

CURRICULUM VITAE

THOMAS M. GEHRING

Department of Biology
Central Michigan University
Mt. Pleasant, MI 48859

Office: (989) 774-2484
FAX: (989) 774-3462
E-mail: tom.gehring@cmich.edu

EDUCATION

2000 Ph.D. (Wildlife Ecology), Purdue University
1996 M.S. (Natural Resources-Wildlife Ecology), University of Wisconsin-Stevens Point
1992 B.S. (Biology-Ecology), University of Wisconsin-Stevens Point

EMPLOYMENT

8/2010-present Professor of Biology, Central Michigan University
2005-2010 Associate Professor of Biology, Central Michigan University
2001-2005 Assistant Professor of Biology, Central Michigan University
2001 Postdoctoral Research Associate, Purdue University
1997-2000 Graduate Research Assistant (Ph.D.), Purdue University
1996 Research Technician, University of Massachusetts-Amherst
1992-1995 Graduate Research Assistant (M.S.), University of Wisconsin-Stevens Point
1992 Wildlife Research Technician, University of Wisconsin-Stevens Point
1990 Wildlife Research Technician, University of Montana-Missoula

RESEARCH INTERESTS

Conservation Biology; GIS Applications; Predator-Prey Ecology; Landscape Ecology/Spatial Ecology; Restoration Ecology; Management of Wildlife-Human Conflicts

INSTRUCTIONAL ACTIVITIES

Teaching Experience

Central Michigan University

- BIO 101N General Biology (F01, F02, F06, F10)
- BIO 240 Conservation of Natural Resources (F01, F02, F03, F04, Su09)
- BIO 340 General Ecology (F06, F07, Sp09, Sp10)
- BIO 364 Wildlife Conservation (F01, F02, F03, F04, F06, F07)
- BIO 440 Wildlife Ecology (Sp02, F04, Su10, F10)
- BIO 541 Wildlife Biology & Management (F03, F05, F07, F09)
- BIO 594 Advances in Natural Resources Conservation (Sp04)
- BIO 597 Wildlife Investigation Techniques – CMUBS (Su02, Su03)
- BIO 597F Applied Wildlife Lab (F02)
- BIO 597G/P Wildlife Diseases (Sp03, Sp09)
- BIO 597Z/540 Mammalogy (Sp 04, Sp06, F08, Sp10)
- BIO 597 Ecology & Conservation of Carnivores (F04, Sp05)
- BIO 620V/691 Landscape Ecology (Sp02, Sp03, Sp05, Sp07, Sp09)
- BIO 620 Wildlife Spatial Statistics (F02)
- BIO 620 Restoration Ecology (Sp03)

Fairmont State College

BIO 101 Introductory Biology

BIO 102 Organismal Biology

West Virginia University

WILD 225 Mammalogy

Purdue University

FNR 242 Vertebrate Biology

FNR 330 Natural Resources Practicum

FNR 547 Vertebrate Population Dynamics

Advising

- Advise(d) 94 undergraduate students with Natural Resources major at CMU, 2001-present
- Advise(d) 48 undergraduate students with Natural Resources minor at CMU, 2001-10/2009
- Faculty advisor for CMU Honors Senior Project, Spring 2002
- Faculty advisor for 3 CMU Summer Scholar student, Summers 2003, 2006, 2007
- Faculty advisor for 10 undergraduate research projects, 2002-present
- Faculty advisor for 1 undergraduate internship (2004)
- Serve(d) as chair of 18 graduate student committees at CMU, 2002-present
- Graduated 10 M.S. students (2003-present)
- Serve(d) as member of 32 graduate student committees at CMU, 2001-present

Mentoring Graduate Student Research***Current Graduate Students***

- Rob Truax (2010-present) Bobcat Social Ecology and Communication Networks
- Donald Poppe (2010-present) Dunlin Stopover Ecology
(Co-Advisor with Dr. Nancy Seefelt)
- Chad Blass (2009-present) Predictive Modeling of Mute Swan Occurrence in Michigan's Great Lakes Coastal Wetlands
- Keith Miller (2009-present) Spatial Modeling of Andean Bear Habitat in Venezuela
- Maxwell Field (2006-present) Spatial Ecology of Common Loon (*Gavia immer*) and Factors Influencing Reproductive Success in Michigan's Lower Peninsula
- Megan Provost (2006-present) Use of Livestock Guarding Dogs as a Conservation Tool on Michigan Farms
- Anna Cellar (2004-present) Testing the Effectiveness of Livestock Guarding Dogs for Reducing Livestock Losses from Predators

Completed Graduate Students

- Todd Lickfett (2006-2010) Evaluation of an Adsorption-Elution Method for Concentration of Influenza A Viruses in Water
- Heather Stricker (2006-2009) Wolf (*Canis lupus*) Recovery within the Changing Great Lakes Landscape
- Nathan Svoboda (2004-2008) Habitat Use, Home-Range Size and Spatial Distribution of Bobcats in Michigan's Northern Lower Peninsula
- Lynnea Shunta (McFadden) (2004-2007) Spatial Ecology of American Martens in the Northern Lower Peninsula of Michigan
- Shawn Rossler (2004-2007) Determining the Effectiveness of Shock Collars as a Non-Lethal Control for Site-Aversive Conditioning of Wild Wolves in Wisconsin
- Sarah Davidson (Nelson) (2003-2006) An Experimental Test of Fladry as a Non-Lethal Control Measure for Reducing Wolf-Caused Livestock Losses
- Amy Boetcher (2004-2006) Forest Access and Human Use in Kakamega Forest, Kenya (Co-Advisor with Dr. Mark Lung)
- Bradley Potter (2003-2005) Creating Predictive Models of Wildlife Crossing Locations Along Michigan Highways
- Timothy Preuss (2002-2005) Predicting Spatial Distribution and Relative Abundance of Bobcats in the Northern Lower Peninsula of Michigan
- Jason Hawley (2002-2005) Experimental Assessment of Shock Collars as a Non-Lethal Control Method for Free-Ranging Wolves in Wisconsin
- Joshua Lallaman (2002-2003) Manistee Lake Sturgeon Study (Served as On-Campus Advisor)

Mentoring Undergraduate Student Research & Internships

- * Adam Nelson Assessing Rates of Nest Predation on Beaver Island (2002) – BIO 403
- * Bradley Potter Landscape Analysis of Carnivore Habitat in Michigan (2002) – BIO 403
- * Sarah Davidson Distribution of Mammalian Predators on Beaver Island (2002) – BIO 403
- * Jared Duquette Summer Scholar - Movements of Suburban White-Tailed Deer in Dow-Veit's Woods (2002-2004)

- * Nate Carle Evaluation of the Behavioral Responses of Coyotes to Fladry (2004)
- * David Lehnert Internship with U.S.D.A. Natural Resource & Conservation Service (2004)
- * Lindsay Miller Community Ecology of 3 Weasel Species in Neithercut Woodland (2003-2004)
 – BIO 403
- * Shawn Rossler Assessing Perceptions of Rural Stakeholders Toward Wolves (2002-2004)
- * Renae Sattler Winter Track Survey for Detecting Recolonization of the Lower Peninsula of
Michigan by Gray Wolves (2005) – BIO 403
- * Megan Provost Farmer Perceptions and Use of Livestock Guarding Dogs in Michigan (2006)
- * Matt Hund Survey of Attitudes Towards Recolonization of Gray Wolves (*Canis lupus*) in
the Northern Lower Peninsula of Michigan (2006) – BIO 403
- * James Detraz Summer Scholar – Effectiveness of Livestock Guarding Dogs to Reduce
Visitation of Mesopredators into Pastures (2006)
- * Randi Brown Summer Scholar – Effectiveness of Livestock Guarding Dogs to Reduce Deer
Visitation into Pastures (2007)
- * Clay Wilton Rare Carnivore Habitat and Population Monitoring (2007-2008)
- * Rob Truax Spatial Ecology of Felids in South Africa (2009-2010)

