

BIOGRAPHICAL SKETCH -- Patrick Andrew Zollner

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CURRENT POSITION

Associate Professor of Quantitative Ecology, 2006 – present. Department of Forestry and Natural Resources, Purdue University.

EDUCATION

B.S. in Natural Resources, 1989. University of Michigan, Ann Arbor.

M.S. in Wildlife Ecology, 1993. Mississippi State University, Starkville. Thesis title: *Habitat ecology of the swamp rabbit in central Arkansas*. Advisors: Dr. Leonard A. Brennan & Dr. Winston P. Smith

Doctorate in Ecology, December 1998. Indiana State University, Terre Haute. Dissertation title: *Perceptual range, search strategies, and the behavioral ecology of ecological landscapes*. Dissertation Advisor: Dr. Steven L. Lima

ACADEMIC POSITIONS

Laboratory Assistant, Summer 1986. Kellogg Biological Station, Hickory Corners, Michigan.

Instructional Intern, 1989, School for Field Studies, Center for Rainforest Studies, Yungaburra, Queensland, Australia.

Administrative Assistant, 1990. School for Field Studies, Center for Rainforest Studies, Yungaburra, Queensland, Australia.

Research Assistant, 1991 – 1993. Department of Wildlife and Fisheries, Mississippi State University.

Research Assistant, 1993 – 1998. Department of Life Sciences, Indiana State University.

Teaching Assistant, 1993 – 1998. Indiana State University;
Introduction to Biology for Majors I & II; Ornithology;
Computer Applications in Graduate Research

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

Undergraduate Research Supervisor, 1996 & 1997 (Advised two Undergraduates while at I.S.U.)

Special Course Consultant, 1996 – 1998. (Developed web based instructional materials and advised on lab design) Introduction to Biology for Majors I & II

Research Ecologist, 1999 – 2006. USDA Forest Service North Central Research Station.

GRANTS

Behavioral mechanisms defining ecological landscapes. 1994. American Museum of Natural History Theodore Roosevelt Research Fund. \$450.

Search strategies for landscape-level inter patch movements. 1998. Indiana State University Graduate School Research Fund. \$250.

Movement as a link between behavioral and landscape ecology: mammals as models. 1999. American Society of Mammalogists (Funded Symposium for 2000 meeting). \$2143.

Impacts of spatial and temporal patterns of human activities on animals.

2004. Research funded by NCRS project 4902. \$40,829.

2005. BP Leadership Award to Southeast Environmental Task Force. \$50,000

Broad-scale inventory of 22 Mammal Species using Genetic Sampling. 2005. State of Wisconsin Wildlife Grant Fund. \$62,020.

AWARDS

1998 Best Student Presentation Award. Thirteenth annual meeting of the International Association for Landscape Ecology (US Chapter).

1998 Best Student Presentation Award. Annual fall meeting of the Indiana Academy of Sciences.

2003 USDA Forest Service Chiefs Early Career Science Award

2004 Presidential Early Career Award for Scientists and Engineers \$25,000/year for 5 years

SCIENTIFIC PUBLICATIONS

Published Papers

1. Lima S.L., and P.A. Zollner. 1996. Towards a behavioral ecology of ecological landscapes. *Trends in Ecology and Evolution* 11: 131-135.
2. Zollner, P.A., W.P. Smith, and L.A. Brennan. 1996. Characteristics and adaptive significance of latrines of swamp rabbits (*Sylvilagus aquaticus*). *Journal of Mammalogy* 77: 1049-1058.

