · ENGINEERING · MEDICINE

BACKGROUND INFORMATION
AND
CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE
For General Scientific and Technical Studies and Assistance

NAME: Jedediah Brodie

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Missoula, MT 59812

EMAIL ADDRESS: jedediah.brodie@mso.umt.edu

CURRENT EMPLOYER: University of Montana

COMMITTEE: _____

_____

There are two parts to this form, Part I Background Information, and Part II Confidential Conflict of Interest Disclosure. Complete both parts, **sign** and **date** this form on the last page, and return the form to the responsible staff officer for the project and committee activity to which this form applies. **Retain a copy for your records**.

PART I **BACKGROUND INFORMATION**

INSTRUCTIONS

Please provide the information requested below regarding **relevant** organizational affiliations, government service, public statements and positions, research support, and additional information (if any). Information is "relevant" if it is related to -- and might reasonably be of interest to others concerning -- your knowledge, experience, and personal perspectives regarding the subject matter and issues to be addressed by the committee activity for which this form is being prepared. If some or all of the requested information is contained in your curriculum vitae, you may if you prefer simply attach your CV to this form, supplemented by additional responses or comments below as necessary.

I. ORGANIZATIONAL AFFILIATIONS. Report your relevant business relationships (as an employee, owner, officer, director, consultant, etc.) and your relevant remunerated or volunteer non-business relationships (e.g., professional organizations, trade associations, public interest or civic groups, etc.).

University of Montana (salaried)
International Union for the Conservation of Nature (volunteer)
Denver Zoological Foundation (volunteer)

II. GOVERNMENT SERVICE. Report your relevant service (full-time or part-time) with federal, state, or local government in the United States (including elected or appointed positions, employment, advisory board memberships, military service, etc.).

Research technician with the National Park Service (summers 2000, 2001, 2002)

III. RESEARCH SUPPORT. Report relevant information regarding both public and private sources of research support (other than your present employer), including sources of funding, equipment, facilities, etc.

United Nations Development Programme
Sabah (Malaysia) Forest Department
Southeast Asia Rainforest Research Partnership
Rainforest Trust

IV. PUBLIC STATEMENTS AND POSITIONS. List your relevant articles, testimony, speeches, etc., by date, title, and publication (if any) in which they appeared, or provide relevant representative examples if numerous. Provide a brief description of relevant positions of any organizations or groups with which you are closely identified or associated.

See attached

V. ADDITIONAL INFORMATION. If there are relevant aspects of your background or present circumstances not addressed above that might reasonably be construed by others as affecting your judgment in matters within the assigned task of the committee or panel on which you have been invited to serve, and therefore might constitute an actual or potential source of bias, please describe them briefly.

None

PART II **CONFIDENTIAL CONFLICT OF INTEREST DISCLOSURE**

INSTRUCTIONS

It is essential that the work of committees of the institution used in the development of reports not be compromised by any significant conflict of interest. For this purpose, **the term "conflict of interest" means any financial or other interest which conflicts with the service of the individual because it (1) could significantly impair the individual's objectivity or (2) could create an unfair competitive advantage for any person or organization.** Except for those situations in which the institution determines that a conflict of interest is unavoidable and promptly and publicly discloses the conflict of interest, no individual can be appointed to serve (or continue to serve) on a committee of the institution used in the development of reports if the individual has a conflict of interest that is relevant to the functions to be performed.

The term "conflict of interest" means something more than individual bias. There must be an *interest,* ordinarily financial, that could be directly affected by the work of the committee.

Conflict of interest requirements are *objective* and *prophylactic.* They are not an assessment of one's actual behavior or character, one's ability to act objectively despite the conflicting interest, or one's relative insensitivity to particular dollar amounts of specific assets because of one's personal wealth. Conflict of interest requirements are objective standards designed to eliminate certain specific, potentially compromising situations from arising, and thereby to protect the individual, the other members of the committee, the institution, and the public interest. The individual, the committee, and the institution should not be placed in a situation where others could reasonably question, and perhaps discount or dismiss, the work of the committee simply because of the existence of conflicting interests.

The term "conflict of interest" applies only to *current interests*. It does not apply to past interests that have expired, no longer exist, and cannot reasonably affect current behavior. Nor does it apply to possible interests that may arise in the future but do not currently exist, because such future interests are inherently speculative and uncertain. For example, a pending formal or informal application for a particular job is a current interest, but the mere possibility that one might apply for such a job in the future is <u>not</u> a current interest.

The term "conflict of interest" applies not only to the personal interests of the individual but also to the *interests of others* with whom the individual has substantial common financial interests if these interests are relevant to the functions to be performed. Thus, in assessing an individual's potential conflicts of interest, consideration must be given not only to the interests of the individual but also to the interests of the individual's spouse and minor children, the individual's employer, the individual's business partners, and others with whom the individual has substantial common financial interests. Consideration must also be given to the interests of those for whom one is acting in a

fiduciary or similar capacity (e.g., being an officer or director of a corporation, whether profit or nonprofit, or serving as a trustee).

Much of the work of this institution involves scientific and technical studies and assistance for sponsors across a broad range of activities. Such activities may include, for example: defining research needs, priorities, opportunities and agendas; assessing technology development issues and opportunities; addressing questions of human health promotion and assessment; providing scientific and technical assistance and supporting services for government agency program development; assessing the state of scientific or technical knowledge on particular subjects and in particular fields; providing international and foreign country science and technology assessments, studies and assistance. Such activities frequently address scientific, technical, and policy issues that are sufficiently broad in scope that they do not implicate specific financial interests or conflict of interest concerns.

However, where such activities address more specific issues having significant financial implications -- e.g., funding telescope A versus telescope B, government development or evaluation of a specific proprietary technology, promotion or endorsement of a specific form of medical treatment or medical device, connecting foreign research facilities to specific commercial interests, making recommendations to sponsors regarding specific contract or grant awards, etc. -- careful consideration must be given to possible conflict of interest issues with respect to the appointment of members of committees that will be used by the institution in the development of reports to be provided by the institution to sponsoring agencies.

The overriding objective of the conflict of interest inquiry in each case is to identify whether there are interests – primarily financial in nature – that conflict with the committee service of the individual because they could impair the individual's objectivity or could create an unfair competitive advantage for any person or organization. The fundamental question in each case is does the individual, or others with whom the individual has substantial common financial interests, have identifiable interests that could be directly affected by the outcome of the project activities of the committee on which the individual has been invited to serve? For projects involving advice regarding awards of contracts, grants, fellowships, etc., this institution is also guided by the principle that an individual should not participate in any decision regarding the award of a contract or grant or any other substantial economic benefit to the individual or to others with whom the individual has substantial common financial interests or a substantial personal or professional relationship.

The application of these concepts to specific scientific and technical studies and assistance projects must necessarily be addressed in each case on the basis of the particular facts and circumstances involved. The questions set forth below are designed to elicit information from you concerning possible conflicts of interest that are relevant to the functions to be performed by the particular committee on which you have been invited to serve.

1. FINANCIAL INTERESTS. (a) Taking into account stocks, bonds, and other financial instruments and investments including partnerships (but excluding broadly diversified mutual funds and any investment or financial interests valued at less than $10,000), do you or, to the best of your knowledge others with whom you have substantial common financial interests, have financial investments that could be affected, either directly or by a direct effect on the business enterprise or activities underlying the investments, by the outcome of the project activities of the committee on which you have been invited to serve?

(b) Taking into account real estate and other tangible property interests, as well as intellectual property (patents, copyrights, etc.) interests, do you or, to the best of your knowledge others with whom you have substantial common financial interests, have property interests that could be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(c) Could your employment or self-employment (or the employment or self-employment of your spouse), or the financial interests of your employer or clients (or the financial interests of your spouse's employer or clients) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(d) Taking into account research funding and other research support (e.g., equipment, facilities, industry partnerships, research assistants and other research personnel, etc.), could your current research funding and support (or that of your close research colleagues and collaborators) be directly affected by the outcome of the project activities of the committee on which you have been invited to serve?

(e) Could your service on the committee on which you have been invited to serve create a specific financial or commercial competitive advantage for you or others with whom you have substantial common financial interests?

If the answer to all of the above questions under FINANCIAL INTERESTS is either "no" or "not applicable," check here __X__ (NO).

If the answer to any of the above questions under FINANCIAL INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

2. OTHER INTERESTS. (a) Is the central purpose of the project for which this disclosure form is being prepared a critical review and evaluation of your own work or that of your employer?

(b) Do you have any existing professional obligations (e.g., as an officer of a scientific or engineering society) that effectively require you to publicly defend a previously established position on an issue that is relevant to the functions to be performed in this committee activity?
(c) To the best of your knowledge, will your participation in this committee activity enable you to obtain access to a competitor's or potential competitor's confidential proprietary information?

(d) If you are or have ever been a U.S. Government employee (either civilian or military), to the best of your knowledge are there any federal conflict of interest restrictions that may be applicable to your service in connection with this committee activity?

(e) If you are a U.S. Government employee, are you currently employed by a federal agency that is sponsoring this project? If you are not a U.S. Government employee, are you an employee of any other sponsor (e.g., a private foundation) of this project?

(f) If the committee activity for which this form is being prepared involves reviews of specific applications and proposals for contract, grant, fellowship, etc. awards to be made by sponsors, do you or others with whom you have substantial common financial interests, or a familial or substantial professional relationship, have an interest in receiving or being considered for awards that are currently the subject of the review being conducted by this committee?

(g) If the committee activity for which this form is being prepared involves developing requests for proposals, work statements, and/or specifications, etc., are you interested in seeking an award under the program for which the committee on which you have been invited to serve is developing the request for proposals, work statement, and/or specifications -- or, are you employed in any capacity by, or do you have a financial interest in or other economic relationship with, any person or organization that to the best of your knowledge is interested in seeking an award under this program?

If the answer to all of the above questions under OTHER INTERESTS is either "no" or "not applicable," check here _X_ (NO).

If the answer to any of the above questions under OTHER INTERESTS is "yes," check here ____ (YES), and briefly describe the circumstances on the last page of this form.

EXPLANATION OF "YES" RESPONSES:

During your period of service in connection with the activity for which this form is being completed, any changes in the information reported, or any new information, which needs to be reported, should be reported promptly by written or electronic communication to the responsible staff officer.



16 October 2017

YOUR SIGNATURE | DATE

Reviewed by: _____ _____

Executive Director | Date

Attachment 01

Potential additional conflicts of interest may include employment or affiliation with the Service, the States of California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, or Wyoming, or the Canadian Federal government; and peer reviewers, who have been or are directly or indirectly employed by any organization that has either litigated the federal government concerning wolverines or taken a position on one side or the other about the status of the North American wolverine in the contiguous United States. In addition, individuals who served as peer reviewers for previous proposed rules or who were participants in the April 2-3, 2014 facilitated wolverine workshop held by the Service should be disqualified from this peer review process. Finally, the reviewers should have no financial or other conflicts of interest with the outcome or implications of the report.

If the reviewer has no potential conflicts of interest as described under ATTACHMENT 01, check here_____(NO).

If the reviewer has any potential conflict of interest as described under ATTACHMENT 01, check here_____(YES), and briefly describe the circumstances below.

EXPLANATION OF "YES" RESPONSES:

PUBLIC STATEMENTS AND POSITIONS

2017 and in press

BRODIE, J.F. In Press. Evolutionary cascades induced by large frugivores. Proceedings of the National Academy of Sciences, USA

BRODIE, J.F., J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and O. Helmy. 2017. Lowland biotic attrition revisited: body size and variation among climate change 'winners' and 'losers'. Proceedings of the Royal Society B 284: 20162335

BRODIE, J.F., O. Helmy, J. Mohd-Azlan, A. Granados, H. Bernard, A. Giordano, and E. Zipkin. In Press. Habitat partitioning at microhabitat but not landscape scales in tropical mammals. Biotropica

BRODIE, J.F., O. Helmy, M. Pangau-Adams, G. Ugiek, G. Froese, A. Granados, J. Mohd-Azlan, H. Bernard, A. Giordano, M. Agil, and A. Mustari. In Press. Crossing the (Wallace) Line: local abundance and distribution of mammals across biogeographic barriers. Biotropica

Granados, A., J.F. **BRODIE**, H. Bernard, and M. O'Brien. In Press. Experimental defaunation and habitat disturbance influence seed mortality but not seedling establishment. Ecological Applications

BRODIE, J.F., J. Hon, and J. Mohd-Azlan. 2016. Sarawak wildlife corridors: meeting the aspirations of future generations. Biodiversity and Environmental Conservation 12: 13

Fischer, J., S. Jones, J.F. **BRODIE**, A. Granados, A. Marshall, A. Wain, T. Berkel, O. Wearn, A. Kaaden, J. Mathai, S. Cheyne, and M. Denny. In Press. Identification, ageing, sexing and phenology of Bornean *Lophura* pheasants and its value for camera trap studies. Forktail

2016

BRODIE, J.F. 2016. How monkeys sequester carbon. Trends in Ecology and Evolution 31: 414-416

BRODIE, J.F., J. Mohd-Azlan, and J. Schnell. 2016. How individual links affect network stability in a large-scale, heterogeneous metacommunity. Ecology 97: 1658-1667

BRODIE, J.F. 2016. Synergistic effects of climate change and agricultural land use on tropical mammals. Frontiers in Ecology and the Environment 14: 20-26

BRODIE, J.F., M. Paxton, G. Bala, G. Reynolds, G. Nagu, R. Clements, J. Hon, and A. Jain. 2016. Connecting science, policy, and implementation for landscape-scale habitat connectivity. Conservation Biology 30: 950-961

Steenweg, R., M. Hebblewhite, R. Kays, J. Ahumada, J. Fisher, C. Burton, S. Townsend, C. Carbone, J.M. Rowcliffe, J. Whittington, J.F. **BRODIE**, J.A. Royle, A. Switalski, A. Clevenger, N. Heim, and L. Rich. In Press. Scaling-up camera traps – monitoring the planet's biodiversity with networks of remote sensors. Frontiers in Ecology and the Environment

Harrison, R.D., R. Sreekar, J.F. **BRODIE**, S. Brook, M. Luskin, H. O'Kelly, M. Rao, B. Scheffers, and N. Velho. 2016. Consequences of bushmeat hunting for Asian tropical forests. Conservation Biology 30: 972-981

Granados, A., and J.F. **BRODIE**. 2016. Persistence of tropical Asian ungulates in the face of hunting and climate change. Pages 223-235 in: M. Sankaran and F. Ahrestani, editors, The ecology of large herbivores in South and Southeast Asia. Springer, Dordrecht

Granados, A., K. Crowther, J.F. **BRODIE**, and H. Bernard. 2016. Persistence of mammals in a selectively logged forest in Malaysian Borneo. Mammalian Biology 81: 268-273

Aslan, C., J. Bronstein, H. Rogers, J.F. **BRODIE**, and T. Young. 2016. Leveraging nature's backup plans to incorporate interspecific interactions and resilience into restoration. Restoration Ecology 24: 434-440

Mathai, J., J.F. **BRODIE**, A. Giordano, A. Peter, R. Alfred, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of Hose's civet *Diplogale hosei* in Borneo. Raffles Bulletin of Zoology 33: 118-125

Moyes, C., Z. Huang, F. Shearer, A. Wiebe, H. Gibson, V. Nijman, J. Mohd-Azlan, J.F. **BRODIE**, S. Malaivijitnond, M. Linkie, H. Samejima, T. 0'Brien, C. Trainor, Y. Hamada, A. Giordano, P. Newton, M. Kinnaird, I. Elyazar, M. Sinka, I. Vythilingam, M. Bangs, D. Weiss, N. Golding, and S. Hay. 2016. Predicting the geographical distributions of the macaque hosts and mosquito vectors of *Plasmodium knowlesi* malaria and their relationship with forest cover. Parasites and Vectors 9: 242

Duckworth, J., H. Samejima, G. Semiadi, A. Hearn, J. Ross, L. Liat, G. Fredriksson, S. Cheyne, M. Heydon, D. Augeri, J.F. **BRODIE**, A. Giordano, Y. Nakashima, R. Boonratana, S. Persey, J. Hon, A. Marshall, J. Mathai, M. Azlan, A. Peter, D. Macdonald, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of banded linsang *Prionodon linsang* in Borneo. Raffles Bulletin of Zoology 33: 71-77

Hearn, A., J. Ross, D. Macdonald, G. Bolongon, S. Cheyne, J. Mohd-Azlan, H. Samefima, J.F. **BRODIE**, A. Giordano, R. Alfred, R. Boonratana, S. Meiri, Rustam, H. Bernard, B. Loken, D. Augeri, M. Heydon, J. Hon, L. Liat, M. Nakabayashi, J. Pilgrim, M. Bezuijen, J. Hall, M. Lammertink, E. Meijaard, C. Breitenmoser-Wursten, S. Kramer-schadt, and A. Wilting. 2016. Predicted distribution of the Sunda clouded leopard *Neofelis diardi* in Borneo. Raffles Bulletin of Zoology 33: 149-156

Wilting, A., S. Cheyne, J. Mohd-Azlan, L. Liat, A. Hearn, J. Ross, H. Samejima, R. Boonratana, A. Marshall, J.F. **BRODIE**, A. Giordano, J. Eaton, J. Hall, J. Pilgrim, M. Heydon, G. Semiadi, D. Macdonald, C. Breitenmoser-Wursten, and S. Kramer-Schadt. 2016. Predicted distribution of the flat-headed cat *Prionailurus planiceps* in Borneo. Raffles Bulletin of Zoology 33: 173-179

Duckworth, J., A. Hearn, J. Ross, H. Samejima, J. Mohd-Azlan, S. Cheyne, R. Alfred, D. Augeri, J. Mathai, M. Heydon, R. Boonratana, Rustam, G. Semiadi, T. van Berkel, J.F. **BRODIE**, A. Giordano, A. Peter, J. Eaton, G. Fredriksson, J. Hall, Y. Nakashima, D. Macdonald, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of short-tailed mongoose *Herpestes brachyurus* in Borneo. Raffles Bulletin of Zoology 33: 132-141

Nakabayashi, M., Y. Nakashima, A. Hearn, J. Ross, R. Alfred, H. Samejima, J. Mohd-Azlan, L. Liat, M. Heydon, Rustam, H. Bernard, G. Semiadi, G. Fredriksson, R. Boonratana, A. Marshall, N. Lim, D. Augeri, J. Hon, T. Berkel, J.F. **BRODIE**, A. Giordano, J. Hall, B. Loken, S. Persey, E. Pollard, D. Macdonald, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of common palm civet *Paradoxurus hermaphroditus* in Borneo. Raffles Bulletin of Zoology 33: 84-88

Mohamed, A., J. Ross, A. Hearn, S. Cheyne, S. Meiri, R. Alfred, H. Bernard, L. Liat, R. Boonratana, H. Samejima, M. Heydon, D. Augeri, J.F. **BRODIE**, A. Giordano, G. Fredriksson, S. Persey, J. Hall, B. Loken, M. Nakabayashi, Y. Nakashima, S. Pieterse, B. Wielstra, J. Pilgrim, Rustam, G. Semiadi, T. Berkel, T. Boorsma, J. Hon, N. Lim, A. Marshall, J. Mathai, A. Peter, D. Macdonald, C. Breitenmoser-Wursten, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of the leopard cat *Prionailurus bengalensis* in Borneo. Raffles Bulletin of Zoology 33: 180-185

Rustam, A. Hearn, J. Ross, R. Alfred, H. Samejima, M. Heydon, S. Cheyne, J.F. **BRODIE**, A. Giordano, A. Giordano, H. Bernard, R. Boonratana, B. Loken, A. Mohamed, D. Augeri, J. Eaton, J. Hon, L. Liat, A. Marshall, J. Mathai, S. Meiri, A. Peter, G. Semiadi, D. Macdonald, C. Breitenmoser-Wursten, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of the marbled cat *Pardofelis marmorata* in Borneo. Raffles Bulletin of Zoology 33: 157-164

Semiadi, G., J. Ross, A. Hearn, M. Heydon, H. Samejima, J. Mathai, D. Augeri, G. Fredriksson, N. Lim, Rustam, A. Mohamed, R. Boonratana, J.F. **BRODIE**, A. Giordano, Y. Nakashima, T. Berkel, J. Hon, L. Liat, B. Loken, A. Marshall, M. Nakabayashi, S. Persey, D. Macdonald, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of binturong *Arctictis binturong* in Borneo. Raffles Bulletin of Zoology 33: 96-102

Semiadi, G., J. Ross, A. Hearn, D. Macdonald, J. Mathai, L. Liat, D. Augeri, G. Fredriksson, Rustam, R. Alfred, J. Hall, M. Heydon, J.F. **BRODIE**, A. Giordano, A. Marshall, J. Eaton, A. Mohamed, A. Peter, E. Pollard, H. Samejima, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of masked palm civet *Paguma larvata* in Borneo. Raffles Bulletin of Zoology 33: 89-95

Ross, J., A. Hearn, D. Macdonald, G. Semiadi, H. Samejima, L. Liat, R. Alfred, A. Mohammed, J.F. **BRODIE**, A. Giordano, M. Heydon, D. Augeri, J. Hon, Rustam, J. Mathai, M. Nakabayashi, G. Fredriksson, R. Boonratana, Y. Nakashima, B. Loken, A. Marshall, A. Peter, T. Berkel, N. Lim, S. Cheyne, J. Eaton, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of the banded civet *Hemigalus derbyanus* in Borneo. Raffles Bulletin of Zoology 33: 111-117

Ross, J., A. Hearn, D. Macdonald, R. Alfred, H. Samejima, S. Cheyne, A. Mohamed, R. Boonratana, H. Bernard, J. Hon, Rustam, J.F. **BRODIE**, A. Giordano, M. Heydon, G. Semiadi, D. Augeri, J. Mathai, G. Fredriksson, J. Hall, A. Peter, A. Marshall, L. Liat, M. Nakabayashi, J. Eaton, J. Pilgrim, E. Pollard, T. Berkel, C. Robson, J. Belant, S. Kramer-Schadt, and A. Wilting. 2016. Predicted distribution of the Malay civet *Viverra tangalunga* in Borneo. Raffles Bulletin of Zoology 33: 78-83

2015

BRODIE, J.F., A. Giordano, E. Zipkin, H. Tiandun, M. Azlan, and L. Ambu. 2015. Correlation and persistence of hunting and logging impacts on tropical rainforest mammals. Conservation Biology 29: 110-121

BRODIE, J.F., A. Giordano, B. Dickson, M. Hebblewhite, H. Bernard, M. Azlan, J. Andersen, and L. Ambu. 2015. Evaluating multispecies landscape connectivity in a threatened tropical mammal community. Conservation Biology 29: 122-132

Yue, S., J.F. **BRODIE**, E. Zipkin, and H. Bernard. 2015. Oil palm plantations fail to support mammal diversity. Ecological Applications 25: 2285-2292

Post, E., and J.F. **BRODIE**. 2015. Anticipating novel conservation risks of increased human access to remote regions with warming. Climate Change Responses 2: 2

BRODIE, J.F., A. Giordano, and L. Ambu. 2015. Differential mammal responses to edge effects and selective logging. Mammalian Biology 80: 7-13

Mang, S., and J.F. **BRODIE**. 2015. Impacts of non-oil tree plantations on biodiversity in Southeast Asia. Biodiversity and Conservation 24: 3431-3447

Streubig, M., A. Wilting, D. Gaveau, E. Meijaard, R. Smith, M. Fisher, K. Metcalfe, S. Kramer-Schadt, and the Borneo Mammal Distribution Group. 2015. Targeted conservation to safeguard a biodiversity hotspot from climate and land-cover change. Current Biology 25: 372-378.

BRODIE, J.F., and M. Pangau-Adam. 2015. Human impacts on two endemic cassowary species in Indonesian New Guinea. Oryx 51: 354-360.

Froese, G., A. Contasti, M. Haris, and J.F. **BRODIE**. 2015. Disturbance impacts on large rainforest vertebrates differ with edge type and regional context in Sulawesi, Indonesia. Journal of Tropical Ecology 31: 509-517

Pangau, M., and J.F. **BRODIE**. 2015. Preliminary analysis of seed dispersal by dwarf cassowary in the Arfak Mountains, Papua, Indonesia. Journal of Indonesian Natural History 3: 42-43

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2014

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Proposal for: Peer Review for Draft Species Status Assessment for the North American Wolverine

US Fish & Wildlife Service

To:	Steve Gess US Fish & Wildlife Service
Re:	Request for Proposal, Reference Number 0092717001
Date:	October 16, 2017
From:	Dawn L. Johnson, PhD Amec Foster Wheeler Environment & Infrastructure, Inc.

1.0 Project Approach

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) proposes to provide support to the US Fish & Wildlife Service (Service) for a peer review of the draft Species Status Assessment of the North American wolverine (*Gulo gulo luscus*). The project will include (1) assembling a panel of four peer reviewers; (2) conducting individual peer reviews without attribution; and (3) providing all peer reviews with a transmittal letter, along with an official record. Amec Foster Wheeler will provide a senior biologist as Project Manager (PM) to facilitate the peer review and ensure completion of the peer review, with experience in leading and facilitating peer reviews and expert panels.

In order to meet the requirements of the Office of Management and Budget (OMB) *Final Information Quality Bulletin for Peer Review* (December 2004) and avoid conflicts of interest, Amec Foster Wheeler selected the reviewers and identified a process to ensure scientific and process integrity. Each reviewer was provided with the OMB Bulletin language on independence and conflicts of interest, along with the conflict of interest considerations provided by the Service in the Statement of Work (SOW). This peer review is part of a larger process being undertaken by the Service to respond to litigation and petitions related to this distinct population segment (DPS) of the wolverine. As required by the SOW dated March 28, 2016, Amec Foster Wheeler will provide four peer reviewers with experience with mesocarnivores and their conservation and management, genetics, population modeling, and climate change (see 3.0 *Project Team*). The Amec Foster Wheeler team will provide services as defined in the SOW with a summary by Task below.

Task 1 (Provide Materials) ***Deliverables:*** **Timeline.**
The PM will coordinate with the Service to receive all materials to be evaluated during the peer review. The PM will distribute these materials and questions from the SOW to the peer reviewers. After award and receipt of all materials, the PM will provide an updated Timeline.

Task 2 (Peer Review) ***Deliverables:*** **None.**
The PM will provide a template for the peer reviewers to use for their responses to questions and facilitate any questions from the reviewers for the Service. The peer reviewers will evaluate materials provided with the intent to answer questions provided by the Service.

Task 3 (Provide Individual Reviews) ***Deliverables:*** **Individual Reviews, Letter Report.**
The PM will collect each individual review, copy edit and standardize formatting, and assign a random number so that each review has no attribution. The PM will then provide a transmittal letter, each individual review without attribution, and the reviewers' CVs to the Service.

Task 4 (Q&A Period) ***Deliverables:*** **Comment Matrix, if applicable.**

The PM will facilitate any clarification required from peer reviewers based on Service comments on the individual reviews. This will be limited to requests for clarification or additional information. If appropriate (i.e., comments are more than typographical/clarification), a comment matrix summarizing comment(s) and response(s) will be provided.

Task 5 (Official Record) ***Deliverables:*** **Final Reviews, Final Letter Report, Final Comment Matrix (if any).**

2.0 Schedule

Amec Foster Wheeler proposes the following schedule, which will be updated and finalized once the project is awarded.

Task	Calendar Days After Award (Previous Task)	Due Date (Assuming 1 November Award)
Task 1 (Provide Materials)	1 (-)	2 November
Task 2 (Peer Review)	31 (30)	1 December
Task 3 (Provide Reviews)	34 (3)	4 December
Task 4 (Q&A Period)	44 (10)	14 December
Task 5 (Official Record)	45 (1)	15 December

3.0 Project Team

The Amec Foster Wheeler Team consists of a PM and four peer reviewers. The PM has overseen and facilitated many expert panels for Department of Interior agencies, as well as for Department of Defense agencies. The PM and all peer reviewers have a PhD in biology, with expertise in ecology and evolution.

All of the peer reviewers are associated with universities, with one located in Montana. All of the peer reviewers have experience with small carnivore biology, including mustelids, but also conservation and ecology of mammals generally. One of the peer reviewers have experience with boreal forest climate change and wildlife populations, while another has experience with anthropogenic changes in northern forests and mustelid and other small carnivore populations.

All peer reviewers have at least 15 years of experience since their undergraduate degree with numerous publications, experience with conservation of mammals, and experience with peer reviews (both for journals and relating to rare species). None of the peer reviewers have a conflict of interest relating to the wolverine or the Service. None are known for any advocacy positions regarding wolverines. The following table provides a brief synopsis of their experience and general areas of expertise, with full CVs for each proposed peer reviewer attached.

Name & Project Role	Relevant Experience
Dawn L. Johnson, PhD Project Manager Amec Foster Wheeler	► 22 years of experience, as a biologist (ecology and evolution) ► Experience facilitating peer reviews and expert panels for Department of Interior agencies
James Beasley, PhD Carnivore Biologist Savannah River Ecology Lab University of Georgia	► 15 years of experience with mammals, including small carnivores ► Expertise in spatial ecology, genetics, population dynamics, wildlife diseases, and anthropogenic stressors ► Particular expertise in diverse methods of population estimation and genetics
Mark Boyce, PhD Wildlife Biologist University of Alberta	► 45 years of experience with carnivore conservation, management, and ecology, including with wolverines ► Emphasis on conservation, landscape ecology, and climate change in western US and Canada
Jennifer Frey, PhD Wildlife Biologist New Mexico State University	► 31 years of experience with mammals, including small carnivores ► Emphasis on conservation genetics, phylogeography, and natural history of mammals

Name & Project Role	Relevant Experience
Dan Harrison Carnivore Biologist University of Maine	► 37 years of experience with mammals, primarily with carnivores ► Experience with a range of mustelids and other small carnivores ► Expertise in management, population modeling, habitat selection, and anthropogenic change in northern forests

4.0 Price and Assumptions

The price proposal for this technical proposal is $27,829.09 for four peer reviewers. The following assumptions apply to this technical proposal and price proposal.

- There are no in-person meetings. Any meetings will be completed via conference call.
- The full list of references cited in the draft SSA, along with digital copies for all references for which they are available, will be provided to the reviewers.
- Delays by the Service do not accelerate Amec Foster Wheeler deliverables.

CURRICULUM VITAE

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RESEARCH INTERESTS

Spatial ecology and population dynamics of carnivores, effects of anthropogenic stressors on wildlife, wild pig ecology and management, human-wildlife conflicts, wildlife disease ecology, scavenging ecology

EDUCATION:

Ph.D., Wildlife Ecology, Purdue University 2010
Advisor: Dr. Olin Rhodes, Jr.

M.S., Wildlife Ecology, Purdue University 2005
Advisor: Dr. Olin Rhodes, Jr.

B.S., Wildlife Management, SUNY ESF 2002
Advisor: Dr. William Shields

A.A.S., Pre-Professional Forestry, Paul Smith's College 2000

PROFESSIONAL EXPERIENCE

2015-present	Assistant Professor – University of Georgia, Savannah River Ecology Laboratory, Warnell School of Forestry and Natural Resources
2014-present	International Atomic Energy Agency's Wildlife Advisor to the Fukushima Prefecture, Japan
2012-2015	Assistant Research Scientist – University of Georgia, Savannah River Ecology Laboratory, Warnell School of Forestry and Natural Resources
2011-2012	Visiting Assistant Professor – Department of Forestry and Natural Resources, Purdue University
2010-2011	Postdoctoral Research Associate – Department of Forestry and Natural Resources, Purdue University
2006-2010	Graduate Research Assistant – Department of Forestry and Natural Resources, Purdue University

2003-2005 Graduate Research Assistant – Department of Forestry and Natural Resources, Purdue University

PUBLICATIONS (Total of 78)

Peer-Reviewed Journal Articles (68)

78.) DeVault, T.L., T. Seamans, K. Linnell, D. Sparks, and J.C. Beasley. *In Press*. Scavenger removal of bird carcasses at simulated wind turbines: does carcass type matter? ***Ecosphere***

77.) Abernethy, E.F., K.L. Turner, J.C. Beasley, and O.E. Rhodes, Jr. *In Press*. Scavenging dynamics of reptile and amphibian carrion in a temperate ecosystem. ***Ecosphere***

76.) Smith, J.B., L.J. Laatsch, and J.C. Beasley. 2017. Spatial complexity of carcass location influences vertebrate scavenger efficiency and species composition. ***Scientific Reports*** 7:10250, DOI: 10.1038/s41598-017-10046-1

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69.) Kay, S, J. Fischer, A. Monaghan, J.C. Beasley, R. Boughton, T. Campbell, S. Cooper, S. Ditchkoff, S. Hartley, J. Kilgo, S. Wisely, C. Wyckoff, K. Vercauteren, and K. Pepin. 2017. Quantifying drivers of wild pig movement across multiple spatial and temporal scales. ***Movement Ecology*** 5(14): 1-15

68.) Byrne, M.E., A.E. Holland, A.L. Bryan, and J.C. Beasley. 2017. Influence of environmental conditions and animal behavior on performance of solar-powered GPS/GSM avian transmitters. ***Condor*** 119(3)389-404

67.) Keiter, D.A., J.C. Kilgo, M.A. Vukovich, F.L. Cunningham, and J.C. Beasley. 2017. Development of known-fate survival monitoring techniques for juvenile wild pigs (*Sus scrofa*). ***Wildlife Research*** 44(2)165-173

66.) Kennamer, R, R. Oldenkamp, J.C. Leaphart, J. King, A.L. Bryan, and J.C. Beasley. 2017. Radiocesium in migratory aquatic game birds using contaminated U.S. Department of Energy reactor-cooling reservoirs: a long-term perspective. ***Journal of Environmental Radioactivity*** 171:189-199

65.) Hernandez, F., R. Oldenkamp, S. Webster, J.C. Beasley, L.L. Farina, and S.M. Wisely. 2017. Raccoons (*Procyon lotor*) as sentinels of trace element contamination and physiological effects of exposure to coal fly ash. ***Archives of Environmental Contamination and Toxicology*** 72:235-246

64.) Keiter, D.A., and J.C. Beasley. 2017. Hog heaven? Challenges of managing introduced wild pigs in natural areas. ***Natural Areas Journal*** 37(1): 6-16 - Invited Paper

63.) Smith, J.B., K.L. Turner, J.C. Beasley, W.C. Pitt, T.L. DeVault, and O.E. Rhodes, Jr. 2016. Location of brown treesnake (*Boiga irregularis*) carcasses following exposure to acetaminophen. ***Ecotoxicology*** 25: 1556-1562

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61.) Webster, S.C., M. Hamilton, J.C. Beasley. 2016. ALLIGATOR MISSISSIPPIENSIS (American Alligator) DIET. ***Herpetological Review*** 47(2):291-292

60.) Brechignac, F., D. Oughton, C. Mays, L. Barnthouse, J.C. Beasley, A. Bonisoli-Alquati, C. Bradshaw, J. Brown, S. Dray, S. Geraskin, T. Glenn, K. Higley, K. Ishida, L. Kapustka, U. Kautsky, W. Kuhne, M. Lynch, T. Mappes, S. Mihok, A. Moller, C. Mothersill, T.A. Mousseau, J. Otaki, E. Prayakhin, O.E. Rhodes, Jr., B. Salbu, P. Strand, and H. Tsukada. 2016. Addressing ecological effects of radiation on populations and ecosystems to

improve protection of the environment against radiation. ***Journal of Environmental Radioactivity*** 158-159: 21-29

59.) Kierepka, E.M., S.D. Unger, D.A. Keiter, J.C. Beasley, O.E. Rhodes, Jr., F.L. Cunningham, A.J. Piaggio. 2016. Identification of robust microsatellite markers for wild pig fecal DNA in humid climates. ***Journal of Wildlife Management***, 80(6):1120-1128

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57.) Keiter, D, F.L. Cunningham, O.E. Rhodes, Jr., B.J. Irwin, and J.C. Beasley. 2016. Optimization of scat detection methods for social ungulates and evaluation of factors affecting human detection of scat: Wild pigs as a case study. ***PlosOne*** 11(5): e0155615

56.) Tannenbaum, L.V., and J.C. Beasley. 2016. Validating mammalian resistance to stressor-mediated reproductive impact using rodent sperm analysis. ***Ecotoxicology*** 25(3):584-593

55.) Olson, Z.H., J.C. Beasley, and O.E. Rhodes, Jr. 2016. Carcass type affects local scavenger guilds more than habitat connectivity. ***PlosOne*** 11(2):e0147798

54.) Keiter, D, J.J. Mayer, and J.C. Beasley. 2016. What's in a "common" name? A call for consistent terminology for referring to non-native *Sus scrofa*. ***Wildlife Society Bulletin*** 40(2): 384-387

53.) Webster, S.C., M.E. Byrne, S.L. Lance, C.L. Love, T. Hinton, D. Shamovich, and J.C. Beasley. 2016. Where the wild things are: Influence of radiation on the distribution of mammalian species within the Chernobyl Exclusion Zone. ***Frontiers in Ecology and the Environment*** 14(4): 1-6

52.) Dharmarajan, G., J.C. Beasley, W.S. Beatty, Z.H. Olson, J.A. Fike, and O.E. Rhodes, Jr. 2016. Genetic co-structuring in host-parasite systems: Empirical data from raccoons (*Procyon lotor*) and raccoon ticks (*Ixodes texanus*). ***Ecosphere*** 7(3):e01269

51.) Pepin, K.M., A.J. Davis, J.C. Beasley, R. Boughton, T. Campbell, S.M. Cooper, W. Gaston, S. Hartley, J.C. Kilgo, S.M. Wisely, C. Wyckoff, and K.C. VerCauteren. 2016. Contact heterogeneities in feral swine: implications for disease management and future research. ***Ecosphere*** 7(3): e01230

50.) Vukovich, M, K.L. Turner, T. Grazia, T. Mims, J.C. Beasley, and J.C. Kilgo. 2015. Monitoring of wintering golden eagles on the coastal plain of South Carolina. ***Journal of Field Ornithology*** 86(4):337-344

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46.) Hennessy, C., C.C. Tsai, J.C. Beasley, W.S. Beatty, P.A. Zollner, and O. E. Rhodes, Jr. 2015. Comparing genetic signatures of broad scale connectivity between two synanthropic mesopredators (raccoons and Virginia opossums). ***Journal of Wildlife Management*** 79:112-121.

