Kathryn M. Miller
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SUMMARY

Senior Quantitative Ecologist (GS-13) with 20+ years of experience directing ecological monitoring, landscape restoration, and data science modernization across U.S. National Parks. Proven leader in developing automated analytics and decision-support tools that inform park planning, conservation policy, and climate resilience efforts across eastern parks. Recognized with multiple national awards for technical innovation, ground-breaking research, and measurable outcomes.

- Founding member of the National Park Service Resilient Forest Initiative to increase forest resilience in eastern national parks through landscape-level restoration, information sharing, and innovative science.
- Thorough knowledge of and experience sampling forest and wetland ecosystems in the Eastern US.
- Extensive experience developing and implementing long-term monitoring programs, developing ecological indicators, and integrating with management.
- Advanced statistical skills, including sample design, generalized linear mixed modelling, multivariate statistics, spatial and conditional autoregressive modelling, and machine learning.
- Advanced data science skills, including functional programming and iteration, package development, version control and GitHub, automated reporting, data wrangling and manipulation, and data visualization. Fluent in R and HTML/CSS, and experience with SQL, LaTex, and Python.
- Extensive experience analyzing complex datasets, including the National Land Cover Database, gridded climate and weather station data, US Forest Service Forest Inventory and Analysis data, and Environmental Protection Agency National Aquatic Resource Survey data.
- Extensive experience working on and leading interdisciplinary teams for planning, monitoring, and implementation of management actions in national parks.
- Adept with GIS and GPS technologies, relational databases, spreadsheets, and word processing.

EDUCATION

Degrees:

2014-2018	University of Maine- Ph.D., Biological Sciences Advisor: Dr. Brian McGill. Thesis: *Big data for small parks: Examining regional vegetation patterns to assess current condition and vulnerability of eastern national parks to climate change.*
2003-2006	University of Maine- M.S., Ecology and Environmental Science Advisor: Dr. Robert Wagner. Thesis: *Arboreal associations with epiphytes and the effects of gap harvesting in the Acadian forest of central Maine*.
1998-2002	Northland College- B.S., Natural Resources, Summa cum laude

Teaching Experience/ University Appointments/Advisory Roles:

2023-present	Maine Ecological Reserve Scientific Advisory Committee, Augusta, ME
Winter 2022	Intro to R: Lessons designed: Prep for Training and Visualizing Spatial Data
Winter 2022	Advanced R: Lessons designed: Prep for Training; Data Retrieval: GIS in R and Downloading FIA data; R Markdown; R Packages.
Fall 2020	R for NPS Resource Managers
Summer 2020	Intro to R and GIS mapping in QGIS for seasonal technicians
2020-present	External Graduate Faculty, University of Maine, School of Biology and Ecology, Orono ME
2013-2018	External Graduate Faculty, University of Maine, School of Forest Resources, Orono, ME
2017 & 2018	Guest Lecture for 5041 Forest Ecology at College of the Atlantic
Fall 2015-17	Guest Lecture for EES 489 Ecology and Environmental Science Capstone Class at UMaine
Fall 2005	Graduate Teaching Assistant (TA) for General Entomology at University of Maine
2004-2005	National Science Foundation GK-12 Teaching Fellow at University of Maine
2003-2004	Graduate TA for Introductory Biology and Biology of Organisms at University of Maine
2002-2003	Adjunct Professor in Natural Resources at Northland College

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AWARDS:
NPS 2023 Director's Award for Natural Resource Research (top award for NPS scientists)
NPS 2023 Regional Director's Award for Natural Resource Research
NPS 2019 Inventory and Monitoring Division's Excellence in Science Award
NPS 2019 Inventory and Monitoring Division's Group Award for the Eastern Forest Work Group
University of Maine 2017 Fay Hyland-Hilborn Prize for Outstanding Graduate Student in Plant Biology
University of Maine 2004 Mark W. Houseweart Memorial Award for Forest Research
Northland College Natural Science Faculty Award for Class of 2002
Northland College Class of 2001 Award for Class of 2002
Northland College 2002 Matthew Berg Endowment Award for Natural Resources