SCHOLARLY & CREATIVE ACTIVITIES

Peer-Reviewed Publications:

* = graduate student; ** = undergraduate student

1. **Gehring, T.M.** 1993. Potential predatory attack by Common Ravens on porcupines. *Wilson Bulletin* 105:524-525.
2. **Gehring, T. M.**, and B. E. Kohn. 1993. Broken snare found attached to a captured wolf. *International Wolf* 3(4):7.
3. **Gehring, T.M.** 1993. Adult black bear, *Ursus americanus*, displaced from a kill by a wolf, *Canis lupus*, pack. *Canadian Field-Naturalist* 107:373-374.
4. Lovallo, M.J., J.H. Gilbert, and **T.M. Gehring**. 1993. Bobcat, *Felis rufus*, dens in an abandoned beaver, *Castor canadensis*, lodge. *Canadian Field-Naturalist* 107:108-109.
5. **Gehring, T. M.**, J. L. Gehring, M. A. Beckel, and M. A. Callahan. 1996. Recovering wolf populations. *Conservation Biology* 10:5-6.

6. Kohn, B., J. Frair, D. Unger, **T. Gehring**, D. Shelley, E. Anderson, P. Keenlance. 1999. Impacts of a highway expansion project on wolves in northwestern Wisconsin: preliminary findings. Proceedings of The International Conference on Wildlife Ecology and Transportation III, Missoula, MT.
7. **Gehring, T. M.**, and R. K. Swihart. 2000. Field immobilization and use of radiocollars on long-tailed weasels. *Wildlife Society Bulletin* 28:579-585.
8. Swihart, R. K., Z. L. Feng, N. A. Slade, D. M. Mason, and **T. M. Gehring**. 2001. Effects of habitat destruction and resource supplementation in a predator-prey metapopulation model. *Journal of Theoretical Biology* 210:287-303.
9. Shelley, D. P., and **T. M. Gehring**. 2002. Behavioral modification of gray wolves suffering from sarcoptic mange: importance of sequential monitoring. *Canadian Field-Naturalist* 116:648-650.
10. **Gehring, T. M.**, and R. K. Swihart. 2003. Body size, niche breadth, and ecologically scaled responses to habitat fragmentation: mammalian predators in an agricultural landscape. *Biological Conservation* 109:283-295.
11. Swihart, R. K., **T. M. Gehring**, T. E. Nupp, and M. B. Kolozsvary. 2003. Responses of “resistant” vertebrates to habitat loss and fragmentation: the importance of niche breadth and range boundaries. *Diversity and Distributions* 9:1-18.
12. Goheen, J. R., R. K. Swihart, **T. M. Gehring**, and M. S. Miller. 2003. The role of mobility and forest fragmentation in shaping tree squirrel communities. *Oikos* 102:95-103.
13. Swihart, R. K., T. C. Atwood, J. R. Goheen, D. M. Scheiman, K. E. Munroe, and **T. M. Gehring**. 2003. Patch occupancy of North American mammals: is patchiness in the eye of the beholder? *Journal of Biogeography* 30:1259-1279.
14. **Gehring, T. M.**, and R. K. Swihart. 2004. Home range and movements of long-tailed weasels in a landscape fragmented by agriculture. *Journal of Mammalogy* 85:138-145.
15. **Gehring, T. M.**, B. E. Kohn, J. L. Gehring, and E. M. Anderson. 2003. Limits to plasticity in gray wolf, *Canis lupus*, pack structure: conservation implications for recovering populations. *Canadian Field-Naturalist* 117:419-423.
16. Atwood, T. C., H. P. Weeks, Jr., and **T.M. Gehring**. 2004. Spatial ecology of coyotes along a suburban-to-rural gradient. *Journal of Wildlife Management* 68:1000-1009.
17. **Gehring, T. M.** and B. A. Potter^{**}. 2005. Wolf habitat analysis in Michigan: an example of the need for proactive land management for carnivore species. *Wildlife Society Bulletin* 33:1237-1244.
18. **Gehring, T. M.**, J. E. Hawley^{*}, S. J. Davidson^{*}, S. T. Rossler^{**}, A. C. Cellar^{*}, R. N. Schultz, A. P. Wydeven, and K. C. VerCauteren. 2006. Are viable non-lethal management tools available for

reducing wolf-human conflict?: preliminary results from field experiments. Pages 2-6 In R. M. Timm and J. M. O'Brien, editors. Proceedings of the 22nd Vertebrate Pest Conference. University of California, Davis, California.

19. Preuss^{*}, T. S., and **T. M. Gehring**. 2007. Landscape analysis of potential bobcat habitat in the northern Lower Peninsula of Michigan. *Journal of Wildlife Management* 71:2699-2706.
20. Gregory^{*}, A. J., M. A. Lung, **T. M. Gehring**, and B. J. Swanson. 2009. The importance of sex and spatial scale when evaluating sexual segregation by elk in Yellowstone. *Journal of Mammalogy* 90:971-979.
21. Hawley^{*}, J. E., T. M. Gehring, R. N. Schultz, S. T. Rossler^{**}, and A. P. Wydeven. 2009. Assessment of shock collars as nonlethal management for wolves in Wisconsin. *Journal of Wildlife Management* 73:518-525.
22. Davidson-Nelson^{*}, S. J., and **T. M. Gehring**. 2010. Testing fladry as a non-lethal management tool for wolves and coyotes in Michigan. *Human-Wildlife Interactions* 4:87-94.
23. **Gehring, T. M.**, K. C. VerCauteren, and J-M. Landry. 2010. Livestock protection dogs in the 21st century: is an ancient tool relevant to modern conservation challenges? *BioScience* 60:299-308.
24. **Gehring, T. M.**, K. C. VerCauteren, and A. C. Cellar^{*}. 2010. Good fences make good neighbors: implementation of electric fencing for establishing effective livestock protection dogs. *Human-Wildlife Interactions* 4: In Press.
25. **Gehring, T. M.**, K. C. VerCauteren, M. L. Provost^{*}, and A. C. Cellar^{*}. 2010. Utility of livestock-protection dogs for deterring wildlife from cattle farms. *Wildlife Research (Invited Special Issue)*. 37: In Press.