45.) Beasley, J.C., T. Atwood, M.E. Byrne, K.C. Vercauteren, S.R. Johnson, and O.E. Rhodes, Jr. 2015. A behaviorally-explicit approach for delivering baits to mesopredators to control epizootics in fragmented landscapes. ***PlosOne*** 10(1):e0113206

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38.) Beasley, J.C., Z.H. Olson, W.S. Beatty, G. Dharmarajan, and O.E. Rhodes, Jr. 2013. Effects of culling on raccoon population dynamics. ***PlosOne*** 8: e58982

37.) Dharmarajan, G., J.C. Beasley, J.A. Fike, E.A. Raizman, C.C. Wu, R.M. Pogranichniy, and O.E. Rhodes, Jr. 2012. Effects of kin-structure on disease dynamics in raccoons (*Procyon lotor*) inhabiting a fragmented landscape. ***Basic and Applied Ecology*** 13:560-567.

36.) Beasley, J.C., and O.E. Rhodes, Jr. 2012. Are raccoons limited by the availability of breeding resources? Evidence of variability in fecundity at fine spatial scales. ***Journal of Wildlife Management*** 76:1718-1724.

35.) Beasley, J.C., W.S. Beatty, T. Attwood, S. Johnson, O.E. Rhodes, Jr. 2012. A Comparison of Methods for Estimating Raccoon Abundance: Implications for Disease Vaccination Programs. ***Journal of Wildlife Management*** 76:1021-1026.

34.) Beasley, J.C., Z.H. Olson, and T.L. DeVault. 2012. Carrion cycling in food webs: comparisons among terrestrial and marine ecosystems. ***Oikos*** 121:1021-1026.

33.) Beatty, W.S., J.C. Beasley, G. Dharmarajan, and O.E. Rhodes, Jr. 2012. Genetic structure of the Virginia Opossum (*Didelphis virginiana*) inhabiting a fragmented agricultural ecosystem. ***Canadian Journal of Zoology*** 90(1):101-109.

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29.) Page, L.K., J.C. Beasley**,** Z.H. Olson, T.J. Smyser, M. Downey, K.F. Kellner, S.E. McCord, T.S. Eagan, II, and O.E. Rhodes, Jr. 2011. Evaluation of an in situ experimental prevention method for raccoon roundworm (*Baylisascaris procyonis*) via anthelmintic baiting: Implications for the management of Infectious diseases. ***Emerging Infectious Diseases*** 17(1):90-93.

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24.) Smyser, T.J., J.C. Beasley, Z.H. Olson, and O.E. Rhodes, Jr. 2010. Interspecific competition limits mitigation of wildlife disease: Use of Rhodamine B to reveal patterns of bait acceptance. ***Journal of Wildlife Management*** 74(6):1405-1416.

23.) Beasley, J.C., W.S. Beatty, Z.H. Olson, and O.E. Rhodes, Jr. 2010. A genetic analysis of the Virginia opossum mating system: evidence of multiple paternity in a highly fragmented landscape. ***Journal of Heredity*** 101(3):368-373.

22.) Dharmarajan, G., J.C. Beasley**,** J.A. Fike, and O.E. Rhodes, Jr. 2009. The population genetic structure of raccoons (*Procyon lotor*) inhabiting a highly fragmented landscape. ***Canadian Journal of Zoology*** 87(9):814-824.

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17.) Retamosa, M.I., L.A. Humberg, J.C. Beasley and O.E. Rhodes, Jr. 2008. Modeling wildlife damage to crops in northern Indiana. ***Human-Wildlife Conflicts*** 2(2):225-239.

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15.) DeVault, T.L., J.C. Beasley, L.A. Humberg, B.J. MacGowan, M.I. Retamosa and O.E. Rhodes, Jr. 2007. Intrafield patterns of wildlife damage to corn and soybean in northern Indiana. ***Human-Wildlife Conflicts*** 1(2):205-213.

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12.) Beasley, J.C., T.L. DeVault, and O.E. Rhodes, Jr. 2007. Home range attributes of raccoons in a fragmented agricultural region of northern Indiana. ***Journal of Wildlife Management*** 71(3):844-850.

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Books (1)

10.) Pitt, W.C., J.C. Beasley, and G.W. Witmer. *In Press*. Ecology and Management of Terrestrial Invasive Species in the United States. CRC Press, Boca Raton, FL, USA.

Book Chapters, and Book Reviews (5)

9.) Beasley, J.C., Z.H. Olson, N. Selva, and T.L. DeVault. *In Press*. Ecological functions of vertebrate scavenging. *In*: Carrion Ecology and Management. P.P. Olea, P. Mateo-Tomas, and J. Sanchez-Zapata. Springer.

8.) Mayer, J.J., and J.C. Beasley. *In Press.* Wild Pigs. *In*: Ecology and Management of Terrestrial Vertebrate Invasive Species in the United States. W.C. Pitt, J.C. Beasley, and G.W. Witmer, editors. CRC Press, Boca Raton, FL, USA.

7.) Beasley, J.C. 2016. Human Diseases from Wildlife. Book Review. ***Journal of Wildlife Management*** 80(1):181-182

6.) DeVault, T.L., J.C. Beasley, Z.H. Olson, M. Moleón, J.A. Sánchez-Zapata, M. Carrete, and A. Margalida. 2016. Ecosystem services provided by avian scavengers. *In*: Why Do Birds Matter? Birds' Ecological Functions and Ecosystem Services. C. H. Şekercioğlu, D. G. Wenny, and C. J. Whelan, eds. University of Chicago Press. pp. 235-270

5.) Beasley, J.C., Z.H. Olson, and T.L. DeVault. 2015. Ecological role of vertebrate scavengers. *In*: Carrion Ecology, Evolution and Their Applications. E.M. Benbow, J. Tomberlin, and A. Tarone, eds. CRC Press, Boca Raton, FL. pp. 107-127

Peer-Reviewed Symposia, Proceedings Articles, and Notes (4)

4.) Abernathy, E.F., K.L. Turner, J.C. Beasley, T.L. DeVault, W.C. Pitt, and O.E. Rhodes, Jr. 2015. Impacts of invasive species on ecosystem energy flow on the big island of Hawai'i: Excuse me but are you going to eat that cane toad? ***Proceedings of the 26th Annual Vertebrate Pest Conference.***

3.) Beasley, J.C., T.E. Grazia, P.E. Johns, and J.J. Mayer. 2014. Characterization of habitat attributes associated with wild pig-vehicle collision locations. ***Proceedings of the 2013 Wildlife Damage Management Conference*** Paper 149.

2.) DeVault, T.L., B.J. MacGowan, J.C. Beasley, L.A. Humberg, M.I. Retamosa, and O.E. Rhodes, Jr. 2008. Evaluation of corn and soybean damage by wildlife in northern Indiana. ***Proceedings of the 12th Wildlife Damage Management Conference***, D. Nolte, ed. Corpus Christi, TX.

1.) Humberg, L.A., T.L. DeVault, B.J. MacGowan, J.C. Beasley, and O.E. Rhodes, Jr. 2007. Crop depredation by wildlife in northcentral Indiana. Pages, 199-205 in the ***Proceedings of the Ninth National Wild Turkey Symposium***, A. Stewart, ed., Grand Rapids, Michigan.

In Review

Smith, J.B., T.D. Tuberville, and J.C. Beasley. *Accepted with Revisions*. Hunting and consumption patterns of southeastern USA hunters and anglers. ***Journal of Fish and Wildlife Management***

Thomas, J., J.C. Beasley, J. Seaman, J.W. Finger Jr., T.J. Kieran, E. Lipp, J. Vaun McArthur, O.E. Rhodes, Jr., and T.C. Glenn. *In Review*. Heavy metals in the environment modulate compositional and functional changes in microbiota of wild *Peromyscus*.

Davis, A.J., D.A. Keiter, E. Kierepka, C. Slootmaker, A.J. Piaggio, J.C. Beasley, and K.M. Pepin. *Accepted with Revisions*. The cost of good information: Trade-offs between cost and quality of common population density estimators. ***Journal of Mammalogy***

Nigenda, S.F., Y. Hu, J.C. Beasley, H. Ruiz-Pina, D. Valenzuela-Galvan, and R.K. Wayne. *In Review*. Transcriptomics of skin pigmentation variation in the Virginia opossum (*Didelphis virginiana*). ***Molecular Ecology***

Byrne, M.E., S.C. Webster, S.L. Lance, C.N. Love, T.G. Hinton, D. Shamovich, and J.C. Beasley. *In Review*. Evidence of long-distance dispersal of a gray wolf from the Chernobyl Exclusion Zone. ***Ecology***

Beasley, J.C., M.J. Lavelle, D.A. Keiter, K.M. Pepin, A.J. Piaggio, J.C. Kilgo, and K.C. VerCauteren. *In Review*. Research Methods. *In*: Ecology and Management of Wild Pigs in North America. K.VerCauteren, J.C. Beasley, J.J. Mayer, B. Strickland, G.J. Roloff, and S. Ditchkoff, editors. CRC Press, Boca Raton, FL, USA

Mayer, J.J., J.C. Beasley, R. K. Boughton, and S.S. Ditchkoff. *In Review*. The South. *In*: Ecology and Management of Wild Pigs in North America. K.VerCauteren, J.C. Beasley, J.J. Mayer, B. Strickland, G.J. Roloff, and S. Ditchkoff, editors. CRC Press, Boca Raton, FL, USA

Snow, N., J.C. Beasley, R. Miller, and K. Pepin. *In Review*. Population Dynamics. *In*: Ecology and Management of Wild Pigs in North America. K.VerCauteren, J.C. Beasley, J.J. Mayer, B. Strickland, G.J. Roloff, and S. Ditchkoff, editors. CRC Press, Boca Raton, FL, USA

Gray, S.M., G.J. Roloff, R.A. Montgomery, J.C. Beasley, and K.M. Pepin. *In Review*. Spatial Ecology and Behaviors. *In*: Ecology and Management of Wild Pigs in North America. K.VerCauteren, J.C. Beasley, J.J. Mayer, B. Strickland, G.J. Roloff, and S. Ditchkoff, editors. CRC Press, Boca Raton, FL, USA

Beasley, J.C., S.S. Ditchkoff, J.J. Mayer, M.D. Smith, and K.C. VerCauteren. *In Review*. Research priorities for managing invasive wild pigs in North America. ***Journal of Wildlife management***

Extension Publications (6)

6.) Beasley, J.C. 2014. SRS, the eagles have landed! The Grapevine. University of Georgia, Savannah River Ecology Lab, Aiken, SC.

5.) Bryan, A., A.E. Holland, J.C. Beasley, and O.E. Rhodes, Jr. 2014. Examining vulture movements and behaviors with GSM/GPS transmitters. Tracker News, Microwave Telemetry, Inc. 1:15.

4.) Beasley, J.C. 2008. Spatial dynamics of raccoons and Virginia opossums in agricultural landscapes. *Compass*. Purdue University, Department of Forestry and Natural Resources, West Lafayette, Indiana.

3.) MacGowan, B.J., L.A. Humberg, J.C. Beasley, and O.E. Rhodes, Jr. 2006. Wildlife CSI: unraveling the mysteries of wildlife crop damage, DVD-FNR-266. Purdue University, Department of Forestry and Natural Resources, West Lafayette, Indiana. DVD.

2.) MacGowan, B.J., L.A. Humberg, J.C. Beasley, and O.E. Rhodes, Jr. 2006. Identification of wildlife crop depredation, FNR-267. Purdue University, Department of Forestry and Natural Resources, West Lafayette, Indiana, 28 pp.

1.) MacGowan, B.J., L.A. Humberg, J.C. Beasley, T.L. DeVault, and O.E. Rhodes, Jr. 2006. Corn and soybean crop depredation by wildlife, FNR-265-W. Purdue University, Department of Forestry and Natural Resources, West Lafayette, Indiana, 13 pp. http://www.agriculture.purdue.edu/fnr/cropdamage/resources.htm.

GRANTS – [*$2,389,404 received, $885,871 pending*]

(Grants in italics indicate proposals currently in review)

- *Dharmarajan, G (PI), R Ostfeld (co-PI), and **JC Beasley** (Co-PI). 2017. Hosts as heterogeneous landscapes: Interspecific competition between ticks and its effects on tick-borne disease. National Science Foundation-DEB. In Review* (*$675,242*)
- ***Beasley, JC** (PI) and P. Schlichting (co-PI). 2017. Przewalski's wild horse population status and use of abandoned buildings by wildlife in Chernobyl. Riverbanks Zoo. In Review: $4,825*
- ***Beasley, JC** (PI) and P. Schlichting (co-PI). 2017. Przewalski's wild horse population status and use of abandoned buildings by wildlife in Chernobyl. National Geographic Society. In Review: $29,514*

- ***Beasley, JC** (PI) and AL Bryan (co-PI). 2017. Contaminants in wild pigs and eastern wild turkeys. US Department of Energy. In Review: $176,290*
- **Beasley, JC** (PI). 2017. Crop depredation by wild pigs in the southeastern US. USDA Animal Plant Health Inspection Service. Awarded: $36,000
- **Beasley, JC** (PI). 2017. Radioactive wildlife: disentangling the confounding effects of radiation exposure and human abandonment on wildlife in Fukushima. UGA OVPR. Awarded: $9,681
- **Beasley, JC** (PI). 2017. Effects of low dose radiation exposure on wildlife inhabiting the Fukushima Exclusion Zone, Japan. University of Georgia OIP. Awarded: $5,500
- **Beasley, JC** (PI). 2017. Analysis of wild pig genetic samples. Noble Foundation. Awarded: $4,500
- Bryan, AL (PI) and **Beasley JC** (co-PI). 2017. Movement of wood storks associated with colony modifications at the Savannah International Airport. USFWS. Awarded: $49,280
- Hernandez, SM (PI), **JC Beasley** (co-PI), and M Yabsley (co-PI). 2015. Understanding and managing coyote colonization of Sanibel Island, FL. Sanibel Island City Council. Awarded: $18,882
- **Beasley, JC** (PI) and AL Bryan (co-PI). 2016. Contaminants in wild turkeys. US DOE. Awarded: $32,000
- **Beasley, JC** (PI). 2016. Chernobyl wolves. Living Planet Productions Ltd. Awarded: $2,500
- **Beasley, JC** (PI). Inter and intra-sounder contact structure in wild pigs. USDA Animal Plant Health Inspection Service. Awarded: $112,800
- **Beasley JC** (PI) and OE Rhodes (co-PI). 2016. Spatial ecology of wild pigs subsequent to management activities. USDA Animal Plant Health Inspection Service. Awarded: $70,852
- Rhodes, OE (PI), G Dharmarajan (co-PI), and **JC Beasley** (co-PI). 2017. Ecological factors affecting success of rabies elimination in the southeastern U.S. USDA APHIS. Awarded: $76,913
- **Beasley, JC** (PI) and AL Bryan (co-PI). 2016. Sub-lethal effects of chronic exposure to contaminants: Evaluation of heavy metal, stress, and parasite burdens in beaver, raccoon and river otter inhabiting contaminated wetlands on the Savannah River Site. US DOE. Awarded: $130,000
- **Beasley, JC** (PI) and S Lance (co-PI). 2015. Chernobyl Wolves. Georgia Funder. Awarded: $2,895
- **Beasley, JC** (PI). 2015. Post-translocation movement behavior of wild pigs. USDA Animal Plant Health Inspection Service. Awarded: $62,480
- Kennamer, R (PI) and **JC Beasley** (co-PI). 2015. Monticello Reservoir and Parr Reservoir waterfowl survey. Kleinschmidt Associates. Awarded: $21,628
- Bryan AL (PI) and **JC Beasley** (co-PI). 2015. ^{137}Cs in Biota of R Canal. US DOE. Awarded: $58,000
- **Beasley JC** (PI), RA Kennamer (co-PI), and AL Bryan (co-PI). 2015. Recalculating ecological half-lives for American Coots on Par Pond. US Department of Energy. Awarded: $41,500
- **Beasley JC** (PI) and OE Rhodes (co-PI). 2014. Calibrating efficient methods of estimating feral swine population size. USDA Animal Plant Health Inspection Service. Awarded: $78,815

- Rhodes, OE (PI) and **JC Beasley** (co-PI). 2014. Indirect transfer of acetaminophen/rodenticides to non-target organism through scavenging during BTS and rodent control operations. U.S. Department of Defense/USDA Animal Plant Health Inspection Service. Awarded: $586,628
- **Beasley JC** (PI). 2014. Survival and cause-specific mortality of juvenile feral swine. USDA Animal Plant Health Inspection Service. Awarded: $25,300
- **Beasley JC** (PI) and AE Holland (co-PI). 2014. Environmental contaminants and blood parasite loads in black and turkey vultures in the southeastern USA. Georgia Ornithological Society. Awarded: $8,840
- **Beasley JC** (PI). 2014. Translocation movement behavior of feral swine. USDA Animal Plant Health Inspection Service. Awarded: $45,870
- **Beasley JC** (PI). 2014. Reproductive effects of chronic exposure to anthropogenic contaminants in small mammals. U.S. Army Public Health Command. Awarded: $9,000
- Rhodes, OE (PI) and **JC Beasley** (co-PI). 2014. Development of genetic-based mark-recapture tools for feral swine. USDA Animal Plant Health Inspection Service. Awarded: $35,000
- **Beasley JC** (PI) and OE Rhodes (co-PI). 2014. Dose titration and duration of Rhodamine B in feral pigs. USDA Animal Plant Health Inspection Service. Awarded: $14,934
- **Beasley JC** (PI), AL Bryan (co-PI), and R Kennamer (co-PI). 2013. Preliminary contaminant analysis in selected game species on the Savannah River site. US DOE. Awarded: $40,300
- Kennamer, R (PI), **JC Beasley** (co-PI), and AL Bryan (co-PI). 2013. Radiocesium in American coots on Pond B: a long-term perspective. US Department of Energy. Awarded: $43,515
- Hinton, T (PI) and **JC Beasley** (co-PI). 2013. Innovative Technique to Measure Radiation Dose to Free Ranging Wildlife. French Institute of Radioprotection and Nuclear Safety. Awarded: $162,839
- Rhodes, OE (PI) and **JC Beasley** (co-PI). 2013. Experimental Evaluation of Trophic Transfer of Toxicants Used for Insular Rodents. USDA APHIS. Awarded: $29,986
- **Beasley JC** (PI). 2013. Grad Student Support. Jones Ecological Research Center. Awarded: $21,665
- **Beasley JC** (PI) and OE Rhodes (co-PI). 2013. Efficacy of Rhodamine B as a biomarker for bait uptake in feral swine. USDA Animal Plant Health Inspection Service. Awarded: $11,660
- **Beasley JC** (PI) and S Lance (co-PI). 2013. Sub-lethal effects of chronic exposure to radiation in gray wolves (Canis lupus) at Chernobyl. National Geographic Society. Awarded: $22,000
- **Beasley JC** (PI) and S Webster (co-PI). 2013. Chernobyl Wolves. National Geographic Society. Awarded: $8,200
- **Beasley JC** (PI). 2013. Wildlife Damage Management Working Group Travel Grant. The Wildlife Society Wildlife Damage Management Working Group. Awarded: $500
- Rhodes OE (PI), **JC Beasley** (co-PI), BF Blackwell (co-PI), AL Bryan (co-PI), and TL DeVault (co-PI). 2013. Efficacy of the LRAD weapon system as an avian dispersal tool on airports. Federal Avian Administration/USDA Animal Plant Health Inspection Service. Awarded: $352,245

- **Beasley JC** (PI). 2013. Comparison of uptake of different flavors of ONRAB placebo sachets by rabies hosts. USDA Animal Plant Health Inspection Service. Awarded: $16,406
- Bryan AL (PI) and **JC Beasley** (co-PI). 2012. Preliminary contaminant analysis in selected game species on the Savannah River site. US Department of Energy. Awarded: $40,300
- Rhodes OE (PI) and **JC Beasley** (co-PI). 2013. Experimental Evaluation of Trophic Transfer of Toxicants Used for Insular Rodents. USDA APHIS. Awarded: $99,990
- **Beasley JC** (PI). 2012. Purdue Instructional Innovation Grant, "Microscopy and Digital Imaging for Life Science Instruction" ($21,497)
- **Beasley JC** (PI). 2012. Purdue Instructional Innovation Grant, "Digital Remote Camera Units for Wildlife Management Instruction" ($8,160)
- Olin Rhodes, Jr. (PI) and **JC Beasley** (co-PI). 2011. USDA-APHIS, "Evaluation of bait distribution methods" ($38,379)
- Olin Rhodes, Jr. (PI) and **JC Beasley** (co-PI). 2010. USDA-APHIS, "Use of trapping point transect and spatially explicit capture-recapture to estimate the density of raccoons and using spatial data to increase trap-based detection for raccoons" ($26,190)
- Olin Rhodes, Jr. (PI) and **JC Beasley** (co-PI). 2009. USDA-APHIS, "Use of trapping point transect and spatially explicit capture-recapture to estimate the density of raccoons and using spatial data to increase trap-based detection for raccoons" ($22,752)
- **Beasley JC** (PI). 2007. Frederick N. Andrews Environmental Travel Grant Award ($2,000)
- **Beasley JC** (PI). 2007. Indiana Academy of Science, "Ecological response of raccoons to agriculturally induced habitat fragmentation" ($1,250)

AWARDS AND ACTIVITIES

- Certified Wildlife Biologist, The Wildlife Society, 2013
- Howard Hughes Medical Institute faculty learning community – member, 2011-2012
- Chemical Immobilization Certification through Safe Capture International – 2011
- Charles Kirkpatrick Memorial Graduate Student Award, 2010
- Master Trapper, Fur Takers of America Certification, 2010
- 2nd place, Purdue Forestry and Natural Resources Research Symposium, 2010 (Poster)
- Bilsland Dissertation Fellowship, Purdue University, 2009
- Indiana Chapter of the Wildlife Society Best Paper Award, 2008
- Charles Kirkpatrick Memorial Graduate Student Award, 2007
- 1st place, Purdue Forestry and Natural Resources Research Symposium, 2005 (Poster)
- Honorable mention, Purdue FNR Research Symposium 2004, (Poster)

TEACHING EXPERIENCE

University of Georgia

- **WILD/ECOL 3580: Vertebrate Natural History** – Instructor (Fall 2013)

- **WILD 4650/6650: Field & Molecular Techniques in Wildlife Research and Management** – Instructor (Summer 2013-2017)

- **WILD 1100E: Wildlife in America** – Instructor (Summer 2016, 2017, Spring 2017)

Purdue University

- **FNR 240: Wildlife in America** – Instructor (Fall 2011; 120 students)
- **FNR 341: Wildlife Habitat Management** – Instructor (Spring 2012; 50 students)
- **FNR 348: Wildlife Investigational Techniques** – Instructor (Spring 2012; 55 students)
- **FNR 373: Summer Field Practicum** – Instructor (May 2012; 60 students).
- **FNR 241: Ecology and Systematics of Fishes and Mammals** – Graduate Teaching Assistant (Fall 2004, 2006; ~30 students)
- **FNR 548: Wildlife Investigational Techniques** – Graduate Teaching Assistant (Fall 2007, 2008; ~50 students)
- **FNR 240: Wildlife in America** –Guest Lecture (Fall 2006-2008; 250-400 students)

Table 1. Student evaluations

Evaluation Questions	WILD 4650/6650 2013-2017	WILD1100E 2016-2017
Instructor clearly articulated and met course objectives	5.0	4.9
Instructor presented material in a clear and understandable manner	5.0	4.9
Instructor was organized and prepared in class	4.9	4.9
Instructor stimulated my interest in course subject material	5.0	4.9
Instructor motivated me to perform at my highest level	4.9	4.8
Instructor demonstrated concern for student learning	4.9	4.5
Instructor was receptive to questions and independent thought	5.0	4.6
Instructor was available and helpful outside of class	4.6	4.8
Instructor employed grading practices that were clearly explained and fair	4.6	4.9
Instructor effectively utilized in class time (including lectures and laboratories)	5.0	4.9
Considering all factors, the instructor should be commended for his/her efforts in the course	5.0	4.9
This course exposed me to information and/or ideas that expanded and/or altered my perception of the world	4.7	4.9
Average (out of 5)	**4.88**	**4.80**

MEDIA COVERAGE

My research program has received media coverage through a multitude of outlets. Since 2005, aspects of my research program have been highlighted in several hundred local, national and international newspapers (e.g., New York Times, The Washington Post, USA Today, BBC News, The Guardian – front page, The Independent – front page, Aiken Standard – front page), internet news media (e.g., National Geographic Society, UGA Today – front page, Scientific American, The Wildlife Society), magazines (e.g., Hawkmoth, Wprost), radio broadcasts (e.g.,

NPR-weekend addition, FM4-Austria, 720 ABC-Australia), scientific magazines (e.g., Science, Nature), as well as local and cable television networks (e.g., CNN, Animal Planet, Georgia Public Broadcasting, NBC-26 News). In particular, two of my coauthored papers have altmetric scores within the top 5% of all articles ever tracked by altmetric, one of which was included in the best of UGA magazine for being the most widely read news release produced by the University of Georgia in 2016.

PROFESSIONAL PRESENTATIONS

(Invited papers in **bold**; * indicates coauthored presentations ^{Ψ} indicates student presentations; $^{¥}$ indicates award received for presentation)

2017 **National Wild Pig Task Force Meeting, Orange Beach, AL**
International Atomic Energy Association Summer Mission, Fukushima, Japan
NNSA SRS Meeting, Aiken, SC
National Academy of Sciences, Minsk, Belarus
Cedar Shoals High School, Athens, GA
Warnell Graduate Student Symposium, Athens, GA (3)^{Ψ}
SICB, New Orleans, LA^{Ψ}
Ecological Society of America, Portland, OR (2)^{*Ψ}
SREL Undergraduate Research Symposium, Aiken, SC (1) ^{Ψ}
University of South Carolina Summer Research Symposium, Columbia, SC (1)^{Ψ}
Wildlife Disease Association Meeting, Chiapas, Mexico*
SREL REU, Aiken, SC (2) ^{Ψ}
USDA-APHIS-WS NC/SC wild pig technical meeting, Garnett, SC
USDA-APHIS-NWRC, Fort Collins, CO*

2016 Warnell Graduate Student Symposium, Athens, GA (4)$^{Ψ¥¥¥}$
International Atomic Energy Association Summer Mission, Fukushima, Japan
SREL Undergraduate Research Symposium, Aiken, SC (1) ^{Ψ}
Fukushima University, Fukushima, Japan^{Ψ}
SREL REU, Aiken, SC (2) ^{Ψ}
TEDx, Atlanta, GA
University of South Carolina Summer Research Symposium (1)^{Ψ}
International Atomic Energy Association Winter Mission, Fukushima, Japan
SETAC, Orlando, FL (3) ^{Ψ}
International Wild Pig Conference, Myrtle Beach, SC (6)^{Ψ}
USDA-APHIS-WS Annual State Meeting, SC
Georgia Wildlife Society Meeting, Athens, GA $^{Ψ¥}$
South Carolina Wildlife Society Meeting, SC
Wild Pig Workshop at the 23rd Annual National Meeting of the Wildlife Society, Raleigh, NC
Southeastern Society of Parasitologists, Fort Mill, SC^{Ψ}
Society for Glycobiology, New Orleans, LA
The 23rd Annual National Meeting of the Wildlife Society, Raleigh, NC (8) ^{Ψ}

2015 Warnell Graduate Student Symposium, Athens, GA (5)[Ψ¥¥¥¥]
Ichaway Scientific Advisory Committee, Newton, GA [Ψ]
Clemson University, Clemson, SC
Georgia Entomological Society, Jekyll Island, GA (2) [Ψ¥]
American Society of Mammalogists Annual Meeting, Jacksonville, FL (4) [Ψ]
International Atomic Energy Association Mission, Fukushima, Japan
SREL Undergraduate Research Symposium, Aiken, SC (2) [Ψ]
UGA Ecology of Infectious Diseases Symposium, Athens, GA [Ψ]
University of South Carolina Summer Research Symposium (2) [Ψ]
Georgia Wildlife Society Meeting, Athens, GA (3) [Ψ¥¥]
13th International Conference on the Biochemistry of Trace Elements, Fukuoka, Japan*
The 22nd Annual National Meeting of the Wildlife Society, Winnipeg, Canada (6) [Ψ¥]
University of Florida Emerging Pathogens Institute, Gainesville, FL [Ψ]
NSF REU National Symposium, Arlington, VA [Ψ]
International Atomic Energy Association Mission, Fukushima, Japan
Science Media Center, London, UK

2014 **University of Florida, Gainesville, FL**
Warnell Graduate Student Symposium, Athens, GA (3) [Ψ]
Evolution Meeting, Raleigh, NC*
26th Vertebrate Pest Conference, Waikoloa, HI[Ψ]
Animal Movement Symposium, Raleigh, NC[Ψ]
Florida Cooperative Fish and Wildlife Research Unit, Gainesville, FL*
Southeastern Forest Work Conference, Charleston, SC[Ψ]
International Atomic Energy Association Mission, Fukushima, Japan
SREL Undergraduate Research Symposium (2) [Ψ]
SREL Touch an Animal Day (2) [Ψ]
The 21st Annual National Meeting of the Wildlife Society, Pittsburg, PA (2) [Ψ]
Georgia Chapter of the Wildlife Society, Tifton, GA (2) [Ψ¥]
AOU/COS/SCO, Estes Park, CO [Ψ]
South Carolina Wildlife Society Meeting, Clemson, SC*

2013 TWS Wildlife Damage Management Workshop, Clemson, SC
Sierra Club, Aiken, SC
Southeastern Cooperative Wildlife Disease Study, Athens, GA
Savannah River Ecology Lab, Aiken, SC
Ecological Society of America, Minneapolis, MN*
American Society of Mammalogists, Philadelphia, PA*
Student Conference on Conservation Science, New York, NY*
USFS Environmental Sciences Field Station, Aiken, SC (2) [Ψ]
IRSN, France*

2012 **USFWS American Burying Beetle Science Workshop, Pawhuska, OK**
Indiana State University, Terre Haute, IN

Savannah River Ecology Lab, Aiken, SC
University of South Carolina-Aiken, Aiken, SC
University of Georgia, Athens, GA
Jones Center, Newton, GA
EcoSummit, Columbus, OH*

2011 **USDA-APHIS National Wildlife Research Center, Fort Collins, CO**
The 91st Annual Meeting of the Am. Society of Mammalogists, Portland, OR*
The 72nd annual Midwest Fish and Wildlife's conference, Des Moines, IO*
Furtakers of America Prof. Trappers College for Furbearer Mgmt, Wolcottville, IN
The 22nd Annual International Conference on Rabies in the Americas, San Juan, Puerto Rico*

2010 Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN (2)
The 17th Annual National Meeting of the Wildlife Society, Snowbird, UT (2)
The 21st Annual International Conference on Rabies in the Americas, Guadalajara, Mexico*
Ph.D. Dissertation Presentation, W. Lafayette, IN

2009 The 89th Annual Meeting of the Am. Society of Mammalogists, Fairbanks, AK (3)
Indiana Chapter of the Wildlife Society, Terre Haute, IN*
The 16th Annual National Meeting of the Wildlife Society, Monterey, CA*
Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN
Furtakers of America Prof. Trappers College for Furbearer Mgmt, Wolcottville, IN

2008 Indiana Chapter of the Wildlife Society, Nashville, IN¥
The Purdue University Chapter of the Wildlife Society, W. Lafayette, IN

2007 Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN (2)
Purdue Center for the Environment Graduate Research Showcase, W. Lafayette, IN
56th Annual Meeting of the Wildlife Disease Association. Estes Park, CO*
The Purdue University Chapter of the Wildlife Society, W. Lafayette, IN

2006 Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN (2)
Purdue Center for the Environment Graduate Research Showcase, W. Lafayette, IN
The Purdue University Chapter of the Wildlife Society, W. Lafayette, IN
Midwest Deer and Turkey Group Meeting, Bloomington, IN*

2005 Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN
M.S. Thesis Presentation, W. Lafayette, IN
The 66th annual Midwest Fish and Wildlife's conference, Grand Rapids, MI
9th National Wild Turkey Symposium, Grand Rapids, MI*

2004 The 11th Annual National Meeting of the Wildlife Society, Calgary, Canada (2)
The 65th Annual Midwest Fish and Wildlife Conference, Indianapolis, IN
Purdue University Forestry and Natural Resources Symposium, W. Lafayette, IN

The Purdue University Chapter of the Wildlife Society, W. Lafayette, IN

GRADUATE STUDENTS SUPERVISED

Theses and Dissertations Supervised

Amanda Holland	M.S.	Spatial ecology of black and turkey vultures in the southeastern U.S.; University of Georgia; December 2015
Kelsey Turner	M.S.	The effect of habitat type, carcass size, and scavenger exclusion on vertebrate scavenging communities in the Coastal Plain of the Southeast; University of Georgia; December 2015
Sarah Webster	M.S.	Occupancy, distribution, and abundance of carnivore populations within the Chernobyl Exclusion Zone; University of Georgia; May 2016
Ricki Oldenkamp	M.S.	Exposure of game species to trace elements and radiocesium on the Savannah River Site in South Carolina; May 2016
Ansley Silva	M.S.	Effects of industrial contamination on carrion-associated beetles; December 2016
Dave Keiter	M.S.	Development of population monitoring techniques for wild pigs (*Sus Scrofa*); December 2016
James Leaphart	M.S.	Biomagnification of radiocesium within aquatic food webs; to be completed December 2017
Ernest Borchert	M.S.	Ecotoxicology and disease ecology of semi-aquatic mammals in the southeastern U.S.; to be completed May 2018
Phillip Lyons	M.S.	Community composition of mammals within the Fukushima Exclusion Zone; to be completed December 2018
Sarah Webster	Ph.D.	Niche overlap and competition between gray fox and coyotes in the southeastern U.S.; to be completed December 2020
Chris Boyce	M.S.	Spatio-temporal patterns of wild pig depredation to agricultural crops; to be completed May 2019
Sarah Chinn	Ph.D.	Reproductive ecology of wild pigs in the southeastern U.S.; to be completed December 2022

Hannah Gerke	M.S.	Distribution and efficiency of vertebrate scavengers across a gradient of human presence in Fukushima, Japan; to be completed December 2019
David Bernasconi	M.S.	Co-supervised with Guha Dharmarajan; to be completed December 2019
Eric Neff	M.S.	Co-supervised with Guha Dharmarajan; to be completed December 2019
Pooja Gupta	Ph.D.	Co-supervised with Guha Dharmarajan; to be completed December 2020

Undergraduate Theses/REU's Supervised

Lauren Laatsch	Fate and scavenging community composition associated with avian nestling carcasses; May 2016
Katie Mcmanners	Surveillance for ticks and *Babesia* infections in wild pigs (*Sus scrofa*) from South Carolina; December 2016
Sarah Abercrombie	Bioaccumulation of radiocesium and mercury in diving and dabbling ducks at Four-mile creek on the Savannah River Site; August 2016
Kaitlin Wilms	Accumulation of radiocesium in bullfrog tadpoles in a contaminated effluent canal on the SRS; August 2017

Postdocs Supervised

Mike Byrne	(2014-2015)	University of Georgia
Josh Smith	(2015-2017)	University of Georgia
Peter Schlichting	(2016-Present)	University of Georgia

Student Committees

William Beatty	Ph.D. (2012)	Purdue University
Erin Abernathy	M.S. (2015)	University of Georgia
Felipe Hernandez	Ph.D. (2017)*	University of Florida
Charles Evans	M.S. (2015)	University of Georgia
Michael Foster	MNR (2016)	University of Georgia
Sarah Sapp	Ph.D. (2018)*	University of Georgia
Emily Jolly	B.S. (2015)¥	University of Georgia
Kayla Buck	M.S. (2017)*	University of Georgia
John Grinder	Ph.D. (2019)*	University of Georgia

Alexandra Wickson	B.S. (2016)[¥]	University of Georgia
Bessie Lockwood	B.S. (2016)[¥]	University of Georgia
Jacob Hill	Ph.D. (2019)*	Mississippi State University
Chris Cleveland	Ph.D. (2019)*	University of Georgia
Sebastian Ortiz	Ph.D. (2018)*	University of Georgia
Maddy Pfaff	M.S. (2018)	University of Georgia
Carly Landa	MNR (2017)	University of Georgia
Kelsey Turner	Ph.D. (2021)*	University of Georgia

** indicates anticipated graduation date*

[¥] *indicates undergraduate student thesis*

PROFESSIONAL AFFILIATIONS

The Wildlife Society
American Society of Mammalogists
Ecological Society of America
Sigma Xi

SERVICE (University, Professional, Community)

- Reviewer: Scientific Reports, PlosOne, Wildlife Research, Canadian Journal of Zoology, Human-Wildlife-Interactions, Journal of Mammalogy, Journal of Wildlife Management, Journal of Wildlife Rehabilitation, Mammalian Biology, Wildlife Biology, Landscape Ecology, Ibis, Landscape and Urban Planning, Northeastern Naturalist, Wildlife Damage Management Proceedings (2013), Wildlife Society Bulletin, Polar Biology, American Midland Naturalist
- Associate Editor, Human-Wildlife Interactions (2016-present)
- External Reviewer, 2014 Purdue University Postdoctoral Application Review
- Guest Associate Editor, 2013 Wildlife Damage Management Proceedings
- TWS working group member: Wildlife Damage Management, Wildlife Diseases
- Chair: Research Subcommittee, National Wild Pig Task Force (2015-present)
- Member: SREL/Warnell Energy Ecologist Search Committee (2014)
- Member: Warnell Graduate Affairs Committee (2016-present)
- Member: SREL Animal Care and Use Committee (2013-2016)
- Member: SREL Campus Relations Committee (2016-present)
- Member: SREL Computer Committee (2012-2014)
- Member: SREL GIS Committee (2012-2015)
- Member: SREL Seminar Committee (2012-2015)
- Member: SREL Executive Committee (2015-present)
- Member: SREL Graduate Programs Committee (2015-present)
- Member: SC Wild Pig Task Force (2013-present)

NAME Mark S. Boyce

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EDUCATION

1977	Ph.D., Yale University, New Haven, Connecticut.
1975	M.Phil., Yale University, New Haven, Connecticut.
1974	M.S., University of Alaska, Fairbanks.
1972	B.S., Iowa State University, Ames.

