

Nathan R. De Jager

Ecologist
USGS-Upper Midwest Environmental Sciences Center
2630 Fanta Reed Road
La Crosse, WI 54603
Phone: 608-781-6232
Email: ndejager@usgs.gov

Education

- 2008 PhD in Ecology, Evolution, and Behavior with a minor in Conservation Biology
University of Minnesota, St. Paul Minnesota, USA 55108
- 2005 MS in Biology with a minor in Applied and Computational Mathematics
University of Minnesota, Duluth, Minnesota, USA 55811
- 2002 Naturalist Certificate
Au Sable Institute of Environmental Studies, Mancelona, MI, USA
- 2001 BA in Biology/Environmental Science
Northwestern College, Orange City, Iowa, USA 51041
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Research Experience

- Upper Midwest Environmental Sciences Center, US Geological Survey, La Crosse, WI
7/08-Present: Ecologist
- University of Minnesota, St. Paul Minnesota 55108
8/07-7/08: Doctoral Dissertation Fellow
- Natural Resources Research Institute, Duluth, MN
5/04-8/07: Graduate Research Assistant
- Swedish University of Agricultural Sciences (SLU), Umeå, Sweden
5/03-8/03: Graduate Research Assistant
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Technical Experience

- US Department of Agriculture, Natural Resources Conservation Service, Orange City, IA
5/99-8/00 Soil Conservation Technician
- US Department of Agriculture, Natural Resources Conservation Service, Boone, IA
5/01-5/02 Soil Conservation Technician
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Publications:

De Jager, N.R. and Houser, J.N. In Prep. Spatial clusters of nitrogen (N), phosphorous (P) and N:P ratios in the Upper Mississippi River, USA.

De Jager, N.R. Thomsen, M.T., Yin, Y In Review. Threshold effects of flood duration on the vegetation and soils of the Upper Mississippi River floodplain, USA. *Forest Ecology and Management*.

De Jager, N.R, Rohweder, J.J., and J.C. Nelson. In Press. Past and predicted future changes in the land cover of the Upper Mississippi River floodplain, USA. *River Research and Applications*.

De Jager, N.R. and Rohweder, 2011. Spatial Patterns of aquatic habitat richness in the Upper Mississippi River floodplain, USA. *Ecological Indicators* 13:275-283.

De Jager, N.R. and Rohweder, J.J. 2011. Spatial scaling of core and dominant forest cover in the Upper Mississippi and Illinois River floodplains, USA. *Landscape Ecology* 26: 697-708

De Jager, N.R. and Yin, Y. 2010. Temporal changes in spatial patterns of submersed macrophytes in two impounded reaches of the Upper Mississippi River, USA, 1998-2009. *River Systems* 19:129-141.

De Jager, N.R. and Pastor, J. 2010. Effects of simulated moose browsing on the growth and morphology of Rowan (*Sorbus aucuparia*). *Wildlife Biology* 16: 301-307.

De Jager, N.R., Pastor, J., Hodgson, A.L. 2009. Scaling the effects of moose browsing on forage distribution from plant canopies to landscapes. *Ecological Monographs*, 79(2):281-297.

De Jager, N.R. and Pastor, J. 2009. Declines in moose population density at Isle Royale National Park, MI, USA and accompanied changes in landscape patterns. *Landscape Ecology* 24: 1389-1403.

De Jager, N.R. and Pastor, J. 2008. Effects of moose population density and site productivity on the canopy geometries of birch (*Betula pubescens* and *B. pendula*) and Scots pine (*Pinus sylvestris*). *Wildlife Biology* 14. 251-262.

Van Dyke, F., B. Darby, S.E. Bowdish, J. D. Schmeling, and N.R. De Jager. 2002. Ecosystem Management and Moose: Creating a Coherent Concept with Functional Management Strategies. *Alces* 38: 55-72.

Presentations:

De Jager, N.R. 2011. Threshold effects of flood duration on the vegetation and soils of the Upper Mississippi River floodplain, USA. April 5, 2011. US-International Association for Landscape Ecology Symposium, Portland, OR, USA.

De Jager, N.R. 2011. Interactive effects of flooding and herbivory by white-tailed deer on tree seedling recruitment in the Upper Mississippi River floodplain. March 8, 2011. Bottomland Ecosystem Restoration Conference, National Great Rivers Research and Education Center, Collinsville, IL, USA.

De Jager, N.R. 2010. Results from 2009 Additional Program Element: Quantifying spatial patterns of the Upper Mississippi River System in space and time. Environmental Management Program Analysis Team Meeting. National Great Rivers Research and Education Center, Godfrey, IL, USA.

De Jager, N.R. 2010. Threshold effects of flood duration on the vegetation and soils of the Upper Mississippi River floodplain. Sept. 9, 2011. U.S. Army Corps of Engineers fall forestry meeting. Le Claire, IA, USA.

