

Matthew H. E. M. Browning

University of Illinois, Dept. of Recreation, Sport and Tourism
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EDUCATION

PhD (2015) Virginia Tech, Dept. of Forest Resources & Environ. Conservation, Blacksburg, VA

MESc (2012) Yale University, School of Forestry & Environmental Studies, New Haven, CT

BA (2005) Oberlin College, Oberlin, OH, Study abroad: Univ. of Otago, Dunedin, New Zealand

PROFESSIONAL APPOINTMENTS

Assistant Professor (2015-present) University of Illinois, Champaign, IL
Department of Recreation, Sport and Tourism in the College of Applied Health Sciences
Health and Nature Lead for Parks and Environmental Behavior Research Group

Project Liaison (2013-2016) MYLES of Science, Montreat College, Montreat, NC

Program Evaluator (2012-2016) Children & Nature Network, Minneapolis, MN

Graduate Student Research Assistant (2012-2015) Virginia Tech, Blacksburg, VA

Student Intern (2013-2014) Community Design Assistance Center, Blacksburg, VA

Graduate Student Research Assistant (2010-2012) Yale University, New Haven, CT

Teaching Fellow (2011-2012) Yale University, New Haven, CT

Lead Resource Management Ranger (2007-2010) Mt. Mitchell State Park, Burnsville, NC

Undergraduate Student Research Assistant (2005) Kent State University, Kent, OH

Undergraduate Student Research Assistant (2004-2005) Oberlin College, OH

National Science Foundation REU Fellow (2004) Gustavus Adolphus, St Peter, MN

PEER-REVIEWED PUBLICATIONS

N.B. Prior to May, 2010, Matthew published under the name M. H. E. Mutel.

Browning, M., Stern, M., Ardoin, N., and Heimlich, J. 2016. Factors of community support for local nature centers. *Environmental Education Research*. <http://dx.doi.org/10.1080/13504622.2016.1217397>.

Browning, M., Stern, M., Ardoin, N., Heimlich, J., Petty, R., and Charles, C. 2016. Investigating the sets of values that community members hold toward local nature centers. *Environmental Education Research*. <http://dx.doi.org/10.1080/13504622.2016.1177713>

Browning, M., Marion, J.L., and Gregoire, T.G. 2013. Sustainably connecting children with nature: An exploratory study of nature play area visitor impacts and their management. *Journal of Landscape & Urban Planning*. 199, p. 104-112. <http://dx.doi.org/10.1016/j.landurbplan.2013.07.00>

Nassar, N., Barr, R., **Browning, M.**, Zhouwei, D., Friedlander, E., Harper, E., Henly, C., Kavlak, G., Kwatra, S., Jun, C., Warren, S., Yang, M., and Graedel, T. 2012. Criticality of the geological copper family. *Environmental Science & Technology*. 46, DOI: 10.1021/es203535w. Available online: <http://dx.doi.org/10.1021/es203535w>

Mutel, M., Waugh, D., Feldmann, R., and Hubbard, K. 2006. Experimental taphonomy of *Callinectes sapidus* and cuticular controls on preservation. *Palaios*. 23:9, p. 615-623. <http://dx.doi.org/10.2110/palo.2008.p08-024r>

Waugh, D., Feldmann, R., Schroeder, A., and **Mutel, M.** 2006. Differential cuticle architecture and its preservation in fossil and extant *Callinectes* and *Scylla* claws. *Journal of Crustacean Biology*. 26:3, p. 271-282. <http://dx.doi.org/10.1651/S-2692.1>

Mutel, M. 2005. Hubert Robert (1733-1808): Young girls dancing around an obelisk, 1798. In Borys, S., Ed., *The Splendor of Ruins in French Landscape Painting, 1630-1800*. Allen Memorial Art Museum Press, Oberlin, OH.

Mutel, M. 2005. Simon Vouet (1590-1649): The muses Urania and Calliope, 1634. In Borys, S., Ed., *The Splendor of Ruins in French Landscape Painting, 1630-1800*. Allen Memorial Art Museum Press, Oberlin, OH.