WORK EXPERIENCE

Quantitative Ecologist, GS-0408-13 step 2
National Park Service, Ellsworth, ME 1/2025 to present
Supervisor: Lori Makarick, (970) 817-0025, Contact: yes Full-time, year-long temp. promotion

- Serving as liaison between the Biological Resource Division and the Inventory & Monitoring Division to align strategic planning and restoration activities across National Park units with special emphasis in the Central Grasslands Region.
- Developing data science pipelines and quality control tools to enhance accuracy and efficiency of long-term ecological monitoring in Midwest Inventory & Monitoring Networks.
- Conducting statistical redundancy analyses for water quality datasets to identify opportunities to streamline sampling design.
- Reviewed and refactored R-based QC and reporting code for improved performance, readability, and reproducibility.

Quantitative Ecologist, GS-0408-12 step 5
National Park Service, Bar Harbor, ME 3/2020 to present
Supervisor: Dr. Aaron Weed, (802) 457-3368 x237, Contact: yes Full-time, permanent

Coordinating long-term forest health monitoring for 21 national parks across the Northeast Temperate Network (NETN), Mid-Atlantic Network (MIDN), and Northeast Coastal and Barrier Network (NCBN), and freshwater wetland monitoring in Acadia National Park. Responsibilities include duties listed for the Plant Ecologist position (see below), with the addition of:

- Designed and maintained R packages and data science pipelines for validating, certifying, and summarizing long-term ecological monitoring data across protocols (e.g., water quality, forest health, freshwater wetlands, rocky intertidal).
- Conducted advanced statistical analyses and supported network and park staff in ecological data interpretation; developed a non-parametric trend analysis R package with power simulations for monitoring applications.
- Built automated R Markdown reports and interactive R Shiny apps for quality control, exploratory data analysis, and communication of ecological trends (e.g., Acadia NP Wetland Viz).
- Provided technical leadership and training in R programming, data visualization, statistical methods, and GitHub-based version control to NPS staff across multiple parks and networks.
- Founding member of the Resilient Forest Initiative, which was established to facilitate more efficient and effective forest restoration across eastern national parks by conducting regional trend analyses, writing multi-park restoration proposals, and facilitating information sharing across parks and regions. To date, the RFI has secured over $15 million funds for restoration projects across 27 parks.
- Public code repositories, visualizations, and example reports available at: https://katemmiller.github.io/

Network Program Manager, GS-0408-13 step 02

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Great Lakes Network, Ashland, WI 10/22/23 – 2/18/2024
Supervisor: Dr. Maggie MacCluskie, (907) 455-0660, Contact: yes Full-time, 120 day temp. promotion

- Supervised five permanent staff, developed performance plans for new hires, and revised existing plans to align with network goals.
- Oversaw budget planning and coordination for the Great Lakes Network; prepared recruitment materials and temporary promotion documentation.
- Streamlined administrative procedures and represented GLKN's priorities at the Inventory & Monitoring Division Extended Leadership Team meetings.
- Led the 2023 annual Board of Directors meeting and advanced staff collaboration on developing proposals to evaluate under-analyzed monitoring protocols.
- Supported R programming and statistical analysis, contributing to foundational efforts for an upcoming network programmatic review.