Manuscripts In Review or In Preparation:

^{*} = graduate student; ^{**} = undergraduate student

VerCauteren, K. C., M. J. Lavelle, **T. M. Gehring**, and J-M. Landry. Cow dogs: the use of livestock protection dogs for reducing predation and transmission of diseases from wildlife to cattle. In Preparation. Planned Outlet: *Journal of Veterinary Behavior: Clinical Applications and Research*

Potter^{*}, B. A., and **T. M. Gehring**. Modeling environmental variables associated with wildlife crossing locations along highways in Michigan. In Preparation. Planned Outlet: *Human-Wildlife Interactions*

Rossler^{*}, S.T., **T. M. Gehring**, R. N. Schultz, M. T. Rossler^{**}, A. P. Wydeven, and J. E. Hawley^{*}. Site-aversive conditioning of wolves using shock collars. In Preparation. Planned Outlet: *Journal of Wildlife Management*

Rossler^{*}, S.T., **T. M. Gehring**, R. N. Schultz, and A. P. Wydeven. Predicting wolf-caused

depredations of bear hunting dogs in Wisconsin. In Preparation. Planned Outlet: *Journal of Wildlife Management*

Hawley*, J.E., S. T. Rossler*, **T.M. Gehring**, R.N. Schultz, M.E. Callahan, J. Cade, and R. Clark. Development of a new shock-collar design for efficient and safe use on wild wolves. In Preparation. Planned Outlet: *Journal of Wildlife Management*

McFadden*, L. M., **T. M. Gehring**, B. J. Swanson, S. Bicker*, E. Nelson*, C. Buchanan*. Home-range dynamics and habitat selection of American martens in Michigan's northern lower peninsula. In Preparation. Planned Outlet: *Journal of Wildlife Management*

Gehring, T. M., M. L. Provost**, and K. C. VerCauteren. Livestock producer perceptions and use of livestock protection dogs in Michigan. In Preparation. Planned Outlet: *Human-Wildlife Interactions*

Gehring, T. M., and R. K. Swihart. Coping with fragmentation: habitat use by long-tailed weasels in an agricultural landscape. In Preparation. Planned Outlet: *Canadian Journal of Zoology*

Gehring, T. M., J.F. Duquette**, S.T. Rossler**, S.J. Davidson-Nelson*, T.S. Preuss*, B.A. Potter*, J.E. Hawley*, and S. W. Gallagher*. Assessing perceptions of rural stakeholders toward wolves in the northern Great Lakes Region. In Preparation.

Smith*, K.M., B. Archambo, **T.M. Gehring**, and D.K. King. 2005. Environmental cues for spawning migration and spawning activity of lake sturgeon (*Acipenser fulvescens*) in the upper Black River, Michigan. Transactions of the American Fisheries Society. In Preparation.

Potter*, B.A., **T.M. Gehring**, and N.D. Niemuth. Modeling the availability of habitat for greater prairie chickens and sharp-tailed grouse in Michigan. In Preparation.

Gehring, T. M., and R. K. Swihart. Predicting predation risk for ground-nesting birds: the effects of predator guilds in an agricultural landscape. In Preparation.

Gehring, T. M., S. T. Rossler*, J. E. Hawley*, B. E. Kohn, and E. M. Anderson. Home-range shifts by wolves: implications for managing wolf-livestock conflicts in semi-agricultural landscapes. In Preparation.

Reports, Reviews, Books & Theses:

* = graduate student; ** = undergraduate student

Gehring, T.M. 2005. Book review of *Conserving Biodiversity in Agricultural Landscapes: Model-Based Planning Tools*. Environmental Conservation 32:192-193.

Potter*, B.A., and **T.M. Gehring**. 2004. Developing predictive models for wildlife crossing sites in Michigan. Final Report to U.S. Department of Agriculture, Berryman Institute-East. 9 pp.

Gehring, T.M., and S.J. Davidson*. 2004. Testing fladry as a non-lethal control tool for reducing

wolf-human conflict in Michigan. Final Report to Michigan Department of Natural Resources, Nongame Wildlife Program. 5 pp.

Gehring, T.M., T.S. Preuss*, and B.A. Potter*. 2004. Independent review of status of the bobcat population in northern Lower Peninsula of Michigan. Final Report to Michigan Department of Natural Resources. 36 pp.

Gehring, T.M., and B.A. Potter*. 2003. Assessing the quality of gray wolf habitat in the Lower Peninsula of Michigan. Final Report to Michigan Department of Natural Resources, Nongame Wildlife Program. 6 pp.

Gehring, T. M. 2000. Ecology of mammalian predators in a landscape fragmented by agriculture. Ph.D. Dissertation, Purdue University, West Lafayette, IN. 160pp.

Swihart, R. K., and **T. M. Gehring**. 1999. A primer of vertebrate population dynamics. Purdue University Printing Services, West Lafayette, IN. 257pp.

Kohn, B., J. Ashbrenner, J. Frair, D. Unger, D. Shelley, **T. Gehring**, and E. Anderson. 1996. Impacts of highway development on northwestern Wisconsin timber wolves. Wisconsin Department of Natural Resources. 1995 Annual Report.

Gehring, T. M. 1995. Winter wolf movements in northwestern Wisconsin and east-central Minnesota: a quantitative approach. M.S. Thesis. University of Wisconsin-Stevens Point, Stevens Point, WI. 132pp.

Kohn, B. E., D. P. Shelley, **T. M. Gehring**, D. M. Unger, and E. M. Anderson. 1995. Impacts of Highway 53 development on timber wolves. Wisconsin Department of Natural Resources Report #3.

Kohn, B. E., D. P. Shelley, **T. M. Gehring**, and J. E. Ashbrenner. 1994. Impacts of Highway 53 development on timber wolves. Wisconsin Department of Natural Resources Report #2.

Gehring, T. M. 1993. Analysis of wolf densities, deer densities, and hunter harvest rates in St. Croix State Park, Minnesota. Report to Minnesota Department of Natural Resources – Parks Division and Mille Lacs Tribal Council – Natural Resources Division.

Popular Articles:

Gehring, T.M. 1990. T.H. Huxley: Darwin's supporter and opponent. Scientific Wisconsin 3:23-28.

Presentations:

* = graduate student; ** = undergraduate student

2010

VerCauteren, K, **T. Gehring**, JM. Landry. 2010.

VerCauteren, K, **T. Gehring**, JM. Landry. 2010. Livestock protection dogs in the 21st Century: Is an ancient tool relevant to modern conservation and production challenges? American Sheep Industry Association Annual Convention. Nashville, Tennessee. (Invited).

2008

Lickfett*, T. M., **T. M. Gehring**, and E. W. Alm. 2008. Application of a cation-coated filter method to detection of influenza A viruses in Michigan waterfowl stopover sites. American Society for Microbiology Annual Meeting, Boston, Massachusetts.

2007

Gehring, T. M., J. E. Hawley*, S. T. Rossler*, R. N. Schultz, and A. P. Wydeven. 2007. Love me, hate me, shock me: experimental tests of shock collars on free-ranging wolves in Wisconsin. 14th Annual Conference of The Wildlife Society, Tuscon, Arizona.

Gehring, T. M., J. E. Hawley*, S. J. Davidson-Nelson*, S. T. Rossler*, A. C. Cellar*, M. L. Provost*, H. K. Stricker*, R. N. Schultz, A. P. Wydeven, and K. C. VerCauteren. 2007. Testing non-lethal management tools for reducing livestock depredations by gray wolves. 2007 Great Lakes Regional Conference, Native American Fish & Wildlife Society. Lac du Flambeau, Wisconsin.

Rossler*, S. T., **T. M. Gehring**, M. T. Rossler**, A. P. Wydeven, and R. N. Schultz. 2007. Testing shock collars as a non-lethal control for site-aversive conditioning of wolves in northwestern Wisconsin. Midwest Wolf Stewards Meeting, Cable, Wisconsin.

Cellar*, A. C., and **T. M. Gehring**. 2007. Integrating and evaluating livestock guarding dogs for reducing wolf-human conflict on Michigan Farms. Midwest Wolf Stewards Meeting, Cable, Wisconsin.

