

*Curriculum vitae*  
CHRISTOPHER E. SMITH

**ADDRESS**

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**EDUCATION**

M.Sc., Conservation Biology, 2012. University of Minnesota, Minneapolis, MN

**Thesis:** Initial Response of Amphibian and Small Mammal Species to Timber and Coarse Woody Debris Harvest in Aspen-Dominated Forests of Northern Minnesota

Minor: Entomology

B.Sc., Fisheries and Wildlife Biology, 2009. University of Minnesota, Minneapolis, MN

Minor: Biology

Minneapolis Community and Technical College, 2004-2006

Completed 73 credits toward liberal education requirements

**PROFESSIONAL INTERESTS**

My work generally focuses on amphibian, reptile, and terrestrial invertebrate conservation and research at a variety of spatial scales. Current and recent projects include; effects of timber and coarse woody debris harvest on amphibians and small mammals; spatial and population ecology of *Heterodon nasicus* and *Pituophis catenifer*; geographical distribution of amphibians and reptiles of North Dakota; and habitat management research and monitoring (Rx fire, timber harvest, grazing) in addition to the restoration of sand blowouts, dunes, and other open-sand geologic features. I am interested in the use of citizen science and science communication to aid species conservation and research.

Other research interests include population and life history dynamics, imperiled species recovery and reintroduction, and the development and evaluation of novel sampling techniques.

## CURRENT POSITIONS / AFFILIATIONS

*Co-founder:* HerpMapper.org – A Global Herpetological Atlas and Data Hub 2013 - Present  
*Owner / Biologist:* Wildlife Research & Consulting Services, LLC, Saint Paul, MN 2009 - Present

## PAST POSITIONS / AFFILIATIONS

*Natural Resource Specialist:* Minnesota Department of Natural Resources, Division of Ecological and Water Resources – Nongame Wildlife Program, Saint Paul, MN May 2011-Feb. 2016  
*Curatorial Assistant:* Amphibian and Reptile Collection, Bell Museum of Natural History, University of Minnesota, MN Sept. 2011-Jan.2012  
*Natural Resource Specialist:* Minnesota Department of Natural Resources, Division of Ecological and Water Resources – Nongame Program, Saint Paul, MN Summer 2008, 2009, 2010  
*Graduate Research Assistant:* Department of Fisheries, Wildlife and Conservation Biology, University of Minnesota, MN Sept. 2009-Aug.2011  
*Undergraduate Research Assistant II:* Department of Fisheries, Wildlife and Conservation Biology, University of Minnesota, MN Jan. 2007-Jan. 2008  
*Peer-tutor:* Minneapolis Community and Technical College, MN Jan. 2005-May 2007

## SKILLS

- Experienced in the use of: R; JMP; Geospatial Modelling Environment (GME); QGIS; and Biotas
- Experience with both small and large landscape-scale projects
- Trained and proficient in the use of radio telemetry for tracking small vertebrates
- Trained and proficient in the use of harmonic radar for tracking small vertebrates
- Extensive experience in the location, identification, natural history and capture of reptiles and amphibians through search and seizure, drift fencing, and turtle trapping
- Experience in the live capture, identification, handling and release of small Minnesota mammals using Sherman and pit-fall traps
- Experience operating boats, small and large trucks and small to large trailers, ATVs, and hand power tools

## LICENSES / CERTIFICATIONS

- Certified Wildlife Biologist ® - The Wildlife Society
- Class B Minnesota Commercial Drivers License
- MN DNR – All Terrain Vehicle (ATV) Certification
- MN Defensive Driving Certification
- Rabies Vaccination
- Wildland Firefighter II Certification
- SCUBA certified

