

Douglas Keinath

Postal Address

Wyoming Natural Diversity Database
University of Wyoming
1000 E. University Ave., Dept. 3381
Laramie, Wyoming 82071

Alternative Contact Information

Email: dkeinath@uwyo.edu
Phone: 307-766-3013
Fax: 307-766-3026

EDUCATION

Degrees Obtained

- ◆ M.S., Wildlife Biology, University of Wyoming, Laramie (awarded May 2000).
- ◆ B.S.E., Interdisciplinary Engineering, University of Michigan, Ann Arbor (awarded *magna cum laude* April 1993).
- ◆ B.S., Natural Resource Management, University of Michigan, Ann Arbor (awarded *with distinction* April 1993).

Merit-Based Academic Awards

- ◆ William and Margaret Owen Scholarship (March 1999)
- ◆ Outstanding Student Teaching Award (December 1998)
- ◆ Max MacGraw Wildlife Foundation Scholarship (June 1998)
- ◆ Reed W. Fautin Memorial Scholarship (March 1997)
- ◆ Outstanding Undergraduate Achievement Award (February 1993)
- ◆ James B. Angell Scholar (April 1990)

WORK HISTORY

Zoology Program Manager (Wyoming Natural Diversity Database; April 2000 – Present).

For the past 6 years I have directed the vertebrate zoology department of Wyoming's Natural Heritage Program, also known as WYNDD. Our primary goal is to collect and disseminate information on sensitive species in the state of Wyoming. To this end, I maintain a staff of 1 - 3 biologists who work on a wide variety of projects in cooperation with state and federal agencies, non-profit organizations, and private interests. This information feeds an extensive geographic database and gets synthesized into targeted conservation reports. I have developed valuable skills in this position, including program management, fundraising, conservation planning, and field research.

Graduate Researcher (University of Wyoming; January 1997 – March 2000).

For my master's research, I used movement analysis to investigate the effects of landscape heterogeneity on small mammal distribution. While completing this degree I also worked on projects examining habitat associations of sensitive raptor populations and broad-scale fire disturbance patterns of Rocky Mountain conifer forests. In later semesters I taught introductory biology and compiled a slide library of regional ecosystems for use by professors wishing to highlight key ecological components of those systems.

Environmental Consultant / Proposal Writer (ICF Incorporated; May 1993 – August 1996).

As an associate I worked on several long-term projects creating technical publications on global warming that the U.S. Environmental Protection Agency submitted to the United Nations to fulfill international treaty obligations. In support of these products I also operated technical hotlines, presented technical talks, facilitated panel discussions, coordinated international workshops, and created and maintained databases. During this time I was a key author on several successful multi-million dollar proposals submitted to federal and international funding organizations.

Volunteer Coordinator (American Red Cross; January 1994 – August 1996).

I coordinated community blood drives on a part time, volunteer basis. This entailed supervision of approximately twenty volunteer staff, logistical coordination with the American Red Cross and community representatives, organization of publicity, and recruitment of donors and volunteers.

Engineering / Environmental Science Specialist (Dow Chemical Corporation; Summers 1990 – 1992).

As a seasonal environmental specialist I assisted in plant maintenance and improvement projects, researched water contamination by conducting experiments on the leaching of trace chemicals into water from plastic containers, conceived and implemented a comprehensive plan to maintain regulatory compliance in a hazardous waste landfill, and trained personnel to use an established facility operating discipline.

