

Michael S. Rentz

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Education

Ph.D: Conservation Biology Program, University of Minnesota. May 2014.

BA, June, 1994, University of Minnesota--Morris. *Major:* Biology *Minor:* Chemistry

Teaching and Youth Experience

Lecturer: (August 2014-Present) Iowa State University

- Hired to teach full-time in the Natural Resources Ecology and Management Department
- Teach between 1 and 4 courses each semester.
- Mentor undergraduate student research
- Develop original courses including an introductory course on wildlife rehabilitation
- Serve as course lead for integral, advanced level courses.

Adjunct Instructor: (February 2014-May 2014) Hamline University

- Teach Introduction to Environmental Science
- 25 students

Fixed-Term Faculty (January 2013-May 2013) St. Cloud State University

- Full-time sabbatical replacement
- Developed and taught 3 courses, including 1 advanced majors course, and 2 introductory courses.
- Courses: Population Analysis (Majors course, 26 students, Environment and Society (non-majors course 98 students, The Living World non-majors course 40 students)

Adjunct Instructor (January 2012-December 2012) University of St. Catherine

- Lead instructor for "Race, Class, Gender, and the Environment" a non-majors environmental science class with a social justice focus.
- Took an existing course and made it my own
- Developed course focus, prepared and delivered all lessons and labs
- 17 students in the Spring 2012, 18 students in Fall 2012

Instructor (Spring Breaks 2011, 2012, and 2013, 2014) University of Minnesota Fish, Wildlife, and Conservation Biology Field Trip.

- Organized and led the annual Field Trip Course for the Department.
- 13-15 students each spring
- All organizing, planning, and course development was mine (based on past models).
- Course included guided hikes, guest lectures, facilitated discussions, and independent mini research projects.

Contract writer (July 2012-September 2012) Worked under contract for the University of Minnesota Extension Service.

- Worked with Nate Meyers and Dr. John Loegering to develop educational briefs for the Fish, Wildlife, and Conservation Education Program of University Extension
- Wrote briefs on moose decline, preventing bear damage, and impact of domestic cats on wildlife
- Helped develop an overall design and focus for the Program

Contract Educator (occasional) University of Minnesota Extension Service.

- Worked with Mike Reichenbach of Minnesota Extension on his Woodland Advisor Program
- Led lectures in wildlife for the participating landowners.

Research Assistant/Scientist (January 2010-December 2010) University of Minnesota Driven to Discover Program

- Worked with Dr. Karen Oberhauser on her innovative Citizen Science project to engage middle school students in doing inquiry by performing citizen science and following up with their own independent research.
- Worked directly with students and teachers/club leaders as a science adviser
- Assisted with evaluation research
- Assisted with our technology/internet presence.
- Created teaching tools for participants on statistics, plant identification, and using technology.

Teaching Assistant (*August 2008, 2009, 2010, 2011*) University of Minnesota Fish, Wildlife, and Conservation Biology summer field course

- Work with Dave Smith in conducting his annual Cloquet field course for FWCB majors.
- Primary teacher for mammalogy: write and present lectures to introduce students to the study of mammals and work with students on the mammal collection.
- Assist other TAs and Dr. Smith in other areas as needed, included assisting students with trapping, writing, data collection and analysis.

Volunteer naturalist

- Give presentations in classrooms and lead nature hikes in area elementary schools periodically as requested.
- Lecture at Duluth and Cloquet area “Forestry Field Days/Conservation Education Days”.

Youth Soccer Coach (*2004-2010*)

- Coach youth summer recreational league soccer, as both assistant and head coach in leagues in Minnetonka and Duluth.
- Coached leagues from U-6 (under six, or pre-K) to U-10.
- Run practices, teach the game to students, serve as primary motivator and mentor for the sport.
- Model and teach good sportsmanship.

Teaching Assistant (*Spring 2003-Spring 2009*) University of Minnesota. Teaching Assistant for General Biology 1009 course.