## GRANTS / AWARDS

MNDNR – Commissioner Recognition Award – Innovation: **2014**  
MNDNR – Commissioner Recognition Award – Conservation Enhancement: **2014**  
State Wildlife Grant (SWG): **2014** - \$167,280  
Minnesota Herpetological Society Research Grant: **2009** - \$885, **2010** - \$1500, **2011** - \$1500, **2012** - \$1156  
Outstanding Conservation Biology Graduate Student, University of Minnesota, MN: **2010**  
Dayton-Wilkie Natural History Fund: **2010** - \$1100  
Ulysses S. Seal Conservation Grant- MN Zoo: **2010** - \$3500  
Ludden Scholarship: **2008** - \$950  
Natural Resource Alum Scholarship: **2008** - \$1550  
Undergraduate Research Grant (UROP): **2007** - \$1700, **2008** - \$1700

## SCIENTIFIC PUBLICATIONS, REPORTS, and NOTES

- Lorch, J.M., J.S. Lankton, S. Knowles, K. Michell, J.L. Edwards, J.M. Kapfer, R.A. Staffen, E.R. Wild, K.Z. Schmidt, A.E. Ballmann, D. Blodgett, T.M. Farrell, B.M. Glorioso, L.A. Last, S.J. Price, **C.E. Smith**, J.F.X. Wellehan Jr., and D.S. Blehert. 2016. Snake Fungal Disease: An Emerging Threat to Wild Snakes. *Proceedings of the Royal Society B* 371(1709):20150457.
- Smith, Christopher E.**, Carol D. Hall, Erica P. Hoaglund, Jeffrey B. LeClere, and Krista A. Larson. 2016. New and Updated Records for Amphibians and Reptiles in Minnesota. *The Journal of North American Herpetology* 2016(1):11-14.
- Smith, Christopher E.** 2016. American Burying Beetle (*Nicrophorus americanus*) Surveys in the Avon Hills Region of Central Minnesota. Final Report to the Minnesota Department of Natural Resources – Scientific and Natural Areas Program and Stearns County. 7pp.
- Smith, Christopher E.**, and Don Becker. 2015. Geographical Distribution: *Pantherophis obsoletus* in Winneshiek County, Iowa. *Herpetological Review*. 46:575.
- Smith, Christopher E.**, and Gary S. Casper. 2015. *Chelydra serpentina* (Snapping Turtle): Hunting Behavior. *Herpetological Review*, 46:241-242.
- Smith, Christopher E.** 2014. American Burying (*Nicrophorus americanus*) Beetle Surveys. In *Minnesota Army National Guard, Camp Ripley Training Center and Arden Hills Army Training Site, 2013 Conservation Program Report, January 1-December 31, 2013* (pp. 90-93). Compiled by Nancy J. Dietz and Brian J. Dirks, Camp Ripley Series Report No. 23, Little Falls, MN, USA.
- Smith, Christopher E.** 2014. Tiger Beetle Surveys. In *Minnesota Army National Guard, Camp Ripley Training Center and Arden Hills Army Training Site, 2013 Conservation Program Report, January 1-December 31, 2013* (pp. 85-90,130-131). Compiled by Nancy J. Dietz and Brian J. Dirks, Camp Ripley Series Report No. 23, Little Falls, MN, USA.
- Smith, Christopher E.**, Jaime Edwards, and Jeffrey M. Lorch. 2013. *Crotalus horridus*: Fungal pathogens. *Herpetological Review*, 44:519-520.
- Smith, Christopher E.**, and Myron B. Zimmer. 2013. *Thamnophis radix*: Brood size. *Herpetological Review*, 44:454.
- Hoaglund, Erica P. and **Christopher E. Smith**. 2013. New and updated records of amphibians and reptiles from Minnesota, USA. *Herpetological Review*, 44:482-483.
- Hoaglund, Erica P. and **Christopher E. Smith**. 2012. Lessons Learned: Notes of the Natural History of *Heterodon nasicus* in Minnesota. *Reptiles & Amphibians*, 19:163-169.