ACADEMIC POSITIONS

Professor of Ecology, and Alberta Conservation Association Chair in Fisheries and Wildlife, 1999-present (Endowed Chair renewed 2012 July 1), Department of Biological Sciences, University of Alberta, Edmonton.

Vallier Chair of Ecology, and Wisconsin Distinguished Professor (UW-System), 1993-1999, College of Natural Resources, University of Wisconsin, Stevens Point.

Professor, 1987-1993, Department of Zoology and Physiology, University of Wyoming, Laramie.

Associate Professor, 1981-1987, Department of Zoology and Physiology, University of Wyoming, Laramie.

Visiting Professor, 1984-1985, Department of Mathematics, University of Wyoming, Laramie.

Postdoctoral Research Fellow, 1982-1983, Animal Ecology Research Group, Department of Zoology, University of Oxford.

Assistant Professor, 1977-1981, Department of Zoology and Physiology, University of Wyoming, Laramie.

Instructor, 1976-77, Department of Zoology and Physiology, University of Wyoming, Laramie.

HONORS AND AWARDS

C. Hart Merriam Award, 2017, American Society of Mammalogists, June 24.
Special Recognition Team Award (with Evelyn H. Merrill), 2017, Alberta Chapter of The Wildlife Society, March 11.
Mirosław Romanowski Medal, 2016, Royal Society of Canada, November 18.
ASTech Award, Outstanding Leadership in Alberta Science, 2014, Alberta Science and Technology Leadership Foundation, October.
Fellow, Royal Society of Canada, inducted 2014 November.
President's Award, 2014, Safari Club International, April.
Emerald Award, 2013, Montane Research Program, Province of Alberta, June.
Publication of the Year Award, 2013, Alberta Chapter of The Wildlife Society, March.
TWS Fellow, lifetime award, 2012, The Wildlife Society, Bethesda, Maryland, USA, October.
Best Wildlife Publication Award "Popular Category," 2012, Alberta Chapter of The Wildlife Society, March.
Killam Annual Professorship, 2011-12, University of Alberta.
Publication of the Year Award, 2011, Alberta Chapter of The Wildlife Society.
Award of Merit, 2010, Alberta Trappers Association.
William Rowan Distinguished Service Award, 2008, The Wildlife Society.
International Conservationist of the Year, 2007, Safari Club International Foundation.
Erskine Fellowship, 1999, Canterbury University, Christchurch, New Zealand.
Phi Kappa Phi, 1998, University of Wisconsin-Stevens Point.
University Scholar Award, 1996, University of Wisconsin-Stevens Point.
Chancellor's Merit Award, 1996, University of Wisconsin-Stevens Point.
Faculty Scholar Award, 1994, Sigma Xi-University of Wisconsin-Stevens Point Chapter.
Distinguished Professorship, 1993, 1999 University of Wisconsin System, Madison.
Vallier Chair of Ecology, 1993, University of Wisconsin-Stevens Point.
Outstanding Research Merit Award, 1993, College of Arts and Sciences, Univ. Wyoming.
Fulbright Scholar to India, 1992, U.S. Educational Foundation in India, Bangalore.
Senior Research Fellow, 1991-92, American Institute of Indian Studies, Bangalore.
Kuehn Professorship Award, 1984-85, College of Arts and Sciences, University of Wyoming.
N.A.T.O. Postdoctoral Fellowship, 1982-83, National Science Foundation, Univ. Oxford, UK.
Academy Exchange to Poland, 1982, National Academy of Sciences, Jagiellonian University.
Outstanding Achievement Award, 1974, University of Alaska, Fairbanks.

SABBATICALS

2017, Centre of Excellence for Biosecurity Risk Analysis (CEBRA), University of Melbourne, AUSTRALIA.

2010-11, University of Queensland, Brisbane, AUSTRALIA;
Imperial College London, Silwood Park, U.K.

2003-04, University of British Columbia, Vancouver, CANADA.

1991-92, Fulbright Fellow/American Institute of Indian Studies, Centre for Ecological Sciences and Centre for Theoretical Studies, Indian Institute of Science, Bangalore, INDIA.

1982-83, NATO Postdoctoral Fellowship, Department of Zoology, University of Oxford, U.K.

OTHER POSITIONS

1989-1993, Director, UW-National Park Service Research Center, University of Wyoming.

PUBLICATIONS

Books:

Boyce, M. S., and A. Haney. 1997. *Ecosystem Management: Applications for Sustainable Forest and Wildlife Resources.* Yale University Press, New Haven, Conn. 361pp.

Thorne, E. T., M. S. Boyce, P. Nicoletti, and T. J. Kreeger (eds.). 1997. *Brucellosis, Bison, elk, and Cattle in the Greater Yellowstone Area: Defining the Problem, Exploring the Solutions.*Wyoming Game and Fish Department, Cheyenne, Wyo. 219pp.

Keiter, R. B., and M. S. Boyce. 1991. *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage*. Yale University Press, New Haven, Conn. 425pp.

Boyce, M. S. 1989. *The Jackson Elk Herd: Intensive Wildlife Management in North America.*Cambridge University Press, Cambridge, U.K., 305 pp.

Boyce, M. S., ed. 1988. *Evolution of Life Histories of Mammals*. Yale Univ. Press, New Haven, Conn., 373 pp.

Boyce, M. S., and L. D. Hayden-Wing. 1979. *North American Elk: Ecology, Behavior and Management*. Univ. Wyoming, Laramie, 294pp.

Scientific Articles:

Morehouse, A. T., A. E. Loosen, and M. S. Boyce. 2017. Rubbing behaviour, fitness, and habitat selection in grizzly bears. *Nature* (manuscript).

Ladle, A., R. Steenweg, B. Shepherd, and M. S. Boyce. 2017. The role of human recreation in shaping patterns of grizzly bear-black bear co-occurrence. *PLoS ONE* (submitted).

Loosen, A., A. T. Morehouse, and M. S. Boyce. 2017. Land tenure shapes black bear density and abundance on a multi-use landscape. *J. Wildl. Manage*. (under revision).

Krawchuk, K. E., K. H. Knopff, N. F. Webb, P. J. Jones, M. S. Boyce, and E. H. Merrill. 2017. Is niche separation between wolves (*Canis lupus*) and cougars (*Puma concolor*) realized in the Rocky Mountains of Canada? *Can. J. Zool*. (under revision).

Morehouse, A., J. Tigner, and M. S. Boyce. 2017. Conservation dollars fund livestock depredation compensation. *J. Environ. Manage.* (under revision).

Scrafford, M. A., and M. S. Boyce. 2017. A comparison of wolverine (*Gulo gulo luscus*) movement, foraging, and habitat selection in the home range and during dispersal. *J. Wildl. Manage.* (JWM-17-0337, submitted).

Ladle, A., T. Avgar, M. Wheatley, G. Stenhouse, S. Nielsen, and M. S. Boyce. 2017. Grizzly bear response to spatio-temporally variable human recreational activity. *J. Appl. Ecol.* (under revision, APPL-2017-00331).

Mallory, C., M. Campbell, and M. S. Boyce. 2017. Climate influences body condition and synchrony of herd size in three caribou populations in Arctic Canada. *Polar Biol.* (revision submitted, POBI-D-17-00033R1).

Scrafford, M. A., and M. S. Boyce. 2017. Wolverine foraging plasticity in the northern boreal forest. *J. Mammal*. (under revision).

Scrafford, M. A., T. Avgar, R. Heeres, and M. S. Boyce. 2017. Roads elicit negative movement and habitat selection responses by wolverines (*Gulo gulo luscus*). *Behav. Ecol*. (revision submitted, BEHECO-2017-0279).

Boyce, M. S., and P. Krausman, editors. 2017. Mountain sheep management in the United States of America and Canada. *J. Wildl. Manage.* (in press).

Bowyer, R. T., T. Kingston, J. R. Goheen, J. Rachlow, and M. S. Boyce. 2017. Conservation and management of the world's mammals. *J. Mammal*. (in press).

Boyce, M. S., C. Mallory, A. Morehouse, C. Prokopenko, M. Scrafford, and C. Warbington. 2017. Defining landscapes and scales to model landscape–organism interactions. *Curr. Landsc. Ecol. Reports* (doi: 10.1007/s40823-017-0027-z).

Mallory, C. D., and M. S. Boyce. 2017. Observed and predicted effects of climate change on Arctic caribou and reindeer. *Envir. Rev*. (doi: 10.1139/er-2017-0032).

Morehouse, A. T., and M. S. Boyce 2017. Troublemaking carnivores: conflicts with humans in a diverse assemblage of large carnivores. *Ecol. Soc.* **22**(3):4 (doi.org/10.5751/ES-09415-220304).

Thurfjell, H., S. Ciuti, and M. S. Boyce. 2017. Learning from the mistakes of others: how female elk (*Cervus elaphus*) adjust behaviour with age to avoid hunters. *PLoS ONE* **12**(6): e0178082 (doi.org/10.1371/journal.pone.0178082).

Paton, D. G., S. Ciuti, M. Quinn, and M. S. Boyce. 2017. Hunting exacerbates the response to human disturbance in large herbivores while migrating through a road network. *Ecosphere* **8**(6):e01841. (doi: 10.1002/ecs2.1841).

Morehouse, A., and M. S. Boyce. 2017. Male dominance interferes with intercept feeding of grizzly bears. *Ursus* **28**(1):66–80.

Avgar, T., S. Lele, J. Keim, and M. S. Boyce. 2017. Relative Selection Strength: quantifying effect size in resource- and step-selection inference. *Ecol. Evol*. **7**:5322–5330 (doi: 10.1002/ ece3.3122).

Roberts, D., V. Bahn, S. Ciuti, M. S. Boyce, J. Elith, G. Guillera-Arroita, S. Hauenstein, J. Lahoz-Monfort, B. Schroder, W. Thuiller, D. Warton, B. Wintle, F. Hartig, and C. Dormann. 2017. Cross-validation strategies for data with temporal, spatial, hierarchical, or phylogenetic structure. *Ecography* **40**:913–929 (doi: 10.1111/ecog.02881).

Boyce, M. S. 2017. Beaver population ecology and trapline management. *Internat. Trapper* 2017(spring):10–13.

Erickson, M. E., C. Found-Jackson, and M. S. Boyce. 2017. Habitat associations with counts of declining Western Grebes in Alberta, Canada. *Avian Conserv. Ecol*. **12**(1):12. (doi.org/10.5751/ACE-00980-120112).

Scrafford, M. A., T. Avgar, B. Abercrombie, and M. S. Boyce. 2017. Wolverine habitat selection in response to anthropogenic disturbance in the western Canadian boreal forest. *For. Ecol. Manage.* **395**:27–36.

Prokopenko, C., M. S. Boyce, and T. Avgar. 2017. Characterizing wildlife behavioural responses to roads using integrated step selection analysis. *J. Appl. Ecol.* **54**: 470–479 (doi: 10.1111/1365-2664.12768).

Boyce, M. S., and R. Corrigan. 2017. Moose survey app for population monitoring. *Wildl. Soc. Bull.* **41**(1):125–128 (doi: 10.1002/wsb.732). [cover photo].

Ladle, A., T. Avgar, M. Wheatley, and M. S. Boyce. 2017. Predictive modeling of ecological patterns along linear-feature networks. *Meth. Ecol. Evol*. **8**:329–338. (doi: 10.1111/2041-210X.12660).

Gilbert, S. L., K. J. Hundertmark, D. K. Person, M. S. Lindberg, and M. S. Boyce. 2017. Behavioral plasticity in a variable environment: snow depth and habitat interactions drive deer movement in winter. *J. Mammal*. **98**:246–259.

Prokopenko, C., T. Avgar, and M. S. Boyce. 2017. Extent-dependent habitat selection in a migratory large herbivore: road avoidance across scales. *Landsc. Ecol*. **32**:313–325.

Christie, K., W. F. Jensen, and M. S. Boyce. 2017. Resource selection by pronghorn in relation to land cover, roads, and oil and gas development in North Dakota. *J. Wildl. Manage.* **81**:154–162. [cover photo].

Cristescu, B., G. B. Stenhouse, B. Goski, and M. S. Boyce. 2016. Grizzly bear space use and fitness in relation to human habitation and access. *Human Wildl. Interact*. **10**(2):240–257.

Salari, A., M. Zakaria, and M. S. Boyce. 2016. Habitat use by two tropical waterfowl in central Malaysia. *Wildfowl* **66**:41–59.

Cristescu, B., G. B. Stenhouse, M. Symbaluk, S. E. Nielsen, and M. S. Boyce. 2016. Wildlife habitat selection on landscapes with industrial disturbance. *Environ. Conserv.* **43**(4):327–336.

Morehouse, A., T. Graves, N. Mikle, and M. S. Boyce. 2016. Nature vs. nurture: Evidence for social learning of conflict behaviour in grizzly bears. *PLoS ONE* **11**(11): e0165425.

Webb, S. M., R. B. Anderson, D. L. Manzer, B. Abercrombie, B. Bildson, M. A. Scrafford, and M. S. Boyce. 2016. Distribution of female wolverines relative to snow cover, Alberta, Canada. *J. Wildl. Manage.* **80**(8):1461–1470.

Benz, R., M. S. Boyce, H. Thurfjell, D. G. Paton, M. Musiani, C. Dormann, and S. Ciuti. 2016. Dispersal ecology informs design of large-scale wildlife corridors. *PLoS ONE* **11**(9): e0162989.

Morehouse, A., and M. S. Boyce. 2016. Grizzly bears without borders: spatially explicit capture recapture in southwestern Alberta. *J. Wildl. Manage.* **80**(7):1152–1166 [Featured article]

Boyce, M. S., A. Derocher, and D. L. Garshelis. 2016. *Scientific review of grizzly bear harvest management system in British Columbia.* British Columbia Ministry of Forests, Lands and Natural Resource Operations, Victoria. 56 pp.

Bacon, M. M., and M. S. Boyce. 2016. Landscape of fear for naïve prey: ungulates flee protected area to avoid a re-established predator. *Can. Wildl. Biol. Manage*. 5(1):1–9.

Cristescu, B., G. B. Stenhouse, and M. S. Boyce. 2016. Large omnivore movements in response to surface mining and mine reclamation. *Scientific Reports* **6**:19177, doi: 10.1038/ srep19177.

Avgar, T., J. R. Potts, M. A. Lewis, and M. S. Boyce. 2016. Integrated step selection analysis: bridging the gap between resource selection and animal movement. *Methods Ecol. Evol*. **7**(5):619–630.

Boyce, M. S., C. J. Johnson, E. H. Merrill, S. E. Nielsen, E. J. Solberg, and B. Van Moorter. 2016. Can habitat selection predict abundance? *J. Anim. Ecol*. **85**:11–20.

Seidel, D., and M. S. Boyce. 2016. Varied tastes: home range implications of foraging patch selection. *Oikos* **125**:39–49.

Christie, K., W. F. Jensen, J. H. Schmidt, and M. S. Boyce. 2015. Long-term changes in pronghorn abundance linked to climate and oil development in North Dakota. *Biol. Conserv*. **192**:445–453.

Ciuti, S., W. Jensen, S. E. Nielsen, and M. S. Boyce. 2015. Predicting mule deer recruitment from climate oscillations for harvest management on the northern Great Plains. *J. Wildl. Manage*. **79**(8):1226–1238.

Morrison, C. D., M. S. Boyce, and S. E. Nielsen. 2015. Space-use, movement and dispersal of sub-adult cougars in a geographically isolated population. *PeerJ* **3**:e1118; doi: 10.7717/peerj.1118.

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CONTRACTS & GRANTS

Funded Projects as PI

Grant Completed	Amount Awarded	Funding Agency
Lynx cycles and barriers: dispersal versus climate change in flat-lining populations		
03/31/2011	$27,500	Alberta Conservation Association
03/31/2011	$20,000	MEC c/o Red Deer Naturalists
04/30/2013	$10,000	Alberta Biodiversity Monitoring Institute
Grizzly bear response to open-pit mining: implications for management and conservation		
03/31/2011	$4,700	International Assoc. for Bear Research & Management
03/31/2011	$2,500	AB Sports Recreation Parks & Wildlife Foundation
03/31/2011	$31,000	Alberta Conservation Association
04/30/2011	$4,400	Canadian Wildlife Federation
12/02/2011	$6,000	TD Friends of the Environment Foundation
03/31/2012	$2,000	Safari Club International NAB – Hunting Heritage Fund
ICCB 2010 (24th International Congress for Conservation Biology)		
03/03/2011	$99,289	ICCB Registration account
12/31/2013	$90,066	Carbon tax project account
02/03/2011	$234,335	Cash sponsor support (34 sponsors)
02/03/2011	$191,079	In-kind sponsor support
Cougar distribution and prey selection SW Alberta		
03/31/2011	$32,700	Alberta Conservation Association
09/30/2011	$3,000	AB Sports Recreation Parks & Wildlife Foundation
09/30/2012	$1,500	AB Sports Recreation Parks & Wildlife Foundation
Space use of urban deer		
04/30/2011	$2,134	AB Sports Recreation Parks & Wildlife Foundation
03/31/2012	$2,000	Alberta Conservation Association
Ecology of cougar, human and prey interactions in the Cypress Hills		
12/31/2011	$3,000	AB Sports Recreation Parks & Wildlife Foundation
03/31/2012	$20,000	SK Environment & Resource Management Fish &

		Wildlife Division Fund
03/31/2012	$2,000	Safari Club International NAB – Hunting Heritage Fund
03/31/2012	$2,500	Cypress Hills Cottage Assoc Donation
Home range development in elk		
04/22/2013	$9,500	TD Friends of the Environment Foundation
03/31/2013	$5,325	Safari Club International NAB – Hunting Heritage Fund
03/31/2012	$21,500	Alberta Conservation Association
Human access management in central-western Alberta: implications for grizzly bears		
03/31/2013	$5,200	Safari Club International NAB – Hunting Heritage Fund
03/31/2013	$2,000	AB Sports Recreation Parks & Wildlife Foundation
03/31/2013	$33,050	Alberta Conservation Association
03/31/2013	$14,000	AB Fish & Game Assoc. - Minister's Special License
04/22/2013	$10,200	TD Friends of the Environment Foundation
03/31/2014	$5,000	Safari Club International NAB – Hunting Heritage Fund
03/31/2014	$35,000	ATPR
03/31/2014	$3,300	AB Sports Recreation Parks & Wildlife Foundation
03/31/2014	$25,000	Alberta Conservation Association
06/04/2014	$10,600	TD Friends of the Environment Foundation
03/31/2015	$3,650	Safari Club International NAB – Hunting Heritage Fund
03/31/2015	$30,000	Alberta Conservation Association
03/31/2015	$10,115	International Assoc. for Bear Research & Management
08/31/2015	$9,300	AB Fish & Game Assoc. - Minister's Special License
Efficacy of intercept feeding in reducing spring grizzly bear-ranching conflicts		
03/31/2013	$3,480	Safari Club International NAB – Hunting Heritage Fund
04/22/2013	$5,000	TD Friends of the Environment Foundation
03/31/2014	$7,250	International Assoc. for Bear Research & Management
03/31/2014	$3,000	Safari Club International NAB – Hunting Heritage Fund
06/30/2014	$4,500	AB Sports Recreation Parks & Wildlife Foundation
03/31/2015	$6,560	International Assoc. for Bear Research & Management
03/31/2015	$4,100	Safari Club International NAB – Hunting Heritage Fund
Restoring grizzly bear populations to southern Alberta: Monitoring and conflict resolution		
02/28/2014	$12,000	Environment Canada - Science Horizons
11/25/2014	$12,000	Environment Canada - Science Horizons
03/31/2013	$9,020	AB Conservation Association – Grants in Biodiversity
03/31/2014	$19,400	AB Conservation Collaboration – Minister's Special License Program
05/31/2014	$24,393	International Assoc. for Bear Research & Management
06/04/2014	$5,000	TD Friends of the Environment Foundation
03/31/2015	$12,500	AB Fish & Game Assoc. - Minister's Special License
05/31/2015	$26,788	International Assoc. for Bear Research & Management
06/30/2015	$25,240	Safari Club International Foundation
11/01/2014	$177,000	Waterton Biosphere Reserve Association c/o Alberta Innovates
Grizzly Bear Monitoring Project (GBMP)		
06/2013 - 06/2014	$25,000	Disney
04/2013 - 03/2014	$10,000	Nature Conservancy Canada Donations
2014 - 2015	$70,000	Royal Dutch Shell Waterton Gas Plant
2012 - 2014	$12,000	Shell Environment

11/2012	$10,000	CPAWS Donation
Effects of industry on wolverine ecology in the boreal forest of northern Alberta		
03/31/2014	$3,985	Safari Club International NAB – Hunting Heritage Fund
03/31/2014	$19,500	Wildlife Conservation Society of Canada
03/31/2014	$4,893	AB Sports Recreation Parks & Wildlife Foundation
03/31/2014	$20,000	Alberta Conservation Association
06/04/2014	$9,845	TD Friends of the Environment Foundation
01/15/2015	$9,300	Wildlife Conservation Society of Canada
03/31/2015	$75,000	Alberta Conservation Association
07/31/2015	$5,000	AB Fish & Game Assoc. - Minister's Special License
07/31/2015	$4,000	Safari Club International NAB – Hunting Heritage Fund
07/31/2015	$17,575	The Wolverine Foundation
10/31/2015	$11,140	TD Friends of the Environment Fund
12/31/2015	$10,000	Wildlife Conservation Society of Canada
03/31/2016	$68,138	Alberta Conservation Association
05/31/2016	$4,000	Safari Club International NAB – Hunting Heritage Fund
07/2013 - 03/2015	$55,000	Dene Tha First Nations Donation
2014-2016	$45,000	Husky Oil Operations Ltd. Donation
03/31/2016	$12,000	TD Friends of the Environment Fund
04/30/2017	$6,275	The Wolverine Foundation
Access management for wildlife conservation		
05/04/2014	$834,306	Shell's Contribution Can/NSERC CRD
05/04/2014	$699,510	NSERC Collaborative Research & Development Grants
An evaluation of historical mule deer fawn recruitment in North Dakota		
06/30/2014	$38,892	ND Game & Fish Department
Response by elk to vehicle disturbance on winter range		
12/31/2015	$3,600	AB Fish & Game Assoc. - Minister's Special License
12/31/2015	$3,000	Safari Club International NAB – Hunting Heritage Fund
Analysis of bighorn sheep data from Alberta Environment and Parks		
12/31/2015	$4,800	Alberta Professional Outfitters Society
A retrospective analysis of Pronghorn fawn recruitment and demographic data in North Dakota		
12/31/2015	$59,092	ND Game & Fish Department
Hunting for sustainability: Using bear rubs to monitor black bear populations in southwestern Alberta		
03/31/2016	$4,500	Safari Club International NAB – Hunting Heritage Fund
03/31/2016	$15,000	AB Fish & Game Assoc. - Minister's Special License
03/31/2016	$25,000	Alberta Conservation Association
10/01/2016	$10,000	Waterton Biosphere Reserve Association
09/30/2016	$9,500	Alberta Professional Outfitters Society
03/31/2017	$11,300	Alberta Conservation Association
03/13/2017	$6,000	International Assoc. for Bear Research & Management
03/31/2017	$4,150	AB Fish & Game Assoc. - Minister's Special License
Evaluating the efficacy of predator management and nesting structures for duck management in AB		
06/30/2017	$30,353	Delta Waterfowl Foundation
03/31/2017	$7,100	AB Fish & Game Assoc. - Minister's Special License
12/31/2017	$15,000	Mitacs
03/31/2018	$2,500	Safari Club International NAB – Hunting Heritage Fund
Ecology, density, and distribution of sitatunga in central Uganda		
03/31/2016	$2,500	Safari Club International NAB – Hunting Heritage Fund

07/31/2016	$24,911	Dallas Safari Club
10/31/2016	$6,540	Safari Club International - San Diego Chapter
12/23/2017	$15,000	Mitacs
11/01/2017	$26,311	Dallas Safari Club
06/30/2017	$3,000	Safari Club International NAB – Hunting Heritage Fund
03/31/2018	$3,000	Safari Club International NAB – Hunting Heritage Fund
Cougar project in Cadomin, Alberta		
08/31/2018	$40,000	Wild Sheep Foundation of Alberta
03/31/2019	$15,000	AB Conservation Association – Grants in Biodiversity
03/31/2018	$9,000	Safari Club International NAB – Hunting Heritage Fund
Evaluating alternate elk harvest strategies in SW Alberta		
03/31/2018	$7,650	Alberta Conservation Association
03/31/2018	$3,500	Safari Club International NAB – Hunting Heritage Fund
Qamanirjuaq barren-ground caribou habitat use and population ecology		
06/30/2017	$4,000	World Wildlife Fund - Canada
Wildlife in an Increasingly Variable World		
03/31/2016	$447,600	NSERC – Discovery Grants Program
Habitats drive population biology		
03/31/2017	$26,000	NSERC – Discovery Grants Program
Spatial and Temporal Variability Influences on Ecology and Conservation		
03/31/2022	$220,000	NSERC – Discovery Grants Program
Grazing practices influence on carbon sequestration and storage		
03/31/2021	$2,623,444	Agriculture Green-House Gas Program

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Memberships in professional societies

American Society of Mammalogists (life member).
Canadian Society for Ecology and Evolution.
Ecological Society of America.
Gamma Sigma Delta (honorary).
Phi Kappa Phi (honorary).
Royal Society of Canada; fellow, 2014.
Sigma Xi (associate member 1975, full member 1978, Univ. Alberta Chapter 2000).
Society for Conservation Biology.
The Wildlife Society (Certified Wildlife Biologist, 2000; Fellow, 2012).
Wild Sheep Foundation (life member, 2003).
Willmore Wilderness Foundation (life member, 2007).

Editor-in-Chief: *Journal of Wildlife Management*, 1995-1997.

Editor: *Ecology* and *Ecological Monographs*, 2001-2006.

Associate Editor: *I.M.A. Journal of Mathematics Applied in Medicine and Biology*, 1983-1994.

Associate Editor: *Journal of Wildlife Management*, 2017.

Editorial Board: *Environmental Conservation*, 2007-2010. *Oxford Bibliographies in Ecology*, 2010-present. *Animal Biotelemetry*, 2012-present.

Academic Editor: *PLoS ONE*, 2010-present.

PROFESSIONAL SERVICES (last 5 yrs)

Organized symposium on "Uncertainty in ecology and conservation" for the Canadian Society for Ecology and Evolution and Canadian Section of The Wildlife Society. Victoria, British Columbia, 2017 May 8.
Past-president, Canadian Section of TheWildlife Society, July 2016-May 2017.
President, Canadian Section of The Wildlife Society, March 2015-July 2016.
Program Chair, The Wildlife Society Annual Conference, Winnipeg, October 2015.
Organized symposium on "Movement models to resource selection functions" for the Annual Conference of The Wildlife Society, Winnipeg, October 2015.
Organized symposium on "Understanding individuals to conserve populations" for the Annual Conference of the Canadian Society for Ecology and Evolution, 2015 May 24.
Workshop on Resource Selection Functions, Saskatchewan Chapter of The Wildlife Society, Saskatoon, 2015 March 13.
Banting Postdoctoral Fellowships Review Committee, NSERC, 2011-2014.
Board of Directors, North American Section, Society for Conservation Biology, 2009-present.
Director, Northern Alberta Chapter of the Safari Club International, 2007-present.
Alberta Conservation Association, Board of Directors, 2002-present.
Chair, Operation Standards Review Committee, Board of Directors, Alberta Conservation Association, 2002-present.

INVITED PRESENTATIONS (last 5yrs)

2017, "Predator-prey systems: the wolves in Yellowstone," Royal Society of Victoria, Melbourne, Australia, September 21.
2017, "Topics in non-linear dynamics in population ecology," Quantitative and Applied Ecology (QAEco), School of Biological Sciences, University of Melbourne, Australia, August 17.
2017, "Habitat selection by mammals," Symposium on Telemetry Methods, International Mammalogical Congress, Perth, Australia, July 11.
2017, "Natural selection for life histories in seasonal environments," Symposium on Ecological and Evolutionary Dynamics in Fluctuating Environments for the Canadian Society for Ecology and Evolution, Victoria, BC, May 8.
2016, "Species at risk in Alberta," Inside Education, Edmonton, September 29.
2016, "Neglected but fundamental: 5 understudied topics in population biology," Distinguished Ecologist Lecture, Colorado State University, April 22.
2016, "North America's Energy Policy," Distinguished Ecologist Lecture, Colorado State University, April 21.
2016, "Compensation and density dependence," Invited Keynote Presentation. Predator-prey Conference, Columbia Mountains Institute, Revelstoke, BC, April 5.
2016, "Neglected but fundamental: 5 understudied topics in population biology," Mathematical Biology Seminar, University of Alberta, March 7.

2015, "Spatial ecology meets population biology," Invited Symposium Presentation, Canadian Society for Ecology and Evolution, Saskatoon, May 22.
2015, "Black bears on the tangled bank," Invited Symposium Presentation, Canadian Society for Ecology and Evolution, Saskatoon, May 24.
2015, "Optimizing cervid harvests in variable environments," Plenary address, Western States and Provinces Deer and Elk Conference, Canmore, May 13.
2015, "Canada's Energy Policy, The Urgent Need for Science," Plenary address, Alberta Chapter of The Wildlife Society, Edmonton, March 21.
2015, "Estimating resource selection functions in R," AGM of the Canadian Section of The Wildlife Society, Saskatoon, March 13.
2014, "Canada's Energy Policy: The Urgent Need for Science," Royal Society of Canada, Quebec City, November 20.
2014, "Selection functions: statistics, interpretations, and applications," Webinar for the Alberta Conservation Association, May 12.
2014, "Trophic cascades in Yellowstone," Plenary Address, Alaska Chapter of The Wildlife Society, Anchorage, April 1.
2014, "Workshop on resource selection functions," Alaska Chapter of The Wildlife Society, Anchorage, March 31.
2014, "Does fear reduce effects of ungulates on vegetation?" Gordon Conference on Predator-Prey Interactions, Ventura, California, January 8.
2013, "Moving into the digital age: a moose app for citizen science among hunters," Canadian Section of The Wildlife Society, Symposium on Citizen Science, Canmore, Alberta, March 9.
2013, "Selection functions: statistics, interpretations, and applications," Webinar for the Canadian Section of The Wildlife Society, January 25.
2013, "Selection, occupancy, and persistence," Morrison Lecture, Stanford University, Jan 16.
2012, "Wolf-caused Trophic Cascades in Yellowstone: Torrent or Trickle?" Symposium at The Wildlife Society Annual Conference, Portland, October 19.
2012, "Critical habitats for the critically endangered Greater Sage-Grouse," Plenary Address, CONFOR West, Banff, February 3.

CONTRIBUTED PAPERS (recent)

2016, "Science and bighorn management." Alberta Chapter of The Wildlife Society, Drumheller (March 5).
2015, "Canada's energy policy: the urgent need for science." Canadian Section of The Wildlife Society, Saskatoon, Saskatchewan (March 14).
2014, "Are terrestrial trophic cascades limited to parks and protected areas?" Alberta Chapter of The Wildlife Society, Jasper, Alberta. (March 8).
2014, "Conflicting views on trophic cascades in Yellowstone," Canadian Section of The Wildlife Society, Universite Laval, Quebec City, Quebec (March 29).
2012, "Managing Moose Populations by the Seat of Your Pants," Poster presentation, The Wildlife Society, Portland (Oct 19).
2012, "Managing Moose Populations by the Seat of Your Pants," National Fish and Wildlife Conservation Congress, Ottawa (May 29).

PUBLIC SERVICE/POPULAR PRESENTATIONS (recent)

2017, "Canada's energy policy: the urgent need for science," Mayfield Rotary, Edmonton (January 4).
2016, "Canada's energy policy: the urgent need for science," Edmonton South Rotary Club (November 23).
2016, "Energy development and species at risk in Canada," Sunrise Rotary Club, Fort Edmonton (September 30).
2016, "Moose app for moose management in Alberta," Strathcona Rotary Club, Edmonton (September 6).
2016, "Bighorn management in Alberta," Safari Club International, Edmonton (January).
2015, "Licenced hunting and trapping in Canada: funding for management and research," House of Commons Standing Committee on Environment and Sustainable Development, Ottawa (March 31).
2013, "Bighorn genetics and the effects of selective harvest," Wild Sheep Foundation, Red Deer, Alberta (March)

COMMITTEES (recent)

2016-2017, Search committee, Fisheries biologist, Dept. Biological Sciences, Univ. Alberta.
2015-present. Alberta Game Policy Advisory Council, Alberta Environment & Parks.
2014-2015, Alberta Game Management Advisory Group, Alberta Environment & Parks.
2015-2016, Grizzly bear harvest policy review, British Columbia Department of Environment.
2013-2014, Search Committee for Campus Alberta Innovates Program (CAIP) Chair, University of Alberta.
2012, Chair, Search Committee for Editor-in-Chief, *Conservation Biology*, Society for Conservation Biology.
2007-present, Conservation Committee, Alberta Chapter The Wildlife Society.

CURRICULUM VITAE

JENNIFER K. FREY

PRESENT ADDRESSES:

Department of Fish, Wildlife, and Conservation Ecology
New Mexico State University
P.O. Box 0003, MSC 4901
Las Cruces, New Mexico 88130

Phone: (575) 640-9782
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Frey Biological Research
PO Box 294
Radium Springs, NM 88054

Phone: (575) 640-9782
Email: Frey_B_R@fastwave.biz

DEGREES:

Ph.D., Biology. University of New Mexico, Albuquerque, New Mexico. Major professor: Terry L. Yates. Dissertation title: Testing among modes of allopatric speciation: a hypothetico-deductive approach. 1994.
M.S., Biology. Emporia State University, Emporia, Kansas. Major professor: Dwight W. Moore. Thesis title: Morphologic variation in the Mexican vole (*Microtus mexicanus*). 1989.
B.S., Biology (emphasis in Zoology). Emporia State University, Emporia, Kansas. 1986.

WILDLIFE CONSULTING COMPANY

Owner, Frey Biological Research. Radium Springs, New Mexico. 2002-present.

FACULTY POSITIONS:

College Professor and Member of the Graduate Faculty. Department of Fish, Wildlife and Conservation Ecology (FWCE), New Mexico State University (NMSU). 2016 – present.
College Associate Professor and Member of the Graduate Faculty. FWCE, NMSU. 2008 – 2016.
College Assistant Professor and Member of the Graduate Faculty. FWCE, MMSU. August 2002 – 2008.
Assistant Professor. Department of Biology, Eastern New Mexico University (ENMU). 1998-2002.
Research Assistant Professor. Department of Biology, University of New Mexico (UNM). 1995-1998.
Postdoctoral Research Associate. Department of Biology, UNM. 1994-1995.

MUSEUM AND CURATORIAL POSITIONS:

Curator. Wildlife Museum, Department of Fish, Wildlife & Conservation Ecology, NMSU. 2014 - present.
Acting Curator. Wildlife Museum, Department of Fishery and Wildlife Sciences, NMSU. September 2003 - 2013.
Adjunct Curator of Mammals. The Vertebrate Museum, Department of Biology, NMSU. 2003 – present.
Committee Member. Center for Natural History Collections, New Mexico State University. 2008-Present
Research Associate. Mammal Division, Museum of Southwestern Biology (MSB), University of New Mexico. Present
Executive Committee Member. Center for Natural History Collections, New Mexico State University. 2006-2008
Director. Eastern New Mexico University Natural History Museum (ENMUNHM). 1998-2002
Curator of Mammals, Birds, and Frozen Tissue. ENMUNHM. 1998-2002
Board of Trustees, New Mexico Museum of Natural History and Science. 2000-2002
Curatorial Associate. Mammal Division, MSB, UNM. 1994-1998.
Collection Assistant. Frozen Tissues & Biological Materials, MSB. 1990-1994.
Curatorial Assistant. Mammal Division, MSB. 1989-1994.
Curatorial Assistant. Schmidt Museum of Natural History, Emporia State University. 1985-1989

PRE-DOCTORAL PROFESSIONAL POSITIONS:

Allozyme Electrophoresis Laboratory Supervisor. UNM. 1991-1994.
DNA and Karyology Laboratory Supervisor. UNM. 1990, 1992-1994.
Research Assistant. UNM. mtDNA and allozyme variation in the Mexican vole (*Microtus mexicanus*). 1992-1994.
Research Assistantships for Minority High School Students Program Assistant. MSB. Assisted directing student research projects and teaching high school students and teachers. 1993.
Computer Lab Coordinator. Biology Department. UNM. 1993.
Research Assistant. UNM. mtDNA and allozyme variation among migratory races of sandhill crane (*Grus canadensis*). 1990-1991.
Parasitologist. Sevilleta Long-term Ecological Research Site, UNM. 1989.
Fisheries Aid. Kansas Department of Wildlife and Parks, Emporia, Kansas. 1988.
Research Assistant. Emporia State University. Karyotypic relationships among populations of short-tailed shrews (*Blarina*). 1987.
Undergraduate Research Assistant. Emporia State University. Predator avoidance in *Diaptomus* (Crustacea: Copepoda). 1985-1986.