- Lecture, prepare and grade quizzes, and provide tutorial help to 50-150 students per semester.
- Consistently high class evaluations. Nominated for Teaching Assistant of the Year.

- 13 semesters (including summers)
- Over 1,000 students taught

Contract Naturalist (*Spring 2004*) Linwood Elementary (Forest Lake Schools).

- Prepared and led hikes and class programs for Linwood Elementary at its School Forest. Worked with all classes and every child at the school from grades K-6.

Public Achievement Coach (*January 2002-June 2002*). Anderson Elementary School in Minneapolis.

- Volunteered with a small group of 5th and 6th graders. Helped them grow as leaders and citizens by working with them to achieve their own political goals. Taught them citizenship through practicing it.

Substitute teacher (*September 1994-April 1995*) *Eagle Butte Schools*.

- Worked at the Bureau of Indian Affairs school in Eagle Butte, South Dakota (Cheyenne River Sioux Tribe Indian Reservation). Worked with Jr. and Sr. High students. Was considered the preferred substitute for the Special Education program.

Kids for Saving Earth Coordinator (*September 1991-June 1993*) *Morris Public Schools*

- Recruited and directed other advisors, planned and led activities for entire chapter.

Volunteer Naturalist (*June 1991-August 1991*) *Voyageurs National Park*

- Led guided trips through Park and gave campfire lectures.

Ecology Research Experience

Iowa State University: January 2015-Present

- Oversee students in research projects.
 - 13 projects in Spring 2015

DNR contract work: *Fall 2009, 2010, 2011.*

- Assisting the Minnesota Department of Natural Resources in surveying small mammal populations in the Superior National Forest. Work is a continuation of research done for the DNR in 2008 as an employee of UMD's NRRI, although this year the DNR chose to contract with me directly.

Doctoral Research: *April 2004-September 2009.*

- Study is a 4 year Before/After/Control/Impact study on the effects logging slash removal on small mammals, amphibians, and vegetation. All design, funding, data collection and analysis is mine alone. The project required cooperating with three separate land managers, including two county Land Departments and the University of Minnesota's Cloquet Forestry Station. Project required extensive coordination with area loggers to manage the forests according to the desired protocol.

The project was the first to research the ecological impacts of woody biomass harvesting in North America.

Research Assistant: *September 2008-occasional*

- Work under Dr. Ron Moen at the University of Minnesota's Natural Resources Research Institute in a variety of roles, including editing, primary research, and assisting research partners as needed.

The bulk of the responsibilities lay in a cooperative agreement with the Minnesota Department of Natural Resources to collect small mammal data on over 100 localities in the Superior National Forest as part of a model to determine small carnivore habitat health. I coordinated trapping with Dr. Moen, led groups of undergraduate students in trapping, and have taken a lead role in data analysis. I have since taken over this work as a private direct contract with the DNR. I have continued to collaborate with/assist Dr. Moen on other projects on an as-needed basis, including helping with snowshoe hare and moose surveys.

Collaborator: (March 2008-ongoing)

- Traveled to Colgate University at their invitation to train a professor and her undergraduate students in a novel method of marking shrews that I developed.

Research Assistant (May, 1995-September, 1995) *University of Minnesota--Cedar Creek Natural History Area.*

- Worked under Dr. David Tilman on field botany and biodiversity studies.

Biologist, volunteer (June 1994-March 1995) *Cheyenne River Sioux Tribe Prairie Management Program.*

- Designed and carried out field experiments.
- Studies included a comparison of faunal composition between a black-tailed prairie dog complex and "normal" mixed grass prairie, and estimation of Endangered, Threatened, and Candidate II species populations on the reservation as an indicator of ecosystem health.

Research Assistant (April -June 1994) *University of Minnesota-Morris*

- Assisted Dr. David Hoppe with his initial research on the deformed leopard frogs in the Minnesota River. Also assisted with spring frog and toad census.