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

3. Lima, S.L., and P.A. Zollner. 1996. Anti-predatory vigilance and limits to collective detection of predatory attack: spatial and visual separation between forages. *Behavioral Ecology and Sociobiology* 38: 355-363.
4. Zollner, P.A., and S.L. Lima. 1997. Perceptual range and its implications for landscape-level ecological phenomena. *Oikos* 80: 51-60.
5. Zollner, P.A., and S.L. Lima. 1999. Search strategies for landscape-level inter-patch movements. *Ecology* 80: 1019-1030.
6. Zollner, P.A. and S.L. Lima. 1999. Orientational data and perceptual range: real mice aren't blind. *Oikos* 84: 164-166.
7. Lima, S.L., P.A. Zollner, and P.A. Bednekoff. 1999. Predation, scramble competition and the group size effect in anti-predatory vigilance. *Behavioral Ecology and Sociobiology* 46: 110-116.
8. Zollner, P.A. and S.L. Lima. 1999. Illumination and the perception of remote habitat patches by white-footed mice. *Animal Behaviour* 58: 489-500.
9. Zollner, P.A., W.P. Smith, and L.A. Brennan. 2000. Home range use by swamp rabbits (*Sylvilagus aquaticus*) in a frequently inundated bottomland forest. *American Midland Naturalist* 143:64-69.
10. Zollner, P.A. 2000. Landscape-level perceptual abilities of forest sciurids: a comparative analysis. *Landscape Ecology* 15:523-533.
11. Zollner, P.A., W.P. Smith, and L.A. Brennan 2000. Microhabitat characteristics of sites used by swamp rabbits (*Sylvilagus aquaticus*). *The Wildlife Society Bulletin* 28:1003-1011.
12. Smith, W.P. and P.A. Zollner. 2001. Seasonal habitat distribution of mammals in an old-growth bottomland hardwood forest. Pp 83-99. In: P.B. Hamel, and T. Foti editors. Bottomland hardwoods of the Mississippi Alluvial Valley: characteristics and management of natural function. USDA Forest Service, General Technical Report, Southern Research Station, Asheville, NC.
13. Mech, S.G., and P.A. Zollner 2002. Using body size to predict perceptual range. *Oikos*. 48:47-52.
14. Conradt, L., Zollner, P.A., Roper, T.J., Frank, K. & Thomas, C.D. 2003. Foray search: an effective systematic dispersal strategy in fragmented landscapes. *The American Naturalist*. 161:905-915.
15. Zollner, P.A., and K.J. Crane. 2003. Influence of canopy closure and shrub coverage on travel along coarse woody debris by eastern chipmunks (*Tamias striatus*). *American Midland Naturalist*. 150:151-157.
16. Sturtevant, B.R., P.A. Zollner, E.J. Gustafson, and D.T. Cleland. 2004. Human influence on fuel connectivity and risk of catastrophic fires in mixed forests of northern Wisconsin. *Landscape Ecology*. 19:235-253.
17. Gustafson, E.J., P.A. Zollner, H.S. He, B. R. Sturtevant, and D.J. Mladenoff. 2004. Influence of

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

management alternatives and landtype on susceptibility to fire in Northern Wisconsin USA. *Landscape Ecology*. 19:327-341.

18. Zollner, P.A., and S.L. Lima. 2005. Behavioral trade-offs when dispersing across a patchy landscape. *Oikos*. 108:219-230
19. Zollner, P.A., Gustafson, E.J., H.S. He, V.C. Radeloff, and D.J. Mladenoff. 2005. Modeling the Influence of Dynamic Zoning of Forest Harvesting on Ecological Succession in a Northern Hardwoods Forest. *Environmental Management*. 35(4):410-425.
20. Smith, W.P, and P.A. Zollner. 2005. Sustainable management of wildlife habitat and risk of extinction. *Biological Conservation*. 125:287-295.
21. Harvey, S., Dumyhan, J., Zollner, P., Gilbert, J., Eklund, D., Matthiae, T. 2005. American marten Wisconsin habitat guide. Power point presentation on compact disk and accompanying brochure for forest managers. US Forest Service Internal Extension Publication.
22. Blumstien, D.T., E. Fernandez-Juricic, P.A. Zollner, and S. C. Garity. 2005. Inter-specific variation in wildlife responses to human disturbance: a review and synthesis. *Journal of Applied Ecology*. 42:943-953.
23. Crow, T.R., Cleland, D.T., DonnerWright, D.M., Gustafson, E.J., Lytle, D.E., Parker, L.R., Probst, J., Schulte, L.A., Sturtevant, B.R., and Zollner, P.A. 2006. Managing midwestern landscapes using ecological principles. In Chen, J, Saunders, S.C., Brososfke, K.D., and Crow, T.R. eds. Linking ecology to landscape hierarchies. Nova Sciences Publishers, New York. p. 251-281.
24. Radeloff, V.C., Mladenoff, D.J., Gustafson, E.J., Scheller, R.M., He, H.S., Zollner, P.A., and R. Akçakaya. 2006. Modeling forest harvesting effects on landscape pattern in Northwest Wisconsin Pine Barrens. *Forest Ecology and Management*. 236:113-126.
25. Williams, B.W., Gilbert, J.H., and Zollner, P.A. 2007. Historical perspective on the reintroduction of the fisher and American marten in Michigan and Wisconsin. Gen. Tec. Rep. NC 06-150. Newton Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 29 p.

