

Derek J. Martin

Assistant Professor of Geography
Department of Geography and Planning
Appalachian State University
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EDUCATION

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| Ph.D. Geography
2014 | University of Tennessee, Knoxville, Tennessee
Dissertation: “Geospatial Characterization of Fluvial Wood in a Low-Gradient, Midwestern River System” |
| M.S. Geospatial Science
2005 | Missouri State University, Springfield, Missouri
Thesis: “Geospatial Analysis of Gravel Bar Deposition and Channel Migration in the Ozark National Scenic Riverways” |
| B.S. Biology
2002 | Lake Superior State University, Sault Ste. Marie, Michigan
Thesis: “Unsupervised Classification as an Aid to Natural Plant Community Classification in Southeastern Massachusetts” |

EMPLOYMENT HISTORY

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|-----------|---|
| 2013-2014 | Research Assistant , University of Tennessee, Knoxville, TN
GIS specialist for multi-disciplinary initiative to collate, organize, and analyze hydrologic, climatic, and biological data collected by Tennessee Valley Authority.

Assisted with project, “Toward an instream suspended sediment standard for East Tennessee streams” |
| 2011-2013 | Teaching Associate , University of Tennessee, Knoxville, TN
Instructor of record for Geography of the Natural Environment, a two-semester lab science sequence. Average enrollment of 120. |
| 2010-2011 | Head Teaching Assistant , University of Tennessee, Knoxville, TN. Lab instructor for Geography of the Natural Environment. Organized and prepared laboratory exercises and coordinated nine teaching assistants. |
| 2007-2010 | Research Specialist , Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO |

2005-2007 **Geographic Information Systems Technician**, Upper Mississippi River Basin Association, St. Paul, MN

2003-2005 **Research Assistant**, Missouri State University, Springfield, MO

2002-2003 **Geographic Information Systems/Field Technician**, U.S. Bureau of Land Management, Shoshone, ID

2002 **Geographic Information Systems/Field Technician**, Manomet Center for Conservation Sciences/AmeriCorps, Manomet, MA

PUBLICATIONS

Keck, B.P, Marion, Z.H., **Martin, D.J.**, Kaufman, J.C., Harden, C.P., Schwartz, J.S., and Strange, R.J. 2014. Fish Functional Traits Correlated with Environmental Variables in a Temperate Biodiversity Hotspot. PLoS ONE 9(3): e93237. doi:10.1371/journal.pone.0093237

Lecce, S.A., Pavlowsky, R.T., Bassett, G.S., and **Martin, D.J.** 2012. *Metal contamination from gold mining in the Cid District, North Carolina*. Physical Geography 32 (5) 469-495.

Martin, D.J., and Pavlowsky, R.T. 2011. *Spatial patterns of channel instability in an Ozark river, SW Missouri*. Physical Geography 32 (5) 445-468.

Pavlowsky, R.T., Lecce, S., Bassett, G. and **Martin, D.J.** 2010. *Legacy Hg-Cu contamination of active stream sediments in the Gold Hill mining district, North Carolina*. Southeastern Geographer 50 (4) 503-522.

TECHNICAL REPORTS

Owen, M.R. Pavlowsky, R.T., and **Martin, D.J.** 2012. *Big River borrow pit monitoring project*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-003. Final Report to U.S. Fish and Wildlife Service, Columbia, Missouri.

Pavlowsky, R.T., Owen, M.R. and **Martin, D.J.** 2010. *Distribution, geochemistry, and storage of mining sediment in channel and floodplain deposits of the Big River system in St. Francois, Washington, and Jefferson Counties, Missouri*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-002. Final Report to U.S. Fish and Wildlife Service, Columbia, Missouri.

Pavlowsky, R.T., and **Martin, D.J.** 2010. *River sediment quality of the upper White River Basin*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-001. Final Report to Upper White River Basin Foundation, Branson, Missouri.

Pavlowsky, R.T., and **Martin, D.J.** 2009. *River channel stability and sediment characteristics in the Upper White River Basin*, Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-09-005. Final Report to Upper White River Basin Foundation, Branson, Missouri.

Martin, D.J., and Pavlowsky, R.T. 2008. *Water quality gap report for Spring River*. Final report to Midwest Environmental Consultants, Columbia, MO, funded by USEPA.

Martin, D.J., and R. Pavlowsky, R.T. 2008. *Water quality gap report for Elk River*. Final report to Midwest Environmental Consultant, Columbia, MO, funded by USEPA.