SELECTED RECENT PROJECTS

- ◆ Sensitive Species Monitoring -- Several organizations have recently asked me to design and conduct monitoring programs as part of conservation for locally sensitive species:
 - *Wyoming Toad* -- After several failed attempts at developing a monitoring program for the endangered Wyoming toad, the Recovery Team asked me to lead the program. Summer 2006 is the first season of this effort, and initial response has been outstanding (Granter: Laramie Rivers Conservation District; Dates: 2006 – Present).
 - *Avian Management Indicators* -- I am implementing a long-term program for monitoring avian management indicator species for the Medicine Bow National Forest. (Granter: Forest Service; Dates: 2003 – Present).
 - *Jumping Mice* -- I continue to direct survey and monitoring of populations of the endangered Preble's meadow jumping mouse on lands administered by the Department of Defense, the Medicine Bow National Forest, the Bureau of Land Management, and the State of Wyoming (Granters: DOD, Forest Service, BLM, Governor's Office; Dates: 2000 - Present).
- ◆ Sensitive Species Inventory -- I have designed and conducted numerous inventories of sensitive species throughout the state of Wyoming, a few of which are noted below:
 - *Pocket Gophers* -- The first ever systematic survey for pocket gophers in the purported range of the Wyoming pocket gopher (*Thomomys clusius*) (Granter: TNC; Dates: 2007).
 - *Yellowstone Mammals* -- Comprehensive inventory for bats and small mammals in the Greater Yellowstone Network (Granter: NPS; Dates: 2002 –2004).
 - *Multi-taxa* -- Inventory of listed sensitive species in the BLM's Pinedale Field Office, focusing on sensitive birds, amphibians, reptiles, and small mammals (Granter: BLM; Dates: 2001 –2002).
 - *Mountain Plover* -- Survey of mountain plovers in the Powder River Basin and public lands of the BLM's Rawlins Field Office (Granter: BLM; Dates: 2001).
 - *Lynx* -- Survey of priority areas based on an in-house habitat model of BLM lands in Wyoming (Granter: BLM; Dates: 2000 –2001).
 - *Herpiles* -- Surveys characterizing herptofauna of F. E. Warren Air Force Base, checking status of boreal toads in the southern Wyoming, and monitoring Wyoming toads in the Laramie Basin of Wyoming (Granters: DOD, WYGF, USFWS, LRCD; Dates: 2001 – 2006).
- ◆ Sensitive Species Conservation Assessments -- At the request of pertinent federal agencies, I supervised compilation of species conservation assessments for amphibians, reptiles, and bats of concern in Region 2 of the Forest Service and all species on the Wyoming State Bureau of Land Management's Sensitive Species List. Assessments included synthesis of biological information, development of predictive distribution models, population demographic analyses, biological threat assessments, and synthesis of conservation measures.

- ◆ Predictive Distribution Modeling -- Under my direction, WYNDD created predictive distribution models for management indicator and biologically sensitive species for the Bureau of Land Management, the Forest Service, and the Fish and Wildlife Service. This method was widely embraced by NatureServe, who commissioned WYNDD to teach international workshops on the subject. WYNDD received a national award of excellence from the Natural Heritage Network for this work, and we obtained funding to develop an ArcGIS tool facilitating production of such models. I was a lead instructor for all workshops and am heading the development of this tool, which is currently in beta-testing. I have also given 3 invited lectures on this topic in the last two years.
- ◆ Sensitive Species Evaluation and Databasing -- In my role as senior zoologist at WYNDD, I am responsible for maintaining sensitive species lists, conservation ranks and a geographic database of information on sensitive species throughout Wyoming. This has involved keeping up-to-date on current information, conducting targeted survey efforts and developing a replicable system for ranking the sensitivity of disparate species. This information is used by private consultants, state government, federal agencies, and non-profit organizations on a daily basis.
- ◆ Educational Programs -- I am conducting interpretive courses for the Yellowstone Association and the Idaho TNC on the bats of Yellowstone. Recently, I have taught natural resource conservation courses for the University of Wyoming School of Environment and Natural Resources, served as lead instructor for 5 international workshops on predictive distribution modeling, and given invited lectures on boreal toad conservation and small-mammal trapping to the Wildlife Society and the Forest Service.
- ◆ Species Conservation Teams -- I serve as an invited technical expert for regional sensitive species' recovery teams, including those for Wyoming toad, boreal toad and Preble's meadow jumping mouse. My staff and I also participate in conservation working groups such as the Wyoming Bat Working Group, Prairie Dog Conservation Team and Partners in Flight.