PEER-REVIEWED CONFERENCE PROCEEDINGS

Browning, M. 2012. The need for sustainable management of nature play areas: A survey of environmental impacts caused by children's play. In Fredman, P., Stenseke, M., Liljendahl, H., Mossing, A., and Laven, D., Ed. *The 6th Intl. Conference on Monitoring and Management of Visitors in Rec. & Protected Areas - Proceedings*. Stockholm, Sweden. http://mmv.boku.ac.at/refbase/files/mmv6_182_183.pdf

Browning, M. 2012. Environmental impacts along informal trails and recreation sites at well-established Swedish nature play areas. In Fredman, P., Stenseke, M., Liljendahl, H., Mossing, A., and Laven, D., Ed. *The 6th International Conference on Monitoring and Management of Visitors in Rec. & Protected Areas - Proceedings*. Stockholm, Sweden. http://mmv.boku.ac.at/refbase/files/mmv6_182_183.pdf

Lusk, L., **Mutel, M.**, Walker, E., and Levy, F. 2009. Forest change in high elevation forests of Mt. Mitchell, North Carolina. *Proceedings of Conference on the Ecology and Management of High-Elev. Forests in Central and Southern Appalachian Mountains*. Slatyfork, WV. http://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs-p-64.pdf

Mutel, M. 2004. Experimental taphonomy of the blue crab, *Callinectes sapidus*: Experimental and cuticular controls on preservation. *Geological Society of America Abstract Programs*. 36:5, p. 65. https://gsa.confex.com/gsa/2004AM/finalprogram/abstract_75525.htm

OTHER PUBLICATIONS AND PRESS RELEASES

Browning, M., Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Corkscrew Swamp Sanctuary and Blair Audubon Center, Naples FL.

- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Audubon Center at Debs Park, Los Angeles, CA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Elachee Nature Science Center, Gainesville, PA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for the Environmental Learning Center, Vero Beach, FL.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Grange Insurance Audubon Center and Scioto Audubon Metro Park, Columbus, OH.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Audubon Greenwich Kimberlin Nature Education Center and Sanctuary, Greenwich, CT.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Hitchcock Nature Center, Honey Creek, IA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Mitchell Lake Audubon Center, San Antonio, TX.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Plains Conservation Center, Aurora, CO.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Audubon Society of Portland Nature Sanctuary and Facilities, Portland, OR.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Richardson Bay Audubon Center and Sanctuary, Tiburon, CA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Seven Ponds Nature Center, Dryden, MI.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Seward Park Audubon Center, Seattle, WA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Silver Lake Nature Center, Bristol, PA.
- Browning, M.,** Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for Corkscrew Swamp Sanctuary and Blair Audubon Center, Naples FL.

- Browning, M.**, Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for the Urban Ecology Center, Milwaukee, WI.
- Browning, M.**, Choi, W., Stern, M., Petty, B., Ardoin, N., and Heimlich. 2016. *Nature centers and communities summary report*. Prepared for the Wilderness Center, Wilmot, OH.
- Browning, M.**, Choi, W., and Charles, C. 2016. *Six month changes in evaluative beliefs about the 2015 ING Summit*. Prepared for Brandwein Institute, Milford, PA.
- Browning, M.**, Choi, W., and Charles, C. 2016. *Goal achievement and contribution of factors for success: Interim report on post-survey results from the 2015 North American Inspiring a New Generation Summit*. Prepared for Brandwein Institute, Milford, PA.
- Browning, M.**, Choi, W., and Charles, C. 2015. *Factors of success, personal motivations, and group goals for the 2015 Inspiring a New Generation Summit*. Prepared for Brandwein Institute, Milford, PA.
- Browning, M.** 2015. *Nature centers in local communities: Perceived values, support factors, and visitation constraints*. Dissertation, Virginia Tech, Blacksburg, VA. <http://vtechworks.lib.vt.edu/handle/10919/54581>
- Browning, M.** 2014. *Legacy Camp evaluation: Results from 2014*. Prepared for Children & Nature Network, Minneapolis, MN. <https://uofi.box.com/s/2z3dg0wh29es924ho2tq4gk3zd49t2dh>
- Gilboy, E., Browning, L., Jessup, J., Wu, S., and **Browning, M.** 2014. *Greendale outdoor classroom & educational trail*. Prepared for Greendale Elementary School, Abingdon, VA.
- Gilboy, E., Browning, L., **Browning, M.**, Walker, H., and Crump, L. 2014. *Scenic River evaluation projects: Cranesnest and Tye rivers*. Prepared for Virginia Dept. of Conservation & Recreation, Richmond, VA.
- Gilboy, E., Browning, L., **Browning, M.**, and Crump, L. 2014. *Clinch Scenic River report: Tazewell county*. Prepared for Virginia Dept. of Conservation & Recreation, Richmond, VA.
- Gilboy, E., Browning, L., **Browning, M.**, Dunn, M., and Walker, H. 2014. *Waynesboro Ridgeview Park, greenway, and trailhead conceptual design*. Prepared for City of Waynesboro, VA.
- Browning, L., **Browning, M.**, Decker, M., and Smith, S. 2011. *Camp property management plan*. Prepared for Connecticut Forest & Parks Association, Rockfall, CT.
- Arthur, T., **Browning, M.**, Cook, L., Martin, R., Saleh, T., and Martinez, J. 2010. *Natural Leaders Network toolkit*. Children & Nature Network, Minneapolis, MN. <http://www.childrenandnature.org/learn/training/toolkits/>
- Mutel, M.** 2010. Research hints forest improving. *The Stewart*. North Carolina Division of Parks and Recreation, Raleigh, NC. 24:1, p. 11.
- Wells, C., Kauffman, G., Ulrey, C., Menges, E., Rock, J., **Mutel, M.**, and Pope, J. August, 2008. Botanists blitz area cliffs for endangered plant. Asheville Field Office Press Releases, U.S. Fish and Wildlife Service, Asheville, NC.