Martin, D.J., and Pavlowsky R.T. 2008. *Water quality gap report for Sac River*. Final report to Midwest Environmental Consultant, Columbia, MO, funded by USEPA

AWARDS AND HONORS

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| 2014 | John Fraser Hart Ph.D. Honors Paper Award, Southeast Division of the Association of American Geographers (\$1,000) |
| 2013 | Yates Dissertation Fellowship, University of Tennessee (\$15,000) |
| 2013 | Robert G. Long Outstanding Graduate Student Award, University of Tennessee, Department of Geography |
| 2012 | Science Alliance Award, Oak Ridge National Laboratory (\$3,600) |
| 2012 | Outstanding Teaching Associate, University of Tennessee, Department of Geography |
| 2012 | McCroskey Foundation Research Grant, University of Tennessee, Department of Geography (\$500) |
| 2012 | GTA@OIT Teaching Associate Grant, University of Tennessee (\$500) |
| 2011 | Science Alliance Award, Oak Ridge National Laboratory (\$3,600) |
| 2011 | Outstanding Teaching Assistant, University of Tennessee, Department of Geography |
| 2010 | Shipley-Swan Graduate Fellowship, University of Tennessee (\$5,000) |
| 2010 | Athletic Department Scholarship, University of Tennessee (\$1,200) |
| 2005 | Outstanding Oral Presentation, Graduate Interdisciplinary Research Forum, Missouri State University |

2004 Outstanding Poster Presentation, Graduate Interdisciplinary Research Forum, Missouri State University

2004 Thesis Research Grant, Missouri State University (\$500)

CONFERENCE PRESENTATIONS

Martin, D.J. 2014. Identifying Longitudinal Patterns of Fluvial Wood Deposition in Missouri's Big River. **Annual meeting of the Association of American Geographers**, Tampa, FL.

Martin, D.J., Pavlowsky, and R.T., Harden, C.P. 2014. Examining Longitudinal Patterns: A Geographic Perspective on River Systems Analysis. **University of Tennessee Geography Research Symposium**, Knoxville, TN.

Martin, D.J., Harden, C.P., and Tran, L. 2013. Spatial Analysis of Fluvial Wood Arrangement in a Midwestern River System: Geomorphic Implications and Influences. Poster. **Annual Meeting of the American Geophysical Union**, San Francisco, CA.

Martin, D.J. 2013. Longitudinal Arrangement of Fluvial Wood in a Low Gradient River System. Ph.D. Honors Paper, Annual meeting of the Southeastern Division of the Association of American Geographers, Roanoke, VA.

Martin, D.J. 2013. Where's the Wood: A geospatial analysis of fluvial wood deposition in a low-gradient, Midwestern river system. Fall 2013 University of Tennessee Department of Geography departmental colloquium series lecture.

Martin, D.J. 2013. *Large Woody Debris in an Ozarks River: Implications for Sediment Storage*. **Annual meeting of the Association of American Geographers**, Los Angeles, CA.

Martin, D.J. 2012. *Large Woody Debris in an Ozarks River: Implications for Contaminated Sediment Storage*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Asheville, NC. Poster.

Owen, M, Pavlowsky, R.T., Lecce, S., and **Martin, D.J.** 2012. *Local-scale variations in floodplain contamination by historical mining in the Old Lead Belt, SE Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Asheville, NC. Poster.

Martin, D.J. 2012. *Spatial Patterns of Channel Instability Along an Ozark River*. **Annual meeting of the Association of American Geographers**, New York, New York.

Martin, D.J. 2011. *Hydrology and Water Quality of Regulated Diurnal Flows of the Nantahala River, NC*. **Annual meeting of the Association of American Geographers**, Seattle, Washington. Poster.

Lecce, S., Pavlowsky, R.T., and **Martin, D.J.** 2010. *Storage of Mining Sediment in Floodplain Deposits of the Big River, Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, AL. Poster.

Pavlowsky, R.T., **Martin, D.J.**, and Owen, M. 2010. *Channel Morphology and Sediment Characteristics of Ozark Rivers*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, AL.

Owen, M., Pavlowsky, R.T., and **Martin, D.J.** 2010. *Geomorphic Evaluation of Channel Dredging to Control Contaminated Sediment Transport in Big River, Old Lead Belt, Eastern Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, AL.

Martin, D.J. 2010. *Geospatial Technologies: Water Resources Applications*. **Missouri Environmental Education Association Workshop**, Nixa, MO.

Martin, D.J., Pavlowsky, R.T. 2009. *Analysis of Stream Channel Disturbance Zones*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Knoxville, TN.

Pavlowsky, R. T., Lecce, S., Schlomer, G., and **Martin, D.J.** 2009. *Legacy Hg-Cu Contamination of Active Sediments in Gold Hill Mining District, North Carolina*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Knoxville, TN.

