Curriculum Vitae

Alison Mikulyuk, PhD

Madison, WI
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Program coordinator focused on program development and service delivery in support of inter- and cross-disciplinary efforts to understand, protect and restore water ecosystems. Lead for Water@UW-Madison, coordinator for the Water@UW-Madison Summer Scholars Program.

Keywords: Collaborative ecological conservation, science education, ecology, water quality, grant writing, DEI, policy, communication, ecological modelling, ecological condition assessment, cross-disciplinary work

EDUCATION

2012-2017 University of Wisconsin – Madison, PhD in Freshwater & Marine Sciences
Thesis: "Aquatic Macrophytes at the Interface of Ecology & Management"
Advisor: Dr. M. Jake Vander Zanden

2002 Grinnell College, Grinnell, IA, USA, B.A., Biology
Capstone: "Genetic variance and covariance for physiological traits in Lobelia: are there constraints on adaptive evolution?"

SKILLS

- Science education & outreach, dynamic public speaking
- Empowering & compassionate team leader
- Program & policy development for DEI initiatives
- Continuous program improvement
- Grant writing & management, grant-making
- Statistical analysis and modelling using R
- GIS using ERSI and R

EXPERIENCE

2022-Present University of Wisconsin – Madison Madison, WI
Water@UW-Madison Research Program Coordinator

- Provide organizational leadership for all aspects of Water@UW-Madison, including coordination of a summer research opportunity program for undergraduates.
- Convey information about the scope and diversity of water research at the UW-Madison to people both within and outside the university.
- Strengthen bridges between UW-Madison's water research community and other UW system campuses, private colleges, government agencies, non-government organizations, and civil society in Wisconsin and beyond.
- Assist in all aspects of research and fellowship programming for the ASC, including developing calls for proposals, coordinating the proposal review process and reporting, and developing and implementing postgraduate fellowship training opportunities.
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2017-2022 Wisconsin Department of Natural Resources Madison, WI

Lakes & Rivers Team Leader

- Lead statewide program to implement programs for surface water protection & restoration.
- Develop & teach curriculum for Wisconsin's Lake Leaders Institute: an educational and capacity-building program for surface water conservation actors.
- Design and deliver learner-centered student diversity fellowship program.
- Advise, mentor and advocate for student learning and career exploration.
- Co-lead Wisconsin's Lake & River Partnership: a nationally-recognized model for collaborative natural resources management.
- Write rules and craft policy to guide the administration of water resources funding program.
- Annually administer and continuously improve WDNR's $6.5M Surface Water Grant program.
- Communicate effectively using written, graphical, spoken and video communication.

2011-2017 University of Wisconsin Center for Limnology Madison, WI

NSF Fellow, Research Assistant, Instructor, Teaching Assistant

- Conduct primary research at the Center for Limnology (5 years). Mentor and advise research assistants.
- Develop and deliver curriculum for Limnology (ZOO 315; 1 semester); serve as teaching assistant for Introduction to Zoology lab (ZOO 102; 1 semester).
- Facilitate student learning through project-based assignments, engaging delivery of content, performance assessments and feedback.
- Advocate for student success by providing advice, mentoring, and letters of recommendation.
- **Research Themes:** Ecological condition assessment, invasive species, species abundance and community composition, art-science collaboration, ecological monitoring, spatial analysis, species distribution modelling.

2005-2017 Wisconsin Department of Natural Resources Madison, WI

Natural Resources Senior Research Scientist

- Developed Wisconsin's first statewide baseline monitoring program for aquatic plants.
- Created a method to assess lake ecological condition using aquatic plant communities.
- Quantified spatial, ecological, and human development influences on aquatic vegetation.
- Lead water resources research lab with up to 5 research technicians and scientists.
- Provide scientific and technical consultation on statistics, study design, and aquatic plant taxonomy.

2003 Research Assistant: Nutra-Park Middleton,WI

2001 Student Researcher; University of Dar-Es-Salaam Dar-Es-Salaam, TANZANIA

2001 Research Technician: Grinnell College Grinnell, IA

AWARDS & NOMINATIONS

Wisconsin Department of Natural Resources Water Quality Employee of the Year, 2021
Charlotte Stein Award in Limnology, 2016
National Science Foundation Graduate Research Fellowship, 2013-2015
Wisconsin Lakes Partnership Stewardship Award, 2013
James LaBounty Best Paper Nomination, 2010, North American Lake Management Society (Mikulyuk et al. 2010)
WDNR PRIDE award nomination recognizing outstanding contributions to DNRs mission, 2011
Best Presentation Award, WDNR Bureau of Science Services, 2007

Competitive Geography Travel Grant, University of Wisconsin, 2005
Outstanding Kiswahili Student, 2004-2005
Awarded Senior MAP Research Grant in biology, Grinnell College, 2001

SELECTED PUBLICATIONS (*PEER-REVIEWED)

*Mikulyuk, A., C. L. Hein, S. Van Egeren, E. R. Kujawa, M. J. Vander Zanden. 2020. Prioritizing Management of Non-Native Eurasian Watermilfoil Using Species Occurrence and Abundance Predictions. Diversity: 12(10):394-413.