Plant Ecologist, GS-0430-11 step 7
National Park Service, Bar Harbor, ME 4/2009 to 3/2020
Supervisor: Dr. Aaron Weed, (802) 457-3368 x237, Contact Supervisor: Yes Full-time, permanent

Coordinated long-term ecological monitoring programs for forest health in 21 national parks from ME to VA and freshwater wetlands in Acadia National Park. Responsibilities include:

- Designing and implementing long-term monitoring protocols for forest health and freshwater wetlands, including specifying sample designs, developing and evaluating study objectives, conducting power analyses, defining field and analytical methods, and writing detailed standard operating procedures.
- Hiring, training and supervising up to 5 seasonal field technicians and 1 permanent technician annually and planning annual budgets and logistics for each protocol.
- Lead botanist for forest and wetland protocols across parks spanning Maine to New Jersey.
- Leading analysis and reporting to assess status and trends in forest and wetland condition, and summarizing monitoring information for technical and non-technical audiences.
- Coordinating with the Environmental Protection Agency's National Wetland Condition Assessment (EPA NWCA), including reviewing protocols and reports, implementing the protocol in Acadia NP wetlands, and developing multi-metric indicators.
- Providing technical expertise to Northeast Region national parks and NER staff to inform management decisions, plan restoration, and/or develop focused monitoring projects.
- Exceptional Performance Rating from 2009 – 2019; Quality Step Increase: 2010; STAR Awards: 2013, 2016, 2017, 2019.

Natural Resource Specialist, GS-0401-09
National Park Service, Bar Harbor, ME 4/2007 to 4/2009
Supervisor: Dr. Brian Mitchell, (404) 625-9406, Contact Supervisor: Yes Full-time, permanent

Developed and implemented long-term vegetation monitoring protocols for NETN, including Forest Health, Freshwater Wetlands, Salt Marsh Vegetation, Early Detection of Invasive Species, and Rare Forest and Woodland Communities. Responsibilities included developing and revising protocols, analysing data, writing annual monitoring reports, providing technical assistance to network parks, and hiring, training and supervising permanent technicians and seasonal monitoring crews. Assisted with water quality and quantity monitoring in Acadia NP and conducted botanical surveys as needed by parks. Performance Ratings and Awards: Superior Performance Rating from 2007 – 2008; Exceptional Performance Rating in 2009;

Forest Monitoring Crew Leader
State University of New York, Syracuse, NY 6/2006 to 9/2006
Supervisor: Dr. Geri Tierney, (607) 257-5369, Contact Supervisor: Ask first Pay: $15/hr. Hours/week: 40

Position was part of cooperative effort between NETN, and SUNY-Syracuse to monitor forest health in national parks. Responsibilities included supervising a 2-3 person field crew, coordinating with park personnel, planning daily logistics, and assisting in training of the crew. Position required a thorough knowledge of eastern flora, ability to identify plants using taxonomic keys, proficiency with common forest monitoring methods, ability to follow established monitoring protocol, and capacity to maintain and use advanced technologies including a field computer, GPS unit, and digital camera.

Consulting Botanist
University of Maine, School of Forest Resources, Orono, ME 6/2005 to 7/2005
Supervisor: Dr. Bob Wagner, (207) 581-2903, Contact Supervisor: Ask first Pay: $15/hr. Hours/week: 40
Sampled permanent vegetation plots located in forested and early successional habitats within the Penobscot Experimental Forest (Bradley, ME) to monitor terrestrial vegetation response to timber harvesting. Performed forestry measurements such as crown volume, basal area, and diameter at breast height. Trained and supervised field assistants in sampling protocols and plant identification.

Consulting Wetland and Aquatic Botanist
USGS- Biological Resources Division, Ann Arbor, MI. 7/2003 to 8/2003
Supervisor: Dr. Jim Meeker, (715) 682-1550, deceased. Pay: $15/hr. Hours/week: 40
Sampled aquatic and wetland vegetation for a research project monitoring impacts of water level regulation on the ecology of Lake Ontario coastal wetlands in New York State. Identified aquatic, semi-emergent, and emergent vegetation, including all trees, shrubs, forbs, and grasses/sedges. Utilized taxonomic keys to identify unknown species. Entered and checked data using Excel spreadsheets, and performed preliminary multivariate exploration using PC-ORD.