GRADUATE STUDENTS:

- Beth Bonham. Master's in Environmental Education. Eastern New Mexico University. May 2000.
- Andrew Hope. Master's thesis title: Island biogeography: Focal species models and their implications for system level relationships. Eastern New Mexico University. May 2002.
- Jason Malaney. Master's thesis title: Distribution, habitat characteristics, and population demographics of snowshoe hare (*Lepus americanus*) at the extreme southern edge of its geographic range. Eastern New Mexico University. December 2003.
- Christina Wampler. Master's thesis title: Effects of fuels reduction treatments on mammals in a southwestern mixed coniferous forest. (collaboratively with Jon Boren). New Mexico State University. May 2007.
- Gerrad Jones. Master's thesis title: Mammals of Padre Island National Seashore, Texas. New Mexico State University. May 2008.
- Alfredo Montoya. Master's research project topic: Morphologic variation in the gray-footed chipmunk (*Tamias canipes*). New Mexico State University. May 2009.
- Martin Moses. Master's thesis title: Elevated surface temperature negatively affects survival of banner-tailed kangaroo rats in the Chihuahuan Desert. (co-advised with Gary Roemer). May 2010.
- Greg Wright. Master's thesis title: Multiple scale habitat selection by a small mammal habitat specialist (*Zapus hudsonius luteus*) in a managed floodplain landscape. May 2012.
- Andrew Passarelli. Master's thesis title: Effect of forest insect outbreak on the red squirrel (*Tamiasciurus hudsonicus*) in the Sacramento Mountains, New Mexico. December 2012.
- Brian A. Small. Master's research project topic: Identification of Limiting Factors for the Restoration of Beavers in Northern New Mexico. New Mexico State University. August 2015.
- Reza Goljani. Master's thesis topic: Predicting spatial factors associated with cattle depredations by the Mexican wolf (*Canis lupus baileyi*) with recommendations for depredation risk modeling. December 2017.
- Ian Perkins-Taylor. Master's thesis topic: Using occupancy and species distribution models to identify the distribution and key habitat features of the Oscura Mountains chipmunk and guide monitoring efforts. December 2017.

GRADUATE COMMITTEES:

- Stanley Fields. Master's thesis title: Ability of western diamondback rattlesnake (*Crotalus atrox*) and prairie rattlesnake (*Crotalus viridis viridis*) to discern the presence of a potential predator based on chemical cues. ENMU. December 2001
- Timothy Frey. Non-thesis Master's: Applied Ecology. ENMU. May 2002
- Verity Mathis. Master's thesis title: Conservation genetics of banner-tailed kangaroo rats (*Dipodomys spectabilis*): a molecular ecology perspective. New Mexico State University. Summer 2006.

GRADUATE COMMITTEES (continued):

- Arlys Finch. Master's thesis topic. Sequencing of Star protein in the endangered Pecos gambusia. Eastern New Mexico University. December 2006.
- Michael Calkins. Master's thesis title: Development of conservation priority models for the American Pika (*Ochotona princeps*): Implications for conservation. New Mexico State University. May 2010.
- Katie Smith. Response of the endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) to tides. Department of Biology, New Mexico State University. May 2012
- Darin A. Kopp. An analysis of factors influencing spatial concordance between ecosystem services and biodiversity. Department of Fish, Wildlife and Conservation Ecology, NMSU. December 2013.
- Dana Sanders. Boldness and natal dispersal in the brush mouse (Peromyscus boylii). Department of Biology, New Mexico State University. May 2014
- Liberty Hightower. Non-thesis masters. Department of Biology, New Mexico State University. May 2014
- Nathan Dylan Burruss. The environmental constraints of Rüppell's (*Vulpes rueppellii*), pale (*V. pallida*), and fennec foxes (*V. zerda*), and golden jackals (*Canis aureus*) within the Termit & Tin Toumma Nature Reserve and Cultural Reserve and an analysis of pale fox food habits. Department of Fish, Wildlife and Conservation Ecology, NMSU. May 2014.
- Randell W. Seeley. Characterization of vegetation and small mammal communities in Chihuahuan Desert grasslands. Department of Range and Animal Science, New Mexico State University. December 2014.
- Eboni S. Duke. Burrowing owl ecology during the post fledging period in an urban and agricultural interface of southern New Mexico. Department of Fish, Wildlife and Conservation Ecology, NMSU. December 2014.
- Sabrina Deeley. Distribution of resources for nectar-feeding bats (*Leptonycteris*) in southwestern New Mexico (non-thesis). Department of Fish, Wildlife and Conservation Ecology, NMSU. May 2016.
- Chris Coxen. Evaluating the performance of satellite tracked and citizen science derived species distribution models to inform the conservation of band-tailed pigeons (*Patagioenas fasciata*). Department of Fish, Wildlife and Conservation Ecology, NMSU. May 2017.
- Rachel Burke. Distribution and niche partitioning of *Leptonycteris* bats. Department of Fish, Wildlife and Conservation Ecology, NMSU. Current.
- Susan Bard. Influence of natural and anthropogenic disturbances on multi-scale black bear (*Ursus americanus*) habitat selection in the Jemez Mountains, New Mexico. Department of Fish, Wildlife and Conservation Ecology, NMSU. Current
- David Stricklan. Differential distribution patterns and germination rates of zoochorous dispersed one-seed juniper (*Juniperus monosperma)* seeds. Department of Range and Animal Science, New Mexico State University. Current
- Scarlet Sellers. Diet of long-nosed bats (*Leptonycteris*) in New Mexico. Department of Fish, Wildlife and Conservation Ecology, NMSU. Current

UNDERGRADUATE SENIOR HONORS THESIS STUDENT

- Mr. Jeremy Lewis. Distribution and habitat modeling of the white-nosed coati (*Nasua narica*) in New Mexico. Howard Hughes Medical Institute, Undergraduate Research Scholars Program, New Mexico State University. December 2010.

CAREER STUDENT MENTORING:

Educational Coordinator. New Mexico-Puerto Rico Natural Resource Career Track Program, New Mexico State University. 2012-2013

DISTANCE EDUCATION PROGRAM DEVELOPMENT:

Distance Education Program Developer. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University. 2017-current

TEACHING EXPERIENCE:

New Mexico State University

Undergraduate:

- Introduction to Natural Resources Management; a distance education course (often taught concurrently on NMSU main and branch campuses; Spring 2003-Fall 2004, Fall 2005-2015)
- Contemporary Issues in Wildlife and Natural Resources Management (Fall 2016)
- Ecology and Management of Southwest Ecosystems (Summer 2012)
- Principles of Fish and Wildlife Management (Spring 2011, 2013-2017)
- Wildlife Ecology (Fall 2011)
- Museum Methods (Spring 2006)
- Undergraduate Problems

Graduate/Undergraduate:

- Systems Ecology in Wildlife Management and Laboratory (Fall 2002)
- Advanced Techniques for the Study of Mammalian Diversity (Spring 2004)
- Nongame Wildlife Conservation and Management (Spring 2004)
- Wildlife Damage Management (Spring 2011-2017)
- The Natural History Museum in Modern Society (Spring 2014)
- Wildlife Museum Internship (Fall 2014, Spring/Fall 2016)
- Independent Studies (Graduate Problems, Non-thesis Project, Master's thesis)

Eastern New Mexico University (exclusive of special problems, thesis, etc)

Undergraduate:

- Wildlife Biology (Fall 1998, Spring 1999)
- Introduction to Wildlife and Fisheries Science (each semester 1999-2002)
- Vertebrate Zoology/Vertebrate Zoology Laboratory (Spring 2002)

Graduate/Undergraduate:

- Mammalogy/Mammalogy Laboratory (annual 1998-2001)
- Ornithology/Ornithology Laboratory (annual 1999-2002)

- Wildlife Management/ Wildlife Management Laboratory (annual 1998-2001)

Graduate:

- Biogeography (Spring 1999, Fall 2000)
- Conservation Biology (Fall 1999, 2001)
- Biological Literature (Fall 2001)

University of New Mexico (exclusive of special problems, thesis, etc)

- Mammalogy, lecturer and laboratory assistant
- General Biology Laboratory, instructor
- Biology for Health Related Sciences Laboratory, instructor

Emporia State University

- Ornithology, teaching and laboratory assistant
- General Biology Laboratory, instructor
- Field and Lab Biology, teaching and laboratory assistant

CURRENT UNIVERSITY SERVICE

- College of Agriculture and Home Economics, Distance Education Committee
- Dept. Fish, Wildlife, Conservation Ecology, Curriculum Committee
- Dept. Fish, Wildlife, Conservation Ecology, Curator of Wildlife Museum

PRIOR UNIVERSITY SERVICE (Partial Listing):

- Dept. Fish, Wildlife, Conservation Ecology, Assessment Committee (NMSU 2015-2017)
- College of Agriculture and Home Economics, Assessment Liason (NMSU 2015-2017
- University-wide, Advocates for Scholarly Teaching Committee (NMSU 2017)
- Dept. Fish, Wildlife, Conservation Ecology, Museum Committee, NMSU 2008-2013
- Dept. Fishery & Wildlife Sciences, Graduate Committee, NMSU
- Dept. Fishery & Wildlife Sciences, Freshman advisor, NMSU
- NMSU, Center for Natural History Collections, Executive Committee
- Director of the Natural History Museum, ENMU
- Revised Wildlife and Fishery undergraduate curriculum, ENMU
- Developed graduate program in Applied Ecology, ENMU
- Faculty advisor to pre-professional Fish and Wildlife Club, ENMU
- Numerous faculty search committees, ENMU
- President - Biology Graduate Student Association, UNM.
- Graduate Policy Committee, Department of Biology, UNM.
- Graduate Research Allocations Committee, Dept. Biology, UNM.

CURRENT PROFESSIONAL SERVICE:

- Middle Rio Grande Project, subject matter experts group for New Mexico meadow jumping mouse
- Conservation Committee, Southwestern Association of Naturalists
- Riparian Rodent Advisory Committee, New Mexico Department of Game and Fish

- Peer Reviewer for: National Science Foundation, Journal of Mammalogy, Diversity and Distributions, Journal of Biogeography, Forest Ecology & Management, Global Change Biology, Canadian Journal of Zoology, Ecological Applications, Southwestern Naturalist, Western North American Naturalist; Canadian Field Naturalist; Comparative Medicine;

PRIOR PROFESSIONAL SERVICE (Partial Listing):

- Associate Editor, The Southwestern Naturalist (2008-2015)
- New Mexico Chapter of The Wildlife Society; Local Committee for 2015 meeting
- Share With Wildlife Task Force, New Mexico Department of Game and Fish
- Board of Directors, New Mexico Chapter of the Wildlife Society
- Scientific advisor groups: NM Bat Working Group; NM River Otter; NM Beaver
- Forest Service Region 3 Mammal Sensitive Species Experts Group
- Board of Trustees, New Mexico Museum of Natural History and Science.
- IUCN, Species Survival Commission, Rodent Specialist Group for North America.
- Board of Directors, Southwestern Association of Naturalists.
- Chair, Conservation Committee, Southwestern Association of Naturalists.
- Resolutions Committee, American Society of Mammalogists.
- Education and Graduate Student Committee, American Society of Mammalogists.
- Committee on Women and Minority Issues, American Society of Mammalogists.
- Secretary - Zoology Section, Southwestern and Rocky Mountain Division, AAAS.

PROFESSIONAL SOCIETY AFFILIATIONS:

- American Society of Mammalogists
- International Biogeography Society
- The Wildlife Society
    - Southwest Section
    - New Mexico Chapter
- Southwestern Association of Naturalists
    - Conservation Committee

HONORS AND AWARDS:

Faculty Merit Award. For excellence in teaching, scholarship and service. Eastern New Mexico University. 2001

James H. Nakano Citation Award. For the outstanding scientific paper published in 1994. National Center for Infectious Diseases and Centers for Disease Control and Prevention, 1995.

Albert R. and Alma E. Shadle Fellowship in Mammalogy. The highest annual award given to a single graduate student or recent PhD graduate who has demonstrated a productive and important role in professional mammalogy. American Society of Mammalogists and the Buffalo Foundation, 1992.

University of New Mexico Graduate Achievement Award. Award presented to the two most outstanding graduate students at the University of New Mexico, 1991.

Robert I. Larus Award. For the outstanding student paper presented in 1990. American Association for the Advancement of Science, 1990.

Outstanding Presentation Award. For an outstanding graduate student research paper competition. Southwestern and Rocky Mountain Division, American Association for the Advancement of Science, 1988.

Emporia State University Graduate Achievement Award. Award presented to the outstanding graduate student at Emporia State University, 1987, 1988.

GRANTS AND CONTRACTS (Total = $ 2,346,819^{oo}):

- $32,199 – New Mexico Department of Game and Fish. Distribution, abundance, and habitat selection of the Penasco least chipmunk (*Tamias minimus atristriatus*). 2017
- $ 61,925 - White Sands Missile Range. Oscura Mountain chipmunk monitoring. 2016
- $ 19,772 – New Mexico Department of Game and Fish. Survey for the Penasco least chipmunk (*Tamias minimus atristriatus*). 2015
- $ 62,125 – White Sands Missile Range. Oscura Mountain chipmunk monitoring. 2015
- $ 7,500 - White Sands Missile Range. Survey for meadow jumping mouse (*Zapus hudsonius luteus*). 2015
- $ 59,562 – White Sands Missile Range. Oscura Mountain chipmunk monitoring. 2014
- $ 50,500 – White Sands Missile Range. Survey for meadow jumping mouse (*Zapus hudsonius luteus*). 2014
- $ 6,246 – Marron and Associates. Survey for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) at Coyote Creek, Mora County, New Mexico. 2014
- $ 4,000 – The Nature Conservancy. Evaluation of flow-ecology relationships for mammals in the Gila River. 2013-2014.
- $ 10,412 – Bureau of Land Management. Survey for meadow jumping mouse (*Zapus hudsonius luteus*) on the Sacramento River. 2013
- $ 6,450 – New Mexico Department of Game and Fish. Draft survey protocol for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). 2012-2013
- $ 19,688 –Evaluation of meadow jumping mouse habitat on Middle Rio Grande. Bureau of Reclamation. 2012-2013
- $ 4,803 – Marron and Associates. Survey for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) at Coyote Creek, Mora County, New Mexico. 2012
- $ 15,000 – Carson National Forest. New Mexico meadow jumping mouse surveys. 2011
- $ 11,000 – New Mexico Department of Game and Fish, Share with Wildlife. Development of a habitat suitability model for the Organ Mountain chipmunk & jumping mouse survey of Casa Colorado WMA. 2011
- $ 14,000 – New Mexico Department of Game and Fish, Share with Wildlife. Development of non-invasive monitoring protocols for the Organ Mountain chipmunk. 2010
- $19,924 – U.S. Fish and Wildlife Service. Using pocket gophers to enhance habitat for the endangered Sacramento prickly poppy. 2010.
- $ 4,000 – Review of ecosystem services of the American beaver. WildEarth Guardians. 2010.
- $ 4,999 – Colorado Division of Wildlife. New Mexican meadow jumping mouse survey. 2010
- $ 38,880 – San Juan Public Lands. New Mexican meadow jumping mouse survey.

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- $ 25,571 – New Mexico Department of Game and Fish, Share with Wildlife. Cool season activity of the meadow jumping mouse in the Middle Rio Grande (with G. Wright). 2009-2011
- $ 22,647 – Carson National Forest. Abert's squirrel monitoring, 2009. 2009
- $ 25,239 – Carson National Forest. Red squirrel monitoring, 2008. 2009
- $ 20,000 – New Mexico Department of Game and Fish, Share with Wildlife. Montane mammal museum studies. 2008-2010
- $138,807 – U.S. Fish and Wildlife Service/Bureau of Reclamation. Response of the meadow jumping mouse to wetland management in the Middle Rio Grande, New Mexico. 2009-2011.
- $128,948 - Arizona Game and Fish Heritage Grants. Inventory of the meadow jumping mouse in Arizona. 2008-2010.
- $ 21,446 - Carson National Forest. Abert's squirrel monitoring, 2008. 2008
- $ 5,870 – Marron and Associates. Mammal survey of Living Desert Zoo State Park. 2008
- $ 2,500 - Modeling with a keystone indicator species: conservation implications for desert grasslands. T&E Inc. (with Martin Moses and Gary Roemer). 2008-2010
- $ 2,500 – New Mexico State Parks. Mammals of Sugarite Canyon State Park. 2007
- $ 24,000 – New Mexico Department of Game and Fish, Share with Wildlife. Morphological and genetic analysis of *Zapus hudsonius luteus*. 2007
- $ 5,900 – New Mexico Department of Game and Fish. Key to the Rodentia of New Mexico. 2007
- $ 2,500 - Modeling with a keystone indicator species: conservation implications for semi-arid grasslands. T&E Inc. (with Martin Moses and Gary Roemer). 2007-2009
- $ 26,460 – New Mexico Department of Game and Fish. Status of the Peñasco least chipmunk. 2006
- $ 26,037 – Lincoln National Forest. Population assessment of the red squirrel. 2006
- $ 700 – Society for Conservation Biology. Peer-review of US Forest Service species assessments for the hog-nosed skunk and pygmy shrew. 2006
- $ 5,250 – Santa Fe National Forest, Jemez Ranger District. Inventory for the meadow jumping mouse. 2006
- $ 29,820 – New Mexico Department of Game and Fish. Status of the meadow jumping mouse in the Sangre de Cristo Mountains. 2006
- $ 2,000 – New Mexico State Parks. Status of the meadow jumping mouse at Sugarite Canyon State Park. 2006.
- $ 20,053 – Carson National Forest. Abert's squirrel monitoring, 2006. 2006
- $ 5,900 - New Mexico Share with Wildlife: Key to the Rodentia of New Mexico, Part II. 2005-2006.
- $ 10,000 – Desert Southwest Cooperative Ecosystem Studies Unit. Literature review on mammalian carnivore use on islands, coyote telemetry methodology, and biology of islands in the Laguna Madre. (with D. Echols, Padre Island National Seashore). 2006
- $ 2,500 - Modeling with a keystone indicator species: conservation implications for desert grasslands. T&E Inc. (with Kristen Otten and Gary Roemer). 2006-2008
- $ 18,651 – New Mexico Department of Game and Fish. Status survey of the least shrew

(Cryptotis parva). 2005

- $ 19,819 – New Mexico Department of Game and Fish. Status survey of the meadow jumping mouse (*Zapus hudsonius*). 2005
- $ 15,564 – Carson National Forest. Abert's squirrel monitoring, 2005. 2005
- $100,000 – International Arid Lands Consortium: Keystone indicator: a tool for semi-desert grassland conservation. (with Gary Roemer and Eli Geffen). 2005-2007
- $160,636 – National Parks Service: Mammal inventory of Padre Island National Seashore. 2004-2007
- $ 10,352 – National Park Service: Data mining and data entry for Vital Signs Monitoring Plan. (with Don Caccamise). 2004-2005
- $ 17,729 – New Mexico Department of Game and Fish. Status of the endangered Arizona montane vole (*Microtus montanus arizonensis*) in New Mexico. 2004
- $ 7,500 – New Mexico Share with Wildlife: Key to the Rodentia of New Mexico. 2004-2005.
- $ 10,000 – New Mexico Share with Wildlife: Habitat and diet of the threatened New Mexico meadow jumping mouse (*Zapus hudsonius luteus*): a spatial and temporal assessment". (with K. Mohrland and D. Jones). 2004-2205
- $ 26,000 – Carson National Forest. Red squirrel and Abert's squirrel monitoring. 2004.
- $ 46,570 – Carson National Forest. Red squirrel and Abert's squirrel monitoring; small mammal surveys. 2003.
- $ 8,998 – BAE Systems Analytical Solutions, Inc. White Sands Missile Range small mammal voucher specimen preparation and identification. 2003-2005.
- $ 98,000 – National Science Foundation. Center for Natural Resource Analysis within New Mexico Experimental Program to Stimulate Competitive Research (EPSCoR). (J.R. Gosz, A.W. Powell, et al.). I was the PI for the ENMU portion of $ 3 million total award. 2002.
- $ 3,335 – ENMU Research and Faculty Development Committee: Ecological segregation of the mountain cottontail (*Sylvilagus nuttallii*) and the snowshoe hare (*Lepus americanus*). 2001.
- $563,389 – Grand Canyon Monitoring and Research Center, USGS: Inventory and monitoring of terrestrial riparian biological resources in Grand Canyon: an integrative approach. (with M.J.C. Kersley, H. Yard, N. Cobb, D.C. Lightfoot, G. Carpenter, and S.L. Brantley). 2001
- $ 7,500 – USDA Forest Service: Expert's Panel on Grazing Impacts on Southwestern Mammals. 2001
- $ 2,000 – New Mexico Natural Heritage Program: White Sands Missile Range Integrated Natural Resources Management Plan: Mammals. 2000-2001.
- $ 4,979 – Lincoln National Forest, USDA Forest Service and ENMU Research and Faculty Development Committee: Status of the endangered Peñasco least chipmunk (*Tamias minimus atristriatus*). 2000.
- $ 17,000 – New Mexico State Land Office: Geospatially referenced database for sensitive mammal, bird, and plant voucher specimens in the ENMU Natural History Museum. 1999-2000.
- $ 5,500 – New Mexico Department of Game and Fish: Lesser prairie chicken lek surveys. 1999-2001.

- $ 1,991 – ENMU Teaching and Technology Instruction: Radiotelemetry equipment and photographic slides of birds and mammals for classroom instruction. 1999.
- $ 15,000 – U.S. Forest Service, in collaboration with the New Mexico Department of Game and Fish. for Relationships among Southwest mammals and GAP vegetation types for the Biotic Information System of New Mexico (BISON-M). 1998.
- $ 9,981 – Turner Biodiversity Division: Mammal survey of the Fra Cristobal Mountains, Armendariz Ranch, Sierra County, New Mexico. 1998.
- $ 49,249 – Animas Foundation: Effects of reintroduced black-tailed prairie dogs on grassland ecology. (with C. Curtin, D. Lightfoot, G. Carpenter, and A. Henry). 1998.
- $ 3,262 – ENMU Research and Faculty Development Committee: Distribution and habitat preference of white-tailed deer in New Mexico. 1998.
- $ 3,000 – Ski Island Alliance, The Wildlands Project: Data compilation of focal species. 1997.
- $ 17,500 – U.S. Geological Survey, Biological Resources Division: Response of southwestern montane mammal communities to global change. (with T. L. Yates) 1997.
- $ 27,180 – National Science Foundation: Joint U.S.-Mexico Workshop on International Ecology and Biodiversity. (with T. L. Yates and G. Ceballos) 1996.
- $ 11,986 – U.S. Forest Service: Mammal survey of the Negrito Creek watershed, Gila National Forest, Catron Co., New Mexico. 1995.
- $ 12,700 – Arizona Game and Fish Department: Mexican vole (*Microtus mexicanus*) genetic analyses. 1992, 1993.
- $ 2,000 – Albuquerque Community Foundation: Wildlife Rescue, Inc. of New Mexico, (with Francisca C. Bermudez and Elizabeth P. Elliston). 1993.
- $ 900 – Sigma Xi; Biology, UNM; GSA, UNM: Dispersal versus vicariance in southwest montane mammals: genetics of long-tailed vole populations. 1991.
- $ 19,500 – New Mexico Game and Fish Department: Allozyme and mtDNA restriction site variation in sandhill crane (*Grus canadensis*). (with T. L. Yates). 1991.
- $ 500 – GRAC; SRAC; Vice President's Graduate Research Fund, Office of Research, UNM: Historical Biogeography of the Mexican Vole (*Microtus mexicanus*). 1990.
- $ 1,226 – Kansas Department of Wildlife and Parks. For Distribution and habitat analysis of the long-tailed shrew in Kansas. (with D. W. Moore). 1987.

PAPERS PRESENTED AT PROFESSIONAL MEETINGS:

1. **Frey**, **J**. **K**. 1987. Nongeographic variation in the Mexican vole (*Microtus mexicanus*). Kansas Academy of Science.
2. **Frey**, **J**. **K**., and D. W. Moore. 1988. Distribution of *Sorex haydeni* in Kansas. Southwestern and Rocky Mountain Division, American Association for the Advancement of Science. **winner Outstanding Presentation Award**
3. **Frey**, **J**. **K**. 1988. Distribution of Hayden's shrew (*Sorex haydeni*) in Kansas. Kansas Academy of Science.
4. **Frey**, **J**. **K**., and D. W. Moore. 1988. Morphologic variation and systematics of the Mexican vole (*Microtus mexicanus*). Southwestern Association of Naturalists.
5. **Frey**, **J**. **K**., and D. W. Moore. 1988. Distribution of *Sorex haydeni* in Kansas. Prairie States Ecology Conclave.

6. **Frey**, **J**. **K**., and D. W. Moore. 1988. Morphologic variation and systematics of the Mexican vole (*Microtus mexicanus*). American Society of Mammalogists.
7. **Frey**, **J**. **K**., and D. W. Moore. 1989. Geographic variation in the Mexican vole (*Microtus mexicanus*). Southwestern and Rocky Mountain Division, American Association for the Advancement of Science.
8. Moore, D. W., G. Ploskey, and **J**. **K**. **Frey**. 1989. Identification of hybrids between sauger and walleye. Southwestern Association of Naturalists.
9. **Frey**, **J**. **K**. 1990. Fluctuation of a mammalian faunal element in response to climatic change. Southwestern Association of Naturalists.
10. **Frey**, **J**. **K**. 1990. Fluctuation of a mammalian faunal element in response to climatic factors. Southwestern and Rocky Mountain Division, American Association for the Advancement of Science. **winner Robert I. Larus Award-best paper**
11. **Frey**, **J**. **K**. 1990. Fluctuation of a mammalian faunal element in response to climatic change. American Society of Mammalogists.
12. **Frey**, **J**. **K**., and D. W. Moore. 1990. Range expansion of the meadow vole (*Microtus pennsylvanicus*) in Kansas. Kansas Mammalogists.
13. **Frey**, **J**. **K**. 1991. Response of a mammalian faunal element to climatic change. American Association for the Advancement of Science. **invited paper**
14. Gannon, W. L., P. J. Glass, **J**. **K**. **Frey**, and T. L. Yates. 1991. Information retrieval of biological materials at the Museum of Southwestern Biology. American Society of Mammalogists.
15. **Frey**, **J**. **K**. 1992. Evolutionary consequences of modes of peripheral isolate formation under alternative modes of speciation and speciation in frogs of the subgenus *Stombus* (Leptodactylidae: genus *Ceratophrys*). Southwestern Association of Naturalists.
16. **Frey**, **J**. **K**. 1992. Evolutionary consequences of modes of peripheral isolate formation under alternative modes of speciation. American Society of Mammalogists.
17. **Frey**, **J**. **K**. 1993. Testing among modes of allopatric speciation: A hypothetico-deductive approach. American Society of Mammalogists. **invited paper in the plenary session for Shadle Award**
18. **Frey**, **J**. **K**., D. J. Hafner, T. L. Yates, and C. G. Schmitt. 1994. Allozyme and mitochondrial DNA variation in migratory sandhill crane (*Grus canadensis*). Southwestern Association of Naturalists.
19. Bermudez, F. C., and **J**. **K**. **Frey**. 1994. Value and potential of wildlife rehabilitation to the zoological sciences. Southwestern Association of Naturalists.
20. **Frey**, **J**. **K**., and M. J. Patrick. 1994. Endoparasites from the endangered Hualapai vole (*Microtus mogollonensis hualpaiensis*). American Society of Mammalogists.
21. Ditto, A. M. and **J**. **K**. **Frey**. 1995. Species diversity and the peninsular effect: non-volant mammals in Chihuahuan Desert habitat peninsulas. Southwestern Association of Naturalists.
22. **Frey**, **J**. **K**. 1995. Homage to Darwin: On the evolution of domestic breeds of standard chickens. Southwestern Association of Naturalists.
23. **Frey**, **J. K**. 1996. Assessing distribution patterns and predicting climate induced extinctions in southwestern montane mammals. Southwestern Association of Naturalists.
24. Ditto, A. M. and **J**. **K**. **Frey**. 1997. Effects of island attributes on genetic variability in southwestern montane mammals. Southwestern Association of Naturalists.

25. **Frey**, **J**. **K**. 1997. A climate induced pump for increased genetic variability in a peripheral isolate of the montane vole? Southwestern Association of Naturalists.
26. Ditto, A. M. and **J. K**. **Frey**. 1997. Effects of island attributes on genetic variability in southwestern montane mammals. American Society of Mammalogists.
27. **Frey, J.K.** 1998. Conservation considerations for the reintroduction of grizzly bears and wolves in the Southwest. Southwestern Association of Naturalists.
28. Fields, S.P., and **J.K. Frey**. 2000. Squamate reptiles in New Mexico: patterns of species richness and provincialism. Southwestern Association of Naturalists.
29. Kendall, J., and **J.K. Frey**. 2000. Hierarchical relationships of bat communities in Arizona, New Mexico, Utah and Colorado. Southwestern Association of Naturalists.
30. Frey, T.C. and **J.K. Frey**. 2000. Railroads: an alternative mechanism for mesquite invasion in the Southwest. Southwestern Association of Naturalists.
31. Hope, A., and **J.K. Frey**. 2000. Biogeographic models of the distribution of Canadian lynx (*Lynx canadensis*) in the western United States with implications for reintroduction and conservation. Southwestern Association of Naturalists.
32. Edgmon, M.G, L. Castillo, and **J.K. Frey**. 2000. Diversity of avian populations in CRP and native grasslands on the Llano Estacado in the Texas Panhandle. Southwestern Association of Naturalists.
33. Hope, A., and **J.K. Frey**. 2001. Biogeographic models of the distribution of Canadian lynx (*Lynx canadensis*) in the western United States with implications for reintroduction and conservation. Joint Arizona-New Mexico Chapters of The Wildlife Society.
34. Kendall, J., and **J.K. Frey**. 2001. Management implications of hierarchical relationships of southwestern bat communities based on Bailey's ecoregions. Joint Arizona-New Mexico Chapters of The Wildlife Society.
35. Hope, A., and **J.K. Frey**. 2001. Biogeographic nestedness and conservation of boreal mammals in the western contiguous United States. Southwestern Association of Naturalists.
    (*winner Clark Hubbs Award-best poster presentation)
36. Hope, A. and **J.K, Frey.** 2001. Biogeographic nestedness and conservation of boreal mammals in the western contiguous United States. American Society of Mammalogists.
37. Malaney, J. and **J.K. Frey**. 2002. Habitat differentiation between snowshoe hare (*Lepus americanus*) and mountain cottontail (*Sylvilagus nuttallii*) in New Mexico. Joint Arizona-New Mexico Chapters of The Wildlife Society.
38. Malaney, J. and **J.K. Frey**. 2003. Snowshoe hare (*Lepus americanus*) population parameters and habitat preferences in New Mexico. Joint Arizona-New Mexico Chapters of The Wildlife Society.
39. Malaney, J. and **J.K. Frey**. 2003. Primary productivity and habitat quality hypotheses for control of snowshoe hare (*Lepus americanus*) demography: a test at the southern range limit and conclusions for conservation. Southwestern Association of Naturalists.
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40. Malaney, J. and **J.K. Frey**. 2003. Primary productivity and habitat quality hypotheses for control of snowshoe hare (*Lepus americanus*) demography: a test at the southern range limit and conclusions for conservation. American Society of Mammalogists.
41. **Frey, J.K.** 2003. Vicariance, not dispersal, is the primary mechanism for the distribution of boreal mammals in the American Southwest. American Society of Mammalogists.

42. Kearsley, M., N. Cobb, H. Yard, D. Lightfoot, G. Carpenter, S. Brantley, and **J.K. Frey**. 2003. Inventory and monitoring of terrestrial riparian biological resources in Grand Canyon: an integrative approach. Ecological Society of America.
43. Malaney, J. and **J.K. Frey**. 2004. Habitat differentiation between snowshoe hare (*Lepus americanus*) and mountain cottontail (*Sylvilagus nuttallii*) at their southern zone of sympatry. Southwestern Association of Naturalists.
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44. Mathis, V.L. and **J.K. Frey**. 2005. Geographic variation in relictual populations of red squirrel (*Tamiasciurus hudsonicus*) in the American Southwest. Southwestern Association of Naturalists.
45. Malaney, J. and **J.K. Frey**. 2006. Decline of montane populations of the threatened meadow jumping mouse (*Zapus hudsonius luteus*) in New Mexico. Arizona and New Mexico Chapters of The Wildlife Society.
46. Wampler, C.R, **J.K. Frey** and J. Boren. 2006. Effects of silvicultural treatments on the small mammal community in a southwest coniferous forest. Arizona and New Mexico Chapters of The Wildlife Society.
47. Jones, G.D., K.M. Otten, C. R. Wampler, Z. Schwenke, and **J. K. Frey**. 2006. Status and habitats of the threatened least shrew (*Cryptotis parva*) in New Mexico. Arizona and New Mexico Chapters of The Wildlife Society.
48. Wampler, C.R, **J.K. Frey** and J. Boren. 2006. Effects of silvicultural treatments on the small mammal community in a southwest coniferous forest. The Southwestern Association of Naturalists.
49. Montoya, A. and **J.K. Frey**. 2007. Geographic variation and taxonomy of the gray-footed chipmunk (*Tamias canipes*). The Southwestern Association of Naturalists.
50. Wampler, C.R, **J.K. Frey** and J. Boren. 2007. Effects of fuels reduction thinning on the small mammal community in a southwest coniferous forest. The Southwestern Association of Naturalists.
51. Jones, G., and **J.K. Frey**. 2007. An enigma of the species-area relationship: small island effect on coastal Texas islands. American Society of Mammalogists.
52. **Frey, J.K.**, J.L. Malaney, Z. J. Schwenke, and J.A. Cook. 2007. The New Mexico meadow jumping mouse (*Zapus hudsonius luteus*): a declining riparian indicator species. American Society of Mammalogists.
53. Schwenke, Z.J., **J.K. Frey**, and J.R. Choate. 2008. Identifying isolated peripheral populations of the least shrew (*Cryptotis parva*) along the western extent of its range. American Society of Mammalogists.
54. **Frey, J.K.** 2008. Mammals of the Gila: patterns of diversity and species of concern. Natural History of the Gila Symposium, Silver City.
55. Malaney, J.L., **J.K. Frey**, J.A. Cook. 2009. Conservation genetics and phylogeography of the New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*). Arizona and New Mexico Chapters of The Wildlife Society.
56. Moses, M.R., G.W. Roemer, and **J.K. Frey.** 2009. Unraveling sources of variation in annual survival among distinct populations of banner-tailed kangaroo rats in the Chihuahuan Desert. Ecological Society of America, Albuquerque.
57. J.C. Lewis, **J.K. Frey**, R.K. Guy, J.N. Stuart, J.F. Roback, and K.G. Boykin. 2009. White-nosed coati (*Nasua narica*) habitat suitability and distribution in the state of New Mexico. Howard Hughes Medical Institute-NMSU Undergraduate Research Scholar

Symposium, Las Cruces.