## SCIENTIFIC PUBLICATIONS, REPORTS, and NOTES cont.

- Hoaglund, Erica P., **Christopher E. Smith**, and Hannah Texler. 2012. Microhabitat Components of Key Habitat Types in the Anoka Sand Plain that Influence Habitat Selection among Species in Greatest Conservation Need. Final Report, Division of Ecological and Water Resources, Minnesota Dept. of Nat. Res.
- D'Amato, Anthony, Charles Blinn, John Bradford, Nick Brazee, Miranda Curzon, Shawn Fraver, Paul Klockow, Randy Kolka, Kenneth Kozak, Michael Ostry, Brian Palik, and **Christopher E. Smith**. 2012. Impacts of woody biomass harvesting on saproxylic communities, nutrient availability, and productivity in aspen ecosystems. Report to the Minnesota Forest Resources Council. Prepared by Alaina Berger. 72pp.
- LeClere, Jeffrey B., Erica P. Hoaglund, Jim Scharosch, **Christopher E. Smith**, and Tony Gamble. 2012. Two naturally occurring intergeneric hybrids (*Pituophis catenifer sayi* x *Pantherophis vulpinus*; Lampropeltini, Squamata) from the Midwestern United States. *Journal of Herpetology*, 46:257-262.
- Smith, Christopher E.** and Erica P. Hoaglund. 2012. Better Late than Never: The Four-toed Salamander. Water, Ecosystem Services, and Biodiversity, Division of Ecological and Water Resources Monthly Newsletter, May/June(2012):1-2.
- Smith, Christopher E.** and Kenneth H. Kozak. 2011. A Case of Mistaken Identity; A Re-evaluation of *Pantherophis obsoletus* Distribution in Minnesota. *Minnesota Herpetological Society Newsletter* 31(12): 6-7.
- Harper, Liz, Erica P. Hoaglund, **Christopher E. Smith**, and Hannah Texler. 2010. Rare Wildlife and Habitat Surveys in Oak Savannas of the Anoka Sand Plain Subsection. Final Report, Division of Ecological Resources, Minnesota Dept. of Nat. Res. 47pp.
- Martyn, Noah T. and **Christopher E. Smith**. 2010. Geographical Distribution: *Thamnophis radix* in Nicollet County, Minnesota. *Herpetological Review* 41:383.
- Smith, Christopher E.**, Erica P. Hoaglund and Duane McDermott. 2010. Geographical Distribution: *Thamnophis radix* in Olmsted County, Minnesota. *Herpetological Review* 41:383.
- Hoaglund, Erica P. and **Christopher E. Smith**. 2010. Geographical Distribution: *Opheodrys vernalis* in Houston County, Minnesota. *Herpetological Review* 41:245.
- Blasus, Randy E., Jeffrey B. LeClere, and **Christopher E. Smith**. 2009. Progress Report 2009: Amphibians and Reptiles of North Dakota Field Guide. *Dakota Amphibian and Reptile Network Newsletter* 2:5-6.
- LeClere, Jeffrey B., **Christopher E. Smith**, and Randy E. Blasus. 2009. New and Updated County Records for Amphibians and Reptiles in North Dakota. *Herpetological Review* 40:246-247.
- Smith, Christopher E.**, and Erica P. Hoaglund. 2008. Geographical Distribution: *Eleutherodactylus cystignathoides* in Montgomery County, Texas. *Herpetological Review* 39:362.

## TECHNICAL GUIDANCE DOCUMENTS (significant contributions)

- Invertebrate Conservation Guidelines: With an Emphasis on Prairie, Savanna, and Grassland Ecosystems. [PDF](#)
- Wildlife-friendly Erosion Control. [PDF](#)

## SELECTED PRESENTATIONS (PRESENTER'S NAME IN BOLD)

**Smith, Christopher E.** 2017. "In Search of Nature's Undertakers." Presented at the Iowa Day of Insects, March 25, 2017. Ames, Iowa.

**Smith, Christopher E.** 2016. "A Brief Introduction to Insect Biology and Conservation for Land Managers with Special Attention to Prescribed Fire Effects." Presented at the Annual Meeting of the Minnesota Chapter of The Wildlife Society, February 10, 2016. Mankato, Minnesota.