Adjunct Professor of Natural Resources
Northland College, Ashland, WI 8/2002 to 4/2003
Supervisor: Dr. Jim Meeker, (715) 682-1550, deceased. Pay: $600/credit hour. Total credit hours: 7
Developed the curriculum and instructed the following courses: NRS 229 Field Studies in Plant Ecology, NRS 269 Habitat Sampling, and NRS 328 Vegetation of Northern Wisconsin. Courses addressed topics in GIS/GPS applications in natural resources; terrestrial and aquatic ecological systems of the Great Lakes Region; tree, shrub, and wetland plant identification; vegetation monitoring/ sampling techniques; data entry and analysis using Excel spreadsheets and Microsoft Access databases; GIS map making; and report writing.

GIS Technician
The Nature Conservancy, Ashland, WI 9/2001 to 5/2002
Supervisor: Matt Dallman, (715) 682-5789, Contact Supervisor: Ask first. Pay: $8.50/hr. Hours/week: 5
Created location, ecological, and land-use GIS maps utilized in land acquisition projects. Acquired and created spatial data for a variety of projects. Reprojected and organized multiple GIS data layers. Assisted in the exploration of several image classification techniques and the uses of the Image Analysis extension for ArcView 3.x. Used remote sensing techniques, aerial photograph interpretation and field investigations to determine forest covertypes and land-use categories.

Plant Ecology Research Assistant
Northland College, Ashland, WI 1/2000 to 5/2002
Supervisor: Dr. Jim Meeker, (715) 682-1550, deceased. Pay: $9/hr. Hours/week: 10
Contributed to multiple research projects monitoring ecological systems in the Northern Great Lakes Region, including deer herbivory impacts on regeneration and understory vegetation, response of understory vegetation to forest management, and influence of invasive species and disturbance on wetland and forest vegetation. Responsibilities included: vegetation sampling; digitizing, performing spatial analysis and creating location maps using GIS and GPS technologies; and entering and analyzing data.

PUBLICATIONS

Kathryn M. Miller
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K.M. Miller, S.J. Perles, J.P. Schmit, E.R. Matthews, A.S. Weed, J.E. Comiskey, M.R. Marshall, P. Nelson, and N.A. Fisichelli. 2023. Overabundant deer and invasive plants drive widespread regeneration debt in eastern national parks. Ecological Applications 33(4):e2837 1-24. https://doi.org/10.1002/eap.2837. *Rated among the top 10 most-cited papers in Ecological Applications published in 2023.

Schmit, J.P., **K.M. Miller**, E.R. Matthews, A. Brolis. 2022. Do parks help forests? Frontiers in Young Minds 10:729784. https://doi.org/10.3389/frym.2022.729784.

Doser, J.W., A.S Weed, E.F. Zipkin, **K.M. Miller**, A.O. Finley. 2021. Trends in bird abundance differ among protected forests but not bird guilds. Ecological Applications 31(6): e02377 1-15. https://doi.org/10.1002/eap.2377.

Miller, K.M., B.J. McGill, A.S. Weed, C.E. Seirup, J.A. Comiskey, E.R. Matthews, S.J. Perles, and J.P. Schmit. 2021. Long-term trends indicate that invasive plants are pervasive and increasing in eastern national parks. Ecological Applications 31(2):e02239 1-17. https://doi.org/10.1002/eap.2239.

Miller, K.M., and B.J. McGill. 2019. Compounding human stressors cause major regeneration debt in over half of eastern US forests. Journal of Applied Ecology 56(6):1355-1366. https://doi.org/10.1111/1365-2664.13375.

Miller, K.M., B.J. McGill, B.R. Mitchell, J. Comiskey, F.W. Dieffenbach, E.R. Matthews, S.J. Perles, J.P. Schmit, and A.S. Weed. 2018. Eastern national parks protect greater species diversity than unprotected matrix forests. Forest Ecology and Management 414:74-84. https://doi.org/10.1016/j.foreco.2018.02.018.