Student Researcher (April-June 1994) *University of Minnesota-Morris*

- Designed and carried out a research project to determine the effects of human disturbance on small mammal abundance and diversity as a student-initiated Directed Study.

Student Researcher (July-August 1993) *University of Minnesota's Itasca Station.*

- Took courses in Vertebrate Ecology and Behavior and Radio Telemetry. Both courses required students to design and carry out research projects.
 - The study done for the Vertebrate Ecology course has since been published by the Minnesota Academy of Science.

Advocacy and Organizing Experience

Campus Organizer (September, 1996-May, 1998, August 2011-May 2012) *Minnesota Public Interest Research Group (MPIRG).*

- Advised campus chapters and helped coordinate local and statewide projects and events.
- Recruited, trained, and cultivated student leaders/organizers.
- Lobbied with students at both state and federal level.
- Assisted Chapters with development of goals, timelines, strategies, and overall campaigns.
- Meet with individual leaders to assist them in their growth, and to keep them effective on their campaign goals.
- Oversee student interns, including paid interns

- Represent MPIRG in regional coalitions with over advocacy organizations and with local governments

Midwest Region Organizer (*May, 1997-August, 1997*) *American Lands*.

- Coordinated American Land's grassroots organizing and legislative work in the Midwest.
- Worked with local environmental groups and individuals to generate grassroots political pressure on targeted Members of Congress.
 - Lobbied Members and Legislative Aides directly.

Political and Public Policy Experience

Coursework (September 1999-Spring 2002)

- Completed coursework for a Masters of Science in Science, Technology, and Environmental Policy (transferred to PhD program in Conservation Biology prior to graduation)

Research Assistant (*February 2000 – September 2002*) *State and Local Policy Program (SLPP)*. (SLPP is one of several policy groups at the Humphrey Institute).

- Developed an outreach campaign to generate political and public support for transportation policy.
- Recruited and managed a 30-member task force.

Candidate for the Minnesota House of Representatives (*June 1998-November 1998*),.

- District 43B. DFL, Sierra Club, Labor, and Teacher endorsed. Received over 5,000 votes.

Board of Directors and Other Volunteer Experience

Lester Park Wolf Ridge Committee (2009-2010 and 2010-2011)

- Co-chaired the parent-led trip to Wolf Ridge Environmental Learning Center
- Recruit kids, parent chaperones, assist with fundraising and logistics.
- The Committee is a response to our school's decision to no longer sponsor the trip. We took 65 of 70 students to last year's trip and planning for this year is well under
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Rockridge/Lester Park Parent Teacher Association

- Volunteer with my sons' school's PTA
- Served as Games Chair for Fall 2009's fall Festival, one of the largest community event/fundraisers for the PTA.

President and founding member (Spring 2003-present) *Minnesota Chapter of the Society for Conservation Biology*

- Assisted in forming the Chapter, including background research and organization
- Elected first President of Chapter in August 2003. Re-elected President in March 2010. Term ended in March 2011.
- Guided Chapter through its formation.
- Organized the 2006 joint meeting of the Minnesota Chapters of, The Society of American Foresters, American Fisheries Society, The Wildlife Society and the Society for Conservation Biology. Over 440 scientists, students and practitioners attended.

Member (*September 1998-June 2003*) (*Minnesota*) *Sierra Club's Forestry Committee*.

Elected member (*May 1999-May 2002*) *Parent's Advisory Committee, Minnetonka Early Childhood and Family Education*.

- Promoted ECFE, assisted district with running its program, lobbied and advocated for the program in the district and statewide.

Board Member and Board Secretary (December 1992-June 1994) Minnesota Public Interest Research Group

- Served on the Board of Directors as an elected member. Oversaw budget, staff, and coordinated efforts across nine member campuses.