EXAMPLES OF RECENT WRITING

- Keinath, D.A., H. Griscom, and A.J. Redder. 2008. Survey for Wyoming pocket gopher (*Thomomys clusius*) in central Wyoming. Prepared for the Wyoming Field Office of the Nature Conservancy, Lander, Wyoming.
- Keinath, D.A. 2007. Yellowstone's World of Bats: Taking Inventory of Yellowstone's Night Life. *Yellowstone Science* 15:3-13. Online: <http://www.nps.gov/yell/planyourvisit/yellsci-issues.htm>.
- Keinath, D.A. and G.P. Beauvais. 2007. Inventory and monitoring of avian management indicator species for the Medicine Bow National Forest, Wyoming: Year two progress report. Prepared for U.S. Department of Agriculture, Forest Service, Medicine Bow-Routt National Forest and Thunder Basin National Grassland, Laramie, Wyoming.
- Keinath, D.A. Redder, and G. Jones. 2006. Wyoming Toad Monitoring on the Buford Foundation Wetland Reserve: 2006. Prepared for the Laramie Rivers Conservation District and United States Fish and Wildlife Service. Online: <http://uwadmnweb.uwyo.edu/wyndd/> >> reports and publications.
- Keinath, D.A. 2006. Wyoming pocket gopher (*Thomomys clusius*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Online: <http://www.fs.fed.us/r2/projects/scp/assessments/index.shtml>.
- Keinath, D. and M. McGee. 2005. Boreal Toad (*Bufo boreas boreas*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Online: <http://www.fs.fed.us/r2/projects/scp/assessments/index.shtml>.
- Keinath, D.A. 2004. Fringed Myotis (*Myotis thysanodes*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Online: <http://www.fs.fed.us/r2/projects/scp/assessments/index.shtml>.
- Keinath, D.A. 2005. Bat Inventory of the Greater Yellowstone Network. Prepared for the National Park Service Greater Yellowstone Network Inventory and Monitoring Program, Bozeman, Montana. Online: <http://uwadmnweb.uwyo.edu/wyndd/> >> reports and publications.

- Keinath, D.A. 2005. A Bat Conservation Evaluation for White Grass Ranch, Grand Teton National Park, Wyoming. Prepared for the National Park Service, Grand Teton National Park, Moose, Wyoming. Online: <http://uwadmnweb.uwyo.edu/wyndd/> >> reports and publications.
- Keinath, D.A. and G. P. Beauvais. 2004. Draft Wyoming Animal Element Ranking Guidelines. Report prepared for the Wyoming Natural Diversity Database, Laramie, Wyoming. Online: <http://uwadmnweb.uwyo.edu/wyndd/> >> reports and publications.
- Keinath, D.A. and Hayward, G. D. 2003. Response of red-backed voles (*Clethrionomys gapperi*) to disturbance in subalpine forests: Use of regenerating forest patches. *Journal of Mammalogy* 84:956-966.
- Keinath, D.A., B. Heidel, and G. Beauvais. 2003. Wyoming Plant and Animal Species of Concern. Report prepared for the Wyoming Natural Diversity Database, Laramie, Wyoming. Online: <http://uwadmnweb.uwyo.edu/wyndd/> >> status information.

SELECTED REFERENCES

Although not necessary, please let me know before contacting references, so that I may afford them the courtesy of advanced notification.

- Dr. Gregory Hayward. U.S. Forest Service Regional Wildlife Ecologist, Rocky Mountain Region and Adjunct Professor, Department of Zoology and Physiology, University of Wyoming. (Laramie, Wyoming -- phone: 307-766-2839; e-mail: ghay@uwyo.edu).
- Dr. Gary Beauvais. Director, Wyoming Natural Diversity Database, University of Wyoming. - Laramie, Wyoming (Gary is my current supervisor. Please contact me prior to contacting him).
- Jeff Carroll. State Endangered Species Coordinator, Wyoming State Bureau of Land Management. (Cheyenne, Wyoming -- phone: 307-775-6090; email: jeff_carroll@blm.gov).
- Dr. Ronald Beiswenger. Wyoming Toad Recovery Team Leader and Professor, Department of Geography, University of Wyoming. (Laramie, Wyoming -- phone: 307-766-3029; email: rbeis@uwyo.edu).
- Jena Hickey. Forest Biologist, Medicine Bow – Routt National Forest. (Laramie, Wyoming -- phone: 307-745-2412; email: jenahickey@fs.fed.us).
- Dr. Anthony Hoch. District Manager, Laramie Rivers Conservation District. (Laramie, Wyoming -- phone: 307-721-0072; email: tony-hoch@wy.nacdnet.net).