Miller, K.M., and B.J. McGill. 2018. Land use and life history limit migration capacity of eastern tree species. Global Ecology and Biogeography 27(1): 57-67. http://dx.doi.org/10.1111/geb.12671

Fisichelli, N.A., and **K.M. Miller.** 2018. Weeds, worms, and deer: positive relationships among common forest understory stressors. Biological Invasions. https://doi.org/10.1007/s10530-017-1630-y

Miller, K.M., F.W. Dieffenbach, J.P. Campbell, W.B. Cass, J.A. Comiskey, E.R. Matthews, B.J. McGill, B.R. Mitchell, S.J. Perles, S. Sanders, J.P. Schmit, S. Smith, A.S. Weed. 2016. National Parks in the eastern United States harbor important older forest structure compared with matrix forests. Ecosphere 7(7): 1-20. http://dx.doi.org/10.1002/ECS2.1404

Miller, K.M., B.R. Mitchell, and B.J. McGill. 2016. Constructing multimetric indices and testing ability of landscape metrics to assess condition of freshwater wetlands in the Northeastern US. Ecological Indicators 66:143-152.

Miller, K.M., and B.R. Mitchell. 2014. A new tool for power analysis of fixed plot data: Using simulations and mixed effects models to evaluate forest monitoring metrics. Ecosphere 5(9): 1-23.

Mitchell, B.R., G.L. Tierney, E.W. Schweiger, **K.M. Miller**, D. Faber-Langendoen, and J.B. Grace. 2014. Getting the message across: Using ecological integrity to communicate with resource managers. In: Guntenspergen, G.R. (ed.) Application of Threshold Concepts in Natural Resource Decision Making. Springer, New York.

Grace, J.B., D.R. Schoolmaster, Jr., E.W. Schweiger, B.R. Mitchell, **K.M. Miller**, and G.R. Guntenspergen. 2014. Connecting the dots: a collaborative USGS-NPS effort to expand the utility of monitoring data. The George Wright Forum 31(2): 181-190

Schoolmaster Jr., D.R., J.B.Grace, E.W. Schweiger, G.R. Guntenspergen, B.R. Mitchell, **K.M. Miller**, and A.M. Little. 2013. An algorithmic and information-theoretic approach to multimetric index construction. Ecological Indicators 26: 14-23.

Grace, J.B., D.R. Schoolmaster Jr., G.R. Guntenspergen, A.M. Little, B.R. Mitchell, **K.M. Miller**, and E. W. Schweiger. 2012. Guidelines for a graph-theoretic implementation of structural equation modeling. Ecosphere 3(8):73. http://dx.doi.org/10.1890/ES12-00048.1

Miller, K.M., R. Wagner, and S. Woods. 2008. Arboreal arthropod associations with epiphytes following gap harvesting in the Acadian forest of Maine. The Bryologist 111: 424-434.

Miller, K.M., R. Wagner, and S. Woods. 2007. Effect of gap harvesting on epiphytes and bark-dwelling arthropods in the Acadian forest of central Maine. Canadian Journal of Forest Research 37: 2175- 2187.

TECHNICAL REPORTS

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Miller K.M., A.S. Weed, C.E. Seirup, A.J. Kozlowski., and M.J. Johnson. 2022. Quality assurance plan for the Northeast Temperate Network and Mid-Atlantic Network long-term forest monitoring protocol. Natural Resource Report. NPS/NETN/NRR—2022/2430. National Park Service. Fort Collins, Colorado. https://doi.org/10.36967/2293.

Miller, K. M., and A. S. Weed. 2021. Quality assurance plan for the Northeast Temperate Network permanent freshwater wetland monitoring protocol for Acadia National Park. Natural Resource Report NPS/NETN/NRR—2021/2277. National Park Service, Fort Collins, Colorado. https://doi.org/10.36967/nrr-2286695.

Miller, K.M., B.R. Mitchell, and A.S. Weed. 2021. Northeast Temperate Network permanent freshwater wetland monitoring protocol for Acadia National Park: 2020 revision. Natural Resource Report NPS/NETN/NRR—2021/2276. National Park Service, Fort Collins, Colorado. https://doi.org/10.36967/nrr-2286693.