58. Wright, G.D., and **J.K. Frey**. 2009. Status of the meadow jumping mouse at Bosque del Apache national Wildlife Refuge. Festival of the Cranes.
59. J.C. Lewis, **J.K. Frey**, R.K. Guy, J.N. Stuart, J.F. Roback, and K.G. Boykin. 2010. Improving ecological niche models; an example based on the white-nosed coati in the southwest. Arizona and New Mexico Chapters of The Wildlife Society.
60. Wright, G.D., and **J.K. Frey**. 2010. The endangered meadow jumping mouse in the Rio Grande Valley; observations of decline, habitat, and behavior. Arizona and New Mexico Chapters of The Wildlife Society.
61. Calkins, M. and **J.K. Frey**. 2010. A revised distribution and habitat associations for the water shrew in the White Mountains, Arizona. Arizona and New Mexico Chapters of The Wildlife Society.
62. **Frey, J.K**. 2010. Status of the meadow jumping mouse in Arizona. Arizona and New Mexico Chapters of The Wildlife Society.
63. Wright, G.D. and **Frey, J.K**. 2010. The endangered meadow jumping mouse at BANWR: observations of occupation, habitat, and behavior. Festival of the Cranes.
64. **Frey, J.K**. 2012. Synopsis of the status and ecology of the meadow jumping mouse (*Zapus hudsonius luteus*): an imperiled species in the American Southwest. Arizona and New Mexico Chapters of The Wildlife Society.
65. **Frey, J.K**. 2013. Ecosystem services of the American beaver: wetland engineer. New Mexico Environment Department Beavers and Wetlands Symposium. Santa Fe.
66. Small, B., I. Barela, **J.K. Frey**. 2014. Status of dam building beaver on public lands in New Mexico: a comparison of occupied and vacant sites. Arizona and New Mexico Chapters of The Wildlife Society.
67. **Frey, J.K.** 2014. The NMSU Wildlife Museum. Department of Fish, Wildlife & Conservation Ecology Alumni and Friends Reception.
68. **Frey, J.**K., P. Castillo, J. Iglesias. 2015. Eastern fox squirrels in the West. Western Pecan Growers.
69. Barela, I. and **J.K. Frey**. 2015 Use of woody forage plants by the American beaver (*Castor canadensis*) in the Chihuahuan Desert. Arizona and New Mexico Chapters of The Wildlife Society.
70. Small, B.A., **J.K. Frey**, C. C. Gard. 2015. Evaluation of habitat suitability for dam-building beaver in northern New Mexico. Arizona and New Mexico Chapters of The Wildlife Society. (best wildlife student paper finalist)
71. Castillo, P., **J.K. Frey**, J. Iglesias. 2015. Damage caused by the eastern fox squirrel (*Sciurus niger*) in pecan orchards in the El Paso Valley. NMSU Undergraduate Research and Creative Arts Symposium.
72. Barela, I. and **J.K. Frey**. 2015 Use of woody forage plants by the American beaver (*Castor canadensis*) in the Chihuahuan Desert. NMSU Undergraduate Research and Creative Arts Symposium.
73. Small, B.A., **J.K. Frey**, C. C. Gard. 2015. Evaluation of habitat suitability for dam-building beaver in northern New Mexico. New Mexico Environment Department Wetlands Roundtable.
74. Youtz, J.A., R. Goljani A., J.K. Frey. 2016. A habitat suitability model for the Dusky Grouse in New Mexico. Arizona and New Mexico Chapters of The Wildlife Society.
75. Perkins-Taylor, I. and J.K. Frey. 2016. Detection rates during surveys of the endangered

New Mexico meadow jumping mouse. Arizona and New Mexico Chapters of The Wildlife Society.

76. Youtz, J.A., R. Goljani A., J.K. Frey. 2016. A habitat suitability model for the Dusky Grouse in New Mexico. Gila Symposium
77. Youtz, J.A., R. Goljani A., J.K. Frey. 2017. A habitat suitability model for the Dusky Grouse in New Mexico. Arizona and New Mexico Chapters of The Wildlife Society.
78. Burke, R., K. Stoner, and J.K. Frey. 2017. Predicting seasonal distribution and migratory pathways for neotropical nectar-feeding bats. Arizona and New Mexico Chapters of The Wildlife Society.
79. Frey, J.K. 2017. Identification, distribution and ecology of the New Mexico meadow jumping mouse in the zone of sympatry with the western jumping mouse. Arizona and New Mexico Chapters of The Wildlife Society.
80. Lehnen, S., J.K. Frey et al. 2017. Use of remote cameras to detect the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) at Bosque del Apache National Wildlife Refuge. Arizona and New Mexico Chapters of The Wildlife Society.
81. Perkins-Taylor, I. and J.K. Frey. 2017. Developing conservation guidelines for the Oscura Mountain chipmunk using occupancy models. Arizona and New Mexico Chapters of The Wildlife Society.
82. Goljani, R., J.K. Frey, et al. 2017. Predicting spatial factors associated with cattle depredations by the Mexican wolf (*Canis lupus baileyi*) in Arizona and New Mexico. Arizona and New Mexico Chapters of The Wildlife Society.
83. Burke, R., K. Stoner, J.K. Frey, C. P. Brown. 2017. Predicting seasonal distribution and migratory pathways for neotropical nectar-feeding bats. The Wildlife Society.
84. Goljani, R., J.K. Frey, D.L. Bergman, S.W. Breck., J.W. Cain, J. Oakleaf, J.B. Smith. 2017. Predicting spatial factors associated with livestock depredations by the Mexican wolf in Arizona and New Mexico. The Wildlife Society.
85. Perkins-Taylor, I. and J.K. Frey. 2017. Assessing site occupancy of the Oscura Mountains Colorado chipmunk using camera traps. The Wildlife Society.
86. Youtz, J.A., R. Goljani A., J.K. Frey. 2017. Species distribution models for the Dusky Grouse in New Mexico: Implications for conservation and climate change. The Wildlife Society.

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Frey, J.K. 2003. Preliminary investigation of the relationship between montane meadow stubble height and small mammal communities on Cason National Forest, New Mexico. Final Report submitted to Carson National Forest, 14 pp.

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National Forest. 38 pp.

SELECTED RECENT TECHNICAL REPORTS (continued):

Frey, J.K. 2004. Abert's squirrel (*Sciurus aberti*) monitoring and habitat analysis on Carson National Forest, New Mexico, 2004. Final Report submitted to Carson National Forest, 21 pp.

Frey, J.K. 2004. Red squirrel (*Tamiasciurus hudsonicus*) monitoring and habitat analysis on Carson National Forest, New Mexico, 2004. Final Report submitted to Carson National Forest, 45 pp.

Frey, J.K. 2005. Status assessment of the Arizona montane vole (*Microtus montanus arizonensis*) in New Mexico. Final Report submitted to New Mexico Department of Game and Fish, 39 pp.

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Kearsley, M., D. Lightfoot, S. Brantley, J.K. Frey, and H. Yard. 2006. Introduction. Pages 4-31 in M. Kearsley, N. Cobb, H. Yard, D. Lightfoot, G. Carpenter, S. Brantley, and J.K. Frey. Inventory and monitoring of terrestrial riparian resources in the Colorado River corridor of Grand Canyon: an integrative approach. Final report submitted to USGS Grand Canyon monitoring and research Center, 317 pp.

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Frey, J.K. 2007. Survey for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) at selected locations in the Jemez Ranger District, Santa Fe National Forest, Final Report submitted to Jemez Ranger District, Santa Fe National Forest, 28 pp.

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SELECTED RECENT TECHNICAL REPORTS (continued):

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Frey, J.K. and Z. J. Schwenke. 2007. Mammals of Sugarite Canyon State Park, Colfax County, New Mexico. Final Report submitted to New Mexico State Parks, 49 pp.

Frey, J.K., and G.D. Jones. 2008. Mammal inventory of Padre Island National Seashore. Final Report submitted to Padre Island National Seashore, 271 pp.

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Frey, J.K. 2009. Red squirrel (*Tamiasciurus hudsonicus*) monitoring on Carson National Forest, New Mexico, 2009. Final Report submitted to Carson National Forest, 37 pp.

Frey, J.K., and G.D. Wright. 2010. Rio Grande jumping mouse ecology. Annual Technical Progress Report for 2009 submitted to U.s. Fish and Wildlife Service, Region 2, Albuquerque, New Mexico, revised 23 February 2010, 34 pp.

Wright, G.D., and J.K. Frey. 2010. Cool season activity of the meadow jumping mouse in the Middle Rio Grande. Final Report submitted to New Mexico Department of Game and Fish, Share with Wildlife Program, 16 pp.

Frey, J.K. 2010. Identification of voles from Aragon, Catron county, New Mexico: are they the endangered Arizona montane vole (*Microtus montanus arizonensis*)? Final Report submitted to New Mexico Department of Game and Fish, Share with Wildlife Program, 20 pp.

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SELECTED RECENT TECHNICAL REPORTS (continued):

Frey, J.K., and G.D. Wright. 2011. Rio Grande jumping mouse ecology. Annual Technical Progress Report for 2010 submitted to U.s. Fish and Wildlife Service, Region 2, Albuquerque, New Mexico, 12 February 2011, 42 pp.

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Frey, J.K. and G.D. Wright. 2012. Multiple Scale Habitat Selection by a Small Mammal Habitat Specialist (*Zapus hudsonius luteus*) in a Managed Floodplain Landscape. Final Report submitted to U.S. Fish and Wildlife Service, Cooperative Agreement 201819J806, 16 March 2012, 109 pp.

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Frey, J.K. 2012. Survey for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) on Carson National Forest, New Mexico. Final Report submitted to Carson National Forest, 5 December 2012, 71 pp.

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Frey, J.K. 2013a. Survey for the meadow jumping mouse at Bosque del Apache National Wildlife Refuge. Final Report submitted to US Fish and Wildlife Service, Ecological Services, Southwest Region, 5 June 2013 (revised).

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Frey, J.K. 2013c. Survey for the New Mexico meadow jumping mouse on the Sacramento River, Otero County, New Mexico, with recommendations for maintenance of the Sacramento-Orogrande Pipeline. Final report submitted to the Bureau of Land Management, Las Cruces District Office, 24 September 2013.

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Frey, J.K., and D.A. Kopp. 2014. Preliminary assessment of jumping mouse habitat associated with the Middle Rio Grande Project. Final report submitted to U.S. Department of the Interior, Bureau of Reclamation, Albuquerque Area Office. 20 January 2014.

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Bogan. Gila River Flow Needs Assessment. A report by The Nature Conservancy. 515 Pp. http://nmconservation.org/Gila/GilaFlowNeedsAssessment.pdf

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PEER-REVIEWED PUBLICATIONS:

ResearchGate: https://www.researchgate.net/profile/Jennifer_Frey3
Peer-refereed articles = 70
Google Scholar
Citations = 1,369 (420 since 2012)
H-index = 15
I10-index = 23

NOTE: asterisk indicate students I mentored: *=graduate student; **=undergraduate student; *=high school student.**

1. Prophet, C. W., and **J**. **K**. **Frey**. 1987. Capture of *Diaptomus siciloides* and *Diaptomus pallidus* by suction simulator and gizzard shad (*Dorosoma cepedianum*). Journal of Freshwater Ecology, 4:253-258.
2. Tims, T. A., **J**. **K**. **Frey**, T. A. Spradling, and D. W. Moore. 1989. A new locality for the pygmy shrew (*Sorex hoyi winnemana*) in Tennessee. Journal of the Tennessee Academy of Science, 64:240.
3. **Frey**, **J**. **K**., and D. W. Moore. 1990. Status of Hayden's shrew (*Sorex haydeni*) in Kansas. Southwestern Naturalist, 35:84-86.
4. **Frey**, **J**. **K**., and D. W. Moore. 1990. Nongeographic morphologic variation in the Mexican vole (*Microtus mexicanus*). Transactions of the Kansas Academy of Sciences, 93:97-109.
5. **Frey**, **J**. **K**., and D. W. Moore. 1990. Range expansion of the meadow vole (*Microtus pennsylvanicus*) in Kansas. Prairie Naturalist, 22:259-263.
6. Choate, J. R., D. W. Moore, and **J**. **K**. **Frey**. 1991. Dispersal of the meadow jumping mouse in northern Kansas. Prairie Naturalist, 23:127-130.
7. **Frey**, **J**. **K**. 1992. Response of a mammalian faunal element to climatic changes. Journal of Mammalogy, 73:43-50.
8. **Frey**, **J**. **K**., T. L. Yates, D. W. Duszynski, W. L. Gannon, and S. L. Gardner. 1992. Designation and curatorial management of type host specimens (symbiotypes) for new parasite taxa. Journal of Parasitology, 78:930-932.
9. **Frey**, **J**. **K**. 1993. Modes of peripheral isolate formation and speciation. Systematic Biology, 42:373-381.

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11. **Frey**, **J**. **K**. 1993. Nocturnal foraging by scissor-tailed flycatchers under artificial light. Western Birds, 24:200.
12. **Frey**, **J**. **K**., and F. C. Bermudez**. 1994. Cordilleran flycatchers nesting within a cave. New Mexico Ornithological Society Bulletin, 22:23-24.
13. Childs, J. E., T. G. Ksiazek, C. F. Spiropoulou, J. W. Krebs, S. Morzunov, G. O. Maupi, K. L. Gage, P. E. Rollin, J. Sarisky, R. E. Enscore, **J**. **K**. **Frey**, C. J. Peters, and S. T. Nichol. 1994. Serologic and genetic identification of *Peromyscus maniculatus* as the primary reservoir for a new hantavirus in the southwestern United States. Journal of Infectious Disease, 169:2171-2180. **Charles C. Shepard Science Award and James H. Nakano Citation candidate**
14. Bermudez**, F. C., J. N. Stuart, **J**. **K**. **Frey**, and R. Valdez. 1995. Distribution and status of the Virginia opossum (*Didelphis virginiana*) in New Mexico. Southwestern Naturalist, 40:336-340.
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29. Dunnum, J.L., **J.K. Frey**, D. Tinin, J. Salazar-Bravo, T.L. Yates. 2002**.** Elevational range extension for the hispid cotton rat, *Sigmodon hispidus*, (Rodentia: Muridae). Southwestern Naturalist, 47:637-639.
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45. **Frey, J.K.**, and J.L. Malaney. 2009. Decline of the meadow jumping mouse (*Zapus hudsonius luteus*) in two mountain ranges in New Mexico. The Southwestern Naturalist, 54:31-44.
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47. **Frey, J.K.,** R.D. Fisher, and S.C. Peurach. 2009. Capture locations of two endangered rodents during a 1902 exploration of the Sacramento Mountains, New Mexico. Western North American Naturalist, 69:267-271.
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50. **Frey, J.K.** 2010. Mammals of the upper Gila River watershed, Arizona and New Mexico: patterns of diversity and species of concern. New Mexico Botanist, Special Issue, 2:67-87.
51. Moses*, M.R., **J.K. Frey**, and G. W. Roemer. 2012. Elevated surface temperature depresses survival of banner-tailed kangaroo rats: will climate change cook a desert icon? Oecologia, 168: 257-268.
52. Malaney, J. L., **J. K Frey**, and J. A. Cook. 2012. The biogeographic legacy of an imperilled taxon provides a foundation for assessing lineage diversification, demography, and conservation genetics. Diversity and Distributions, 18:689-703.
53. Calkins*, M.T., E. A. Beever, K..G. Boykin, **J. K. Frey**, and M. C. Andersen. 2012. Not-so-splendid isolation: modeling climate-mediated range collapse of a montane mammal *Ochotona princeps* across numerous ecoregions. Ecography, 35: 780-791.
54. **Frey, J.K.** 2012. Evidence for the historical occurrence of the meadow jumping mouse in the Verde River watershed, Arizona. Western North American Naturalist, 72:257-262.
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59. **Frey, J.K**., J. Iglesias, K. Herman**. 2013. Eastern fox squirrel (*Sciurus niger*): new threat to pecan orchards in far west Texas. Western North American Naturalist. 73:382-385.
60. **Frey, J.K.**, and M. Calkins*. 2014. Snow cover and riparian habitat determine the distribution of the short-tailed weasel (*Mustela erminea*) at its southern range limits in arid western North America. Mammalia, 78:45-56.
61. Wright*, G. D. and **J.K. Frey**. 2014. Herbeal feeding behavior of the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). Western North American Naturalist, 74:231-235.
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63. **J.K. Frey**. 2015. Variation in the phenology of hibernation and reproduction in the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). PeerJ DOI: 10.7717/peerj.1138
64. Small*, B.A., **J.K. Frey**, C.C. Gard. 2016. Livestock grazing limits beaver restoration in northern New Mexico. Journal of Restoration Ecology, 24: 646-655.
65. Barela**, I. and **J.K. Frey**. 2016. Habitat and forage selection by the American beaver (*Castor canadensis*) on a regulated river in the Chihuahuan Desert. The Southwestern Naturalist, 61:286-293.
66. **Frey, J.K**. 2017. Landscape Scale and Microhabitat of the Endangered New Mexico Meadow Jumping Mouse in the White Mountains, Arizona. Journal of Fish and Wildlife Management, .
67. Burruss*, D., A. Matchano, **J.K. Frey**, M. Andersen, C. Sillero-Zubiri. 2017. Food habits of the pale fox in Niger. African Journal of Ecology, **DOI:** 10.1111/aje.12404
68. Coxen,* C.L., **Frey, J.K.**, S.A. Carlton, D.P. Collins. 2017. Species distribution models for a migratory bird based on citizen science and satellite tracking data. Global Ecology and Conservation, 11:298-311.
69. **Frey, JK**. In press. A review and conservation implications of aquatic behaviour (and drowning) in jumping mice (Dipodidae: Zapodinae). Canadian Field Naturalist
70. **Frey, J.K.** In press. Beavers, livestock, and riparian synergies: a small mammal perspective. Chapter in International Riparian Project. US Forest Service, Rocky Mountain Research Station, General Technical Report.

BOOK IN PREPARATION:

Cartron, J.E. and **J.K. Frey (editors).** The Carnivores of New Mexico. University of New Mexico Press. Expected publication date January 2019

J.K. Frey authored chapters by include:

- Introduction
- Conservation of Carnivores
- Red fox
- Wolverine
- Ermine
- Long-tailed weasel
- American mink
- White-nosed coati
- Conclusion

SELECTED MANUSCRIPTS IN PREPARATION:

Perkins-Taylor, I. and **J.K. Frey.** Ecological factors associated with site occupancy of an endemic chipmunk. Journal of Wildlife Management.

Burruss, D., A. Matchano, **J.K. Frey**, M. Andersen, C. Sillero-Zubiri. Species distribution models unravel niche partitioning in a Sahelo-Saharan canid community

Frey, J.K., and M. Calkins. Distribution and habitat of an endangered and isolated population of the northern water shrew (*Sorex palustris*) in Arizona. The Southwestern Naturalist

Frey, J.K. Habitat partitioning between two species of jumping mice (*Zapus*) in a zone of sympatry. Journal of Mammalogy

Jones, G.D. and **J.K. Frey**. Mammal community structure on a Padre Island: influence of habitat and interspecific interactions. Journal of Mammalogy

Malaney, J.L., and **J.K. Frey**. Demography of snowshoe hare (*Lepus americanus*) at the southern edge of its range. Journal of Mammalogy

Jones, G.D. and **J.K. Frey**. Testing between hypotheses of causal mechanisms for the small island effect. Journal of Biogeography.

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PROFESSIONAL EXPERIENCES

9/2000-8/2013 & 9/2016-present: ***Professor of Wildlife Ecology***, Dept. of Wildlife Ecology, University of Maine; ***Cooperating Professor***, Center for Research on Sustainable Forests (2007-present); ***Cooperating Scientist*** **,** Maine Cooperative Forestry Research Unit (1999-present); ***Cooperating Professor***, Department of Forest Ecosystem Science (1999-2005) and Center for Research on Sustainable Forests (2008-present); and ***Faculty Associate***, Maine Cooperative Fish and Wildlife Research Unit, Univ. of Maine (1988-present). Tenured, academic year appointment with shared research (50%) and teaching (50%) responsibilities; appointment changed to 75% research, 25% teaching, effective 9/1/2005. Course instruction: Wildlife-Habitat Relationships (WLE 450, Cr. 4), Introduction to Wildlife Resources (WLE 100, Cr. 1), Graduate Course in Habitat Ecology (WLM 650, Cr. 4; team-taught), Graduate Course in Carnivore Ecology and Management (WLE 565, Cr. 3). Serve as academic advisor to undergraduate students and as thesis advisor for graduate students (Responsible for: base-funded research program in wildlife-forestry relationships supported through the Maine Agricultural and Forest Experiment Station; extramurally funded research program in habitat relationships of forest wildlife and ecology of meso-carnivores and their prey; public service; technology transfer. Provide research advisement and technology transfer to large private forest landowners, state and federal resource management agencies, and NGO's.

9/2013-8/2016: ***Chair, Professor, and Undergraduate Coordinator*****,** Department of Wildlife, Fisheries, and Conservation Biology, University of Maine; 70% administration, 20% research, 10% instruction. Administer an academic department including 7 university faculty, a federal USGS research unit (2-3 scientists), 2 support personnel, post-doctoral scientists, research associates, approximately 25 graduate research and teaching assistants, and 125 undergraduate wildlife majors. Taught co-capstone senior-level undergraduate course, administered and supervise research grants, and led a lab comprised of graduate students, technicians and a post-doctoral scientist.

7/2001-6/2002: ***Interim Chair***, Department of Wildlife Ecology, University of Maine.

9/93-8/00: ***Associate Professor of Wildlife Ecology***, Dept. of Wildlife Ecology, University of Maine; duties listed above plus served as administrator and instructor for mandatory 3-week summer field camp, Wildlife Field Survey (WLE 250, Cr. 3, 1994-97).

1/88-8/93: ***Assistant Professor of Wildlife***, Dept. of Wildlife, University Maine. 50%-50%, shared research-teaching appointment (9-month). Additional responsibilities included serving as advisor to the Student Chapter of The Wildlife Society, and administration and instruction of the summer field camp, Wildlife Field Survey (WLE 250, Cr. 3, 1988-93). Twice served as instructor in senior-capstone course in wildlife policy and administration (Cr. 3). Developed and taught 4 credit undergraduate habitat

course with 2 sections of lab (1988-93), and a graduate course in predator ecology (Cr. 3).

2/86-12/87: ***Wildlife Research Supervisor*** (Staff Associate-Wildlife), Wildlife Bureau, Connecticut Department of Environmental Protection. Responsible for overall supervision, administration, budgeting, and coordination of statewide research and management programs for Nongame and Endangered Species, Upland Wildlife (small game), and Mammals (except deer). Supervised a staff of 6 wildlife biologists and 2 clerical staff.

6/85-2/86: ***Mammal Program Leader*** (Wildlife Biologist I and II), Wildlife Bureau, Connecticut Department of Environmental Protection. Administered statewide research and management programs for 14 species of harvested and non-harvested mammals.

EDUCATION

1982-1985: University of Maine, ***Ph. D. in Wildlife***, August 1986; Dissertation: Coyote Dispersal, Mortality, and Spatial Interactions with Red Foxes in Maine.

1980-1982: University of Maine, ***M.S. in Wildlife Management***, May 1983; Thesis: Denning Ecology, Movements, and Dispersal of Coyotes in Eastern Maine.

1976-1980: University of Wyoming, ***B.S. in Wildlife Management***, May 1980.

PROFESSIONAL SERVICES

Affiliations

Society for Conservation Biology
American Society of Mammalogists
The Wildlife Society (national, section, chapter)
Martes Working Group

Committees/Professional Service

Invited external reviewer, Species Status Assessment for U.S. population of Canada lynx (2017)
Chair of DWFCB Alumni Awards Committee, (2016-present)
Undergraduate Program Coordinator, Dept. Wildlife, Fisheries, and Conserv. Biol. (2013-2015)
Search Committee, Assistant Professor of Wildlife Habitat Ecology, University of Maine (2015)
Institutional Animal Care and Use Committee, University of Maine (2012-2014)
Chair of Search Committee, Assistant Professor of Wildlife Population Ecology (2013)
Peer Committee Chair, Department of Wildlife Ecology, University of Maine (2012-2013)
Faculty Senator, University of Maine (2010-2012)
Financial and Institutional Planning Committee, Faculty Senate (2010-2012)
Board of Directors, The Forest Society of Maine (2008-2011)
Land Conservation Committee, Forest Society of Maine (2009-present)
Scientific Advisor, Carnivores 2006 Conference, St. Petersburg, Florida (2005-06)
External Program Review Team, Dept. Natural Resources, Univ. New Hampshire (2006)
Search Committee for Asst. Professor Fisheries, Dept. Wildlife Ecology, Univ. Maine (2006)
Invited Peer Reviewer, U.S. Fish &Wildlife Service, Critical Habitat Proposal for Lynx (2006)
Research Council, Maine Agricultural and Forest Experiment Station (2005-2008)
Peer Review Team, Endangered Wolf Delisting Proposal, U.S. Fish Wildlife Service, (2004)
Scientific Advisor, Carnivores 2004 Conference, Santa Fe, New Mexico (2003-04)

Cooperating Scientist, Maine Cooperative Forestry Research Unit, (1999-present)
Scientific Advisor to Newfoundland Model Forest, marten research, (1997-2010)
Invited Member, Recovery Team for Endangered Newfoundland Marten, (1998-2010)
University Representative on Northern Maine Landscape Planning Comm. (2002-2008)
Committee of Whole for Curriculum and Graduate Issues, Dept. of Wildlife Ecology (1988-present)
Awards Committee, Maine Chapter of The Wildlife Society, (1992-present)
Peer Review Committee, Dept. Wildlife Ecology, University Maine (1988-present)
Hosted 4 landscape planning workshops for agencies and environmental groups (2002-2010)
Coauthored position on coyote snaring bill, Maine Chapter, The Wildlife Society (2003)
Member of Search Committee, Assistant Coop. Unit Leader for Fisheries (2003)
Invited External Review Participant for Maine Dept. Inland Fisheries and Wildlife (2003)
Nongame/Endangered Species Advisory Council, MDIFW (1999-2002)
Chair, Search Committee for Instructor in Wildlife Ecology (2001-02)
Search Committees for Faculty Sabbatical Replacements (2) (2001-2002)
Co-author on Forestry-Wildlife Alumni Newsletter, Univ. Maine (2002)
U.S.D.A. Forest Service Expert Review Panel for Species at Risk WMNF, GMNF (2002)
Forest Biodiversity Benchmarks Working Group, Maine Forest Service (2001-02)
Advisor to Huber Corp. on forest wildlife habitat supply planning (2001-2002)
Expert Panelist, Eastern Wolf Conference (2002)
Scientific Advisor, Carnivores 2002 Conference, Monteray, California (2001-02)
Program Chair/Co-Convenor, 3rd Int. *Martes* Symp., Newfoundland, (2000)
Consulting Scientist to industry on biocontaminants issues with aquatic mammals, (2000)
Search Committee for Finance/Communications Coordinator, Maine Coop. Forest Res.Unit, (1999)
Search Comm. for Asst. Leader/Wildlife, Maine Coop. Fish and Wildlife Research Unit, (1999)
College Committee for Development of Green Endowment policies (1999)
Research and Public Service Committee, Faculty Senate, (1994-95, 1998-1999)
Forest Research Center Steering Committee, College of NFA (1998-2000)
Restructuring Committee for Maine Cooperative Forestry Research Unit (1998-1999)
Usniversity of Maine Faculty Senate (elected), (1993-1999)
Lynx Research Working Group, MDIFW & USFWS (2000-present)
Timber Wolf Advisory Committee, Maine Dept. Inland Fisheries & Wildlife (1997-2000)
Search Committee for Silvicultural Program Leader, CFRU, (1997-98)
Search Committee for Instructor, Dept. Wildlife Ecology, (1997)
Academic Affairs Committee, Faculty Senate, (1997-98)
Constitution and Bylaws Committee, Faculty Senate, (1996-97)
Search Committee for Program Scientist, CFRU (1996)
Search Committee for Assistant Professor of Wildlife Ecology (1995)
Admissions Committee, Graduate Program in Ecology and Environmental. Sciences, (1994-96)
Forest Ecosystem Research Committee, University Maine, (1993-95)
Auditing Committee, NE Section, The Wildlife Society, (1989-94)
Scholarship Committee, College Forest Resources, (1989-94)
Scholarship Committee, Department of Wildlife Ecology, (1988-96)
University Forest Advisory Committee, College of Forest Resources, (1989-94)
Predator Management Committee, Baxter State Park, (1993)
Presidential Public Service Awards Committee, University Maine, (1993-94)
Faculty Research Funds Committee, University Maine, (1988-91), Chair, (1990-91)
Evaluation Committee for Dean of Graduate School, (1991)

Executive Committee of the Graduate School, (elected), (1989-90)
Graduate Board, (elected), University Maine, (1988-91)
Northeast Fur Resource Technical Committee, (1985-1991)
Facilities and Safety Committee, College of Forest Resources, (1988-89)
Cooperative Extension-College of Forest Resources Working Group, (1988-89)
Advisor, Student Chapter of the Wildlife Society, University Maine, (1988-92)
Executive Board (elected), Maine Chapter of The Wildlife Society (1989)

Editorships

-Associate Editor for *Wildlife Biology*, September 2009 – 2012
-Senior Editor for a Contributed book: ***Ecology and management of <u>Martes</u> in human altered landscapes: An International Perspective***. Reviewed, edited, and revised 22 contributed chapters, wrote Preface, and coordinated publication (published by Springer, New York in 2004).
-Guest editor for Northeastern Naturalist (2005-06)
-Consulting Editor for Wildlife Monographs (2000)

Manuscript Reviews (in order of number of manuscripts reviewed: range 1-49)

Journal of Wildlife Management
Wildlife Biology
Journal of Mammalogy
Wildlife Society Bulletin
Forest Ecology and Management
Landscape Ecology
Conservation Biology
Canadian Journal of Zoology
Northeastern Naturalist
Wildlife Monographs
Bioscience
Behavioral Ecology
Ecology
Ecological Applications
Ecography
Environmental Monitoring and Assessment
Southeast Proceedings
Southwest Naturalist
Northeast Wildlife
American Midland Naturalist
Wildlife Biology
Wildlife Research
Proceedings of 5th International *Martes* Symposium
Proceedings of 2nd International *Martes* Symposium
Proceedings of 1st International *Martes* Symposium
Maine Agricultural and Forest Experiment Station Miscellaneous Reports

Other Professional Contributions

Granted > 130 media interviews; contributed to 3 film documentaries, presented legal and public testimony on numerous occasions, have provided technical advice to natural resource agencies and non-governmental organizations in Maine, Alaska, Rocky Mountain states, Ontario, New Brunswick, Nova Scotia and Newfoundland Canada, and Tanzania; hosted numerous field trips for visiting scientists, organizations, and businesses; provided technology transfer (newsletters, phone calls, presentations, field visits) for forest products businesses in Maine, handled hundreds of requests for information from public; presented >100 public talks; frequently review scientific proposals for business, federal agencies, and other universities.

Honors and Awards

2009:	Distinguished Alumnus Award, Department of Wildlife Ecology, University of Maine
2008-2009:	University Research Sabbatical, University of Maine (competitive system-wide award)
2008:	Award of Professional Excellence, Department of Wildlife Ecology, The University of Maine (awarded to alumni)
2007:	Maine Chapter of the Wildlife Society's Meritorious Service Award
2007:	Appointed Cooperating Professor, Center for Research on Sustainable Forests
2006:	G. Peirce and Florence Pitts-Webber Award to the Outstanding Researcher in Forest Resources, University of Maine
2000:	G. Peirce and Florence Pitts-Webber Award to the Outstanding Researcher in Forest Resources, University of Maine
1998:	Appointed Cooperating Scientist, Maine Cooperative Forestry Research Unit
1992:	Distinguished College of Forest Resources Professor of the Year, University of Maine
1985:	Dow-Griffee Award to Outstanding Graduate Students in Agriculture, Forestry and Wildlife at the University of Maine
1984:	New England Outdoor Writer's Scholarship to Outstanding Wildlife Student in New England (selected from regional competition among state-level awardees).
1984:	New England Outdoor Writer's Scholarship to Outstanding Wildlife Student in Maine
1979:	Phi Kappa Phi, University of Wyoming

GRADUATE ADVISING:

-Served as major advisor for 19 M.S., 3 non-thesis Masters and 7 Ph.D. students; 25 dissertations, theses, and final project reports completed to date.
-Served on 42 graduate committees where I did not serve as major advisor.
-Mentored 4 post-doctoral Research Scientists and several post-M.S. Research Associates.

TEACHING EXPERIENCE:

Taught 37 sections of 6 undergraduate semester courses (median instructor rating 1.42; 1=excellent, 5=poor); managed and taught the required 3-week, summer field session for wildlife students annually for 10 years (median instructor rating 1.50); advised 8-33 undergraduate wildlife students annually, taught 12 semesters of graduate courses in Predator Ecology and Habitat Analysis (median instructor rating 1.50), and instructed graduate thesis (54 semesters).

PUBLICATIONS (* = refereed)**:**

Books, Journal Articles, Book Chapters, and Published Conference Proceedings

*xxxx - Loman, Z. G., W. V. Deluca, D. J. Harrison, P. B. Wood, C. S. Loftin, and W. S.Schwenk. Submitted. Forest birds usefulness as representatives using fine scale proxy models. ***Diversity and Distributions***.

*xxxx – Rolek, B. W., D. J. Harrison, C. S. Loftin, and P. B. Wood. Submitted. Regenerating clearcuts and post-harvest treatments promote spruce-fir avian assemblages and richness in managed stands. ***Forest Ecology and Management***

*xxxx – Simons-Legaard, E. M., D.J. Harrison, and K. R. Legaard. Submitted. Efficacy of regulations to reduce winter habitat loss and fragmentation in deer wintering areas. ***Biological Conservation***.

*In press - Loman, Z. G., W. V. Deluca, D. J. Harrison, C. S. Loftin, B. W. Rolek, and P. B. Wood. Submitted. Landscape capability models as a tool to predict fine-scale forest bird occupancy and abundance. ***Landscape Ecology***.

*2017 - Loman, Z. G., E. J. Blomberg, W. V. Deluca, D. J. Harrison, C. S. Loftin, and P. B. Wood. Landscape capability predicts upland game bird abundance and occurrence. ***Journal of Wildlife Management*** DOI:10.1002/jwmg.21265

*2016 – Simons-Legaard, E.M., D.J. Harrison and K.R. Legaard. Habitat monitoring and projections for Canada lynx: linking the Landsat archive with carnivore occurrence and prey density. ***Journal of Applied Ecology*** 53:1260-1269.

*2013 - Fuller, A. K,. and D. J. Harrison. Modeling the influence of forest structure on microsite habitat use by snowshoe hares**.** ***International Journal of Forestry Research***: Volume 2013, Article ID 892327, 7 pages, http://dx/doi.org/10.1155/2013/892327.

*2013 - Fuller, A. K., S. M. Spohr, D. J. Harrison, and F. A. Servello. Nest survival of wild turkeys in a mixed-use landscape: influences at nest-site and patch scales. ***Wildlife Biology*** 19:138-146.

*2013 - Simons-Legaard, E. M., D. J. Harrison, W. B. Krohn, and J. H. Vashon. Canada lynx occurrence and forest management in the Acadian forest. ***Journal of Wildlife Management*** 77:567-578.

*2012 - I. D. Thompson, J. Fryxell, and D. J. Harrison. Improved insights into use of habitat by American martens, since the 2nd International Martes Symposium in 1991. ***Pages 209 – 229 in K.B. Aubry, W.J. Zielinski, M.G. Raphael, G. Proulx, and S.W. Buskirk,*** **editors,** ***Biology and conservation of martens, sables, and fishers: a new synthesis.*** Cornell University Press, Ithaca, New York, USA.

*2010- Fuller, A. K., and D. J. Harrison. Movement paths reveal scale-dependent habitat decisions by Canada lynx. ***Journal of Mammalogy*** 91:1269-1279.

*2010- Hearn, B. J., D. J. Harrison, A. K. Fuller, C. G. Lundrigan, and W. J. Curran. Paradigm shifts in habitat ecology of threatened Newfoundland martens. ***Journal of Wildlife Management*** 74:719-728.

*2007 - Fuller, A. K., D. J. Harrison, and J. H. Vashon. Winter habitat selection by Canada lynx in Maine: prey abundance or accessibility? ***Journal of Wildlife Management*** 71:1980-1986.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, A. K. Fuller, and C. L. Hoving. Multi-scalar habitat preferences of snowshoe hares: how does a prey specialist coexist with a specialist predator? Page 175 *in* K. Sjoberg and T. Rooke, editors, ***International Union of Game Biologists Conference Proceedings***, Department of Wildlife, Fish, and Environmental Studies, Swedish University of Agricultural Sciences (SLU), Umea, Sweden.

*2007- Homyack, J. A., D. J. Harrison, and W. B. Krohn. Effects of precommercial thinning on snowshoes hares in Maine. ***Journal of Wildlife Management*** 71: 4-13.

*2006 - Homyack, J.A., D. J. Harrison, J.A. Litvaitis, and W.B. Krohn. Quantifying densities of snowshoe hares in Maine using pellet plots. ***Wildlife Society Bulletin*** 34: 74-80.

*2005 - Fuller, A. K. and D. J. Harrison. Influence of partial timber harvesting on American martens in north-central Maine. ***Journal of Wildlife Management*** 69:710-722.

*2005- Homyack, J. A., D. J. Harrison, and W. B. Krohn. Long-term effects of precommercial thinning on small mammals in northern Maine. ***Forest Ecology and Management***: 205:43-57.

*2005 - Hoving, C. L. D. J. Harrison, W. B. Krohn, R. A. Joseph, and M. O'Brien. Broad-scale predictors of Canada lynx occurrence in eastern North America. ***Journal of Wildlife Management*** 69:739-751.

*2004 - Fuller, A. K., D. J. Harrison, and H. J. Lachowski. Stand-scale effects of partial harvesting and clearcutting on small mammals and forest structure. ***Forest Ecology and Management*** 191:373-386.

*2004 - Harrison, D. J., A. K. Fuller, and G. Proulx. Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. *Springer, New York, New York (edited, peer-reviewed book).***

*2004 - Homyack, J. A., D. J. Harrison and W. B. Krohn. Structural differences between precommercially thinned and unthinned conifer stands. ***Forest Ecology and Management*** 194:131-143.

*2004 - Hoving, C. L., D. J. Harrison, W. B. Krohn, W. J. Jakubas, and M. A. McCollough. Canada lynx habitat and forest succession in northern Maine, United States. ***Wildlife Biology*** 10(4):285-294.

*2004 - Krohn, W. K., C. L. Hoving, D. J. Harrison, D. Phillips, and H. Frost. Martes foot-loading and snowfall patterns in eastern North America: Implications to broad-scale distributions and interactions of mesocarnivores. Pages 115-131 *in* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. Springer, New York, New York.

*2004 - Payer, D. C. and D. J. Harrison. Relationships between forest structure and habitat use by American martens in Maine, USA. Pages 173-186 i*n* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International***

Perspective. Springer, New York, New York.

*2004 -Payer, D. C., D. J. Harrison, and D. M. Phillips. Territoriality and Home-Range Fidelity of American Martens in Relation to Timber Harvesting and Trapping. Pages 99-114 i*n* D. J. Harrison, A. K. Fuller, and G. Proulx, editors, ***Martens and Fishers (Martes) in Human Altered Environments: An International Perspective***. *Springer*, New York, New York.