\* **Invited: Smith, Christopher E.** 2014, 2016. "Stop, Look, and Listen: A Tour of Minnesota's Frog and Toad Diversity." Presented to the Minnesota Master Naturalists Program and the Minnesota Water Garden Society. Minnesota.

**Hoaglund, Erica P.,** and Christopher E. Smith. 2012. "Lessons Learned: Plains hog-nosed snake movement in a complex landscape." Midwest Partners in Amphibian and Reptile Conservation Annual Meeting. September 8, 2012. Pioneer, Ohio.

\***Invited: Smith, Christopher E.** 2012. "Minnesota Herpetology and Citizen Science: Is There an App for That?" Minnesota Master Naturalist Monthly Meeting. August 15, 2012. Forest Lake, Minnesota.

\***Invited: Smith, Christopher E.** 2012. Data Collection in the 21st Century: Is There an App for That?" Annual Meeting of the Dakota Amphibian and Reptile Network. May 26, 2012. Spearfish, South Dakota.

\***Invited: LeClere, Jeffrey B.,** Christopher E. Smith, and Randy E. Blasus. 2011. "North Dakota Herp Project; An Overview and Progress Report." Annual Meeting of the Dakota Amphibian and Reptile Network. May 21, 2011. Minot, North Dakota.

**Smith, Christopher E.** 2011. "Initial Response of Small Mammal and Amphibian Species to Logging and Biomass Harvest." Conservation Biology Departmental Seminar. May 2, 2011. University of Minnesota, Saint Paul, Minnesota.

\***Invited: Smith, Christopher E.** 2010. "Impacts of Woody Biomass Removal on Amphibian Abundance and Diversity in an Aspen Dominated Ecosystem, A Progress Report." Minnesota Herpetological Society. November 4, 2010. Saint Paul, Minnesota.

\***Invited: LeClere, Jeffrey B.,** Christopher E. Smith, and Randy E. Blasus. 2010. "North Dakota Herp Project; An Overview and Progress Report." Annual Meeting of the Dakota Amphibian and Reptile Network. March 13, 2010. Pierre, South Dakota.

## SERVICE

**Peer-reviewer:** *Herpetological Conservation & Biology, American Midland Naturalist*

**Review Consultant:** Capstone Press (animal and biology children's books)

**Project Consultant:** The Sandboa Book by Warren Treacher. Published 2014.

**Center for North American Herpetology (CNAH):** Board Member (2016 to present).

**Minnesota Herpetological Society (MHS):** Conservation Committee Chair (2016 to Present), President (2012 to 2014), Webmaster (2011 to 2014), Member at Large (2009 to 2011, 2015 to 2016), Membership Secretary (2008), Student Chapter Leader (2008 to 2012).

**Midwest Partners in Amphibian and Reptile Conservation (MW PARC):** Advisory Board Member (2011 to 2015).

## PROFESSIONAL AFFILIATIONS

Center for North American Herpetology (CNAH), Dakota Amphibian and Reptile Network (DARN), Entomological Society of America (ESA), Minnesota Herpetological Society (MHS), Minnesota Native Plant Society (MNNPS), Partners for Amphibian and Reptile Conservations (PARC) – including MW PARC Chapter, Society for the Study of Amphibians and Reptiles (SSAR), The Wildlife Society (TWS)

## SOCIAL MEDIA

**Blog:** [FieldEcology.com/blog](http://FieldEcology.com/blog)

**Twitter:** [@FieldEcology](https://twitter.com/FieldEcology), [@HerpMapper](https://twitter.com/HerpMapper)

**Instagram:** [@FieldEcology](https://www.instagram.com/FieldEcology)

**Facebook Pages / Groups (I admin w/ > 1,000 likes/followers):** [HerpMapper](#); [Minnesota Herpetological Society](#); [Snake Identification](#)