Miller, K.M., and A.S. Weed. 2017. Freshwater wetland monitoring in Acadia National Park: Northeast Temperate Network 2011-2016 summary report. National Resources Report NPS/NETN/NRR—2017/1418. National Park Service, Fort Collins, CO.

Tierney, G.L., B.R. Mitchell, K.M. Miller, J. Comiskey, A. Kozlowski, and D. Faber-Langendoen. 2015. Northeast Temperate Network long-term forest monitoring protocol: 2015 revision. Natural Resource Report NPS/NETN/NRR—2015/923. National Park Service, Fort Collins, CO.

Wheeler, J.S., K.M. Miller, and B.R. Mitchell. 2015. Forest health monitoring in the Northeast Temperate Network: 2014 summary report. National Resource Report NPS/NETN/NRR – 2015/973. National Park Service, Fort Collins, CO.

Miller, K.M. 2014. Salt marsh vegetation monitoring at Boston Harbor Islands National Recreation Area: 2013 summary report for Thompson Island. Natural Resource Data Series NPS/NETN/NRDS – 2014/664. National Park Service, Fort Collins, CO.

Miller, K.M., B.R. Mitchell, P.J. Curtin, and J.S. Wheeler. 2014. Forest health monitoring in Acadia National Park: 2006-2011 summary report. Natural Resource Report NPS/NETN/NRR— 2014/777. National Park Service, Fort Collins, CO.

Miller, K.M., B.R. Mitchell, J.S. Wheeler. 2014. Forest health monitoring in the Northeast Temperate Network: 2013 summary report. Natural Resource Technical Report NPS/NETN/NRTR – 2014/894. National Park Service, Fort Collins, CO.

Tierney, G.L., B.R. Mitchell, K.M. Miller, J. Comiskey, A. Kozlowski, and D. Faber-Langendoen. 2014. Northeast Temperate Network long-term forest monitoring protocol: 2014 revision. Natural Resource Report NPS/NETN/NRR—2014/805. National Park Service, Fort Collins, CO.

Tierney, G.L., K.M. Miller, and B.R. Mitchell. 2014. Rare woodland and forest community monitoring protocol for Acadia National Park: 2014 revision. Natural Resource Report NPS/NETN/NRR—2014/893. National Park Service, Fort Collins, CO.

Wheeler, J.S., and K.M. Miller. 2014. Invasive species early detection in the Northeast Temperate Network: 2013 summary report. Natural Resource Data Series. NPS/NETN/NRDS—2014/638. National Park Service. Fort Collins, Colorado.

Miller, K.M., E.K. Heck, and B.R. Mitchell. 2013. Ecological integrity of tree regeneration in Acadia National Park spruce-fir forests. Natural Resource Report NPS/ACAD/NRR—2013/660. National Park Service. Fort Collins, CO

Miller, K.M., B.R. Mitchell, F.W. Dieffenbach, and J.S. Wheeler. 2013. Forest health monitoring in the Northeast Temperate Network: 2012 summary report. Natural Resource Report NPS/NETN/NRTR – 2013/678. National Park Service, Fort Collins, CO.

Miller, K.M., and B.R. Mitchell. 2013. Permanent freshwater wetland monitoring protocol for Acadia National Park. Natural Resource Report NPS/NETN/NRR—2013/653. National Park Service, Fort Collins, CO.

Tierney, G.L., F.W. Dieffenbach, B.R. Mitchell, and K.M. Miller. 2013. Appalachian National Scenic Trail plot-based forest monitoring protocol. Natural Resource Report NPS/NETN/NRR— 2013/633. National Park Service, Fort Collins, Colorado.