Scientific Presentations

- **Oral presentation** (April 2011) Woody Biomass Energy Research Symposium University of Vermont, Burlington, VT.
 - “No Free Lunch: The Ecological Impacts of Woody Biomass Harvest”
- **Oral presentation** (November 2010) Minnesota-Wisconsin Invasive Species Conference
 - “Does Woody Biomass Harvest Open Forests to Increased Exotic Plant Invasion?”
- **Oral presentation:** (June 2009) American Society of Mammalogists
 - “The effect of woody biomass harvest on small mammals”
- **Oral presentation:** (April 2009) Minnesota Chapter of the Society for Conservation Biology annual meeting
 - “Woody Biomass Harvest: short-term impacts on vegetation (there is no such thing as zero-impact)”
- **Poster presentation:** (June 2008) American Society of Mammalogists
 - “The Tagging of the Shrew: The Feasibility of Visible Impact Elastomers for Marking Small Mammals”
- **Guest seminar:** (March 2008) The College of St. Benedicts and St. John’s University
 - “Fat Guy/Small Mammals: The Impact of Logging on Small Mammals in Minnesota’s forests and the Implications for the Sustainability of Electricity Generation from Woody Biomass”
- **Oral presentation:** (June 2007) American Society of Mammalogists annual meeting
 - “Trap Happy: A Comparison of Catch and Failure Rate of Three Common Traps: Fitch, Sherman, and Ugglan”
- **Oral presentation:** (March 2007) Minnesota Chapter of the Society for Conservation Biology annual meeting
 - “Biomass and wildlife: the effect of Logging slash removal on small mammals and amphibians”
- **Oral presentation:** (March 2007) Midwest Ecology and Evolution Conference
 - Biomass and wildlife: the effect of Logging slash removal on small mammals and amphibians
- **Poster presentation:** (July 2003) International Society for Conservation Biology annual meeting
 - “Internalizing the Forest: Investigate the Application of Tradeable Permits in the International Timber Trade”

Conference Planning

- 2010 Joint meeting of the Minnesota Chapters of the Society for Conservation Biology, American Fisheries Society, Society of American Foresters, and The Wildlife Society. The joint meeting was a follow-up to the 2006 meeting. We had over 400 attendees and over 100 scientific presentations over three days.

- 2006 Joint meeting of the Minnesota Chapters of the Society for Conservation Biology, American Fisheries Society, Society of American Foresters, and The Wildlife Society. The joint meeting was my initial suggestion, and I coordinated with the leaders of the other three societies to organize the meeting. We had over 440 attendees and over 100 scientific presentations over three days.
- 2003 International Meeting of the Society for Conservation Biology. Assisted in coordinating student volunteers at the meeting.
- Minnesota Public Interest research Group. Planned numerous conferences of varying size during my time as a student leader and staff member.

Professional Society Memberships

- Society for Conservation Biology (*1994-present*)
 - Minnesota Chapter of the Society for Conservation Biology (*2003-present*)
 - Served as the founding President of the Chapter August 2003-November 2005
- American Society of Mammalogists (*1994-present*)
 - Serve on the Society's Resolution's Committee (2007-Present)
 - Named to the Society's Energy Policy Sub-Committee (2008-Present)

Publications in progress

Currently at work on several papers stemming from dissertation research. These include:

- A paper on the use of visible implant elastomers in wild animals with Dr. Debra Shier of Zoological Society of San Diego
- A paper comparing the trap efficacies of three common small mammal traps: Ugglan, Sherman, and Fitch.
- A paper on the impacts of biomass harvesting on the small mammal and plant communities.

Scholarships and other Awards

- 2011-2012 Ally of the Year, University of Minnesota Duluth Queer and Allied Student Union
- 2000-2001 Alumni Tuition Grant, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota
- Jonas Schwartz Scholar: named the Jonas Schwarz Scholar for academic year 2000-2001 for the Humphrey Institute of Public Affairs. The award recognizes the student who ranks highest on community service.
- 1994 Outstanding Student Leader Award, University of Minnesota-Morris. The annual award recognizes the top five student leaders on campus.