2006

Gehring, T.M., S.T. Rossler*, M.L. Provost**, A.C. Cellar*, and K.C. VerCauteren. 2006. Farmer perception of wolves in the northern Great Lakes Region. Midwest Wolf Stewards Conference. Watersmeet, Michigan.

Gehring, T.M., J.E. Hawley*, S.J. Davidson*, S.T. Rossler*, A.C. Cellar*, M.L. Provost**, R.N. Schultz, and A.P. Wydeven. 2006. Experimental field tests of non-lethal management tools. Midwest Wolf Stewards Conference. Watersmeet, Michigan.

Gehring, T.M., and S.J. Davidson*. 2006. Experimental tests with fladry for reducing wolf-human conflict. Nonlethal, Proactive Wolf Management Tools, Techniques and Strategies Workshop. Pray, Montana.

Gehring, T.M., M.L. Provost**, A.C. Cellar*, K.C. VerCauteren. 2006. Farmer perceptions and use of livestock guarding dogs in Michigan. Nonlethal, Proactive Wolf Management Tools, Techniques and Strategies Workshop. Pray, Montana.

Rossler*, S.T., and **T.M. Gehring**. 2006. Shock collar deterrents. Nonlethal, Proactive Wolf

Management Tools, Techniques and Strategies Workshop. Pray, Montana.

- Gehring, T.M.** 2006. How to outsmart a wolf: old and new tools for reducing livestock losses to predators. Michigan Sheep Breeders Association Annual Convention. Lansing, Michigan.
- Gehring, T. M.,** D. W. Craven, A. Kiogima, and H.K. Stricker*. 2006. Proactive management of gray wolves in the Great Lakes Region. Special Symposium: Indigenous Peoples Wildlife and Ecosystem Management. 13th Annual Conference of The Wildlife Society, Anchorage, Alaska.
- McFadden*, L. M., and **T. M. Gehring.** 2006. Home-range dynamics and habitat selection of American marten in Michigan's Lower Peninsula. 13th Annual Conference of The Wildlife Society, Anchorage, Alaska.
- Cellar*, A. C., and **T. M. Gehring.** 2006. Integrating and evaluating livestock guarding dogs for reducing wolf-human conflict. 13th Annual Conference of The Wildlife Society, Anchorage, Alaska.
- Rosler*, S. T., **T. M. Gehring,** M. T. Rosler**, A. P. Wydeven, and R. N. Schultz. 2006. Testing shock collars as a non-lethal control for site-aversive conditioning of wolves in northwestern Wisconsin. 13th Annual Conference of The Wildlife Society, Anchorage, Alaska.
- Svoboda*, N. J., and **T. M. Gehring.** 2006. Spatial distribution and relative abundance of bobcats in the Northern Lower Peninsula of Michigan. Midwest Furbearer Workshop, Sault Ste. Marie, Michigan.
- McFadden*, L. M., and **T. M. Gehring.** 2006. Home-range dynamics and habitat selection of American marten in Michigan's Lower Peninsula. Midwest Furbearer Workshop, Sault Ste. Marie, Michigan.
- Cellar*, A. C., and **T. M. Gehring.** 2006. Integrating and evaluating livestock guarding dogs for reducing wolf-human conflict on Michigan Farms. Great Lakes Regional Conference – Native American Fish & Wildlife Society, Manistee, Michigan.
- Cellar*, A. C., and **T. M. Gehring.** 2006. Integrating and evaluating livestock guarding dogs for reducing wolf-human conflict on Michigan Farms. 67th Midwest Fish & Wildlife Conference, Omaha, Nebraska.
- Gehring, T. M.,** D. W. Craven, A. Kiogima, and H.K. Stricker*. 2006. Proactive management of gray wolves in the Great Lakes Region. Great Lakes Regional Conference – Native American Fish & Wildlife Society, Manistee, Michigan.
- Gehring, T.M.,** M.L. Provost**, A.C. Cellar*, K.C. VerCauteren. 2006. Farmer perceptions and use of livestock guarding dogs in Michigan. 18th Annual North American Wolf Conference. Pray, Montana.
- Rosler*, S.T., **T.M. Gehring,** R.N. Schultz, and A.P. Wydeven. 2006. Shock collars and wolves.

18th Annual North American Wolf Conference. Pray, Montana.

Cellar^{*}, A.C., and **T.M. Gehring**. 2006. Livestock guard dogs. 18th Annual North American Wolf Conference. Pray, Montana.

Boetcher^{*}, A., **T. Gehring**, and M. Lung. 2006. Understanding the relationship between trail systems and forest use in the Kakamega Forest, Kenya. 20th Annual Meeting of Society for Conservation Biology, San Jose, California.

Gehring, T.M., J.E. Hawley^{*}, S.J. Davidson^{*}, S.T. Rossler^{*}, A.C. Cellar^{*}, R.N. Schultz, and A.P. Wydeven. 2006. Experimental field tests of non-lethal control tools for reducing wolf-human conflict. 22nd Vertebrate Pest Conference. Berkeley, California.

Cellar^{*}, A. C., and **T. M. Gehring**. 2006. Integrating and evaluating livestock guarding dogs for reducing wolf-human conflict on Michigan Farms. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

2005

Gehring, T.M., J.E. Hawley^{*}, S.J. Davidson^{*}, S.T. Rossler^{*}, A.C. Cellar^{*}, R.N. Schultz, and A.P. Wydeven. 2005. Experimental field tests of non-lethal control tools for reducing wolf-human conflicts in Michigan and Wisconsin. Special Symposium: Gray Wolf Recovery in the Western Great Lakes Region. 12th Annual Conference of The Wildlife Society, Madison, Wisconsin.

Potter^{*}, B. A., and **T. M. Gehring**. 2005. Creating predictive models for wildlife crossing locations along highways in Michigan. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Davidson^{*}, S. J., and **T. M. Gehring**. 2005. Testing fladry as a non-lethal control tool for reducing wolf-human conflicts in Michigan. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Rossler^{*}, S. T., **T. M. Gehring**, M. T. Rossler^{**}, A. P. Wydeven, and R. N. Schultz. 2005. Testing shock collars as a non-lethal control for site-aversive conditioning of wolves in northwestern Wisconsin. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Svoboda^{*}, N. J., and **T. M. Gehring**. 2005. Spatial distribution and relative abundance of bobcats in the Northern Lower Peninsula of Michigan. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Shunta^{*}, L. M., and **T. M. Gehring**. 2005. Home-range dynamics and habitat selection of American marten in Michigan's Lower Peninsula. 66th Midwest Fish & Wildlife Conference, Grand Rapids, Michigan.

Potter^{*}, B. A., and **T. M. Gehring**. 2005. Creating predictive models for wildlife crossing locations along highways in Michigan. 12th Annual Conference of The Wildlife Society,

Madison, Wisconsin.

Davidson^{*}, S. J., and **T. M. Gehring**. 2005. Testing fladry as a non-lethal control tool for reducing wolf-human conflicts in Michigan. 12th Annual Conference of The Wildlife Society, Madison, Wisconsin.

Gehring, T.M. 2005. They're here: gray wolves that is. Kirtland's Festival. Roscommon, Michigan.

Gehring, T.M., J.E. Hawley^{*}, S.J. Davidson^{*}, S.T. Rossler^{*}, A.C. Cellar^{*}, J.L. Gehring, R.N. Schultz, and A.P. Wydeven. 2005. Experimental field tests of non-lethal control tools on gray wolves. Midwest Wolf Stewards Conference. Hinckley, Minnesota.