Martin, D.J. Pavlowsky, R.T. 2009. *Impacts of in-channel dredging for lead-contaminated sediment mitigation, Big River, Old Lead Belt, Missouri*. **Big River Workshop - Missouri Natural Resources Annual Conference**, Osage Beach, MO.

Martin, D.J. 2009. *Analysis and Classification of Channel Disturbance Zones in an Ozark River*. **Annual meeting of the Association of American Geographers**, Las Vegas, NV.

Dryer, P.W., Pavlowsky, R.T., Lecce, S., **Martin, D.J.** 2009. *Mining-related contamination of channel and overbank sediments in the Big River, Old Lead Belt, SE Missouri*. **Annual meeting of the Association of American Geographers**, Las Vegas, NV. Poster.

Martin, D.J. 2009. *Channel Disturbance in Ozark Rivers*. **Watershed Hydrology Class, Guest Lecture**. Department of Geography, Geology, and Planning, Missouri State University, Springfield, MO.

Martin, D.J. 2009. *Identification of Channel Disturbance Zones in Ozark Rivers*. **Workshop on Ozark Streams – Missouri Natural Resources Annual Conference**, Osage Beach, MO.

Martin, D.J. 2009. *Channel Disturbance in the Finley River*. **Guest Lecture - Fluvial Geomorphology Class**. Department of Geography, Geology, and Planning, Missouri State University, Springfield, MO, November 2009.

Martin, D.J. *Classification of Channel Disturbance Zones of the Finley River, Southwest Missouri.* **Annual meeting of the Great Lakes Division of the Association of American Geographers**, Bloomington, IN. Poster.

Martin, D.J. and Haack, J. 2008. *GIS Applications for Natural Resources: Research and Monitoring.* **Southwest Regional GIS User Group Workshop**, Springfield, MO.

Martin, D.J., Pavlowsky, R.T. 2008. *Historical Patterns of Channel Stability in an Ozarks Watershed.* **Annual Binghamton Geomorphology Symposium**, Austin, TX. Poster.

Martin, D.J., Pavlowsky, R.T. 2008. *Historical and Present-Day Channel Stability Assessment of Finley Creek, Missouri, Using Aerial Photography.* **Annual meeting of the Association of American Geographers**, Boston, MA.

Williams, A., Owen, M., Pavlowsky, R.T., and **Martin, D.J.** 2008. *Human Disturbance and Geomorphic Response of a Small Ozarks Plateau Catchment.* **Annual meeting of the Association of American Geographers**, Boston, MA. Poster.

Martin, D.J. 2008. *Using Historical Aerial Photography and GIS for Stream Channel Monitoring and Assessment: Finley Creek Case Study.* **Missouri Natural Resources Conference**, Osage Beach, MO.

Martin, D.J. 2007. *The Ozarks Environmental and Water Resources Institute: Geospatial Science Mission & GIS Project Application.* **Southwest Regional GIS Workshop**, Springfield, MO.

Martin, D.J. 2005. *Geospatial Analysis of Gravel Bar Deposition and Channel Migration Within the Ozark National Scenic Riverways, Missouri (1955-2003).* **Annual Graduate Interdisciplinary Research Forum**, Springfield, MO.

Martin, D.J. 2005. *Geospatial Analysis of Gravel Bar Deposition and Channel Migration Within the Ozark National Scenic Riverways, Missouri (1955-2003).* **Annual Meeting of the Association of American Geographers**, Denver, CO.

Martin, D.J. and Pavlowsky, R.T. 2005. *Comparison of Two Common Physical Stream Habitat Assessments in the U.S.A.* **Annual Missouri Natural Resources Conference**, Osage Beach, MO.

Martin, D.J. 2005. *Development of a GIS/RS Based Methodology to Monitor Spatial Patterns of Gravel Bar Movement Within the Ozark National Scenic Riverways, Missouri (1955-2003).* **Annual Missouri Natural Resources Conference**, Osage Beach, MO. Poster.

Martin, D.J. and Pavlowsky, R.T. 2004. *Status and Comparison of Physical Habitat Assessments in the U.S.A.* **Annual Meeting of the American Society of Agricultural and Biological Engineers**, St. Paul, MN.

DEPARTMENTAL SERVICE (University of Tennessee)

2012-2013	President of the Graduate Association of Research Geographers,
2012	Graduate student representative on faculty search committee
2011-2012	Vice President of the Graduate Association of Research Geographers
2011	Geography Awareness Week volunteer
2010-2011	Treasurer of the Graduate Association of Research Geographers

MEDIA COVERAGE

2009	Radio interview regarding southwest Missouri water quality, KSMU public radio, Springfield, Missouri
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