*2004 - Spohr, S. M., F. A. Servello, D. J. Harrison, and D. W. May. Survival and reproduction of wild turkey hens in a suburban environment. ***Northeast Naturalist*** 11*: 363-374.*

2003 - Fuller, A. K. and D. J. Harrison. Occurrence, distribution, and survey methods for native terrestrial mammals in Acadia National Park, Mount Desert Island, Maine. ***Maine Agricultural and Forest Experiment Station Miscellaneous Publication 752***, Orono, Maine, 28 pp.

*2003 -- Payer, D. C., and D. J. Harrison. Influence of forest structure on habitat use by American marten in an industrial forest. ***Forest Ecology and Management*** 179:145-156.

*2000 - Payer, D. C., and D. J. Harrison. Structural differences between forests regenerating following spruce budworm infestation and clearcut harvesting: implications for American marten. ***Canadian Journal of Forest Research*** 30:1965-1972.

1999 - Harrison, D. J. Response of wildlife to thinning in forests of the northeastern U.S. Pp. 35-40 *in* ***Proceedings of Conference on Thinning in the Maine Forest***, Cooperative Forestry Research Unit and Office of Professional Development, University of Maine, Orono.

*1998 - Harrison, D. J., and T. G. Chapin. Extent and connectivity of habitat for wolves in eastern North America. ***Wildlife Society Bulletin*** 26:767-775.

*1998 - Chapin, T. G., D. J. Harrison, and D. D. Katnik. Influence of landscape pattern on habitat use by American marten in an industrial forest. ***Conservation Biology*** 12:1327-1337.

*1998 - Long, R. A., A. F. O'Connell, Jr., and D. J. Harrison. Mortality and survival of white-tailed deer Odocoileus virginianus fawns on a north Atlantic coastal island. ***Wildlife Biology*** 4:237-247.

*1998 - Phillips, D. M., D. J. Harrison, and D. C. Payer. Seasonal changes in home-range area and fidelity of martens. ***Journal of Mammalogy*** 79:180-190.

1997 - Bissonette, J. A., D. J. Harrison, C. D. Hargis, and T. G. Chapin. The influence of spatial scale and scale-sensitive properties on habitat selection by American marten. Pages 368-385 in J.A. Bissonette (editor). ***Wildlife and Landscape Ecology: effects of pattern and scale*.** Springer-Verlag, New York.

*1997 - Chapin. T. G., D. J. Harrison, and D. M. Phillips. Seasonal habitat selection by marten in an untrapped forest preserve. ***Journal of Wildlife Management*** 61:707-717.

*1997 - Chapin, T. G., D. M. Phillips, D. J. Harrison, and E. C. York. Seasonal selection of habitats by resting marten in Maine. Pages 166-181 *in* G. Proulx, H.N. Bryant, and P.M. Woodard (editors). ***Martes: taxonomy, ecology, techniques and management***. Provincial Museum of Alberta,

Edmonton, Alberta, Canada. 474pp.

*1997 - Hodgman, T. P., D. J. Harrison, D. M. Phillips, and K. D. Elowe. Survival of American marten in an untrapped forest preserve in Maine. Pages 86-99 *in* G. Proulx, H.N. Bryant, and P.M. Woodard (editors). ***Martes: taxonomy, ecology, techniques and management***. Provincial Museum of Alberta, Edmonton, Alberta, Canada. 474pp.

*1996 - Chilelli, M., B. Griffith, and D. J. Harrison. Interstate comparisons of river otter harvest data. ***Wildlife Society Bulletin*** 24(2):238-246.

1995 - Harrison, D. J. Foreword. Pp. 1-4 in G. Parker. ***Eastern coyote: the story of its success***. Chelsea Green Publishing Company, White River Junction, Vermont.

*1994 - Hodgman, T. P., D. J. Harrison, D. D. Katnik, and K. D. Elowe. Survival in an intensively trapped marten population in Maine. ***Journal of Wildlife Management***. 58:593-600.

*1994 - Katnik, D. D., D. J. Harrison, and T. P. Hodgman. Spatial relations in a harvested population of marten in Maine. ***Journal of Wildlife Management*** 58:600-607.

*1992 - Harrison, D. J. Dispersal characteristics of coyotes in Maine. ***Journal of Wildlife Management*** 56:128-138.

*1992 - Harrison, D. J. Social ecology of coyotes in northeastern North America: relationships to dispersal, food resources, and human exploitation. Pages 53-72 *in* A. Boer (editor) ***Ecology and Management of the Eastern Coyote***. Wildlife Research Unit, University of New Brunswick, Frederickton.

1992 - Harrison, D. J., and N. E. Famous. Effects of peat harvesting on a large mammalian carnivore: a case study with coyotes (Canis latrans). Pages 77-96 *in* D. Grubich (editor) ***Peat and Peatlands: the Resource and Its Utilization***. Proceedings International Peat Symposium, Duluth, Minnesota.

*1992 – O'Connell, A. F., Jr., D. J. Harrison, B. Connery, and K.B. Anderson. Food use by an insular population of coyotes. ***Northeast Wildlife*** 49:36-42.

*1991 - Harrison, D. J., J. A. Harrison, and M. O'Donoghue. Pre-dispersal movements of coyote (Canis latrans) pups in eastern Maine. ***Journal of Mammalogy*** **72:**756-763.

*1989 - Harrison, D. J., J. A. Bissonette, and J. A. Sherburne. Spatial relationships among coyotes and red foxes in eastern Maine. ***Journal of Wildlife Management*** 52:181-185.

*1989 - Litvaitis, J. A., and D. J. Harrison. Bobcat-coyote niche relationships during a period of coyote population increase. ***Canadian Journal of Zoology*** 67:1180-1188.

1986 - Harrison, D. J., and W. B. Krohn. Population characteristics of Maine coyotes. ***U.S. Fish and Wildlife Service Research Information Bulletin No. 86***:112.

*1986 - Harrison, D. J. Coyotes in the northeast: their history, origin, and ecology. ***Appalachia*** 46:30-39.

1986 - Major, J. T., J. A. Sherburne, J. A. Litvaitis, and D. J. Harrison. Resource use by and interspecific relations between bobcats and other large mammalian predators in Maine. Pages 291 *in* S.D. Miller and D.D. Everett, (editors) ***Cats of the World: Biology, Conservation and Management***. Natl. Wildlife Federation, Washington, D.C.

*1985 - Harrison, D. J., and J. R. Gilbert. Denning ecology and movements of coyotes in Maine during pup rearing. ***Journal of Mammalogy*** 66:712-719.

*1984 - Harrison, D. J., and J. A. Harrison. Foods of adult Maine coyotes and their known-aged pups. ***Journal of Wildlife Management*** 48:922-926.

1984 - Harrison, D. J. Use of white-tailed deer by coyotes during pup rearing in Maine. ***Transactions of the Northeast Deer Technical Committee*** 20:34-35.

Technical Reports and Miscellaneous Publications:

2017 – Dunham, S. and D. Harrison. Spruce grouse habitat in the Acadian forests of Maine: Results and recommendations for forest managers. CFRU Research Note 17-01, Maine Cooperative Forestry Research Unit. University of Maine. Orono, ME.

2016 – Harrison, D., S. Morano, and S. Olson. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 52-56 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2016 – Tebbenkamp, J., E. Blomberg, D. Harrison, and S. Dunham. Population dynamics of spruce grouse in the managed forest landscapes of northern Maine. Pages 57-61 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2016 – Rolek, B., D. Harrison, C. Loftin, and P. Wood. Bird communities of coniferous forests in the Acadian region: habitat associations and responses to forest management. Pages 57-61 *in* Roth, B.E. (Ed.) Cooperative Forestry Research Unit: 2015 Annual Report. University of Maine. Orono, ME.

2015 – Harrison, D., and S. Olson. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 68-74 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2015 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 75-79 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2015 - Rolek, B., D. Harrison, C. Loftin, and P. Wood. Bird communities of coniferous forests in the Acadian Region: Habitat associations and response of birds to forest management. Pages 80-88 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2014 Annual Report, University of Maine, Orono.

2014 – Harrison, D., S. Olson, D. Mallett, A. Fuller, and J. Vashon. Relationships among forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 57-62 *in* B.E. Roth, editor, Cooperative Forestry

Research Unit: 2013 Annual Report, University of Maine, Orono.

2014 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 63-66 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2013 Annual Report, University of Maine, Orono.

2014 – Rolek, B., D. Harrison, and C. Loftin. Bird communities of coniferous forests in the Acadian Region: habitat associations and response of birds to forest management. Pages 67-73 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2013 Annual Report, University of Maine, Orono.

2013 – Harrison, D., E. Simons-Legaard, K. Legaard, and S. Sader. Effectiveness of zoning to protect deer wintering habitats in Maine: Did the designation of LURC-zoned deeryards achieve desired objectives during the period 1975-2007? Final Report to Northeastern States Research Cooperative and USDA Forest Service. http://nsrcforest.org/sites/default/files/uploads/harrison08full.pdf

2013 – Harrison, D., S. Olsen, D. Mallett, A. Fuller, and J. Vashon. Relationships among commercial forest harvesting, snowshoe hares and Canada lynx in Maine. Pages 79-84 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2012 Annual Report, University of Maine, Orono.

2013 – Dunham, S., and D. Harrison. Patch occupancy, habitat use, and population performance of spruce grouse in commercially managed conifer stands. Pages 85-89 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2012 Annual Report, University of Maine, Orono.

2012 - Harrison, D., S. Olson, D. Mallet, J. Vashon, and A. Fuller. Relationships among commercial forest harvesting, snowshoe hares, and Canada lynx in Maine. Pages 95-98 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2011 Annual Report, University of Maine, Orono.

2012 - Harrison, D., and S. Dunham. Relative densities, patch occupancy, and population performance of spruce grouse in managed and unmanaged forests in northern Maine. Pages 99-104 *in* B.E. Roth, editor, Cooperative Forestry Research Unit: 2011 Annual Report, University of Maine, Orono.

2011 – Fuller, A. K. and D. J. Harrison. A landscape planning initiative for northern Maine using area-sensitive umbrella species: Evaluating baseline conditions and effects of alternative management scenarios and silvicultural portfolios on future timber harvest volumes, standing forest inventory, and marten and lynx habitat supply on The Nature Conservancy's St. John lands in northern Maine. ***Final Report to the Maine Chapter of The Nature Conservancy***. 133 pp.

2011 – Harrison, D., W. Krohn, S. Olson and D. Mallett. Snowshoe hares spatio-temporal dynamics and implications for Canada lynx in managed landscapes. Pages 43 - 48 *in* Mercier***, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report***, The University of Maine, Orono.

2011 – Simons, E. M., D. J. Harrison, K. R. Legaard, and S. A. Sader. The effectiveness of state regulation to protect deer wintering areas in Maine: Did the designation of LURC-zoned deer yards achieve desired objectives during the period 1975-2007? Pages 38-42 *in* ***Mercier, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report***, The University of Maine, Orono.

2011 – Vashon, J., D. Harrison, A. Fuller, D. Mallet, W. Jakubas, and J. Organ. Documenting the response of

Canada lynx to declining snowshoe hare populations in an intensively managed private forest landscape in northern Maine. Pages 49-51 *in* ***Mercier, W. J. and A. S. Nelson (eds.) Cooperative Forestry Research Unit: 2010 Annual Report,*** The University of Maine, Orono.

2010 – Simons, E., D. Harrison, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine. ***Final Report to the Maine Cooperative Forestry Research Unit,*** University of Maine, Orono. 29 pp.

2010 - Harrison, D. J., W. B. Krohn, and S. Scott. Effects of changing hare densities on probability of lynx occurrence throughout the commercially managed landscape of northwestern Maine. Pages 61-64 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2010 - Simons, E., D. Harrison, K. Legaard, and S. Sader. The effectiveness of zoning to protect deer wintering areas during the period 1975-2007: Does compromising forest productivity to protect deer habitat achieve desired ecological objectives? Pages 51-56 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2010 - Simons, E., D. Harrison, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine - Year # 3 Progress Report. Pages 66-75 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2010 – Vashon, J., D. Harrison, A. Fuller, D. Mallett, S. McLellan, W. Jakubas, and J. Organ. Documenting the response of Canada lynx to declining snowshoe hare populations in an intensively managed private forest landscape in northern Maine. Pages 57-60 *in* ***Meyer, S. R. (Ed.): Cooperative Forestry Research Unit: 2009 Annual Report.*** University of Maine, Orono.

2009 - Fuller, A.K, and D. J. Harrison. Home range, habitat use, edge relationships, mortality sources, age structure,, and survival of white-tailed deer on Mount Desert Island, Maine, 1992-1994. ***Final contract report to Natural Resource Stewardship Science Office***, Northeast Region, U.S. Department of Interior, National Park Service. 69 pp.

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2008 – Simons, E. K. Legaard, D. Harrison, S. Sader, J. Wilson, and W. Krohn. Predicting responses of forest landscape change on wildlife umbrella species. Pages 55-59 *in* Maine Cooperative Forestry Research Unit Annual Report, ***Maine Agricultural and Forest Experiment Station Miscellaneous Report 444***, Orono, Maine.

2007 – Fuller, A.K, D. J. Harrison, B. J. Hearn. Application and testing of models to predict probability of occupancy and density of endangered Newfoundland martens. ***Final Contract Report to Natural Resources Canada, Newfoundland-Labrador Wildlife Division, and Western Newfoundland Model Forest***, Corner Brook, Newfoundland. 75 pp.

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1993 - Harrison, D.J. A landscape approach to habitat quality assessment: a case study with American martens. Pages 10-12 *in* SJ.G. Lusk, ed., ***Methodology for deriving quantitative definitions of forest wildlife habitat***, New Brunswick Department Natural Resources and Energy, Frederickton.

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Scientific Publications *In Prep*:

Fuller, A. K., D. J. Harrison, J. A. Hepinstall-Cymerman, and B.J. Hearn. A quantitative method for detecting ecological thresholds: nonlinear responses to habitat loss by American martens. ***Ecological Applications***: (in revision).

Fuller, A. K., and D. J. Harrison. Competition and resource partitioning between island red foxes and recently colonized coyotes. ***Wildlife Biology*** (in revision).

Hepinstall, J. A., and D. J. Harrison. A method for simulating home ranges and determining habitat currencies. ***Journal of Wildlife Management*** (in prep).

Fuller, A. K., and D. J. Harrison. Effects of habitat loss versus fragmentation on habitat occupancy by endangered Newfoundland martens. ***Conservation Biology*** (in prep).

Harrison, D.J. Influence of dispersal on social ecology of coyotes: do social pressures or prey size promote pack formation? ***Animal Behaviour*** (in preparation).

Hepinstall, J. A., and D. J. Harrison. Prediction and validation of occupancy models for American martens. ***Journal of Wildlife Management*** (draft manuscript complete).

Hearn, B. J. and D. J. Harrison. Home range and body scaling in American martens in Maine and Newfoundland: why are home ranges in Newfoundland so large? ***Oikos*** (draft manuscript complete).

Hearn, B. J. and D. J. Harrison. When the sink becomes the source: survival of martens in relation to timber harvesting in Newfoundland. ***Oikos*** (manuscript in preparation)

Hepinstall, J.A. and D. J. Harrison. The relative effects of habitat loss versus fragmentation in determining habitat occupancy by American marten. ***Conservation Biology*** *(manuscript complete and undergoing pre-submission review).*

D. J. Harrison, W. B. Krohn, S. Scott, and L. D. Robinson. Effects of partial forest harvesting on habitat and densities of snowshoe hares. ***Forest Ecology and Management*** *(manuscript in prep).*

Payer, D.C., and D.J. Harrison. Influences of timber harvesting and trapping on habitat selection and home range characteristics of marten. ***Journal of Wildlife Management*** *(analyses ongoing).*

GRANTS AND PROPOSALS:

External (total funded >4.3 million, direct funding to University of Maine =$3,858,897 and is presented in

bold):

Responses of marten populations to 30 years of habitat change in commercially managed landscapes of northern Maine. Maine Cooperative Forestry Research Unit, 2018-2020, **$79,200**, funded.

Responses of marten populations to 30 years of habitat change in commercially managed landscapes of northern Maine. Matching funds of $67,218 requested from Maine Department of Inland Fisheries and Wildlife, 2018-2020, $67,218, not funded.

Spatio-temporal dynamics of snowshoe hares in northern Maine from 2001-2015. Post-doctoral matching support requested from Maine Department of Inland Fisheries and Wildlife, 2017-2018, $33,250, not funded.

Linking habitat associations with demographics to inform conservation of spruce grouse throughout the Northern Forest. Northeastern States Research Cooperative, Theme Four, not funded, $63,633 requested, Co-investigator with Erik Blomberg.

Studies of snowshoe hare population cycles. U.S. Fish and Wildlife Service, funded **$21,290** 1/15/2015-12/31/2017.

Demography and populations status of spruce grouse in northern Maine forests, Co-investigator with Erik Blomberg, Maine Outdoor Heritage Fund, funded **$17,835**, 2014-2015.

Population dynamics of spruce grouse in the managed forest landscapes of northern Maine. Co-investigator with Erik Blomberg, Maine Cooperative Forestry Research Unit, funded, **$89,238** 2015-2017.

Evaluation of representative bird species Landscape Capability models. Co-investigator with Cynthia Loftin, USGS Science Support Program, funded, **$276,731**, 2015-2017

Effects of forest management practices in the Acadian northern hardwood/conifer forests of Maine on forest bird communities. Co-investigator with Cynthia Loftin. U.S. Fish and Wildlife Service and USGS Science Support Partnership Program, funded, **$380,884**, 2012-2016.

Effects of forest management practices in the Acadian conifer forests of Maine on forest bird communities, with emphasis on species of federal conservation priority. Co-investigator with Cynthia Loftin, **$87,000**, Maine Cooperative Forestry Research Unit, funded 2013-2015.

Studies of snowshoe hare densities and forest succession following forest harvesting. U.S. Fish and Wildlife Service. Cooperative Agreement 2011-2015. **$15,000**, funded.

Long-term studies of snowshoe hares, Canada lynx and forest structure associated with forest succession following clearcutting and various forms of partial harvests. **$157,110**, Maine Cooperative Forestry Research Unit, funded 2012-2015.

Cost-shared funding and base support for a Cooperating Scientist in wildlife-forestry relationships. Proposal to Maine Cooperative Forestry Research Unit, The Nature Conservancy,and other forest stakeholders. $510,000 funded, 2010-2015 – but project cancelled due to candidate taking faculty

position at another university.

Relative densities, patch occupancy, and population performance of spruce grouse in clearcut, precommercially thinned, mid-late successional conifer forests, and in coniferous forested wetlands in northern Maine**. $118,007**, funded, Maine Cooperative Forestry Research Unit, funded 2010 –2013.

Genetic-based analyses of lynx diets from scats collected with aid of detection dogs. Funded $6,812, 2013. Funded by Maine Department of Inland Fisheries and Wildlife and paid directly to genetics subcontractor.

Effectiveness of zoning to protect deer wintering areas**. $17,500** funded by Northeastern States Research Cooperative, USDA Forest Service for 2008-2010.

Trends in habitat supply for wildlife species whose habitat requirements are not addressed using coarse-filter umbrella species approaches, with a focus on deer wintering areas**. $77,000** funded by Maine Cooperative Forestry Research Unit for 2009-2011.

An evaluation of course filter umbrella species for landscape planning: trends in habitat supply for wildlife species whose habitat requirements are not addressed using umbrella species approaches. Pre-proposal submitted to Northeastern States Research Cooperative, Theme 4, USDA Forest Service for 2008-2010, $45,629, not funded.

Long-term monitoring of snowshoe hare populations to inform stand and landscape-scale forest management and the recovery planning for Canada lynx in Maine, and collaboration with Maine Department of Inland Fisheries and Wildlife to address changes in lynx demography and spatial ecology associated with declining hare populations. **$97,083** funded by Maine Cooperative Forestry Research Unit for 2008-2011and **$14,637** funded by U.S. Fish and Wildlife Service.

An evaluation of coarse-filter umbrella species for landscape planning. $59,311 requested from Northeast Regional Conservation Needs Grants Program, not funded.

Long-term habitat management planning for lynx and marten across the managed landscapes of northern Maine. **$265,000** funded by U.S. Natural Resource Conservation Service, Healthy Forest Reserve Program (The Nature Conservancy and Natural Resource Conservation cooperating) for 2007-2010.

Developing a black bear model system of skeletal mechanotransduction. $2,105,885 requested from U.S. Department of Human Services (with R. Seger as lead P.I. and others), not funded.

Forecasting and assessing the future of Maine's forests using LiDAR. $2,098,924 requested from Maine Technology Institute (with B. Wiersma as lead P.I. and others), not funded.

Documenting relationships among forest management and the occurrence patterns of Northern Goshawks in Maine. Proposal to Maine Cooperative Forestry Research Unit, $64,000 for 2008-2009 (not funded).

Application and testing of models to predict probability of occupancy and density of endangered Newfoundland marten. **$26,329** funded by Canadian Forest Service and Newfoundland-Labrador Wildlife Division 2006-2007.

Integrating landscape-scale biodiversity conservation with diverse forest management goals on large ownerships in Maine. **$115,427** funded by Maine Cooperative Forestry Research Unit for 2006-2009 (with Manomet Center for Conservation Sciences).

Responses of snowshoe hares and lynx to forest harvesting across multiple spatial scales. **$96,000** funded by Maine Cooperative Forestry Research Unit, **$20,000** funded by U.S. Fish and Wildlife Service, **$15,000** by National Council for Air and Stream Improvement; 2005 - 2009 (with W. Krohn).

Trends in deer-vegetation relationships in Acadia National Park from 1980-2007: relationships of an unhunted insular deer population to forage carrying capacity. $99,830 requested from U.S. National Park Service (not funded).

Completion of deer studies in Acadia National Park. **$8,900** funded by U.S. National Park Service, 2006.

Support for lynx-hare research at The University of Maine, 2005-2007. **$20,000** in grants funded by International Paper Company through the Department of Industrial Cooperation, University of Maine (with W. Krohn).

Gift from The Nature Conservancy to support lynx-hare research projects, May 2006, **$5,000**.

Predicting responses of forest landscape change on wildlife umbrella species: Modeling future effects of alternative forest harvesting scenarios on vertebrate diversity across multiple spatial scales on commercial forestlands in Maine. **$124,00**0 funded by USDA Forest Service, Agenda 20/20 Program 2005-2007, and **$17,000** funded by Maine Cooperative Forestry Research Unit. This project is in collaboration with Drs. Steve Sader, Jeremy Wilson, and William Krohn and supports 2 graduate students.

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across spatial multiple scales in northern Maine. Science Support Program, USGS/FWS, **$89,810** funded for 2004-2007 (with W.B. Krohn, MCFWRU, M. McCollough, FWS).

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across multiple spatial scales. **$50,000** funded by CFRU for 2005-2006, **$10,500** funded by U. S. Fish and Wildlife Service (with W. B. Krohn).

Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios across spatial multiple scales. **$30,000** funded by National Council for Air and Stream Improvement and Plum Creek Corporation for 2004-2006 (with W. B. Krohn).

Evaluating the umbrella species approach for biodiversity conservation on commercial forestlands in Maine. **$28,850** funded by CFRU for 2004. This project supported a collaboration with post-doctoral scientist Jeff Hepinstall at the University of Washington, Seattle.

Development of a stand-scale model for predicting snowshoe hare densities for forest measurements. **$22,000** funded by CFRU for 2004 (with W. B. Krohn). This project supported a research collaboration with Jessica Homyack, Research Associate, U.S. Fish and Wildlife Service, Cheyenne, Wyoming.

Gift from The Nature Conservancy to support lynx-hare research projects, August 2004, **$5,000**.

Support for publication of edited book titled: *Martens and Fishers (Martes) in Human-Altered environments: An International Perspective*. Gift of **$8,000** from Canadian Forest Service (2002) and **$3,000** from Newfoundland-Labrador Wildlife Division.

Influence of forest practices on stand- and sub-stand scale habitat selection of lynx in northern Maine. Maine Cooperative Forestry Research Unit, **$63,046**, (funded, 2001-2003), Fraser Paper Company **$3,000**.

Influence of forest practices on stand- and sub-stand scale habitat selection of lynx in northern Maine. U.S. Fish and Wildlife Service and Maine Department of Inland Fisheries and Wildlife, **$12,000** (funded 2001-2003).

Landscape thresholds and response to fragmentation by endangered Newfoundland marten. Canadian Wildlife Service, Canadian Forest Service, Western Newfoundland Model Forest, Parks Canada, Newfoundland Wildlife Division, **$180,600**(US$) (funded, 2002-2007).

National Commission on Science for Sustainable Forestry – authored preproposal in collaboration with Manomet scientists requesting $160,000 to support landscape planning for biodiversity in northern Maine. The preproposal was selected as one of 3 finalists (2 to be funded) nationally and we were invited to develop a full proposal. Preproposal was withdrawn because of administrative responsibilities associated with Interim Chair position.

Lynx research projects in northern Maine. The Nature Conservancy, **$7,000** (gift) in 2003.

Influence of pre-commercial thinning on wildlife habitat in northern Maine, with special emphasis on snowshoe hares. Maine Cooperative Forestry Research Unit, U.S. Fish and Wildlife Service, National Council of the Paper Industry for Air and Stream Improvement, **$177,176** (funded, 2000-2003).

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. Maine Cooperative Forestry Research Unit, **$45,000** (funded 2000-2002).

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. National Council of the Paper Industry for Air and Stream Improvement, $30,000 (not funded).

Marten as a tool for landscape-scale habitat planning in northern Maine. Maine Outdoor Heritage Fund and Maine Dept. Inland Fisheries and Wildlife, **$71,498**, (funded, 1999-2002).

Marten as a tool for landscape-scale habitat planning in northern Maine. Maine Chapter of The Nature Conservancy $15,000 requested, **$7,500** funded, 2000-2002).

A GIS-based evaluation of lynx habitat at multiple spatial scales. National Council of the Paper Industry for Air and Stream Improvement (NCASI), U.S. Fish and Wildlife Service, Maine Dept. Inland Fisheries

and Wildlife $59,503 requested, **($52,003**, funded, 1998-2001), co-investigator: W. Krohn.

Population demography of marten in Newfoundland, Canada. Natural Resources Canada, **$20,000**, (funded 1998-99).

Influence of partial harvesting on habitat selection by marten and primary prey species in northern Maine. Maine Cooperative Forestry Research Unit, **$37,151** (funded, 1997-99).

Effects of timber harvesting and trapping on marten populations in northern Maine: the industrial forest site. Maine Department of Inland Fisheries and Wildlife, **$169,259** direct funding, $60,800 *in-kind* (funded, 1993-99).

Effects of timber harvesting and trapping on marten populations in northern Maine: the forest preserve site. Maine Cooperative Forestry Research Unit, **$90,889** (funded, 1993-98), Maine Forest Service, **$71,689** (funded, 1994-98), Maine Department of Inland Fisheries and Wildlife, $25,500 *in-kind* (funded 1994-98). Influence of microhabitat characteristics on intensity of forest use and productivity of martens in Maine: implications for forest practices. National Council of the Paper Industry for Air and Stream Improvement, **$38,214** (funded, 1995-98).

Factors influencing nesting success of wild turkeys in Connecticut. National Wild Turkey Federation and Wildlife Division, Connecticut Dept. of Environmental Protection **$25,000** + *in-kind* support (funded 1996-98), co-investigator F. Servello.

Potential habitat for wolves in the northeastern U.S. and connectivity with habitat occupied by extant wolf populations in southeastern Canada. Wildlife Conservation Society, **$4,559**, (funded, 1996).

Opportunities for management of habitat of American marten on Crown lands leased and managed by Fraser, Inc., in New Brunswick. Fraser Paper, Inc., New Brunswick, $69,334, (not funded, 1996).

Effects of timber harvesting and residual stand characteristics on habitat selection by martens in northern Maine. National Council for the Paper Industry for Air and Stream Improvement. **$28,232**, (funded 1993-95).

White-tailed deer mortality, population dynamics, movements, and spatial interactions with coyotes in Acadia National Park, Maine. U.S. National Park Service. **$208,547**, (funded 1991-95, 1999-2000), co-investigator A. O'Connell, Jr.

Predation on white-tailed deer fawns by coyotes on Mount Desert Island, Maine. U.S. National Park Service. **$69,103**, (funded 1992-94), co-investigator A. O'Connell.

Influence of trapping and timber harvesting on pine martens in northern Maine. New Brunswick Executive Forest Research Committee, Inc. $248,000, (not funded).

Occurrence, distribution, and interactions among mammalian carnivores in Acadia National Park. U.S. National Park Service, **$59,000**, (funded 1988-90).

Effects of browsing by white-tailed deer and snowshoe hare on vegetation at Acadia National Park. U.S.

National Park Service, **$39,000**, (funded 1988-90).

Fecal nitrogen as an index to white-tailed deer nutritional condition in Acadia National Park. U.S. National Park Service , **$1,300**, (funded 1990).

Interactions among trapping, timber harvesting, and pine marten populations. Submitted to Maine Department of Inland Fisheries and Wildlife; $73,000 contractual requested, **$58,000** of *in kind* were provided (1988-92).

A review of methodologies and harvest data used to manage river otter populations in northeastern North America. N.E. Region, U.S. Fish & Wildlife Service, **$52,000**, (funded 1989-90), Co-investigator with B. Griffith.

Internal

Add $2k support for Zach Loman in June 2017 from CRSF and new M-Stennis project October 2015-September 2020

A very high resolution aircraft mounted digital imaging system for remotely sensing forest vegetation. University of Maine Competitive Research Funds, Co-Investigator with Stephen Sader and Robert Wagner, **$14,972**, funded, 4/2012.

Received a competitive University Sabbatical ($15,000) that funded Linda Ilse as an Adjunct Professor and provided additional funds to DWE during my sabbatical in spring 2008.

Multi-scalar effects of forestry on an early-and a late-successional forest obligate across commercially managed lands in northern Maine: How are densities of snowshoe hares and occurrence patterns of spruce grouse differentially affected by broad-scale forest harvesting. Maine Agricultural and Forest Experiment Station, McIntire-Stennis Project funded October 2010 – September 2015. Funding includes 25-50% of P.I. salary, 1 graduate research assistantship (12 months), and ca. $3,000 in annual support for research expenses.

Secured funding for 50% ($25,000 per year, plus fringe benefits for 2 years) of an Assistant Scientist salary (Erin Simons) from the Center for Research on Sustainable Forest's ForCAST initiative 2008-2009.

Landscape-Scale Effects of Forestry on Forest Carnivores and Other Vertebrates. This project forms the basis for my McIntire-Stennis (MAFES) associated research program and is approved for the period 10/2004-9/2009. Funding includes 50% of P.I. salary, 1 graduate research assistantship (12 months), and ca. $6,000 in annual support for research expenses.

Influence of partial harvesting on American marten and primary prey species. McIntire-Stennis proposal, base funded 1998-2004.

A habitat supply assessment for marten: linking population management alternatives to habitat extent and distribution across northern Maine. $22,500 requested from research and development funding, College of Natural Sciences Forestry and Agriculture, University of Maine (not funded, 2002).

A research scientist to complete analyses and report writing for long-term studies in Acadia National Park. Department of Wildlife Ecology, Office of the Dean of College of Natural Sciences, Forestry and Agriculture, and Office of the Vice Provost for Research and Graduate Studies, Univ. Maine, $15,000, funded, 1999-2000.

A GIS-based evaluation of potential habitat for lynx in eastern North America at geographic and landscape scales. $7,500, funded, 11/98. Competitive funding for research and development, College of Natural Sciences, Forestry and Agriculture, University of Maine.

Synthesis and application of data from long-term studies of mammalian carnivores and prey. $31,980, not funded, 11/98. Competitive funding for research and development, College of Natural Sciences, Forestry and Agriculture, University of Maine.

A real-time, differentially corrected, global positioning system for studying animal movements. $6,500, funded, 12/97. Faculty Research Funds - Equipment Grant Competition, Univ. Maine.

Influence of partial harvesting on American marten and primary prey species. McIntire-Stennis proposal, base funded 1998-2003, included $7,900 in annual research funding, plus a graduate assistantship.

Effects of timber harvesting on population performance and habitat selection by American martens in northern Maine. McIntire-Stennis proposal, base funded, 1993-1998.

Interaction of forest management practices and pine marten populations. McIntire-Stennis proposal, base funded 1989-1993.

Submitted proposals requesting supplemental McIntire-Stennis funding in 1988, 1989, 1990, 1991, 1992: $44,190 requested, $40,310 funded.

Effects of trapping on pine marten populations in northern Maine. $5,000, funded, 1991. Faculty *Research Funds - Summer Research Grant Competition, Univ. Maine.*

SCIENTIFIC PRESENTATIONS (abridged to include January 1988 – June 2017: presenter is listed first):

2016 – Tebbenkamp 2 posters at TWS Conference, October 2016

2017- Dunham, S. W., D. J. Harrison, and E. J. Blomberg. Spruce Grouse Habitat Ecology in Maine's Commercially Managed Acadian Forest. *Presented at the Adapt, Adopt, Advance: Resiliency in Natural Resource Management Conference,* Bangor, Maine. March 9.

2017 - Harrison, D. J., B. W. Rolek, C.S. Loftin, P.B. Wood. Effects of forest management practices in Acadian conifer forests on spruce-fir bird communities. *Presentation to Irving Corporation Wildlife Biologists and Foresters and to the New Brunswick Forest Research Advisory Committee Advisory,* Sainte Anne de Madawaska, New Brunswick, Canada, May 30.

2017 - Harrison, D. J., B. W. Rolek, C.S. Loftin, P.B. Wood. Effects of forest management practices in

Acadian conifer forests on forest bird communities, with emphasis on species of conservation priority. *Presentation to Advisory Committee of Maine Cooperative Forestry Research Unit*, Orono, Maine, April 12.

2017 - Loman, Z., D. Harrison, C. Loftin, P. B. Wood. Validation of Designing Sustainable Landscapes Models using forest game birds, passerine birds, and a representative species approach. *Workshop presented to U.S. Fish and Wildlife Service, Migratory Bird Division.* Hadley, MA, USA. 12 January.

2017 - Loman, Z., D. Harrison, C. Loftin, P. B. Wood. Designing sustainable landscapes evaluation: where we're going and where we've been. USGS Maine Coop Unit Cooperators Meeting. Orono, ME, March 22.

2017 – Loman, Z. G. Loman, .W. V. Deluca, D. J. Harrison, C. S. Loftin,, Petra B. Wood. Do representative forest songbirds effectively predict occurrences of ecologically similar species? *Paper presented at Northeast Association of Fish and Wildlife Agencies Annual Conference, Rayleigh, NC*, April 11.

2017 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Spruce-fir birds and forest management in Northern New England. *Workshop presented to U.S. Fish and Wildlife Service, Migratory Bird Division.* Hadley, MA, USA. 12 January.

2017 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Softwood forest birds and forestry in New England. *Presentation to Cooperating Committee Meeting for Maine Cooperative Fish and Wildlife Research Unit*, Orono, Maine, USA. 22 March.

2016 - Dunham, S.W., and D.J. Harrison. Female spruce grouse habitat selection during the brood-rearing season in managed conifer forests. *Poster. 6th North American Ornithological Conference. Joint meeting of American Ornithological Union, Cooper Ornithological Society, Wilson Ornithological Society, Association of Field Ornithologists, and Society of Canadian Ornithologists.Washington, DC.* August 17.

2016 - Harrison, D. and S. Dunham. Final project report: Relative densities, patch occupancy, and population performance of spruce grouse in managed and unmanaged forests in northern Maine. *Presentation to Advisory Committee of Maine Cooperative Forestry Research Unit*, Orono, Maine, April 20.

2016 - Loman, Z.G., E. J. Blomberg, W. D. Deluca, D. Harrison, C. Loftin, and P. B. Wood. 2016. Landscape capability as a predictor of upland game bird space use in the northeastern United States. *Presentation at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2016 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Opportunities to enhance habitat for spruce-fir passerines using commercial forest management. *Paper at North American Congress for Conservation Biology, Society for Conservation Biology, Madison, Wisconsin*, July 17-20.

2016 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. Softwood forest birds and forestry in New England. *Presentation at Cooperating Committee Meeting for Maine Cooperative Fish and Wildlife Research Unit, Orono, Maine,* March 23.

2016 - N. S. Parkhill, N. S., J. Tebbenkamp, S. Dunham, D. Harrison, and E. Blomberg. Effect of forest structure on nest site selection by spruce grouse across two scales. *Poster presented at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2016 - Tebbenkamp, J., E.Blomberg, D. Harrison, and R. Holberton. Is autumnal display associated with territorial defense or mate prospecting? A case study with spruce grouse. *Poster presented at The Wildlife Society Annual Conference. Raleigh, North Carolina*, October 15-19.

2015 - Dunham, S. W., D. J. Harrison, and E. J. Blomberg. 2015. Spruce grouse (*Falcipennis canadensis)* patch occupancy and abundance estimates in the commercially managed forests of Maine. *Presentation at the 13th International Grouse Symposium, Reykjavik, Iceland*, September 8.

2015 - Harrison, D. J. Updates on wildlife projects funded by the Maine Cooperative Forestry Research Unit (CFRU). *Presentation at CFRU Advisory Committee Meeting, Houlton, Maine*, October 28, 2015.