Gehring, T.M., J.E. Hawley^{*}, S.J. Davidson^{*}, S.T. Rossler^{*}, A.C. Cellar^{*}, R.N. Schultz, and A.P. Wydeven. 2005. Experimental field tests of non-lethal control tools for reducing wolf-human conflict in Michigan and Wisconsin. Wildlife Damage Management Conference. Traverse City, Michigan.

2004

Gehring, T.M. J.E. Hawley^{*}, and S.J. Davidson^{*}. 2004. Developing non-lethal control tools for reducing wolf-human conflicts. Wisconsin Wolf Workshop Annual Meeting. Drummond, Wisconsin.

Gehring, T.M. 2004. Are we ready for gray wolves in the Lower Peninsula of Michigan? The Headwaters Land Conservancy Annual Meeting, Grayling, Michigan.

Gehring, T.M., J.E. Hawley^{*}, R.N. Schultz, S.T. Rossler^{**}, and A.P. Wydeven. 2004. Preliminary tests of shock collars as a potential tool for reducing wolf-human conflict. Midwest Wolf Stewards Conference. Odanah, Wisconsin.

Gehring, T.M., J.E. Hawley^{*}, and S.J. Davidson^{*}. 2004. Developing new management tools for reducing livestock losses to wolves. Wisconsin USDA-Wildlife Services State Conference, Rhinelander, Wisconsin.

Gehring, T.M. 2004. Developing new management tools for reducing livestock losses to predators. Michigan Sheep Breeders Association Annual Convention. Lansing, Michigan.

Gehring, T.M., J.L. Gehring, B. Eversole^{**}, S.W. Gallagher^{*}, S.T. Rossler^{**}, J.F. Duquette^{**}, S.J. Davidson^{*}, J.E. Hawley^{*}, T.S. Preuss^{*}, and B.A. Potter^{*}. 2004. Perceptions of livestock producers toward gray wolves in the northern Great Lakes Region. 11th Annual Conference of The Wildlife Society, Calgary, Alberta.

2003

Gehring, T.M. 2003. Michigan wolves. Chippewa Watershed Conservancy, Spring Banquet, Mount Pleasant, Michigan.

Gehring, T.M. 2003. Survey of farm management responses to wolves and other wild predators.

Midwest Wolf Stewards Conference. Wakefield, Michigan.

Gehring, T. M., S. W. Gallagher^{*}, T. S. Preuss^{*}, B. A. Potter^{*}, J. E. Hawley^{*}, S. T. Rossler^{**}, and J. F. Duquette^{**}. 2003. Assessing perceptions of rural stakeholders toward wolves in the northern Great Lakes Region. World Wolf Congress, Banff, Alberta.

2002

Gehring, T. M. 2002. Experimental assessment of a non-lethal control method for reducing wolf-human conflicts. 2002 Spring Meeting of the Michigan Chapter of The Wildlife Society, Dundee, MI.

Gehring, T. M., and R. K. Swihart. 2002. Patterns of habitat use by long-tailed weasels in an agricultural landscape. 82nd Annual Meeting of the American Society of Mammalogists. McNeese State University, Lake Charles, Louisiana.

Swihart, R. K., T. C. Atwood, J. R. Goheen, D. Scheiman, K. Munroe, and **T. M. Gehring**. 2002. Patchiness is in the eye of the beholder: multi-scale determinants of patch occupancy in North American mammals. 82nd Annual Meeting of the American Society of Mammalogists. McNeese State University, Lake Charles, Louisiana.

2001

Gehring, T. M., and R. K. Swihart. 2001. Spatial ecology of mammalian predators in an agricultural landscape: species-specific ecological landscapes and conservation. 63rd Midwest Fish & Wildlife Conference, Des Moines, IA.

2000-1993

King, W. T., Jr., G. Shao, and **T. Gehring**. 2000. Comparison of remote sensing detection with different resolution data for a fragmented landscape. Forestry and Natural Resources Research Symposium, Purdue University, West Lafayette, IN.

Swihart, R. K., N. A. Slade, Z. Feng, and **T. M. Gehring**. 2000. Effects of habitat destruction and diet breadth in a predator-prey metapopulation model: analytical predictions. 80th Annual Meeting of American Society of Mammalogists. Durham, NC.

Slade, N. A., R. K. Swihart, Z. Feng, and **T. M. Gehring**. 2000. Effects of habitat destruction and diet breadth in a predator-prey metapopulation model: spatially explicit simulations. 80th Annual Meeting of American Society of Mammalogists. Durham, NC.

Gehring, T. M., J. L. Gehring, and B. E. Kohn. 1999. Management of wolf-caused livestock depredations: the farmer's role. 129th Annual Conference of the Wisconsin Academy of Sciences, Arts and Letters. Stevens Point, WI.

Gehring, T. M., and R. K. Swihart. 1999. Mammalian predator use of spatial elements in a landscape fragmented by agriculture. 79th Annual Meeting of American Society of Mammalogists. Seattle, WA.

- Swihart, R. K., **T. M. Gehring**, M. B. Kolozsvary, T. E. Nupp, and L. K. Page. 1999. Effects of habitat fragmentation on midwestern wildlife: looking beyond the obvious. 61st Annual Meeting of Midwest Fish and Wildlife Conference.
- Gehring, T. M.**, J. L. Gehring, B. E. Kohn, M. A. Beckel, and M. A. Callahan. 1996. Integrated management of wolf-caused depredation: the Wisconsin-Minnesota depredation option plan. 14th Midwest Furbearer Workshop. Ironwood, MI.
- Frair, J. L., E. M. Anderson, B. E. Kohn, D. P. Shelley, **T. M. Gehring**, and D. Unger. 1996. Impacts of Highway 53 expansion on gray wolves: preliminary results. Wolves of America Conference. Albany, NY.
- Wydeven, A. P., K. Beheler-Amass, N. J. Thomas, R. N. Schultz, S. M. Schmitt, D. P. Shelley, and **T. M. Gehring**. 1996. Occurrence of sarcoptic mange in Great Lakes States gray wolves (*Canis lupus*): 1991-1994. 14th Midwest Furbearer Workshop. Ironwood, MI.
- Wydeven, A., K. Beheler-Amass, S. Schmitt, N. Thomas, R. Schultz, D. Shelley, and **T. Gehring**. 1995. Occurrence of sarcoptic mange in Great Lakes states timber wolves (*Canis lupus lycaon*) Page 463 in Proceedings of the American Association of Zoo Veterinarians. Media, Pennsylvania, USA.
- Kohn, B. E., D. P. Shelley, and **T. M. Gehring**. 1995. Impacts of highway development on timber wolves in northwestern Wisconsin. Wolves & Humans 2000 International Symposium. Duluth, MN.
- Gehring, T. M.**, M. A. Callahan, J. L. Gehring, M. A. Beckel, and B. E. Kohn. 1995. An alternative approach to wolf control in the Minnesota-Wisconsin border region. 57th Midwest Fish and Wildlife Conference. Detroit, MI.
- Gehring, T. M.**, B. E. Kohn, J. L. Gehring, M. A. Callahan, M. A. Beckel, and E. M. Anderson. 1995. Population dynamics of wolves in the Wisconsin - Minnesota border region. Wolves & Humans 2000 International Symposium. Duluth, MN.
- Gehring, T. M.**, and E. M. Anderson. 1994. Developing a predictive model for wolf movements in northwestern Wisconsin and east-central Minnesota. 56th Midwest Fish and Wildlife Conference. Indianapolis, IN.
- Gehring, T.M.**, and E.M. Anderson. 1993. Analysis of winter wolf movements in northeastern Minnesota. 55th Midwest Fish and Wildlife Conference. St. Louis, MO.