*Mikulyuk, A., E. Kujawa, M. E. Nault, S. Van Egeren, K. I. Wagner, M. Barton, J. Hauxwel, M. J. Vander Zanden. 2020. Is the cure worse than the disease? Comparing the ecological effects of an invasive aquatic plant and the herbicide treatments used to control it. FACETS 5(1):353-366.

*Mikulyuk, A., M. Barton, J. Hauxwell, C. Hein, E. Kujawa, K. Minahan, M. E. Nault, D. L. Oele, K. I. Wagner. 2017. A macrophyte bioassessment approach linking taxon-specific tolerance and abundance in north temperate lakes. Journal of Environmental Management 199:172-180.

*Alahuhta et al. 2017. Global variation in the beta diversity of lake macrophytes is driven by environmental heterogeneity rather than latitude. Journal of Biogeography 44(8):1758-1769.

*Kujawa, E., P. Frater, A. Mikulyuk, M. Barton, M. Nault, S. Van Egeren, J. Hauxwell. 2017. Lessons from a decade of lake management: effects of herbicides on Eurasian watermilfoil and native plant communities. Ecosphere 8(4):e01718

*Frater, P., A. Mikulyuk, M. Barton, M. Nault, K. Wagner, J. Hauxwell, E. Kujawa. 2017. Relationships between water chemistry and herbicide efficacy of Eurasian watermilfoil management in Wisconsin lakes. Lake and Reservoir Management 33:1-7.

Mikulyuk, A., Bullard, H. J., Peterson, S., Van Winkle, J. and Blanke, C. 2016. At the Confluence of Art and Science. Edge Effects. University of Wisconsin Center for History and the Environment. 22 Sep 2016.

*Oele, D. L., Wagner, K. I., Mikulyuk, A., Seeley-Schreck, C., & Hauxwell, J. A. 2015. Effecting compliance with invasive species regulations through outreach and education of live plant retailers. Biological Invasions, 17(9), 2707-2716.

*Nault, M. E., Netherland, M. D., Mikulyuk, A., Skogerboe, J. G., Asplund, T., Hauxwell, J., & Toshner, P. 2014. Efficacy, selectivity, and herbicide concentrations following a whole-lake 2, 4-D application targeting Eurasian watermilfoil in two adjacent northern Wisconsin lakes. Lake and Reservoir Management, 30(1), 1-10.

*Hansen, G. J. A., M. J. Vander Zanden, M. Blum, M. K. Clayton, Ernie F. Hain, J. Hauxwell, M. Izzo, M. S. Kornis, P. B. McIntyre, A. Mikulyuk, E. Nilsson, J. D. Olden, M. Papeş, S. Sharma. 2013. Commonly rare and rarely common: Comparing population abundance of invasive and native aquatic species. PLoS one 8(10):e77415

Nault, M., A. Mikulyuk, J. Hauxwell, J. Skogerboe, T. Asplund, M. Barton, K. Wagner, T. Hoyman, E. Heath. 2012. Herbicide Treatments in Wisconsin Lakes: Building a Framework for Scientific Evaluation of Large-scale Herbicide Treatments in Wisconsin Lakes. NALMS Lakeline. 32(1): 19-24.

*Mikulyuk, A, S. Sharma, S. Van Egeren, E. Erdmann, M. Nault and J. Hauxwell. 2011. The relative role of environmental, spatial, and land-use patterns in structuring aquatic macrophyte communities. Canadian Journal of Fisheries and Aquatic Sciences. 68: 1778-1789.

*Mikulyuk, A., J. Hauxwell, P. Rasmussen, S. Knight, K. I. Wagner, M. E. Nault and D. Ridgely. 2010. Testing a methodology for assessing aquatic plant communities in temperate inland lakes. Journal of Lake and Reservoir Management. 26(1): 54-62.

*Mikulyuk, A and M. Nault. 2010. 11 individual contributions to the CABI Invasive Species Compendium. Wallingford, UK: CABI. (Invited publication).

Hauxwell, J., S. Knight, K. I. Wagner, A. Mikulyuk, M. E. Nault, M. Porzky and S. Chase. 2010. Recommended baseline monitoring of aquatic plants in Wisconsin: Sampling design, field and laboratory procedures, data entry and analysis, and applications. Miscellaneous publication PUB-SS-1068 2010. Madison, WI: Wisconsin Department of Natural Resources.

Mikulyuk, A. 2009. What can plants tell us? Lake Tides. 34(1)1-2.

Mikulyuk, A. and M. E. Nault. 2009. Technical reviews of distribution, ecology, impacts and management of 5 different aquatic macrophytes species. Publication PUB-SS-1047 2009 through PUB-SS-1052 2009. Madison, WI: Wisconsin Department of Natural Resources.