Manuscripts Submitted/In Preparation

26. Zollner, P.A., Roberts, L.J., Gustafson, E.J., H.S. He, Mladenoff, D.J. and V.C. Radeloff. (In Review) Modeling the influence of forest management alternatives on patterns of ecological succession in Northern Wisconsin, USA. Submitted to *Forest Ecology and Management*.
27. Dumyahn, J.D., Zollner, P.A., and Gilbert, J.L. (In Revision) Home range level habitat selection of American marten in Wisconsin. *American Midland Naturalist*.
28. Fernandez-Juricic, E., P.A. Zollner, Le blanc, C. and Westphal, L.. (In Review). Response of nestling black crowned night herons to aquatic and terrestrial human disturbance. Submitted to *Waterbirds*.
29. Gilbert, J.G., Green, A.K., Green, Zollner, P.A. and Wright, J.L. (In Review) Seasonal field

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

metabolic rate of American marten in Wisconsin. Submitted to *Journal of Mammalogy*.

30. Zollner, P.A., Gustafson, E.J., and S.L. Lima. (In Prep) Simulating the sensitivity of successful dispersal in fragmented landscapes to behavioral characteristics. To be submitted to *Ecological Applications*.
31. Zollner, P.A., Gilbert, J.H., Dumyahn, J., Woodford, J.E., White, T.S., Russell, K.R. and Wright, J.L. (In Prep) Modeling landscape potential for home range establishment by American marten in Ecological Province 212J. To be submitted to *Journal of Mammalogy*.

Book Reviews

32. Zollner, P.A. 2001. Review of *Landscape Ecology of Small Mammals*. Edited by G.W. Barrett and J. D. Peles, Springer, New York, 1999. *Ethology* 107:365.

SCIENTIFIC PRESENTATIONS

Invited Seminars

Iowa State University, Department of Animal Ecology (1996).
Miami University (Ohio), Department of Zoology (1998).
University of Wisconsin Stevens Point, College of Natural Resources (1999).
American Museum of Natural History, Southwestern Research Station (1999).
Purdue University, Department of Forestry and Natural Resources (1999).
University of Wisconsin Madison, Department of Wildlife Ecology (2000).
University of Oxford, Behavioral Ecology Research Group (2001).
Fragland TMR Network, University of Leeds (2001).
International Theriological Congress, Sun City South Africa (2001).
Institute for Ecosystem Studies, Milbrook, NY (2002).
University of California Davis, Animal Behavior Group (2003).
Northern Michigan University, Department of Biology (2003).
Lynx Biology Team Meeting (2005).
Wabash College, Biology Department (2006).

Sessions Organized

Animal movements across landscapes: The big picture. 1996. Midwest Regional Animal Behavior Society Conference. (Organized session and invited participants)

Movement as a link between behavioral and landscape ecology: mammals as models. 2000. American Society of Mammalogists Meetings. (Organized symposium and affiliated contributed paper section)

Presentations at Meetings

1992. Annual Meeting of the American Society of Mammalogists.
1993. Annual Meeting of the American Society of Mammalogists.
Annual Meeting of the American Society of Mammalogists (Poster).