Grants & Contracts Received:

1. 1992 Modeling winter wolf movements in northwestern Wisconsin and east-central Minnesota. Merrel-Karhu, Inc. \$1,000 equipment grant.
2. 1992 Modeling winter wolf movements in northwestern Wisconsin and east-central

Minnesota. Patagonia, Inc. \$500 equipment grant.

3. 1993 Influence of nutritional deprivation of white-tailed deer on winter wolf movements. Special Projects Foundation, Minneapolis, MN. \$2,000
4. 1993 Influence of nutritional deprivation of white-tailed deer on winter wolf movements. Zoological Society of Milwaukee County, Milwaukee, WI. \$2,000
5. 1993 Influence of nutritional deprivation of white-tailed deer on winter wolf movements. Fox Valley Chapter of White-Tails Unlimited, Appleton, WI. \$600
6. 1993 Influence of nutritional deprivation of white-tailed deer on winter wolf movements. Eau Claire Chapter of White-Tails Unlimited, Eau Claire, WI. \$500
7. 1995 Integrated management of wolf-caused depredation: the Wisconsin-Minnesota: depredation option plan. Wildlife Science Center, Forest Lake, MN. \$2,500
8. 1997 Relative abundance and distribution of mammalian predators in fragmented landscapes. Indiana Academy of Science, Muncie, IN. \$1,200
9. 1999 Movements of long-tailed weasels in landscapes fragmented by agriculture. Furbearers Unlimited, Inc., Bloomington, IL. \$1,500
10. 1999 Movements of long-tailed weasels in landscapes fragmented by agriculture. American Society of Mammalogists. \$800
11. 1999 Factors influencing predation on avian ground nests in landscapes fragmented by agriculture. Indiana Academy of Science, Muncie, IN. \$900
12. 2000 Movements of long-tailed weasels in landscapes fragmented by agriculture. American Museum of Natural History, New York, NY. \$1,500
13. 2001 Assessing perceptions of rural stakeholders toward wolves. Central Michigan University. FRCE Award. **\$6,837**
14. 2001 Predicting the spatial distribution of wild felids in landscapes of the northern Great Lakes Region. Central Michigan University. PRIF Award. **\$25,000**
15. 2002 Experimental assessment of a non-lethal method for reducing wolf-human conflicts. Central Michigan University, REF Award. **\$123,344**
16. 2002 Assessing the quality of gray wolf habitat in the Lower Peninsula of Michigan. Michigan Department of Natural Resources, Nongame Wildlife Fund. **\$4,650**
17. 2002 Determining the abundance and movements of white-tailed deer in Veits Woods and surrounding properties. City of Mount Pleasant. **\$2,000**

18. 2003 Predicting potential Canada lynx habitat in the northern Great Lakes Region. Defenders of Wildlife (with T.S. Preuss^{*}). **\$5,000**
19. 2003 Wolf recovery in semi-agricultural landscapes: testing non-lethal control measures for reducing conflict (with J. Hawley^{*}). Defenders of Wildlife. **\$4,800**
20. 2003 Estimating abundance and distribution of bobcats (*Lynx rufus*) in Michigan (with T.S. Preuss^{*}). Wildlife Forever. **\$4,000**
21. 2003 Developing predictive models for wildlife crossing sites in Michigan. Michigan Department of Transportation. **\$135,943**
22. 2003 Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan (with S.J. Davidson^{*}). Defenders of Wildlife. **\$3,000**
23. 2003 Seasonal use of livestock disposal sites by predators. Central Michigan University. FRCE Award. **\$7,480**
24. 2004 Developing predictive models for wildlife crossing sites in Michigan. (with B.A. Potter^{*}) USDA, Berryman Institute-East. **\$4,000**
25. 2004 Independent Review of Status of Bobcat Population in Northern Lower Peninsula of Michigan. Michigan Department of Natural Resources. **\$12,202**
26. 2004 Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan (with S.J. Davidson^{*}). Humane Society of the United States. **\$2,000**
27. 2004 Integrating non-lethal control of predators into agricultural systems. Central Michigan University, REF Award. **\$111,842**
28. 2004 Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan. Michigan Department of Natural Resources, Nongame Wildlife Fund. **\$8,965**
29. 2004 Wildlife Research at Central Michigan University. CITGO Petroleum, Inc. **\$2,000 fuel credit**
30. 2004 Effects of roads and fragmentation of habitat on bobcats in Michigan (with T.S. Preuss^{*}). Merit Energy Company. **\$500**
31. 2004 Status and Habitat Use of Bobcats (*Lynx rufus*) in the Northern Counties of Michigan. Little River Band of Ottawa Indians. **\$21,556**
32. 2004 Ecology of American martens in the northern Lower Peninsula of Michigan. Grand Traverse Band of Ottawa and Chippewa Indians and U.S. Fish & Wildlife Service (with B.J. Swanson). **\$123,826**

33. 2004 Monitoring bobcats in the northern Lower Peninsula of Michigan. Michigan Department of Natural Resources. **\$27,286**
34. 2004 Integrating non-lethal control of predators into agricultural systems: evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict. Defenders of Wildlife (with A. Cellar^{*}). **\$2,500**
35. 2004 Farmer perceptions and use of livestock guarding dogs in Michigan. USDA-National Wildlife Research Center. **\$9,968**
36. 2004 Integrating non-lethal control of predators into agricultural systems. National Geographic Society-Conservation Trust. **\$5,000**
37. 2005 Study of wolf range, behavior, and friendly co-existence with man in Michigan's Lower Peninsula. Little Traverse Bay Band of Odawa Indians and U.S. Fish & Wildlife Service. **\$78,819**
38. 2006 Evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict in Michigan. USDA-Sustainable Agriculture Research and Education Program. (with A. Cellar^{*}) **\$7,504**
39. 2006 Can livestock guarding dogs reduce rates of nest predation? Central Michigan University, FRCE Award. **\$7,190**
40. 2006 Evaluating the effectiveness of electronic-training collars for reducing wolf-human conflict in Wisconsin. Wisconsin Department of Natural Resources (with S.T. Rossler^{*}). **\$9,164**
41. 2006 Farmers conserving wildlife: integrating livestock guarding dogs to reduce predation and disease transmission. Animal Welfare Institute – The Christine Stevens Award. **\$10,000**
42. 2006 Farmers conserving wildlife: integrating livestock guarding dogs to reduce predation and disease transmission. Defenders of Wildlife. **\$2,000**
43. 2007 Examining the role of livestock protection dogs in reducing wildlife-borne disease transmission to livestock. Central Michigan University, PRIF Award-Phase I. **\$15,000**
44. 2007 Comparison of large-volume and small-volume sampling for avian influenza. Central Michigan University, FRCE Grant. **\$7,000**
45. 2008 Have Asiatic strains of avian influenza virus reached North America in the past?: examining the phylogenetics of avian influenza. Central Michigan University, FRCE Grant. **\$7,330**

46. 2008 Examining the role of livestock protection dogs in reducing wildlife-borne disease transmission to livestock. Central Michigan University, PRIF Award-Phase II. **\$10,000**
47. 2009 Monitoring the status and trends of ecosystem health of Great Lakes coastal wetlands: an intensification of the national effort. Michigan Department of Environmental Quality (with D. Uzarski and B. Murry). **\$319,328**
48. 2010 Dunlin (*Calidris alpina hudsonia*) stopover ecology and shorebird management at inland sites in the Great Lakes Region. U.S. Fish & Wildlife Service – Joint Venture Program. (with N. Seefelt and D. Poppe). **\$24,931**
49. 2010 GLIC implementing Great Lakes coastal wetland monitoring. EPA (with D. Uzarski et al.). **\$10,000,000**
50. 2010 Modeling Andean bear population connectivity in Venezuela. Central Michigan University, NRI Award. **\$5,476**

Recent Grant Proposals Submitted (2001-present):

2010

Aiding conservation of Andean bears: assessing connectivity of protected areas in Venezuela and developing models of potential travel corridors. Submitted to U.S. Fish & Wildlife Service, Division of International Conservation: Wildlife Without Borders-Latin America and the Caribbean. \$22,477. Not Funded.