GRANTS

2016-2019. **M. Browning**, F. Kuo, J. Greenberg, and S. van Den Eeden. *Urban forestry's return on investment: Tying residential nature to health care expenditures*. 2016 U.S Forest Service National Urban and Community Forestry Challenge Cost-Share Grant Program. \$278,383 awarded + \$369,169 matched: \$647,552 total project cost.

2016-2017. **M. Browning**, LaValle, S., and K. Mimnaugh. *The technology of healing: Exploring simulated natural environments in virtual reality for therapeutic applications*. The Center on Health, Aging, and Disability Pilot Grant. \$20,000.

2016. **M. Browning**. *Connecting MBDH to health insurance company big data*. Midwest Big Data Hub Seed Grant. \$7,000.

2016. **Browning, M.**, & van Riper, C., & Browning, L. *Investigating the human dimensions of aquatic invasive species part II: A behavioral mapping study*. National Great Rivers Research and Education Center Internship Program. \$6,500.

2016. van Riper, C., **Browning, M.**, & Browning, L. *Investigating the human dimensions of aquatic invasive species part I: A vignette survey design*. National Great Rivers Research and Education Center Internship Program. \$6,500.

2013-2016. Shuman, D., Sachs, S., and **Browning, M.** *Hiking MYLES of Science*. Burroughs Wellcome Fund Science Enrichment Award. \$178,550.

2012-2017. F. Kuo, L. Westphal, and **M. Browning**. *Hierarchical linear modeling of green and school performance*. U.S. Forest Service Northern Research Service Joint Venture Agreement with University of Illinois at Urbana-Champaign. \$19,757.

2012. Martinez, J., and **Browning, M.**, et al. *Natural Leaders Network Legacy Camp Continuation Grant*. The North Face. \$75,000.

2012-2013. **Browning, M.**, and Arthur, T. *Appalachian Trail Millennial Youth Led Expeditions Planning Grant*. U.S. Fish & Wildlife Service and National Park Service. \$16,000.

2011. **Browning, M.** *Advancing sustainable land management to connect children with nature*. The American Swedish Institute Malmberg Scholarship for Study in Sweden. \$10,000.

2011. Martinez, J. and **Browning, M.**, et al. *Natural Leaders Network Legacy Camp Continuation Grant*. The North Face. \$25,000.

2011-2012. **Browning, M.** *Measuring possible concerns about bringing children to nature*. Clemson University Conference on the Value of Play Research Seed Grant. \$3,000.

2011-2012. **Browning, M.**, and Arthur, T. *Appalachian Trail Millennial Youth Led Expeditions Youth Engagement Grant*. Outdoor Foundation. \$2,500.

SCHOLARSHIPS AND AWARDS

Stapp Scholarship to 2014 NAAEE Conference in Ottawa, Canada. North American Association for Environmental Education.

Citizen Science Engagement Award 2014. Virginia Tech.

George Melendez Wright Travel Scholarship to 2013 GWS Conference in Denver, CO. George Wright Society.

Park Break Fellowship 2012. National Park Service, U.S. Geological Survey, and George Wright Society.

Stapp Scholarship to 2012 NAAEE Conference in Oakland, CA. North American Association for Environmental Education.

Research Colloquium 2012 Graduate Student Best Presenter Award. Yale School of Forestry & Environmental Studies.