2015 - Olson, S. J., D. J. Harrison, A. K. Fuller, J. H. Vashon. Canada lynx food habits responses to seasons, and to low vs. high hare density periods: Always a specialist? *Poster presentation at The Wildlife Society Annual Conference, Winnipeg, Manitoba, Canada*, October 21-22.

2015 - Rolek, B.W., D. Harrison, C.S. Loftin, P.B. Wood. *Workshop on spruce-fir birds and forest management in Northern New England at U.S. Fish and Wildlife Service Migratory Bird Division. Hadley, MA, USA*, October 8.

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Effects of forest management on avian abundance in spruce-fir forests of New England. *Joint Meeting of the Canadian Ornithological Society, Association of Field Ornithologists, and Wilson Ornithological Society. Wolfville, NS*, Canada, July 17.

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Softwood forest birds and silviculture in New England. *Annual Meeting of the Research Committee for Baxter State Park, Augusta, Maine*, March 27.

2014 - Dunham, S. W., and D. J. Harrison. 2014. Spruce grouse breeding season patch occupancy and female home range use across forest management treatments in Maine. *Poster presented at the Annual Conference of The Wildlife Society, Pittsburgh, Pennsylvania*, October 27-28.

2014 – Harrison, D. Origin, spatial and social ecology, and predator-prey relationships of eastern coyotes: a review. *Invited lead presentation in Symposium on Ecology and Management of Coyotes in Eastern North America: Synthesizing Information from Contemporary Studies, The Wildlife Society 21st Annual Conference, Pittsburg, Pennsylvania*, October 27.

2014 – Dunham, S. and D. Harrison. Spruce grouse breeding season patch occupancy and home range comparisons across forest management treatments in Maine. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 - Dunham, S. and D. Harrison. Habitat selection of female spruce grouse during brood rearing in commercially managed forests. Presentation at Annual Meeting of the American Ornithologists

Union, Estes Park, Colorado. September 27.

2014 – Harrison D. and E. Blomberg. Population dynamics of spruce grouse on commercially managed forestlands in Maine: a proposal. *Presentation at winter meeting of CFRU Advisory Committee, Orono, Maine,* January 22.

2014 – Harrison, D., S. Olson, S. Dunham, B. Rolek, and C. Loftin. Updates of research findings from studies of snowshoe hares, Canada lynx, spruce grouse and forest songbirds funded by the Maine Cooperative Forestry Research Unit (CFRU). *Presentation at winter meeting of CFRU Advisory Committee, Orono, Maine,* January 22.

2014 – Olson, S. and D. Harrison. Seasonal influences of vegetation on snowshoe hare pellet densities across forest management types in Maine. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 – Olson, S. and D. Harrison. Snowshoe hare response to seasonal changes in Acadian managed forests of northern Maine. *Presentation at American Society of Mammalogists Annual Conference, Oklahoma City, Oklahoma,* June 10.

2014 – Parkhill, N. S., D. Harrison, and S. Dunham. Effects of forest vegetation on spruce grouse nest-site selection across 2 spatial scales. *Poster at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 14.

2014 – Rolek, B., C. Loftin, D. Harrison, and P. Bohall Wood. The influence of silviculture on New England bird communities in northern coniferous forests. *Presentation at 70th Northeast Fish and Wildlife Conference, Portland, Maine,* April 15.

2014 - Simons-Legaard, E. and D. Harrison. Trends in habitat conditions in LURC-zoned deer wintering Areas: implications for management of deer on commercially-owned forestlands. *Invited presentation and panel discussion at Maine Industrial Forest Forum, Bangor, Maine,* February 16.

2013 – Fuller, A. K. and D. J. Harrison. Trade-offs among forest management objectives, focal wildlife species, and ecological reserves: implications for future forest biodiversity and timber harvests. *Invited Seminar to Department of Wildlife Ecology, University of Maine, Orono, Maine,* October 28.

2013 – Harrison, D., D. Mallett, A. K. Fuller, and J. H. Vashon. Snowshoe hares, forests, and Canada lynx: a dynamic interaction between populations, forestry and habitat. *Presentation at Meeting of Maine Cooperative Forestry Research Unit, Orono, Maine,* April 24.

2013 – Harrison, D.J. Conserving sustainable landscapes: using Canada lynx and American martens as umbrella species to enhance landscape planning. *Invited presentation at 2013 Kennebec Land Trust Lyceum, Wayne, Maine,* March 21.

2013 - Rolek, B., C.S. Loftin, D. Harrison, and P. B. Wood. Softwood forest birds and forest management in New England, *USGS-Maine Cooperative Fish and Wildlife Research Unit Annual Coordinating Committee Meeting, Wells Conference Center, Orono, Maine,* March 21.

2012 – Harrison, D., C. Loftin, and P. Wood. Forestry and forest birds: trends in FWS priority bird species in managed forest landscapes. *Presentation to U.S. Fish and Wildlife Service Refuge Biologists, Portland, Maine*, December 18.

2012 - Harrison, D., and E. Simons-Legaard. 2012. Trends in biodiversity in Maine's northern forest. *Presentation at Annual Program and Executive Board Meeting of The Maine Chapter of The Wildlife Society, Brewer, Maine,* May 10.

2012 - Harrison, D. Effects of forest management on Maine's forest bird communities. *Presentation at Advisory Meeting of the Maine Cooperative Forestry Research Unit, Orono, Maine,* January 25.

2012 - Simons-Legaard, E. and D. Harrison. Trends in habitat conditions in LURC-zoned deer wintering areas. *Presentation at Annual Program and Executive Board Meeting of The Maine Chapter of The Wildlife Society, Brewer, Maine,* May 10.

2012 - Simons-Legaard, E. and D. Harrison. Habitat trends in Maine's LURC-zoned deer wintering areas. *Seminar, Department of Wildlife Ecology, The University of Maine,* October 15.

2011 - Fuller, A., D. Harrison, and W. Krohn. 2011. The role of ecological reserves to maintain American marten and Canada lynx in a working forest landscape. *Poster presented at The Wildlife Society, 18th Annual Conference, Waikoloa, Hawaii,* November 9.

2011 - Fuller, A. and D. Harrison Trade-offs among forest management objectives, focal wildlife species, and ecological reserves: implications for future biodiversity and timber harvests. *Poster presented at the Society of Annual Foresters Annual Conference, Honolulu, Hawaii*, November 4

2011 – Harrison, D., E. Simons, A. Fuller, and W. Krohn. Trends in habitat for forest wildlife in Maine's great north woods: the need for landscape planning. *Invited presentation at U.S. Fish and Wildlife Service Northeast Region Biologists Conference, Baltimore, Maryland*, February 14.

2011- Harrison, D., E. Simons, A. Fuller, and W. Krohn. Habitat planning and assessment for forest vertebrates in northern Maine. *Invited Presentation at Annual Coordinating Committee Meeting of the U. S. Geological Survey, Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono, Maine,* April 12.

2011 – Harrison, D. J. Effects of wind power development on American martens and Canada lynx: an issue of scale. *Invited Presentation at Wind Energy and Wildlife Forum, The Maine Chapter of The Wildlife Society, Orono, Maine,* May 5.

2011 – Simons-Legaard, E. M., D. J. Harrison, K. Legaard, and S. Sader. The effectiveness of zoning to protect deer wintering areas during the period 1975-2007: Does compromising forest productivity to protect deer habitat achieve desired ecological objectives? *Invited Presentation at Advisory Committee Meeting, Maine Cooperative Forestry Research Unit, University of Maine*, Orono, January 26.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Applications of habitat modeling for wildlife umbrella species to landscape planning on commercial forestlands. *Presentation at meeting of Maine Cooperative Forestry Research Unit, Orono, Maine,* April 14.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. A wildlife-based modeling approach to forest landscape planning. *Presentation at The Wildlife Society Annual Conference, Snowbird, Utah*, October 6.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Required steps to develop a habitat classification and structured decision-making framework for use in planning for multiple biodiversity and forest objectives on TNC's St. John Lands. *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Results from a structured process for deciding among alternative management scenarios on TNC's St. John lands: trends in habitat supply for martens and lynx and resulting inventory and forest-related metrics. *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 – Harrison, D., W. Krohn, and S. Scott. Spatio-temporal relationships of snowshoe hare populations to forest harvesting, succession, and natural population cycles: implications for forest managers. *Final project report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine*, January 27.

2010 - Harrison, D., W. Krohn, and S. Scott. Snowshoe hares, forestry and Canada lynx: A dynamic interaction. *Invited Paper presented at Lessons From the Past- Research for the Future: A Workshop for CFRU members*, Orono, Maine, May 20.

2010 - Harrison, D. J. and W.B. Krohn. Ongoing research efforts to link landscape conservation with wildlife habitat planning on commercial forestlands in northern Maine. *Invited Presentation to Directors of Resource Conservation, Wildlife, and Planning, Maine Department of Inland Fisheries and Wildlife, Augusta, Maine,* June 15.

2010 – Harrison, D. J., E. Simons, A. Whitman, J. Wilson. Present and future status of biodiversity on managed forest landscapes in Maine, U.S.A. *Presentation at the Annual Meeting of the Society for Conservation Biology*, Edmonton, Alberta, July 7.

2010 – Harrison, D. J. Incorporating landscape planning into the conservation of sensitive forest wildlife species in the northeastern U.S. *Invited presentation at Landscape Workshop for U.S. Fish and Wildlife Service Refuge Biologists and Refuge Managers, Moosehorn National Wildlife Refuge*, Calais, Maine, August 18.

2010 – Harrison, D. J. Stand- and landscape-scale responses of forest mammals to the various forms of siliviculture applied in the Acadian forests of Maine. *Invited presentation and field tour for U.S. Forest Service biologists, foresters and managers. U.S. Forest Service Northern Forest Research Station*, Bradley, Maine, September 9.

2010 – Harrison, D. J. The need for landscape planning on commercially managed landscapes in Maine: *Presentation at Workshop on Managing Working Forest Landscapes for Multiple Biodiversity and Fiber Objectives Using American Martens and Canada Lynx as Focal Species*, University of Maine, Orono, November 10.

2010 - Mallet, D. G., D. J. Harrison, and A. K. Fuller. Variable fix success of GPS collars across habitats used by Canada lynx: influences of habitat structure, topography, and satellite configuration. *Paper presented at 66th Annual Northeast Fish and Wildlife Conference*, Newton, Massachusetts, April 27.

2010 - Simons, E., D. Harrison, A. Whitman, and J. Wilson. 2010. Quantifying biodiversity: seeing the big picture. *Invited Paper presented at Lessons From the Past- Research for the Future: A Workshop for CFRU members*, Orono, Maine, May 20.

2010 – Simons, E., D. Harrison, A. Whitman, and J. Wilson. Present and future status of biodiversity in Maine's commercial forests as indicated by a suite of condition indicators. *Seminar presented at Department of Wildlife Ecology Spring Seminar Series, University of Maine*, Orono, March 29.

2010 - Simons, E. M., W. B. Krohn, and D. J. Harrison. Influences of past and future forest management on the spatiotemporal dynamics of habitat supply for Canada lynx and American marten. *Invited Presentation at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2010 - Simons, E., W. Krohn, and D. Harrison. Predicting responses of forest landscape changes on wildlife umbrella species: future projections results for Canada lynx and American marten. *Poster presented at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2010 - Scott, S. A., W. B. Krohn, and D. J. Harrison. Influence of declining snowshoe hare densities on Canada Lynx occurrence in northern Maine. *Poster presented at the Cooperators' Meeting, Maine Cooperative Fish and Wildlife Research Unit*, University of Maine, Orono. May 11.

2009 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Landscape planning on The Nature Conservancy lands in northern Maine. *Invited presentation to executive director and staff of The Nature Conservancy*, Brunswick, Maine. February 24.

2009 - Fuller, A. K. D. J. Harrison, B. J. Hearn, and J. A. Hepinstall. Spatial responses to habitat loss in two populations of forest martens. Paper presented at *5th International Martes Symposium – Biology and Conservation of Martens: a New Synthesis*, Seattle, Washington. September 10.

2009 – Harrison, D. J. Forests, forest mustelids, and forest fragmentation: what happens when mammals don't read? *Invited presentation at Symposium on Behavioral Ecology of Mammals, W. M. Keck Center for Behavioral Ecology, North Carolina State University*, September 4.

2009 – Harrison, D. J. and B. J. Hearn. Ecological comparisons of home-range characteristics of American martens in Newfoundland and Maine: why are home ranges of threatened Newfoundland martens so large? Paper presented at *5th International Martes Symposium – Biology and Conservation of Martens: a New Synthesis*, Seattle, Washington. September 10.

2009 – Harrison, D. J. and A. K. Fuller. Ecology of white-tailed deer in Acadia National Park: Results from Research Conducted at The University of Maine. *Presentation to Resource Management Staff, Acadia National Park, Bar Harbor, Maine*, November 6.

2009 – Harrison, D .J., E. Simons, A. Whitman, and J. Wilson. Quantifying biodiversity values across managed landscapes in northern and western Maine. *Presentation to the Maine Cooperative Forestry Research Unit, Mars Hill, Maine*, October 28.

2009 – Harrison, D. J. The growing need to fund additional scientists working on forest-wildlife interactions in Maine: a proposal. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. February 26.

2009 – Harrison, D. J. Forestry and Forest Wildlife, Chaired session at New England Society of American Foresters 89th Winter Meeting**.** Bio: Mass, Fuel, Products, Diversity - Resource Management in a Changing World. Portland, Maine. March 19**.**

2009 – Harrison, D. J., and A. K. Fuller. Relative Densities, Patch Occupancy, and Population Performance of Spruce Grouse in Regenerating Conifer, Precommercially Thinned, Mature Conifer, and Conifer Wetlands Stands: a proposal. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2009 – Harrison, D. J., E. M. Simons, and W. B. Krohn. Habitat changes for wildlife umbrella species: implications for landscape conservation strategies in northern Maine. *Invited presentation to northern Appalachians landscape conservation committee*, The Nature Conservancy, Brunswick, Maine. May 21.

2009 – Harrison, D. J., W. B. Krohn, and E. M. Simons. Past and future trends in habitat supply for forest carnivores in northern Maine: implications for forest policy. *Invited presentation to leadership of Maine Forest Service, Maine Department of Inalnd Fisheries and Wildlife and Maine Natural Areas Program*, Augusta, Maine. June 30.

2009 - Patterson W. and A. K. Fuller. Silvicultural prescriptions for maintaining marten and lynx habitat requirements. Field tour of the Nature Conservancy St. John ownership for staff of The Nature Conservancy, U.S. Fish and Wildlife Service, and Huber Resources Group. May 4-6.

2009 - Scott, S. A, D.J. Harrison, and W. B. Krohn. The relative effects of forest practices and natural population processes on the temporal dynamics of hare populations in northern Maine. *Invited Paper at New England Society of American Foresters 89th Winter Meeting***,** Portland, Maine. March 19**.**

2009 - Scott, S.A., D.J. Harrison, and W.B. Krohn. Spatio-temporal dynamics of snowshoe hares in northern Maine**.** *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2009 – Scott, S. A., D. J. Harrison, and W. B. Krohn. Spatio-temporal dynamics of snowshoe hares in northern Maine. *Paper presented at Northeast Fish and Wildlife Conference*, Lancaster, Pennsylvania. April 27.

2009 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, J. S. Wilson, and S. A. Sader. Past and future trends in habitat supply for martens and lynx across the landscapes of northern Maine, 1973-2032. . *Invited Paper at New England Society of American Foresters 89th Winter Meeting*, Portland, Maine. March 19**.**

2009 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, J. S. Wilson, and S. A. Sader. Past and future trends in habitat supply for martens and lynx across the landscapes of northern Maine, 1973-2032. .

Invited presentation to executive director and staff of The Nature Conservancy, Brunswick, Maine. February 24.

2009 – Simons, E. M. Influences of past and future forest management on the spatiotemporal dynamics of habitat supply for Canada lynx and American martens in northern Maine. *Ph.D. defense seminar, The University of Maine,* Orono. March 25.

2009 - Simons, E. M., J. S. Wilson, D. J. Harrison, W. B. Krohn,. Future trends in habitat supply for martens and lynx across the landscapes of northern Maine under alternative forest management scenarios, 2007-2032. . *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine. April 15.

2008 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. 2008. Application and testing of models to predict probability of occupancy and density of endangered Newfoundland martens. *Presentation to Newfoundland Marten Recovery Team*, Corner Brook, Newfoundland. January 4.

2008 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. 2008. Spatial responses to habitat loss in two isolated populations of forest martens. *Invited talk in the Ecology, Evolution, and Behavior seminar series. Virginia Tech. University*, Blacksburg. February 1.

2008 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Landscape planning initiative for northern Maine using area sensitive umbrella species. *Invited presentation at USDA Natural Resources Conservation Service and U.S. Fish and Wildlife Service workshop on the Healthy Forest Reserve Program in Maine*, Bangor, Maine. July 1.

2008 – Fuller, A. K., D. J. Harrison, B. K. Hearn, and J. A. Hepinstall. Spatial responses to habitat loss in 2 populations of forest martens. *Paper presented at The Wildlife Society 15th Annual Conference*, Miami, Florida. November 11.

2008 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. Applications of lynx and marten models to operational forest management. *Invited presentation at Lynx on the landscape: workshop and fall field tour*, Cooperative Forestry Research Unit, Greenville, Maine. October 28.

2008 – Harrison, D. J., W. B. Krohn, and A. K. Fuller. Long-term monitoring of snowshoe hare populations to inform stand- and landscape-scale forest management and recovery planning for Canada lynx in Maine. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono. April 9.

2008 – Harrison, D. J., A. K. Fuller, and E. Simons. Trends in habitat supply for wildlife species whose habitat requirements are not addressed using coarse-filter umbrella species approaches, with a focus on deer wintering areas. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono. April 9.

2008 – Harrison, D. J., W. B. Krohn, S. Scott, A. K. Fuller, and L. Robinson. Stand-scale management to increase hare and lynx populations. *Invited presentation at Bridging Science and Stewardship Workshop*, Maine Cooperative Forestry Research Unit, Brewer, Maine. May 14.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, and E. Simons. Forests, forest carnivores, and fragmentation: Wildlife-habitat relationships in the Acadian forests of Maine, USA. *Invited seminar, Department of Ecology and Natural Resource Management*, Norwegian University of Life Sciences, As, Norway. September 16.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, and E. Simons. Forests carnivores as a tool for landscape conservation: Case studies focusing on American martens and Canada lynx. *Seminar presented at Grimso Wildlife Research Station*, Lindesberg, Sweden. September 19.

2008 – Harrison, D. J., A. K. Fuller, J. A. Hepinstall, E. Simons, B. J. Hearn, and D. Payer. Forests, forestry, and forest martens: a landscape perspective. *Invited presentation at conference titled: Pour une sylviculture adaptee a al feret irreguliere et sa faune*, Faculty of Forestry, University of Laval, Baie Comeau, Quebec. October 8.

2008 - Krohn W. B., D. J. Harrison, S. A Scott, L. L. Robinson, C. L. Hoving, A. K. Fuller, and E. M. Simons. Variation in snowshoe hare densities as related to Canada lynx and forest management in eastern North America. *Presentation at Eastern CANUSA Forest Science Conference*, Orono, Maine. October 17.

2008 - Scott, S., D.J. Harrison, and W. B. Krohn. Partial harvests: contributing to foraging habitat?. *Presentation at Lynx on the Landscape Workshop*, Maine Cooperative Forestry Research Unit , Workshop. Greenville, ME. October 28.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. Sader. Trends in American marten habitat on the commercial forestlands of northern Maine. *Presented at Impact of Wildlife on the Forest Industry Workshop*, New England Regional Council on Forest Engineering, University of Maine, Orono. March 10.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. Sader. Predicting responses of forest landscape change on wildlife umbrella species. *Presentation to the Maine Cooperative Forestry Research Unit Advisory Committee*, Orono. April 7.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, S. Sader, and J. S. Wilson. Landscape indicators of forest biodiversity: application of American marten, Canada lynx, and snowshoe hares. *Presentation at Bridging Science and Stewardship Workshop*, Maine Cooperative Forestry Research Unit, Brewer. May 14.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard and S. A. Sader. Ecological factors associated with landscape-scale occurrences of Canada lynx in northern Maine. *Invited Presentation at Lynx on the Landscape: What You Need to Know Workshop and Field Tour*, Maine Cooperative Forestry Research Unit, Greenville, Maine. October 29.

2008 - Simons, E. M., D. J. Harrison, W. B. Krohn, K. R. Legaard, and S. A. Sader. Retrospective changes in habitat supply for Canada lynx and snowshoe hares resulting from timber harvesting: Implications for lynx recovery? *Paper presented at The Wildlife Society 15th Annual Conference*, Miami, Florida. November 9.

2008 - Simons, E. M., K. R. Legaard (Co-Presenters), D. J. Harrison, W. B. Krohn, and S. Sader. Evaluating broad-scale changes in timber harvesting patterns, forest landscape structure, and wildlife habitat supply for umbrella species in northern Maine. *Invited presentation at Friends of ForCAST, Center for Research on Sustainable Forests*, Orono. November 20.

2007 - Fuller, A. K., and D. J. Harrison. "The relative roles of fine- and coarse-grained habitat choices by Canada lynx during winter." *Paper presented at The Wildlife Society 14th Annual Conference*, Tucson, Arizona. September 23.

2007 - Fuller, A. K., D. J. Harrison, and W. B. Krohn. 2007. Landscape planning initiative for northern Maine using area sensitive umbrella species: an overview. *Presented to Beginning with Habitat Steering Committee*, Orono, Maine. October 17.

2007 - Fuller, A. K., and D. J. Harrison. Foraging paths reveal scale-dependent habitat decisions by Canada lynx. *Paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 26.

2007 - Harrison, D.J. Forest carnivores, forestry, and fragmentation: modeling landscape sustainability using marten and lynx. *Seminar presented to Division of Biological Sciences and School of Forest Resources*, University of Montana, Missoula. April 30.

2007 - Harrison, D. J. The role of predation on population dynamics of white-tailed deer. *Presentation to Commissioner's Task Force to Assess the Northern and Eastern Maine Deer Population*. June 12.

2007 - Harrison, D. J., E. Simons, and K. Legaard. Forest carnivores, forestry and fragmentation: Using American marten as the canary in the coal mine. *Department of Biological Sciences Seminar Series*, University of Maine. May 4.

2007 - Harrison, D. J. and J. McCloskey. Documenting occurrence patterns of northern goshowks in Maine. *Proposal presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, Maine. April 25.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, A. K. Fuller, and C. L. Hoving. 2007. Multi-scalar habitat preferences of snowshoe hares: how does a prey specialist coexist with a specialist predator? Paper *presented at International Union of Game Biologists XXVIII Congress*, Uppsala, Sweden. August 17.

2007 – Harrison, D. J. Effects of forest practices on habitat for wintering deer. *Workshop and Field Tour for Maine Cooperative Forestry Research Unit Advisory Committee*. October 10.

2007 - Harrison, D. J., W. B. Krohn, L. Robinson, S. Scott, A. K. Fuller, and C. L. Hoving. Temporal and spatial variation in snowshoe hare densities in eastern North America: relationships to lynx and forest management. *Invited paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 26.

2007 – Harrison, D. J. The influence of predators on overwinter deer survival: interactions with habitat. *Invited presentation at Deer Wintering Area Workshop*, Orono, Maine. December 10.

2007 - Hearn, B. J., D. J. Harrison, C. Lundrigan, W. J. Curran, and A. K. Fuller. Multi-scale habitat selection by the endangered Newfoundland marten. *Paper presented at The Wildlife Society 14th Annual Conference*, Tucson, Arizona. September 23.

2007 - Simons, E. M., L. Robinson, D. J. Harrison, W. B. Krohn, and K. R. Legaard. Ecological factors associated with landscape-scale occurrences of Canada lynx in northern Maine. *Paper presented at Canada Lynx on the Border, Biological and Political Realities for Conservation Planning: An International Workshop*, Grand Portage, Minnesota. October 24.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 3.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Paper presented at 2006 Carnivores Conference*, St. Petersburg, Florida, November 14.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Invited presentation at Forestry Noontime Seminar Series*, University of Maine, Orono, March 3.

2006 – Fuller, A. K., and D. J. Harrison. Stand-scale habitat relationships of lynx in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 25.

2006 – Harrison, D. J. Interactions among forestry and forest wildlife in the Acadian forest: the need for landscape planning. *Invited lecture in FES 508: Industrial Spruce-Fir Ecosystems*, University of Maine, Orono, December 15.

2006 – Harrison, D. J., W. B. Krohn, J. A. Homyack, L. Robinson, and A. K. Fuller. Temporal and spatial variation in hare populations in relation to forest harvesting in Maine. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 - Harrison, D. J., W. B. Krohn, A. K. Fuller, and L. Robinson. Hare population dynamics and lynx and hare habitat selection in Maine. *Presentation at National Interagency Lynx Biology Team Meeting, Duluth, MN*. October 20.

2006 - Harrison, D. J. and W. K. Krohn. Long-term results from research on snowshoe hares and lynx in relation to forest management activities in Maine. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, University of Maine. October 4.

2006 – Harrison, D. J., W. K. Krohn, L. Robinson, J. A. Homyack, and A. K. Fuller. Temporal and spatial variation in hare densities within the geographic range of lynx in Maine. *Invited paper presented at Symposium on Lynx Conservation in the lower 48 states, The Wildlife Society Annual Conference*, Anchorage, Alaska, September 27.

2006 – Harrison, D. J. Managing forest stands and landscapes to maintain wildlife biodiversity. *Invited presentation at Research, Results and the Resource Workshop*, sponsored by Maine Cooperative Forestry Research Unit, Orono, Maine, May 25.

2006 – Harrison, D. J. Research results and applications for management: stand and landscape management for marten and lynx on commercial forestlands in Maine. *Invited presentations and field tour, Annual meeting of Foresters, Wagner Land Management Corp*., Bethel, Maine, May 3.

2006 – Harrison, D. J. Quantifying biodiversity values across managed landscapes in northern and western Maine. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, April 26.

2006 – Harrison, D. J. Wildlife, forest succession, vegetation management, and biodiversity. *Invited lecture in FES 435/535: Managing Forest Succession*, University of Maine, Orono, April 13.

2006 – Krohn, W. B., D. J. Harrison, C. Hoving and L. Robinson. Factors influencing patterns of lynx occurrence across multiple spatial scales in eastern North America. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 - Krohn, W. B., D. J. Harrison L. Robinson, and C. Hoving. Results for species occurrence modeling with lynx across 3 spatial scales in Maine. *Presentation at National Interagency Lynx Biology Team Meeting*, Duluth, MN. October 20.

2006 – Robinson, L., D. J. Harrison, W. B. Krohn, J. Vashon, and M. McCollough. Modeling habitat occupancy of lynx in northern Maine. *Paper presented at Carnivores 2006 Conference*, St. Petersburg, Florida, November 14.

2006 – Robinson, L., D. J. Harrison, W. B. Krohn. Ecological relationships between partial harvesting, snowshoe hares, and lynx in Maine. *Presentation and Wiscussion for Forestry and Wildlife Professionals in Maine*, University of Maine, Orono, August 24.

2006 – Simons, E., K. Legaard, D. J. Harrison, S. Sader, and W. B. Krohn. Forest harvesting trends affecting lynx and marten habitat in Maine as revealed by change detection of multiple LANDSAT TM images, 1988-2004. *Presentation at Maine Lynx Workshop*, Bangor, Maine, December 1.

2006 – Simons, E., K. Legaard, D. J. Harrison, S. Sader, and W. B. Krohn. Trends in forest harvesting in Maine as revealed by change detection of multiple LANDSAT TM images. *Poster presented at 2006 CANUSA Conference*, Quebec City, Canada, October.

2005 - Fuller, A. K., D. J. Harrison, and B. J. Hearn. Modeling habitat occupancy of marten in western Newfoundland: management and planning applications. *Invited presentation to the Newfoundland Marten Recovery Team*, Corner Brook, Newfoundland, November 2.

2005 – Fuller, A. K., D. J. Harrison, and B. J. Hearn. Modeling habitat occupancy of marten in western Newfoundland: management and planning applications. *Final contract report presentation to Canadian Forest Service, Western Newfoundland Model Forest, and other project cooperators*, Corner Brook, Newfoundland, November 1.

2005 - Fuller, A. K., D. J. Harrison, and J. Vashon. Stand-scale habitat selection by lynx on commercial forestlands in northern Maine. *New England Chapter of Society of American Foresters Conference*, Portland, ME. March 17.

2005 - Fuller, A. K., D. J. Harrison, and J. H. Vashon. Effects of forest practices on habitat selection by Canada lynx during winter. *Lynx Research Working Group Meeting*, Orono, ME. April 14.

2005 - Harrison, D. J. An overview of the research program in the Department of Wildlife Ecology. Presentation to the *Office of the Vice President for Research*, University of Maine, Orono, ME. February 1.

2005 - Harrison, D. J. Predators, prey, and forestry in northern and eastern Maine: a historical perspective. *University of Maine at Machias Science Club and Downeast Salmon Federation*, Machias, ME. March 2, 2005.

2005 - Harrison, D. J. Overview of research conducted by The University of Maine during 1980-1994 regarding the population status and relationships of deer and vegetation in Acadia National Park. *Acadia National Park Resource Management Staff*, Bar Harbor, ME. July 26.

2005 - Harrison, D. J. and J. A. Hepinstall. Evaluating the utility of forest carnivores as umbrella species to promote biodiversity conservation. Final contract report presentation, *Maine Cooperative Forestry*

Research Unit, University of Maine, Orono, ME. January 26.

2005 - Harrison, D. J., and W. B. Krohn. Relationships among partial harvesting, snowshoe hares, Canada lynx and forest harvesting: a survey of research activities at the University of Maine and Maine Cooperative Fish and Wildlife Research Unit. *National Lynx Biology Team Meeting*, Minneapolis, MN. August 17.

2005 – Harrison, D. J., W. B. Krohn, and J. A. Hepinstall. A landscape planning framework for northern Maine: an overview of recent research results for marten, lynx and other forest vertebrates. *Maine Department of Inland Fisheries and Wildlife*, Augusta, December 21.

2005 - Harrison, D. J. and W. B. Krohn. A summary of preliminary research findings from studies of snowshoe hares and lynx conducted by the University of Maine and the Maine Cooperative Fish and Wildlife Research Unit. *Eastern Science Team, National Council for Air and Stream Improvement*, Sugarloaf, U.S.A. August 24.

2005 - Hearn, B. J., D. J. Harrison, and A.K. Fuller. Landscape-scale habitat selection by Newfoundland marten & an update on efforts to model habitat for Newfoundland marten. *Newfoundland Marten Recovery Team*, Corner Brook, NL. May 17, 2005.

2005 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University*, Frostburg, VA. April 26.

2004 - Fuller, A. K. and D. J. Harrison. Preliminary results of studies of substand-scale habitat selection by lynx in northern Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Fuller, A. K. and D. J. Harrison. Preliminary results of studies of substand-scale habitat selection by lynx in northern Maine. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 21.

2004 – Fuller A. K. and D. J. Harrison. Influence of forest practices on stand-scale habitat selection of lynx in northern Maine. *Paper presented at Eastern CANUSA Forest Science Conference,* Frederickton, New Brunswick, October 15.

2004 - Fuller, A. K. and D. J. Harrison. Stand-scale habitat selection by lynx in northern Maine: preliminary results. *Invited presentation at Fourth Northeastern Mesocarnivore Workshop: Lynx and marten in the northern Appalachians*, Portland, Maine, December 9.

2004 - Harrison, D. J., J. A. Homyack, A. K. Fuller, and W. B. Krohn. Effects of precommercial thinning and partial harvesting on snowshoe hares in Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Harrison, D. J., J. A. Homyack, J. A. Litvaitis, and W. B. Krohn. Quantifying densities of snowshoe hare in Maine using pellet plots. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2004 - Harrison, D. J., C. L. Hoving, and W. B. Krohn. Distribution and extent of lynx habitat in eastern North America and Maine from GIS modeling. *Presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 7.

2004 - Harrison, D. J. Status of lynx litigation, critical habitat designations, and recovery planning in the U.S. *Presentation to Maine Cooperative Forestry Research Unit*, Orono, Maine, January 21.

2004 - Harrison, D. J. Effects of clearcutting, precommercial thinning, and partial harvesting on forest dependent wildlife species. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research,* Ashland Maine, May 12.

2004 – Harrison, D. J. and J. A. Hepinstall. Predicting marten and lynx occurrences across the landscape: Evaluating the utility of forest carnivores as umbrella species to promote biodiversity conservation. *Wildlife Ecology Seminar Series, University of Maine*, Orono, 6 December.

2004 – Harrison, D. J., W. B. Krohn, L. Robinson, and A. K. Fuller. Lynx and hare research sponsored by the Maine Cooperative Forestry Research Unit. *Field tour at sites in northern Maine for forest industry representatives.* October 28.

2004 – Harrison, D. J. and J. A. Hepinstall. Broad-scale viability habitat modeling, habitat supply trends, and umbrella species applications for marten and lynx in Maine. *Invited presentation at Fourth Northeastern Mesocarnivore Workshop: Lynx and marten in the northern Appalacians, Wildlife Conservation Society*, Portland, Maine, December 9.

2004 – Harrison, D. J., A. K. Fuller, and B. Hearn. Updates of results on habitat selection and fragmentation studies on Newfoundland marten. *Presentation to Newfoundland marten recovery team*, Corner Brook, Newfoundland, December 15.

2004 – Hepinstall, J. A. and D. J. Harrison. Utility of forest carnivores (American marten and Canada lynx) as umbrella species for biodiversity conservation. *Carnivores 2004 Conference*, Sante Fe, New Mexico, November 15.

2004 – Homyack, J. A., D. J. Harrison, W. B. Krohn, A. K. Fuller, and C. L. Hoving. *Comparing conservation issues affecting Canada lynx within the northeastern U.S. and the Rocky mountains*. *Presentation to Wyoming Chapter of The Wildlife Society*, Laramie, November 11.

2004 - Krohn, W. B., D. J. Harrison, and M. A.,McCollough. An overview of the lynx-hare landscape modeling project in northern Maine. *Invited presentation at Wildlife Management Institute's Eastern Lynx Workshop*, North Conway, New Hampshire, January 6.

2003 - Harrison, D.J., and J.A. Hepinstall. Marten as a tool for landscape-scale habitat planning in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* January 29.

2003 - Harrison, D.J. Ecological aspects of coyote predation and the potential for effective control of predation via snaring. *Invited presentation and panel discussion at winter meeting of Maine Chapter of The Wildlife Society, Augusta, Maine.* January 30.

2003 - Harrison, D.J. and J.A. Hepinstall. Using marten as a landscape-scale conservation tool for maintaining diversity of forest-dependent vertebrates. *Presentation and workshop conducted for Maine Department of Inland Fisheries and Wildlife Habitat Planning Committee, Bangor, Maine.* March 10.

2003 - Harrison, D.J., and J.A. Hepinstall. Marten as a tool for landscape-scale habitat planning and biodiversity conservation. *Presentation to Recovery Team for the Endangered Newfoundland Marten, Deer Lake, Newfoundland.* April 1.

2003 - Harrison, D.J. Predicting responses of snowshoe hares and lynx to alternative forest harvesting scenarios. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D.J. Relative densities, habitat selection, and population performance of spruce grouse in clearcut, intensively managed, and "classic" habitat in northern Maine. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D.J. Evaluating the umbrella species approach for biodiversity conservation on commercial forestlands in Maine. *Presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Harrison, D. J. Effects of coyotes on Maine's deer herd: Is there a need for a snaring program. *Talk presented to Student Chapter of The Wildlife Society*, University of Maine, Orono, December 6.

2003 - Harrison, D. J. A. K. Fuller, J. A. Homyack, and W. B. Krohn. How do clearcutting, pre-commercial thinning, and partial harvesting influence wildlife habitat? Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Harrison, D. J. and J. A. Hepinstall. Landscape planning for wildlife. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Harrison, D. J., D. C. Payer, and A. K. Fuller. Maintaining structural requirements of wildlife within forest stands. Invited presentation at workshop on *Managing for Fiber Production, Wildlife Habitat, and Biodiversity: Latest Results from CFRU Research*. Plum Creek Timber Company, Fairfield, Maine, December 16.

2003 - Hepinstall, J.A., and D. J. Harrison. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Paper presented at Resource Selection Conference, Laramie, Wyoming.* January 5-8.

2003 - Hepinstall, J.A., and D.J. Harrison. Does the umbrella leak?: Biodiversity conservation based on marten habitat. *Paper presented at the 10th Annual Conference of The Wildlife Society, Burlington, VT*. September 9.

2003 - Homyack, J.A. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Seminar presented to Department of Wildlfe Ecology, University of Maine.* February

27.

2003 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hares, small mammals, and forest structure in northern Maine. *Final contract report presentation to Maine Cooperative Forestry Research Unit, Orono, Maine.* April 17.

2003 - Krohn, W.B., J.A. Homyack,and D.J. Harrison. "Changes in the Acadian Forest: Implications for Wildlife." *Invited paper presented in Special Wildlife Session on Early Successional Habitats: A Critical Problem, 59th Northeast Fish and Wildlife Conference, Newport, Rhode Island*. April 15.

2002 - Fuller, A. K. and D. J. Harrison. "Resource partitioning and interspecific competition between coyotes and red foxes on an island during recent colonization by coyotes." *Paper presented at the Northeast Fish and Wildlife Conference*, Portland, ME. April 23.

2002 - Fuller, A. K., and D.J. Harrison. Resource partitioning and interspecific competition between coyotes and red foxes on an island during recent colonization by coyotes. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 18.