Evaluating the role of latrines in the spatial ecology of bobcats: implications for estimating populations. Submitted to Panthera. \$8,221. Not Funded.

Implementing and assessing gull management at public beaches. Submitted to EPA, Regional Applied Research Effort (with E.W. Alm). \$249,725. Not Funded.

Trophic-level impacts of mute swans in Great Lakes coastal wetlands. Submitted to U.S. Fish & Wildlife Service - Joint Venture Program. (with B. Murry and D. Uzarski). \$257,162. Not Funded.

2009

Social indicator survey in Pinnebog Watershed, Michigan. Submitted to Saginaw Bay Land Conservancy and Michigan Department of Environmental Quality (with B. Murry). \$33,243. Not Funded.

Evaluating a novel approach for estimating bobcat populations in Michigan. Submitted to Michigan Department of Natural Resources – Wildlife Division (with D.R. Etter). \$346,621. Not Funded.

Economics and ecology of livestock protection dogs for protecting livestock on small and medium-sized farms from wildlife-transmitted disease. Submitted to USDA-AFRI (with K.C. VerCauteren,

S.A. Shwiff, G. E. Phillips). \$466,706. Not Funded.

2008

Reducing gull-human conflicts at public beaches in Michigan. Submitted to Central Michigan University, REF Award (with E.W. Alm). \$119,664. Not Funded.

Economics and ecology of livestock protection dogs for protecting livestock from predation and disease transmission. Submitted to USDA-CSREES (with K.C. VerCauteren). \$484,005. Not Funded.

Assessment of the impact of gulls on the quality of Michigan beaches. Submitted to Michigan Department of Environmental Quality (with E.W. Alm). \$42,500. Not Funded.

2007

Assessment of the impact of gulls on beach quality. Submitted to EPA, Regional Applied Research Effort (with E.W. Alm). \$200,000. Not Funded.

The use of livestock guarding dogs as a conservation tool on Michigan farms. Submitted to USDA-NCR- Sustainable Agriculture Research and Education Program (with M. Provost^{*}). \$8,367. Not Funded.

2006

Farmers conserving wildlife: integrating livestock guarding dogs onto Michigan farms to reduce predation and disease transmission. Submitted to Wildlife Forever. \$1,000 challenge grant. Not Funded.

Effects of human disturbance and shoreline development on nesting success of breeding common loons in Michigan's Lower Peninsula: a landscape level GIS analysis. Submitted to Sigurd Olson Environmental Institute, LoonWatch. \$2,000. Not Funded.

Farmers using livestock guarding dogs to protect against predation and disease. Submitted to Davis Conservation Foundation. \$3,000. Not Funded.

Livestock guarding dogs as a conservation tool. National Geographic Society-Conservation Trust. \$11,900. Not Funded.

Livestock guarding dogs for conservation. Submitted to Disney Wildlife Conservation Fund. \$3,000. Not Funded.

Detection and modeling of avian influenza in Michigan. Submitted to CMU 2010 (with E.W. Alm and B. Li). \$576,923. Not Funded.

Use of livestock guarding dogs as a conservation tool. Submitted to Berryman Institute (with M.L. Provost^{*}). \$4,545. Not Funded.

Home-range dynamics and habitat selection of American martens (*Martes americana*) in

Michigan's northern lower peninsula. Submitted to Wildlife Forever (with L. Shunta*). \$3,000. Not Funded.

Avian influenza surveillance program for wildlife, poultry, and humans in Michigan. Submitted to Centers for Disease Control and Prevention (with E.W. Alm and B. Li). \$1,819,841. Not Funded.

2005

Evaluating different census techniques for furbearers in Michigan. Submitted to Michigan Department of Natural Resources, State Wildlife Grants Program, (with D. Etter). .

Examining shock collars and aversive conditioning in wolves. (with S.T. Rossler*). Submitted to Wildlife Forever. Not Funded.

Evaluating the effectiveness of shock collars for reducing wolf-human conflict in Wisconsin. Submitted to U.S. Fish & Wildlife Service, (with S.T. Rossler*). Not Funded.

Evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict in Michigan. Submitted to U.S. Fish & Wildlife Service, (with A.C. Cellar*). Not Funded.

The influence of predation risk on habitat use and foraging behaviors of elk (*Cervus elaphus*) Submitted to National Science Foundation, (with M.A. Lung and B.J. Swanson). Not Funded.

Evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict in Michigan. Submitted to Sierra Club Foundation. Not Funded.

Evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict in Michigan. Submitted to Newman's Own Organics. Not Funded.

Evaluation of population estimation methods in bobcats. Submitted to Michigan Department of Natural Resources, State Wildlife Grants Program, (with D. Etter, B. Swanson, K. Scribner, S. Winterstein). Not Funded.

Farmers conserving wolves: testing livestock guarding dogs for reducing livestock losses on Michigan farms. Submitted to Michigan Department of Natural Resources, Nongame Wildlife Fund. \$5,531. Not Funded.

Using livestock guarding dogs to reduce wildlife-livestock interactions in Michigan: protecting against depredation and disease transmission. Submitted to Michigan Department of Natural Resources, P-R Wildlife Fund (with K.C. VerCauteren B.D. Nelson, P.H. Butchko). \$288,596. Not Funded.

Economics and ecology of livestock guarding dogs for protecting livestock from predation and disease transmission. Submitted to USDA-CSREES (with K.C. VerCauteren B.D. Nelson, P.H. Butchko). \$481,258. Not Funded.

2004

Testing non-lethal control on wolves. Submitted to Wildlife Forever. (with J. Hawley*) Not Funded.

Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan. Submitted to Saginaw Chippewa Indian Tribe. Not Funded.

Monitoring gray wolves in the eastern Upper Peninsula of Michigan as part of a test of a non-lethal control tool for reducing wolf-human conflict. Submitted to Safari Club International. Not Funded.

Monitoring bobcats in the northern Lower Peninsula of Michigan. Submitted to Safari Club International. Not Funded.

Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan (with S.J. Davidson*). Submitted to Michigan Department of Natural Resources. Not Funded.

Integrating non-lethal control of predators into agricultural systems: evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict. Submitted to The Humane Society of the United States (with A. Cellar*). Not Funded.

Evaluating the effectiveness of livestock guarding dogs for reducing livestock losses to wolves and other predators. Submitted to American Farm Bureau Foundation. Not Funded.