Graduate Research Fellowship 2011 Proposal Honorable Mention. National Science Foundation.

Berkley Conservation Scholarship 2011 to Intern with Children and Nature Network. Yale School of Forestry & Environmental Studies. \$6,000.

Stapp Scholarship to 2011 NAAEE Conference in Raleigh, NC. North American Association for Environmental Education.

Scholarship to 2010 IMCL Conference in Charleston, SC. International Making Cities Liveable.

HopeLab scholarship to 2010 Playworks Conference in New York, NY. Playworks. 2008.

Featured Article Award for First-Author Article in Palios 2008. BioOne.

MEDIA REFERENCES TO RESEARCH

Marris, E. 2014. **Let kids run wild in the woods.** *Slate*, May 25, 2014. http://www.slate.com/articles/health_and_science/science/2014/05/kid_play_zones_in_parks_leave_no_trace_inhibits_fun_and_bonding_with_nature.single.html Republished in Sunday Points section of *Dallas News*, June 27, 2014.

Kwok, R. 2013. **Kids damage ‘nature play areas.’”** *Conservation This Week*, August 8, 2013. <http://conservationmagazine.org/2013/08/kids-damage-nature-play-areas/>

Gibbons, W. 2012. **Develop some natural play areas for children.** *Savannah River Ecology Laboratory*. <http://srel.uga.edu/outreach/ecoviews/ecoview121202.htm> Republished in the ECOVIEWS, *Tuscaloosa News*, Dec. 2, 2012.

TEACHING EXPERIENCE

Instructor of Record

RST 503: Advanced Research Methods, Univ. of Illinois (Online, Summer 2016)
RST 370: Research Methods, Univ. of Illinois (Spring 2016)
RST 429: Contemporary Issues in Leisure Services, Univ. of Illinois (Fall 2015)
FOR 3524: Environmental Interpretation, Virginia Tech (Spring 2014)

Teaching Assistant

FOR 3574: Environmental Education Service Learning, Virginia Tech (Fall 2013)
FOR 3524: Environmental Interpretation, Virginia Tech (Spring 2013)
FOR 3574: Environmental Education Service Learning, Virginia Tech (Fall 2012)
EEB 123L: Lab for Principles of Evolution, Ecology, and Behavior (Spring 2012)
CHEM 116L: General Chemistry Lab, Yale University (Fall 2011)
EEB 123L: Lab for Principles of Evolution, Ecology, and Behavior (Spring 2011)

Instructor

Natural Leaders Legacy Camp, Shepherdstown, WV (2011-2014)
North Carolina Park Ranger Advanced Interpretation Training, Raleigh, NC (2009-2010)
Toe River Valley Festival, Celo, NC (2009-2010)
Mount Mitchell State Park, Burnsville, NC (2007-2010)
Canon America Envirothon, Asheville, NC (2009)
Grandfather Mountain Annual Naturalist Weekend, Linville, NC (2009)
Muddy Sneakers, Brevard, NC (2008-2009)
Blue Ridge Discovery Weekend, Wildacres, NC (2008)
Parkway Elementary School, Boone, NC (2006-2007)
Neal Smith National Wildlife Refuge, Prairie City, IA (2006)
Arches National Park, Moab, UT (2006)
Families Rediscovering Eclectic Education, Oberlin, OH (2005)

INVITED TALKS

East Tennessee State University Environ. Health Seminar (09/2016) Johnson City, TN

National Great Rivers Research & Education Center (05/2016) East Alton, IL

American Zoological Association (12/2015) Nation-wide webinar

Institute for Museum and Library Services (11/2015) New Orleans, LA

National Audubon Society (10/2015) Nation-wide webinar

Parks and Environmental Behavior Research Group (09/2015) Champaign, IL

Association of Nature Center Administrators Summit (08/2015) Gainesville, GA

Appalachian Trail Conservancy Regional Partner Meeting (04/2014) Pembroke, VA

Virginia Master Naturalists (03/2014) Blacksburg, VA

American Swedish Institute Midsommer Fest (05/2013) Minneapolis, MN

The Conference on the Value of Play (02/2013) Clemson, SC

Appalachian Trail Conservancy Regional Partner Meeting (11/2012) Waterbury Center, VT

Appalachian Trail Conservancy Regional Partner Meeting (10/2012) Asheville, NC

NC Museum of Natural Science (07/2012) Raleigh, NC

United States Forest Service National Office (05/2012) Washington, D.C.