2002 - Harrison, D.J., and J. A. Hepinstall. "A workshop on approaches to evaluate habitat requirements and to inventory habitat supply for endangered marten in Newfoundland." *Workshop presented to Canadian Forest Service Scientists, Newfoundland Government Scientists, and Western Newfoundland Model Forest Scientists,* Cornerbrook, Newfoundland, January 9.

2002 - Harrison, D.J. "Forestry and forest carnivores: conflict or opportunity." *Talk presented to Student Chapter of The Wildlife Society,* Orono, Maine, February 7.

2002 - Harrison, D.J. "Forestry and forest carnivores: conflict or opportunity." *Department of Biology Seminar Series, Colby College*, Waterville, Maine, March 8.

2002 - Harrison, D.J., C. L. Hoving, A. K. Fuller, and W.B. Krohn. "A summary of research needs for lynx in eastern North America: what do we know, what are we researching, and what is left?" *Presentation at Northern Appalachians Lynx Science Workshop*, Portland, Maine, April 24.

2002 - Harrison, D.J. "Landscape considerations for conserving habitat for wolves, American marten, and lynx in the White and Green Mountain National Forests." *Presentation at Species Viability Workshop, U.S. Forest Service*, Manchester, New Hampshire, May 22.

2002 - Harrison, D. J. and A.K. Fuller. Effects of partial harvesting on forest mammals. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Harrison, D.J., and J.A. Hepinstall. Landscape management for fragmentation-sensitive species. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Harrison, D.J. and A.K. Fuller. Substand-scale responses of Canada lynx to habitat and prey: an ongoing study. . *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002 - Harrison, D.J., W.B. Krohn, and C. Hoving, Broad-scale habitat ecology of Canada lynx in eastern North

America. *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002 - Harrison, D.J., and J.A. Hepinstall. Modeling habitat supply as a tool for marten conservation. *Invited presentation at Newfoundland Marten Habitat Supply Workshop, Grand Falls, Newfoundland.* December 3.

2002 - Harrison, D.J., and J.A. Hepinstall. Predictive modeling and trends in marten occurrence across the landscape of Northern Maine: marten as a tool for conserving forest biodiversity. *Invited presentation at Wildlife Division Meeting, Maine Department of Inland Fisheries and Wildlife, Bangor, Maine.* December 17.

2002 - Hearn, B., and D.J. Harrison. Home range characteristics of Newfoundland marten. *Invited presentation at Newfoundland Marten Habitat Supply Workshop, Grand Falls, Newfoundland.* December 3.

2002 - Hepinstall, J. A. and D. J. Harrison, and W. B. Krohn. "Spatially explicit wildlife habitat modeling; case studies from Maine." Seminar presented at the *Department of Wildlife Ecology Seminar Series*, Orono, ME. April 8.

2002 - Hepinstall, J. A., D. J. Harrison, D. C. Payer and A. K. Fuller. "Habitat supply modeling for American marten in the managed forests of northern Maine." *Poster presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 21- 24.

2002 - Hepinstall, J. A., D. J. Harrison, D.C. Payer, and A. K. Fuller. "Can marten serve as an umbrella species for forest management in northern Maine?" *Paper presented at the 17th annual symposium of the International Association for Landscape Ecology – United States Regional Association (US-IALE),* Lincoln, NE. April 23-27.

2002 - Hepinstall, J. A. and D. J. Harrison. "Applications of Field Research to Forest Landscape Planning: A Case Study Using American Marten in Maine." Paper presented at *Beyond the Data: Integrating Research Findings into Forest Management Planning and Operations,* Moncton, New Brunswick, Canada. May 3-4.

2002 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Poster presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting habitat supply for American marten using measures of landscape composition and configuration. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of intensive forest management on small mammals and snowshoe hare in northern Maine." *Presentation at the Spring 2002 Evening Seminar Series of the University of Maine Student Chapter of the Wildlife Society, Orono, ME*. April 14.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of precommercial thinning on small mammals in northern Maine." *Paper presented at the Northeast Fish and Wildlife Conference, Portland, ME.* April 23.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Preliminary results of the effects of precommercial thinning on snowshoe hare." *Poster presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 21- 24.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Effects of precommercial thinning on snowshoe hare in northern Maine." *Paper presented at The Annual Meeting of The Wildlife Society, Bismarck, ND*. September 27.

2002 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. Precommercial thinning effects on hare habitat. *Presentation and field tour for Cooperative Forestry Research Unit, Northern Maine.* October 9.

2002 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on abundance of snowshoe hare in northern Maine. *Paper presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002 - Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on small mammals in northern Maine. *Paper presented at Eastern Canada-USA (CANUSA) Forest Science Conference, Orono, Maine.* October 20.

2002- Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hares in northern Maine: implications for Canada lynx. *Invited presentation at Interagency Lynx Biology Team Meeting, Orono, Maine*. October 22.

2002- Homyack, J.A., D.J. Harrison, and W.B. Krohn. Effects of precommercial thinning on snowshoe hare: implications for Canada lynx. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 - Hoving, C. L., D. J. Harrison, W. B. Krohn, and W. J. Jakubas. "Canada lynx habitat, forest harvest strategies and regeneration in northern Maine." *Paper presented at the Northeast Fish and Wildlife Conference, Portland, ME*. April 24.

2002 – Hoving, C., D.J. Harrison, W.B. Krohn, and W. Jakubas. Canada lynx habitat, forest harvest strategies and regeneration in northern Maine. *Paper presented at Carnivores 2002 Conference, Monteray, California.* November 19.

2002 – Hoving, C., D.J. Harrison, W.B. Krohn, R.A. Joseph, and M. O'Brien. Climate change and lynx: spatial occurrence models for eastern North America. *Poster presented at Carnivores 2002 Conference, Monteray, California.* November 17-20.

2002 - Spohr, S., D.J. Harrison, and F.A. Servello. "Effects of landscape and cover characteristics on nest success of eastern wild turkeys in southeastern Connecticut." *Paper presented at the Northeast Fish and Wildlife Conference,* Portland, Maine, April 23.

2001 - Fuller, A.K., and D.J. Harrison. "Partial harvest guidelines for maintenance of marten in Maine." *Invited lecture presented at the "Newfoundland Marten Endangered Species Recovery Team Meeting*", St. John's, Newfoundland, January 12.

2001 - Harrison, D.J. Landscape scale habitat requirements and fragmentation thresholds of marten. *Lecture at workshop attended by Canada Parks scientists and invited advisors to address habitat needs of endangered marten in western Newfoundland*. Gros Morne National Park Newfoundland, January 9.

2001 – Harrison, D.J., and D.C. Payer "Influences of trapping mortality on current distribution and population dynamics of marten: a biogeographical and empirical perspective." *Invited paper presented at "Newfoundland Marten Accidental Trapping and Snaring Workshop*", St. John's, Newfoundland, January 12.

2001 - Harrison, D.J. An update of lynx and marten issues related to forest management. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit,* Orono, January 25.

2001 – Harrison, D. J. "Marten and Forestry: Conflict or Opportunity." *Invited paper presented at J. D. Irving, Limited's 2001 Science Forum*, Frederickton, NB, April 3, 2001.

2001 - Harrison, D.J. "Forestry and Forest Carnivores: Conflict or Opportunity." *Presented at the University of Maine, Forestry Noontime Seminar Series,* April 6.

2001 - Harrison, D.J. Potential forest management issues and research opportunities with federally threatened lynx in Maine. *Presentation to to Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, Maine, May 3.

2001 – Harrison, D.J. "Extent and distribution of wolf habitat in eastern North America and niche characteristics of wolves versus eastern coyotes." Served as *invited panelist and presenter at Wolf Symposium for invited government agencies, university personnel and non-governmental organizations*, Burlington, VT, May 16.

2001 - Harrison, D. J., D.C. Payer, J. A. Hepinstall, A. K. Fuller and D. J. Katnik. "Landscape thresholds and nonlinear responses to fragmentation by American marten." *Paper presented at 15th Annual Meeting of the Society for Conservation Biology*, Hilo, Hawaii, July 31.

2001 - Harrison, D. J., and J. A. Hepinstall. "Habitat supply planning for American marten in Maine and Newfoundland." *Seminar presented to Canadian Forest Service and Newfoundland Provincial Scientists,* Cornerbrook, Newfoundland, August 26.

2001 - Harrison, D. J. "Marten habitat supply assessment." *Presentation at meeting of Maine Cooperative Forestry Research Unit Advisory Committee*, Millinocket, Maine, October 17.

2001 - Harrison, D.J. "Habitat potential for wolves and niche overlap with eastern coyotes in eastern North America." *Paper presented at Eastern Wolf Workshop,* Dixville Notch, New Hampshire, October 19.

2001 – Hepinstall, J. A., D. J. Harrison, D. C. Payer, A. K. Fuller, and D. D. Katnik. "Using marten as an umbrella species for forest management." *Invited paper presented at the 37th Annual North American Moose Conference and Workshop,* Sugarloaf, ME, May 14, 2001.

2001 - Hepinstall, J.A., D.J. Harrison, D.C. Payer, and A.K. Fuller. Predicting the occurrences of American

marten in harvested landscapes. *Paper presented at the 8th Annual Conference of The Wildlife Society, Reno, Nevada*, September 25-29.

2001 - Homyack, J. A., D. J. Harrison, and W. B. Krohn. "Update on the effects of precommercial thinning on snowshoe hare and small mammals in northern Maine." *Field tour and presention to Advisory Committee, Maine Cooperative Forestry Research Unit*, Millinocket, Maine, October 17.

2001 - Hoving, C. L. "Historical occurrence and habitat ecology of Canada lynx in eastern North America." *Talk presented at the Maine Audubon's Wildlife Conference, Maine Audubon Society*, Falmouth, ME, April 7.

2001 - Hoving, C.L, D. J. Harrison, and W.B. Krohn. Historical occurrence and habitat ecology of Canada lynx in eastern North America. *Final contract seminar to Maine Department of Inland Fisheries and Wildlife*, Bangor, ME, March 22.

2001 - Hoving, C.L. Historical occurrence and habitat ecology of Canada lynx in eastern North America. *Final thesis seminar presented to Department of Wildlife Ecology, University of Maine*, April, 12.

2001 – Hoving, C. L., R. A. Joseph, and W. B. Krohn. "Historical and current distributions of lynx in Maine, 1833-1999." *Paper presented at the 57th Northeast Fish and Wildlife Conference*, Saratoga Springs, NY, April 22-26.

2001 – Hoving, C. L., D. J. Harrison, W. K. Krohn, W. J. Jakubas, R. A. Joseph, R. Lafond, and M. O'Brien. "A probability model of Canada lynx occurrence in eastern North America." *Poster presented at the 57th Northeast Fish and Wildlife Conference*, Saratoga Springs, NY, April 22-26.

2001 - Hoving, C.L., D. J. Harrison and W. B. Krohn. " Habitat ecology of Canada lynx in eastern North America." *Poster presented at the U. S. Fish and Wildlife Service regional office, Hadley, MA*, April 26.

2001 - Hoving, C. L., D. J. Harrison, and W. K. Krohn. " Multi-scale habitat relations of Canada lynx in eastern North America." *Paper presented at the 2001 Meeting of the Northeast Fur Technical Committee*, Providence, Rhode Island, September 13.

2001 - Hoving, C. L., D. J. Harrison, W. K. Krohn, W. J. Jakubas, R. A. Joseph, R. Lafond, and M. O'Brien. "Canada lynx habitat associations in eastern North America." *Paper presented at The Wildlife Society 8th Annual Conference*, Reno, Nevada, September 27.

2001 - Hoving, C. L., D. J. Harrison, and W. B. Krohn. "Canada lynx habitat in eastern North America." *Presented at the Alice Steward Lecture Series, Maine Center for the Arts*, Orono, ME. October 31.

2000 - Fuller, A.K., H. J. Lachowski, and D. J. Harrison. Responses of mammals at two trophic levels to partial harvesting. *Paper presented at 80th Annual Meeting of the American Society of Mammalogists*, University of New Hampshire, Durham, June 19.

2000 - Fuller, A.K. and D.J. Harrison. Influence of partial harvesting on habitat selection by American marten in an industrially forest landscape. . *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Fuller, A., H.J. Lachowski, and D. Harrison. 2000. Stand-level responses of American marten and prey to forest management: do marten respond to distribution of prey? *Paper presented at 3rd International Martes Symposium, Corner Brook*, Newfoundland, August 15.

2000 - Fuller, A.K., and D.J. Harrison. Fuller, A.K. and D.J. Harrison. Influence of partial harvests on American marten habitat selection in Maine. *Final contract seminar presented to Advisory Committee, Maine Cooperative Forestry Research Unit*, Sugarloaf Mountain, Maine, October 3.

2000 - Harrison, D.J. Presented a seminar of final results of 10 year study on effects of forest harvesting and trapping on American martens to Advisory Committee, *Cooperative Forestry Research Unit*, University of Maine, Orono, February 2.

2000 - Harrison, D.J. Extent and distribution of potential wolf habitat in eastern North America; an international issue. *Presentation at "Northeast Wolf Forum: a discussion of issues and concerns"*, Rumford, Maine, July 12.

2000 - Harrison, D.J. Served as Program Chair and provided opening comments for *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D., D. Payer, A. Fuller, J.Hepinstall, D. Katnik. Landscape thresholds and response to fragmentation by American marten. Paper presented at *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D. Served as chairperson for session titled: Planning and Managing Landscapes for *Martes*, *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Harrison, D. Served as an invited panelist for discussion of : What is suitable habitat for North American *Martes*? *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Harrison, D. Chaired plenary session titled: Status of *Martes* and their habitats from a global perspective. *3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Harrison, D.J. Fragmentation thresholds for American marten: preliminary results. *Presentation to Advisory Committee, Maine Cooperative Forestry Research Unit*, Sugarloaf Mountain, Maine, October 3.

2000 - Harrison, D.J., J.Homyack, and A.K. Fuller. Led a field trip and presented preliminary data on effects of forest harvesting on snowshoe hares and small mammals at field tour for Maine forest industry representatives, *Maine Cooperative Forestry Research Unit Fall Field Tour*, October 4.

2000 - Harrison, D. J. Presentation on wolf ecology , habitat potential in Maine, and behavior of wolf-hybrids. *7th grade science and literature classes at the Reeds Brook Middle School*, Hampden, November 8.

2000 – Harrison, D.J. T.G. Chapin, and C.L. Hoving. Distribution, extent, and connectivity of potential habitat for wolves in Maine and eastern Canada. *Poster presented at Carnivores 2000 Conference*, Denver, Colorado, November 13-15.

2000 - Harrison, D.J. Influence of dispersal on social ecology of coyotes: do social pressures or prey size promote pack formation? *Invited paper at Carnivores 2000 Conference*, Denver, Colorado, November 14.

2000 - Krohn, W.B., C.L. Hoving, D.J. Harrison, D.M. Phillips, and H.C. Frost. Martes foot-loading and snowfall distribution in eastern North America: implications to broad-scale distributions and mesocarnivore interactions. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Payer, D.C., and D.J. Harrison. Influence of forest structure on habitat use by American marten. *Paper presented at 10th Northern Furbearer Conference*, Fairbanks, Alaska, April 17.

2000 - Payer, D.C., and D.J. Harrison. 2000. Effects of timber harvesting and trapping on demographic characteristics of marten. *10th Northern Furbearer Conference*, Fairbanks, Alaska, April 18.

2000 - Payer, D.C., and D.J. Harrison. Demographic characteristics of American marten in relation to clearcutting and trapping. . *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 14.

2000 - Payer, D.C., and D.J. Harrison. Effects of timber harvesting and trapping on habitat selection by American marten. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 15.

2000 - Payer, D.C., and D.J. Harrison. Territoriality and home-range fidelity of American marten in relation to timber harvesting and trapping. *Paper presented at 3rd International Martes Symposium*, Corner Brook, Newfoundland, August 16.

1999 - Harrison, D.J. Response of wildlife to thinning in forests of the *northeastern U.S. Invited* presentation at *Conference on Thinning in the Maine Forest*, Augusta, Maine. November 15.

1999 - Harrison, D. J. Influence of dispersal on social ecology of coyotes: Comparison of a mainland and island population. *The Wildlife Society 6th Annual Conference*, Austin, Texas. September 11.

1999 - Harrison, D. J. Responses of wide ranging carnivores to forest characteristics at multiple spatial scales. *North American Forest Ecology Workshop*, University of Maine, Orono. June 28.

1999 - Harrison, D. J. Session summary: stand- and landscape-scale responses of wildlife to forest practices. *North American Forest Ecology Workshop*, University of Maine, Orono. June 30.

1999 - Harrison, D. J. Habitat associations of marten in Maine: responses to forestry and trapping. Invited presentation at *Pine Marten Symposium*, Corner Brook, Newfoundland. January 27.

1999 - Fuller, A.K. and D.J. Harrison. Influence of partial harvests on American marten habitat selection in Maine. *The Wildlife Society 6th Annual Conference*, Austin, Texas. September 11.

1999 - Fuller, A.K., H. J. Lachowski, and D. J. Harrison. Responses of mammals at two trophic levels to stand-

scale forest harvesting in Maine. *North American Forest Ecology Workshop*, University of Maine, Orono. June 28.

1998 - Harrison, D. J. Using carnivores as a model for landscape-scale forest planning. Invited paper at *Maine Forest Biodiversity Conference*, Orono, Maine. November 19.

1998 - Harrison, D. J. Wolves, science, and the future of Maine=s forests. Lecture to *Forum for Undergraduate Science Majors*, University of Maine. December 10.

1998 - Harrison, D. J. A summary from 10 years of marten research with a look to the future. Invited seminar presented to *Resource Assessment Staff, Maine Department of Inland Fisheries and Wildlife.* November 19.

1998 - Fuller, A.K., and D.J. Harrison. Use of partially harvested stands by American marten: a preliminary analysis. Poster presented at *Euro-American Mammal Congress*, Santiago de Compostela, Spain. July 23.

1998 - Harrison, D.J. Habitat ecology of American marten: specialist or generalist? Invited Paper presented in symposium: *Mustelids in a Modern World*, Euro-American Mammal Congress, Santiago de Compostela, Spain. July 23.

1998 - Harrison, D.J. A summary of results from ongoing studies of American marten in Maine. Invited presentation at *Newfoundland Marten Recovery Team Meeting*, Grand Falls-Windsor, Newfoundland. May 13.

1998 - Harrison, D.J. Potential habitat for eastern timber wolves in Maine. Invited presentation at *Eastern Wolf Recovery Meeting*, Pinkham Notch, NH. September 29.

1998 - Harrison, D.J. and D.C. Payer. Substand-level habitat use by American marten: recommendations for foresters. Presentation to Advisory Committee, *Maine Cooperative Forestry Research Unit*, Orono, Maine. April 29.

1997 - Harrison, D.J. An assessment of potential habitat for eastern timber wolves in the northeastern United States. Invited presentation at *meeting of eastern wolf experts*, Sherbrook, Quebec. October 23.

1997 - Harrison. D.J. Habitat selection by American marten at multiple spatial scales. Invited seminar presented to *Wildlife Division, Department of Natural Resources, St. Johns, Newfoundland*, Canada, March 3.

1997 - Harrison, D.J. "Results from coyote-deer studies in Acadia National Park: insights into predator social ecology and prey demography." Seminar presented to *Dept. of Wildlife Ecology, Univ. Maine*, Orono, April 7.

1997 - Harrison, D.J. Influence of forest harvesting and trapping on populations of American marten. Invited seminar presented to forest industry personnel, *Corner Brook, Newfoundland*, Canada, March 4.

1997 - Harrison, D.J. Influence of forest harvesting and fur trapping on populations of American marten.

Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison D.J. Influence of landscape composition and configuration on habitat occupance by American marten. Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison, D.J. Integrating marten and forest management: the Maine experience. Invited paper presented at *Marten Biology and Habitat Guidelines Workshop*, Sault Ste. Marie, Ontario, Canada, May 28.

1997 - Harrison, D.J. Microhabitat-, stand-, and landscape-scale habitat selection by marten in Maine. Invited paper presented at *Workshop on Lynx and Marten Management in Eastern Boreal Forests*, White Mountain National Forest, Gilead, ME, August 26.

1997 - Harrison, D.J. Results from ongoing studies of American marten on industrial forestland in Maine. Seminar presented to *Advisory Committee, Maine Cooperative Forestry Research Unit*, Orono, ME, January 21.

1997 - Harrison, D.J. Ecology and habitat relationships of American martens in Maine. *Penobscot Valley Chapter, Maine Audubon Society*, February 7.

1997 - Harrison, D.J. "The influence of partial harvesting on American marten: a proposal." Presentation to *Advisory Committee, Cooperative Forestry Research Unit*, Univ. Maine, Orono, April 29, 1997.

1997 - Harrison, D.J., and W.B. Krohn. What do, and don=t, we know about lynx and marten in Maine? Invited paper presented at *Workshop on Lynx and Marten Management in Eastern Boreal Forests*, White Mountain National Forest, Gilead, ME, August 25.

1997 - Payer, D.C., and D.J. Harrison. Influence of site-level habitat characteristics on spatial patterns of habitat use by American marten in an industrial forest and a forest preserve in Maine. *The Wildlife Society National Conference*, Snowmass, Colorado, September 25.

1997 - Payer, D.C. and D.J. Harrison. Influence of microsite characteristics on patterns of habitat occupancy by American marten. Presentation at seminar series sponsored by the *Department of Wildlife Ecology, University of Maine*. November 3.

1997 - Payer, D.C., and D.J. Harrison. Structural differences between forests regenerating following spruce-budworm infestations and clearcutting, with implications for merican marten. Presentation at seminar series sponsored by the *Department of Wildlife Ecology, University of Maine*. November 3.

1996 - Chapin, T. G. and D. J. Harrison. Seasonal Selection of Habitats by Resting Marten in Maine. Paper presented at *52nd Northeast Fish and Wildlife Conference*, Farmington, CT. April 2.

1996 - Chapin, T. G. and D. J. Harrison. Seasonal habitat selection by marten in an untrapped forest preserve. Paper presented at *Ecological Society of America and Society for Conservation Biology*

Meeting, Providence, RI. August 14.

1996 - Harrison, D. J. Habitat requirements of American marten in northeastern forests. Seminar presented to *Fraser Paper, Inc. and J. D. Irving Corporation's foresters*. Edmundston, New Brunswick. February 27.

1996 - Harrison, D. J. Marten, forests, and biodiversity: a model for conservation. Invited presentation at *Maine Forest Biodiversity Conference*, Ellsworth, Maine. March 12.

1996 - Harrison, D. J. Funding, infrastructure, and partnerships for wildlife conservation in the U.S. Invited seminar presented to *Department of Ecosystem Planning, Tokyo Noko University*, Japan. March 20.

1996 - Harrison, D. J. Habitat relationships of American marten: specialist or generalist. Seminar presented to *U. S. Forest Service Redwood Sciences Laboratory and College of Natural Resources, Humboldt University*, Arcata, CA. March 28.

1996 - Harrison, D. J. Influence of spatial and body scaling on habitat selection by mammalian carnivores. Seminar presented to *Utah Cooperative Fish and Wildlife Research Unit and Dept. of Fisheries and Wildlife, Utah State University*, Logan. April 5.

1996 - Harrison, D. J. Influence of spatial and body scaling on habitat selection by mammalian carnivores. Seminar presented to *Dept. of Zoology and Physiology, University of Wyoming, Laramie*. April 11.

1996 - Harrison, D. J. Marten as a barometer of forest health in Maine. Seminar presented at *Annual Meeting, Maine Chapter of The Wildlife Society*, Brewer, ME. April 25.

1996 - Harrison, D.J. A conservation model for habitat of American martens in Maine. Seminar presented to *Executive Council, Maine Audubon Society*, Ellsworth, ME, November 11.

1996 - Harrison, D. J., D. Payer, and H. J. Lachowski. Influence of forest harvesting and forest structure on habitat selection by American marten Presentation and field tour to *National Council of the Paper Industry (NCASI)* scientists and other forest industry representatives, Millinocket, ME. August 22.

1996 - Harrison, D. J., and S. L. Glass. Comparative social ecology of coyotes: does large prey cause pack formation? Paper presented at *Ecological Society of America and Society for Conservation Biology Meeting*, Providence, RI. August 13.

1996 - Long, R .A., D. J. Harrison, and A. F. O'Connell, Jr. Survival and cause-specific mortality of white-tailed deer fawns on Mount Desert Island, Maine. Paper presented at *Ecological Society of America and Society for Conservation Biology Meeting*, Providence, RI. August 14.

1995 - Chapin, T.G., and D.J. Harrison. Marten use of residual stands in an industrial forest landscape in Maine. Presented at the *51st Annual Northeast Fish and Wildlife Conference*, Ocean City, MD. April 8-12.

1995 - Chapin, T.G., and D.J. Harrison. Marten use of residual stands in an industrial forest landscape in Maine. Paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August

12-16.

1995 - Chapin, T.G and D.J. Harrison. Influence of landscape pattern and forest type on use of habitat by marten in Maine. Seminar presented to *Department of Wildlife Ecology, University of Maine*, Orono. June 15.

1995 - Chapin, T. G. and D. J. Harrison. Influence of landscape pattern on spatial us of habitat by marten in an industrial forest. Paper presented at *National Conference of the Society of American Foresters*, Portland, ME, November 1.

1995 - Harrison, D. J. Influence of Forest Harvesting on Marten Populations in Northern Maine. Invited paper presented at *Society of American Foresters National Convention*, Portland, ME. October 28-29.

1995 - Harrison, D. J. Ecology and life history of the northeastern coyote. Invited seminar presented to *Illinois Natural History Museum*, University of Illinois, Urbana. November 14.

1995 - Harrison, D. J. Social ecology and prey relationships of the eastern coyote: the influence of prey size on pack formation. Invited seminar presented to *Dept. of Ecology, Ethology, and Evolution*, University of Illinois, Urbana. November 15.

1995 - Harrison, D. J. Habitat Requirements of American Marten: Reassessing Paradigms. Seminar presented to *Department of Wildlife Ecology, Univ. Maine*, November 28.

1995 - Harrison, D.J. Relative influences of timber harvesting and trapping on marten populations in Maine. Presentation at the *Spring Meeting of Forest Resources Research Advisory Committee*, University of Maine, Orono. April 11**.**

1995 - Harrison, D.J. Incorporating marten habitat requirements into forest management activities. Presentation and field tour, *Cooperative Forestry Research Unit Annual Conference*, Millinocket, ME. September 20-21.

1995 - Harrison, D.J., D.M. Phillips, T.G. Chapin, D.P. Katnik, and T.P. Hodgman.. Population performance and habitat selection by American marten: a need to reassess accepted paradigms and conservation practices. Invited paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1995 - Hodgman, T.P., and D. J. Harrison. 1995. Survival in a heavily harvested marten population: a preliminary assessment. Poster presented at *Annual Conference of the Maine Cooperative Forestry Research Unit*, Millinocket, ME. September 20.

1995 - Hodgman, T.P., D.J. Harrison, D.M. Phillips, and K.D. Elowe. Survival of marten in an untrapped forest preserve in Maine. Paper presented at the *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1995 - Long, R.A., S.L. Glass, D.J. Harrison, and A.F. O'Connell. Cause-specific mortality of white-tailed

deer fawns on Mount Desert Island, Maine. Presented at the *51st Annual Conference of the Northeast Fish and Wildlife Conference*, Ocean City, MD. April 9-12.

1995 - Long, R.A., D.J. Harrison, S.L. Glass, and A.F. O'Connell. Annual survival and cause-specific mortality of white-tailed deer fawns on Mount Desert Island, Maine. Paper presented at the *21st Maine Biological and Medical Sciences Symposium*, Bar Harbor, ME. June 8-9.

1995 - Long, R.A., D.J. Harrison, and A.F. O'Connell, Jr. Annual survival and cause-specific mortality of white-tailed deer fawns, and relative abundance of snowshoe hare on Mount Desert Island, Maine. Seminar presented to *Department of Wildlife Ecology, University of Maine, Orono*. June 16.

1995 - Long, R, D.J. Harrison, S. L. Glass, and A. F. O'Connell. Mortality of white-tailed deer fawns in Acadia National Park. Seminar presented to research and management staff, *Acadia National Park*, Bar Harbor, ME. August 30.

1995 - Phillips, D.M., and D.J. Harrison. Seasonal changes in density, range area, and range fidelity of American marten in a forest preserve. Paper presented at *Second International Martes Symposium*, Edmonton, Alberta. August 12-16.

1994 - Chilelli, M., B. Griffith, and D.J. Harrison. Utility of regional furbearer data: the river otter example." Paper presented at *First Annual Conference of The Wildlife Society*, Albuquerque, New Mexico, September 21.

1994 - Harrison, D.J. "A proposal to study the relationships among trapping, forest harvesting, and marten populations in northern Maine." Presentation to *Maine Cooperative Forestry Research Unit Advisory Committee*, University of Maine, January 25.

1994 - Harrison, D.J. "Preliminary results from ongoing research to assess influences of forest harvesting and trapping on marten populations in northern Maine." Invited presentation at *Wildlife Division Meeting, Maine Department of Inland Fisheries and Wildlife*, Rockland, ME, April 14.

1994 - Harrison, D.J. The effects of scale on habitat selection. Guest presentation in graduate course in *Evaluation of Wildlife Habitats*, University of Maine, Orono. October 7.

1994 - Harrison, D.J. Evidence for external regulation in an unmanaged deer population. Paper presented at the *Conference on Science of Overabundance*, Front Royal, VA. November 10-11.

1994 - Harrison, D.J., and T.D. Chapin. "Effects of forest fragmentation on martens in northern Maine: preliminary results from ongoing studies." Presentation to *National Council of the Paper Industry for Air and Stream Improvement*, Albuquerque, NM, September 23.

1994 - Phillips, D.M., and D.J. Harrison. "Density, home-range, and spatial overlap of marten in an industrial forest and forest preserve." Paper presented at *Northeast Fish and Wildlife Conference*, Burlington, VT, May 3.

1993 - Harrison, D.J. "Potential forest management issues associated with habitat requirements of the marten." Presentation to *Maine Chapter, Association of Consulting Foresters*, Bangor, ME,

October 12.

1993 - Harrison, D.J. "Objectives and preliminary results of a study to assess the influence of trapping and forest harvesting on marten populations in northern Maine." Presentation to foresters of *Scott Paper, Inc., Rockwood, Maine*, December 14.

1993 - Harrison, D.J. "Habitat associations of the marten: does the species deserve spotted owl status?" Invited paper presented at *Conserving Species Dependent on Older Forests: a Population Viability Workshop*. Fundy National Park, Alma, New Brunswick, October 27.

1993 - Harrison, D.J. The role and effectiveness of predator control to enhance game populations. Presentation to *Maine Chapter of The Wildlife Society,* April 5.

1993 - Harrison, D.J. Feasibility and issues associated with restoring wolves to Maine. Presentation to *Maine Chapter of The Wildlife Society*, April 5.

1992 - Saeki, M., and D.J. Harrison. Influence of food availability and fire history on dietary quality of white-tailed deer (Odocoileus virginianus). Paper presented at Seventy-second annual meeting of *American Society of Mammalogists*, Salt Lake City, Utah.

1992 - Harrison, D.J. Significance of pine martens to future forest practices in Maine. Presentation to *Woodlands staff, Great Northern Corp*., Millinocket, Maine.

1992 - Harrison, D.J. Pine marten habitat requirements: will the Forest Practices Act safeguard marten habitat? Presentation to *Maine Chapter of The Wildlife Society*, Orono, Maine.

1991 - Harrison, D. J. Chaired session and provided summative comments for session titled: "Habitat management of martens and fishers," *International Symposium on the Biology and Management of Martens and Fishers*, Laramie, Wyoming.

1991 - Harrison, D. J. Coyote social organization and relationships to dispersal and food resources: predictions with an unpredictable animal. Invited paper presented at *Eastern Coyote Symposium*, Fredericton, New Brunswick.

1991 - Harrison, D.J., A.F. O'Connell, and J.A. Subijanto. Seasonal food habits of a recently established insular population of coyotes. Poster presented at *Northeast Fish and Wildlife Conference*, Portland, Maine.

1991 - Harrison, D.J., A.F. O'Connell, Jr., and J. A. Subijanto. Seasonal food habits of a recently established insular coyote population. Invited paper presented at *Second National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region*, Newport, RI.

1991 - Harrison, D.J., and N.E. Famous. Effects of peat harvesting on a large mammalian carnivore: a case study with coyotes (*Canis latrans*). Paper presented at *International Peat Symposium*, Duluth, Minnesota.

1991 - Harrison, D.J., T.P. Hodgman, and D.D. Katnik. Survival in a heavily harvested marten population, a preliminary assessment. Paper presented at *International Symposium on the Biology and Management of Martens and Fishers*, University of Wyoming, Laramie.

1991 - Giuliano, W., and D.J. Harrison. A preliminary assessment of spatial-temporal relationships in an unexploited pine marten population. Poster presented at *International Symposium on the Biology and Management of Martens and Fishers*, University of Wyoming, Laramie.

1991 - Saeki, M. and D. J. Harrison. Trends in browse use and preference in an unhunted deer and hare population. Paper presented at *Second National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region*, Newport, Rhode Island.

1990 - Harrison, D.J. Status of ongoing mammal research. Seminar presented to regional management staff, *Maine Department of Inland Fisheries and Wildlife*, Bar Harbor.

1990 - Harrison, D.J. Status, ecology, and inter-specific relationships of mammalian predators in Acadia National Park. Seminar presented to *North Atlantic Region, science staff, U.S. National Park Service*, Bar Harbor, Maine.

1990 - Harrison, D.J. An abstract of results from ongoing research involving coyote-fox spatial interactions, deer-hare browsing relationships, and marten population characteristics in Maine. Seminar presented at annual Wildlife Division meeting, *Maine Department of Inland Fisheries and Wildlife*, Rockland, Maine.

1990 - Harrison, D.J. Ecology and interspecific relationships among Maine's predators. Seminar presented to faculty and staff, *Suffolk University*, Edmunds, ME.

1990 - Harrison, D.J. Pre-dispersal movements of coyote pups in eastern Maine. Paper presented at *70th annual meeting of the American Society of Mammalogists*, Frostburg, Maryland.

1989 - Harrison, D.J. Dispersal characteristics of juvenile coyotes: implications for social organization. Paper presented at *69th Annual Meeting of the American Society of Mammalogists*, Fairbanks, Alaska.

1989 - Harrison, D.J. Distribution, productivity, and food habits of a recently established coyote population in Connecticut. Paper presented at *Northeast Fish and Wildlife Conference*, Ellenville, NY.

1989 - Harrison, D.J. Spatial dynamics and inter-specific relationships among Maine predators. Seminar presented at *Unity College*, Unity, Maine.

1989 - Harrison, D.J. Ecology and management of coyotes in Maine. Seminar presented to *Department of Animal Science*, University of Maine.

1988 - Harrison, D.J. A proposal to assess the utility and interstate comparability of river otter sex, age, and reproductive data. Invited presentation at *Northeast Furbearer Resources Technical Committee Meeting*, Quebec City.

1988 - Harrison, D.J. Interaction of forest management practices and pine marten populations. Invited presentation at *Northeast Furbearer Resources Technical Committee Meeting*, Quebec City.

1988 - Harrison, D.J. A proposal to reintroduce fishers to northwest Connecticut. Paper presented at *Second Natural Diversity Conference*, Rocky Hill, Connecticut.

1988 - May, D,W., D.J. Harrison, and P. Rego. Characteristics and diet of colonizing coyote populations in Connecticut. Paper presented at *Second Natural Diversity Conference*, Rocky Hill, Connecticut.

Public Talks and Workshops (abridged to include since 2007 only):

2015 - Rolek, B.W., C. Loftin, D. Harrison, and P. Wood. Habitat associations, forestry, and coniferous forest birds. *Downeast Birding Festival. Machias, Maine*, May 2015.

2015- Harrison, D. Eastern coyotes and wolves: their history, origin, and ecology in the northeastern U.S. *Invited presentation at the Maine State Museum, Augusta*, April 8.

2013 – Dunham, S., and D. Harrison. Habitat ecology of the spruce grouse in Maine's northern forests. *Presentation sponsored by the Bangor Nature Club, Bangor, Maine*. May 15.

2013 – Olson, S., and D. Harrison. Seasons of the snowshoe hare. *Presentation at Sunkhaze Café, hosted by Friends of Sunkhaze National Wildlife Refuge, Old Town, Maine*. April 20.

2011 - Harrison, D. J. Lynx, forests, and forestry in northern Maine. *Presentation at SummerMeeting of The Forest Society of Maine*, Greenville, ME. August 15.

2008 – Harrison, D. J. "Wildlife in Winter". *Presentation at Maine Audubon's Fields Pond Nature Center*. January 8.

2007 - Harrison, D. J. "Applying umbrella species as tools for land conservation: case examples using martens and lynx in Maine." Presentation to the Board of Directors, Forest Society of Maine, Falmouth, Maine. September 11.

2007 - Harrison, D. J. "What is a predator ecologist and what does it do?" Presentation to first year students in WLE 100. October 12.

2007 - Harrison, D. J. Co-led a field tour for professional foresters highlighting the management of deer wintering habitat in northern Maine. October 10.

2007 - Harrison, D. J. Presented invited guest lecture in WLE 100. October 12.

2007 – Harrison, D. J., W. B. Krohn, E. Simons and A. K. Fuller. Co-led a northern Maine landscape planning workshop for NGO's and state agency personnel. October 17.

2007- Harrison, D. J., W. B. Krohn, and M. McCollough. Contributed to an article titled "Cats in a Quandry" that highlighted finding from our lynx research and appeared in National Wildlife Magazine December-January 2008 issue.