Evaluating and integrating non-lethal control methods in agricultural systems to reduce wolf-human conflict. Submitted to USDA, Berryman Institute. Not Funded.

Testing fladry as a non-lethal control tool for reducing wolf-human conflict in Michigan (with S.J. Davidson*). Submitted to Michigan Department of Natural Resources, Nongame Wildlife Fund. Not Funded.

Evaluating the effectiveness of livestock guarding dogs for reducing wolf-human conflict in Michigan (with A.C. Cellar*). Submitted to Michigan Department of Natural Resources, State Wildlife Grant Program. Not Funded.

Integrating livestock guarding dogs onto Michigan farms. Submitted to National Fish & Wildlife Foundation. Not Funded.

Evaluating multiple census techniques for furbearers in Michigan (with D. Etter). Submitted to Michigan Department of Natural Resources, State Wildlife Grants Program. Not Funded.

2003

Developing predictive models for wildlife crossing sites along highways in Michigan. Submitted to Defenders of Wildlife, (with B. Potter*). Not Funded.

Influence of landscape pattern on genetic structure as mediated by dispersal. Submitted to National Science Foundation, (with B.J. Swanson). Not Funded.

Wolf recovery in semi-agricultural landscapes: testing non-lethal control measures for reducing conflict. Submitted to Sierra Club Foundation. Not Funded.

Estimating abundance and distribution of bobcats (*Lynx rufus*) in Michigan. Submitted to Michigan Department of Natural Resources, Wildlife Division. (with T.S. Preuss*) Not Funded.

Testing non-lethal control on wolves. Submitted to Wildlife Forever. (with J. Hawley*) Not Funded.

Assessing perceptions of rural stakeholders toward wolves in the northern Great Lakes Region. Submitted to U.S. Fish & Wildlife Service. Not Funded.

Wolf recovery in semi-agricultural landscapes: testing non-lethal control measures for reducing conflict. Submitted to U.S. Fish & Wildlife Service. (with J. Hawley*) Not Funded.

Developing predictive models for wildlife crossing sites along highways in Michigan. Submitted to Insurance Institute of America. (with B. Potter*) Not Funded.

Evaluation of non-lethal control methods for reducing wolf-human conflict. Submitted to USDA, Berryman Institute-East. Not Funded.

2002

Center for applied wildlife studies: integrating education, research, service, and policy for effective wildlife management. Submitted to Central Michigan University, REF committee, Not Funded.

2001

Predicting potential Canada lynx habitat in Michigan. Submitted to Michigan Department of Natural Resources, Nongame Wildlife Fund. Not Funded.

Recent Awards:

- Provost's Award for Outstanding Research & Creative Endeavors (CMU, 2006)

PROFESSIONAL GROWTH ACTIVITIES

- Corridor Designer Program Workshop, Sept (Tucson Sept 2007)
- Dr. E.J. Simon: "The Evolution of Biology Pedagogy" (CMU 2008)
- Dr. D. Ebert-May: "Workshop on Science Teaching" (CMU 2005)
- Dr. D. Luckie: "Teaching Biology Laboratories: Teams, Streams and Inquiry (CMU Brown Bag 2005)
- CMU, ORSP Grant Writing 101 Workshop, October 18, 2001
- CMU, ORSP December Proposal Writing Workshop, December 17-19, 2001
- The Wildlife Society Teaching Workshop: Learning Theory, Motivation and Today's Wildlife Students, September 24, 2002

Professional Affiliations:

American Society of Mammalogists (1992-present)
Society for Conservation Biology (1992-present)
The Wildlife Society (1992-present)
Michigan Chapter of The Wildlife Society (2001-present)
Sigma Xi (2007-present)

PROFESSIONAL SERVICE

Department-level:

- Advisor for Natural Resources Option of Biology Major, Department of Biology, CMU (8/2001-present)
- Advisor for Natural Resources Minor, CMU (8/2001-10/2009)
- Graduate Committee, Department of Biology, CMU (8/2007-5/2010); Secretary 8/2008-9/2009
- RTP Committee (Member, Fall 2008, Spring 2009); 3-yr term started 8/2009 (Chair 8/2009 – 12/2009; Chair 8/2010-present)
- Scholarship Committee, Department of Biology, CMU (Secretary 2004-5/2007)
- Neithercut Woodland Committee, CMU (2002-8/2007); Chair 2006-2007
- Faculty Advisor, CMU-Student Chapter of The Wildlife Society (2002-present)
- Ecosystem Biologist Search Committee, Department of Biology, CMU (2006)
- Chair Search Committee, Department of Biology, CMU (2003-2005)
- Scholarship Committee, Department of Biology, CMU (Chair, 2001-2003)
- Fisheries Biologist Search & Screen Committee, Department of Biology, CMU (2001)

College-level:

- Interdisciplinary Natural Resources Minor Council, CMU (Chair 2007-10/2009)
- Earth Science Council (2007-present)
- Advisory Board of the College of Science & Technology (CST) Residential College (8/2001-8/2007)
- Director of Dow-Veit's Woodland, CMU (2002-2003)

University-level:

- Lead workshop for North American Indigenous Student Organization group, CMU, 12 July 2007
- Museum Studies Advisory Council (Fall 2008-present)
- Institutional Animal Use and Care Committee (IACUC), CMU (2006-present)
- IACUC Protocol Review Subcommittee, CMU (2006-present)
- IACUC Protocol Revision Subcommittee, CMU (2006-present)
- Speaker at CMU Alumni Events (April & May 2003)
- Dow-Veit's Woods Deer Resolution Sub-Committee of CST (2001)
- Reviewer for: Midwestern Association of Graduate Schools Thesis Competition (2001-2002)

Other:

- Invited Seminar Speaker at University of Wisconsin-Madison, Department of Wildlife Ecology (2007)
- Midwest Fish & Wildlife Conference Steering Committee (2003-2005)

- Midwest Fish & Wildlife Conference Program Committee (2003-2005)
- Midwest Fish & Wildlife Conference Wildlife Sub-Committee (2003-2005)
- Served on panel for Michigan State University-Professional Development of Graduate Students (2004)
- Expert witness for MDNR in Michigan Circuit Court Hearing and Trial (2004-2005)
- Invited Speaker at MDNR Furbearer Working Group, St. Ignace, MI (2004)
- Invited Speaker at USDA-WS State Conference in Wisconsin (2004)
- Evaluator of student presentations at American Society of Mammalogists Conference (2002)

- Reviewer for: *Acta Oecologia* (2003, 2004)
Acta Theriologica (2005, 2006)
BioScience (2010)
Canadian Journal of Zoology (2004)
Conservation Biology (2000)
Ecological Modelling (2010)
Ecology (2008)
Ecography (2003, 2004)
Ecological Modelling (2004)
Environmental Conservation (2005) – book review
Journal of Mammalogy (2002, 2004, 2005, 2007)
Journal of Wildlife Management (2003, 2006, 2007, 2008)
Landscape and Urban Planning (2010)
Landscape Ecology (2009)
Michigan Birds and Natural History (2007, 2009)
Northeast Naturalist (2003)
Proceedings of the Sixth California Islands Symposium (2004)
Small Carnivore Conservation (2008)
Southeastern Naturalist (2008)
Wildlife Society Bulletin (2004)

- Conservation of Land Mammals Committee, American Society of Mammalogists (1999-2005)
- Purdue University Student Chapter of The Wildlife Society Mentor(1998-2001)
- Speaker and Activity Leader for Elderhostel Program, Purdue University (1998-2001)