The Conference on the Value of Play (02/2012) Clemson, SC

Children & Nature Network Grassroots Gathering (09/2011) San Diego, CA

Good Jobs Green Jobs Conference (02/2011) Washington, D.C.

North Carolina Children & Nature Coalition Conference (03/2010) Asheboro, NC

Youth in Natural Resources Working Meeting (12/2009) Shepherdstown, WV

Environmental Educators of North Carolina Section Gathering (05/2009) Hot Springs, NC

CONTRIBUTED PRESENTATIONS

N.A. Assoc. for Environmental Education Conference (10/2016) Madison, WI

International Symposium on Society and Resource Management (06/2016) Houghton, MI

University of Illinois Design Center Symposium (04/2016) Champaign, IL

Chittenden Symposium (04/2016) Champaign, IL

Environmental Education Association of Illinois (03/2016) Canton, IL

N.A. Assoc. for Environmental Education Conference (10/2015) San Diego, CA

Association of Nature Center Administrators Summit (08/2015) Gainesville, GA

GWS Conference on Parks, Protected Areas, and Cultural Sites (03/2015) Oakland, CA

Virginia Tech Graduate Student Symposium (03/2015) Blacksburg, VA

N.A. Assoc. for Environmental Education Conference (10/2014) Ottawa, Ontario

Children & Nature Network's Legacy Camp (07/2014) Shepherdstown, WV

Virginia Tech Graduate Student Symposium (03/2014) Blacksburg, VA

GWS Conference on Parks, Protected Areas, and Cultural Sites (03/2013) Denver, CO

N.A. Assoc. for Environmental Education Conference (10/2012) Oakland, CA

Children & Nature Network's Legacy Camp (08/2012) Shepherdstown, WV

Matthew H. E. M. Browning

Page 9 of 10

Monitoring & Mgmt. of Visitors in Rec. & Protected Areas Conf. (08/2012) Sweden

Yale FES Masters Student Research Colloquium (04/2012) New Haven, CT

North Eastern Society of American Foresters (04/2012) Amherst, MA

Connecticut Land Conservation Council Conference (03/2012) Middletown, CT

N.A. Assoc. for Environmental Education Conference (10/2011) Raleigh, NC

International Play Association Conference (07/2011) Wales

The Association for the Study of Play Conference (03/2011) Atlanta, GA

The Conference on the Value of Play (02/2011) Clemson, SC

PROFESSIONAL MEMBERSHIPS

Academy of Leisure Sciences, Environmental Education Association of Illinois, American Evaluation Association, George Wright Society, Illinois Water Scholars, National Association for Interpretation, North American Association of Environmental Education

JOURNAL REVIEWER

Leisure Sciences

Society and Natural Resources

Environmental Education Research

International Journal of Environmental Research and Public Health

Illuminaire: A Student Journal in Recreation, Parks, and Tourism Studies

GRADUATE STUDENTS MENTORED

Doug Becker (2016-present) Univ. of Illinois NRES PhD student: Advisor

Grace Merrett (2016-present) Univ. of Illinois RST undergraduate student: Internship supervisor

Katherine Mimnaugh (2015-present) Univ. of Illinois NRES master's student: Advisor

Wonjun Choi (2015-present) Univ. of Illinois RST doctoral student: RA supervisor

SELECTED PUBLIC AND UNIVERSITY SERVICE

Graduate Student Committee (2015-present) Univ. of Illinois RST, Champaign, IL

Inspiring a New Generation Evaluator (2015) Shepherdstown, WV

Graduate Student Representative (2013-2015) GWS Board of Directors, Hancock, MI

Inner City Outings Trip Leader (2010-2012) Sierra Club, New Haven, CT

Trip Leader (2008-2010) Friends of the Mountains to Sea Trail, Raleigh, NC

Matthew H. E. M. Browning

Page 10 of 10

Stewardship Volunteer (2007-2010) S. Appalachian Highlands Conservancy, Asheville, NC

Land Monitor Volunteer (2006-2007) Blue Ride Conservancy, Boone, NC

Outing Club President (2003-2005) Oberlin College, OH

SELECTED CERTIFICATIONS

Leave No Trace Trainer (2014-present) Blacksburg, VA

Environmental Educator (2009-present) Raleigh, NC

Middle Grades Science Teacher (2009-2014) Raleigh, NC

Playworker (2011-2012) Asheboro, NC

Special Peace Officer (2007-2010) Raleigh, NC

Emergency Medical Technician - Basic (2008-2010) Marion, NC