*Caruso, C. M., H. Maherali, A. Mikulyuk, K. Carlson and R. B. Jackson. 2005. Genetic variance and covariance for physiological traits in Lobelia: Are there constraints on adaptive evolution? Evolution 59: 826-837.

EDITOR

Nault, M. 2016. The science behind the 'so-called' super weed. Wisconsin Natural Resources Magazine. S. V. Egeren, S. Knight, A. Mikulyuk, S. Provost, S. Thomsen, C. Schaal, eds. Madison, WI, Wisconsin Department of Natural Resources. August.

Verbeten, E., S. Van Egeren, C. Schaal, S. Knight, K. Wagner, C. Schaal, L. Gaumnitz. 2014. A peek beneath the waves: Managing and protecting aquatic plants for the health of Wisconsin's lakes. Wisconsin Natural Resources Magazine. J. Hauxwell, A. Mikulyuk, M. Nault and S. Provost, eds. Madison, WI, Wisconsin Department of Natural Resources. August.

WORKSHOPS

Surface Water Grant Workshop: Orientation, grant writing, and project management. 2022. Wisconsin Lakes & Rivers Convention. Stevens Point, WI. (Design, facilitate, teach)

Envisioned and implemented Diversity and Inclusivity Workshop Series for the UW-Madison Center for Limnology. Secured funding and speakers. Workshop resulted in the formation of a department-wide standing DEI team. (Design, fund, facilitate)

Aquatic Macrophyte Identification Workshop (1-2 per year); Kemp Natural Resources Station, Minocqua, WI. 2019-present; 2001-2011. (Facilitate, teach)

PROFESSIONAL CONTRIBUTIONS

- Division of Environmental Management's Diversity, Equity, and Inclusion Team (2021-2022)
    - Design and implement new Student Fellowship program
    - Mentor fellows, evaluate and improve fellowship program

- Wisconsin Water Week & Lakes & Rivers Conference Planning Team (2005 – 2022)
- WDNR Diversity Team (2018-2019)
- Creator and co-chair of CFL Diversity and Inclusivity Committee (2016-2017)
- Diversity and Inclusivity Workshop Series lead at UW-Madison Center for Limnology (2015-2016)
- Conference and keynote planning, moderating
- Peer reviewer for Environmental Management, Knowledge and Management of Aquatic Ecosystems, Lake and Reservoir Management, Evolution and Ecology, Journal of Great Lakes Research

PROFESSIONAL GRANTS RECEIVED

Midwest Glacial Lakes Partnership Grant, 2022-23, "Assessing relationships between fisheries and aquatic vegetation to improve lake habitat management." $60,155

National Science Foundation Graduate Research Fellowship Grant DGE-1256259, 2013-15, $90,000

EPA Grant GL-00E00804, 2011-14, "Reducing Invasive Plant Species in Trade in Great Lakes Water Bodies." $385,307

SELECTED PRESENTATIONS

Mikulyuk, A. and L. MacFarland. 2018-2022. Surface Water Grant Program Annual Applicant Webinars.

Mikulyuk, A. and M. Johansen. 2020. Managing Aquatic Plants Together: Programs and Policies to Support Collaborative Natural Resource Management. Upper Midwest Invasive Species Conference. (Virtual)

Mikulyuk, A. and C.S. Schaal. 2019. Public hearing on draft administrative code NR 193 governing the Surface Water Grant Program. Rulemaking public hearing. Madison, WI, statewide telecast. 10 Jul 2019.

Mikulyuk, A., M. J. Vander Zanden, M. Barton, J. Hauxwell, M. Nault, S. Van Egeren, K. Wagner. 2016. Untangling the effects of invasive species, natives and management: Is the cure worse than the disease? 2016. Upper Midwest Invasive Species Conference. LaCrosse, WI.

Mikulyuk, A., J. van Winkle, C. Blanke, H. J. Bullard, S. Peterson. 2016. Uncertain legacies: Artists and scientists collaborate to consider long-term ecological change. PSi #22: Performance Climates. Melbourne, Australia.

Mikulyuk, A. 2015. Weird Wisconsin Weeds: Getting to know the world of underwater plants. Clean Lakes Alliance lecture series: Yahara 101, Madison, WI. Invited talk.

Mikulyuk, A. 2014. Preparing Wisconsin invasive species policy for a future of climate change. Wisconsin Lakes Convention. Stevens Point, WI. Invited talk.

Mikulyuk, A., S. Van Egeren, Kelly Wagner, Elizabeth Haber. 2013. Using Aquatic Macrophytes to Assess Lake Biotic Integrity. Minnesota DNR Fisheries Research Meeting, St. Cloud, MN. Invited talk.

Mikulyuk, A., K. Wagner and J. Hauxwell. 2012. Assessing Impairment in Aquatic Macrophyte Communities. North American Lake Management Society Symposium, Madison, WI.

Mikulyuk, A., K. Wagner and T. Asplund. 2012. Results of Pilot Testing in Wisconsin to Add Rapid Macrophyte Assessment to the 2012 National Lake Assessment. 8th National Water Quality Monitoring Conference. Portland, OR.