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

- 1994. Annual Meeting of the American Society of Mammalogists.
56th Midwest Fish and Wildlife Conference.
- 1995. Annual Meeting of the American Society of Mammalogists.
Annual Meeting of the Animal Behavior Society.
- 1996. Annual Meeting of the American Society of Mammalogists.
Midwest Population Biology Conference (Poster).
Midwest Regional Animal Behavior Society Conference.
- 1997. Annual Meeting of the American Society of Mammalogists.
Annual Meeting of the Animal Behavior Society.
Midwest Regional Animal Behavior Society Conference.
- 1998. (U.S. Chapter) International Association for Landscape Ecology.
Annual Meeting of the American Society of Mammalogists.
Annual Meeting of the Animal Behavior Society.
Annual Meeting of the Ecological Society of America.
Annual Meeting of the Indiana Academy of Sciences.
- 1999. Annual Meeting of the American Society of Mammalogists.
5th World Congress of the International Association for Landscape Ecology.
- 2000. (U.S. Chapter) International Association for Landscape Ecology.
Annual Meeting of the American Society of Mammalogists.
- 2001. Tracking Animals with GPS, Macaulay Land Use Research Institute.
British Ecological Society Annual Symposium Dispersal.
(U.S. Chapter) International Association for Landscape Ecology.
- 2002. (U.S. Chapter) International Association for Landscape Ecology.
International Union Forest Research Organizations (landscape ecology working party).
Annual Meeting of the American Society of Mammalogists.
- 2003. (U.S. Chapter) International Association for Landscape Ecology.
Midwest Fur Bearer Workshop.
USFS Wildlife Research Review.
- 2004. MN 3rd Annual Forest and Wildlife Research Review.
(U.S. Chapter) International Association for Landscape Ecology.
Annual Meeting of the American Society of Mammalogists.
- 2005. Annual Meeting of the American Society of Mammalogists.
The Wildlife Society Annual Conference
- 2006. The Wildlife Society Annual Conference

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

PROFESSIONAL AFFILIATIONS

American Society of Mammalogists 1992 - present
Serving on Grants-in-Aid Committee 2000 - 2004
Serving on Program Committee 2000 – present
Breakfast with a Scientists 2001
Animal Behavior Society 1995 to present
Ecological Society of America 1997 to present
U.S. Chapter International Association for Landscape Ecology 1998 to present
Serving on Awards Committee 2000 - 2002
Chair of Awards Committee 2003 – 2005
Chair of Membership Committee 2006
Lunch with a mentor 2002 – 2004
Served on Careers in Landscape Ecology Panel 2004
US IALE Executive Committee Member 2005 - present
The Wildlife Society 2005 to present

REVIEWER OF MANUSCRIPTS FOR

Acta Theriologica
American Midland Naturalist
The American Naturalist
Animal Behavior
Behavioral Ecology
Behavioral Ecology and Sociobiology
Biodiversity and Conservation
Biological Conservation
Canadian Journal of Zoology
Conservation Biology
Ecography
Ecologia Austral
Ecology
Ecological Applications
Ecological Modeling
Ecological Monographs
Ecology Letters
Ethology
Evolutionary Ecology
Forest Ecology and Management
Global Change Biology
Journal of Animal Ecology
Journal of Mammalogy
Journal of Theoretical Biology
Journal of Wildlife Management
Landscape Ecology

BIOGRAPHICAL SKETCH -- Patrick A. Zollner

Landscape and Urban Planning
Oikos
Northeast Wildlife
Proceedings of the Royal Society of London B
Southwestern Naturalist
Theoretical Population Biology
Ursus
Wildlife Society Bulletin

REFERENCES

Dr. Eric J. Gustafson (Post-Doctoral Supervisor)
Research Ecologist and Project Leader
USFS North Central Research Station
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Professor
Department of Life Sciences
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