De Jager, N.R. 2010. Departure from quarter-power scaling of aquatic habitat richness-area as an indicator of riverscape organization. June 2010. American Association for Limnology and Oceanography/North American Benthological Society. Santa Fe, NM.

De Jager, N.R. 2010. Departure from quarter-power scaling of aquatic habitat richness-area as an indicator of riverscape organization. June 2010. 3rd Annual USGS Modeling conference, Denver, CO.

De Jager, N.R. 2010. Departure from quarter-power scaling of aquatic habitat richness-area as an indicator of riverscape organization. April 28, 2010. Upper Mississippi River Research Consortium, La Crosse, WI

De Jager, N.R. 2009, 2010 Effects of the worlds large herbivores on plant and ecosystem dynamics. University of Wisconsin La Crosse, Ecology class.

De Jager, N.R. 2009. Indicators of landscape pattern for the Upper Mississippi River floodplain landscape. Upper Mississippi River Basin Association, Rock Island, IL.

De Jager, N.R. 2008. Dynamic Landscape Indicators for the Upper Mississippi River System. Environmental Management Program Analysis Team meeting, Dubuque, IA.

De Jager, N.R. 2008. Multiple scale spatial dynamics of the moose-forest-soil ecosystem of Isle Royale National Park, MI, USA. University of Minnesota Twin Cities Ecology, Evolution, and Behavior Seminar Series, St. Paul, MN.

De Jager, N.R. 2006. Interactions between moose population density and landscape patterns at Isle Royale National Park, MI, USA. University of Minnesota Twin Cities Conservation Biology Seminar Series, St. Paul, MN

De Jager, N.R. 2005. Moose in the fractal forest. Wheaton College Biology Seminar Series

De Jager, N.R. 2004, 2005. Effects of moose population density and soil fertility on the growth and morphology of birch and Scots pine in northern coastal Sweden. University of Minnesota Duluth Biology Series Seminar, Duluth MN (2004, 2005)

De Jager, N.R. 2003. Moose in the fractal forest. Swedish University of Agricultural Sciences (SLU), Umeå Sweden.

Funded Project Proposals, Grants and Contracts

De Jager, N.R. 2012-2015. Landscape Pattern Research and Application on the Upper Mississippi River System. U.S. Army Corps of Engineers. 2012-2015 (\$505,000).

De Jager, N.R. 2010-2012. Development of landscape pattern indices for the Upper Mississippi River System. U.S. Army Corps of Engineers. 2010-2012 (\$330,616).

De Jager, N.R. 2010. Effects of landscape patterns on forest community composition and aquatic nutrient concentrations along the Upper Mississippi and Illinois Rivers, USA. US Army Corps of Engineers/US Geological Survey, Long Term Resource Monitoring Program-Additional Program Element (\$84,000).

Guntenspergen, GR, Rohweder, JJ, De Jager, NR. 2010-2011. Development of a decision support system to examine how habitat corridors could ameliorate the impact of habitat fragmentation at Acadia National Park caused by development. National Park Service. (\$152,567).

De Jager, N. and Nelson, J.C. 2009. Quantifying changes in landscape patterns of the Upper Mississippi River System in space and time. US Army Corps of Engineers/US Geological Survey Long Term Resource Monitoring Program-Additional Program Element. (\$63,000)

De Jager, N. 2006. Multiple-scale spatial dynamics of the moose-forest-soil ecosystem of Isle Royale National Park, MI, USA. Dissertation Fellowship, University of Minnesota. 2006-2007 (\$21,500)

De Jager, N. and F. Van Dyke. 1999. Riparian Habitat and Prairie Restoration Project Proposal to Northwestern College President and Farm Committee. (Commitment of 20 acres for 20 years and funding totaling \$5,000)

Scientific Service:

Vice President: Mississippi River Research Consortium 2011-2012
Member: International Society for Landscape Ecology 2008-Present
Member: Society for Conservation Biology 2009-2010
Reviewer: Landscape Ecology 2010-Present
Reviewer: Ecoscience 2011-Present
Reviewer: Silva Fennica 2011

References:

Dr. John Pastor, Professor, University of Minnesota Duluth, Duluth, MN 55811. 218-726-7001.
jpastor@d.umn.edu

Dr. Barry Johnson, Chief, Long-Term Resources Monitoring Branch, USGS-Upper Midwest
Environmental Sciences Center, La Crosse, WI 54603. 608-781-6230. bljohnson@usgs.gov.

Ms Karen Hagerty, Manager, Long-Term Resources Monitoring Program, US Army Corps of
Engineers. Rock Island, IL 61204. 309-794-5634. Karen.H.Hagerty@usace.army.mil.