Tierney, G.L., B.R. Mitchell, K.M. Miller, J.A. Comiskey, A.J. Kozlowski, and D. Faber-Langendoen. 2013. Northeast Temperate Network long-term forest monitoring protocol: 2013 revision. Natural Resource Report NPS/NETN/NRR—2013/639. National Park Service, Fort Collins, CO.

Wheeler, J.S., and K.M. Miller. 2013. Invasive species early detection in the Northeast Temperate Network: 2012 summary report. Natural Resource Data Series NPS/NETN/NRDS—2013/470. National Park Service, Fort Collins, CO.

Miller, K.M., B.R. Mitchell, and J.S. Wheeler. 2012. Forest health monitoring in the Northeast Temperate Network: 2011 summary report. Natural Resource Technical Report NPS/NETN/NRTR—2012/604. National Park Service, Fort Collins, CO.

Tierney, G.L., K.M. Miller, and B.R. Mitchell. 2012. Rare woodland and forest community monitoring protocol for Acadia National Park: Northeast Temperate Network. Natural Resource Report NPS/NETN/NRR—2012/529. National Park Service, Fort Collins, CO.

Wheeler, J.S., and K.M. Miller. 2012. Invasive species early detection report in the Northeast Temperate Network: 2010-2011 summary report. Natural Resource Data Series. NPS/NETN/NRDS—2012/267. National Park Service, Fort Collins, CO.

Miller, K.M., B.R. Mitchell, G.L. Tierney, and J.S. Wheeler. 2011. Northeast Temperate Network forest health monitoring report: 2010. Natural Resource Report NPS/NETN/NRR—2011/399. National Park Service, Fort Collins, CO.

Miller, K.M., G.L. Tierney, and B.R. Mitchell. 2010. Northeast Temperate Network forest health monitoring report: 2006-2009. Natural Resource Report NPS/NETN/NRR—2010/206. National Park Service, Fort Collins, Colorado.

Miller, K.M., G.L. Tierney, and B.R. Mitchell. 2009. Northeast Temperate Network 2006-2008 forest health monitoring report. Natural Resource Report NPS/NETN/NRR—2009/104. National Park Service, Fort Collins, Colorado.

PRESS COVERAGE & OUTREACH

Pipkin, Whitney. "Park Service works to change the future of failing forests." *Bay Journal.* 24 January 2025. https://www.bayjournal.com/news/wildlife_habitat/park-service-works-to-change-the-future-of-failing-forests/article_0ccf7d8c-da80-11ef-ab84-fbbf398aaaf0.html.

Fenston, J. and T. Turner. "Local forests are failing to produce the next generation of trees." *The DCist*. 20 December 2023. https://dcist.com/story/23/12/20/dc-local-forests-failing-tree-regeneration/.

Levulis, J. "Study finds most forests in eastern national parks at risk." WAMC Northeast Public Radio. 24 April 2023. https://www.wamc.org/news/2023-04-24/study-finds-most-forests-in-eastern-national-parks-at-risk.

Crowe, K.C., "Deer becoming a national park nemesis- Invasive plant species and climate change are also threats to historic acreage." *Times Union.* 13 April 2023. https://www.timesunion.com/news/article/deer-threaten-saratoga-roosevelt-vanderbilt-17893287.php.

Martinez, G. "Deer, invasive plants are a grave threat to park forests in eastern U.S., study says." *CBS News*. 6 April 2023. https://www.cbsnews.com/news/deer-national-parks-invasive-plants-threat-eastern-u-s/

Hargrave, A. "Save a forest? Shoot a deer, NPS study finds." *Greenwire*. 05 April 2023. https://subscriber.politicopro.com/article/eenews/2023/04/05/save-a-forest-shoot-a-deer-nps-study-finds-00090541

Peters, G.M. "Blazes and colors." *National Parks*: *The Magazine of the National Parks Conservation Association*. Winter 2023, pp 57-59.

Schuett, E. "Invasive plants threaten national parks; Vermont manages to decrease invasive population." *ECONEWS VT*. 23 February 2021. http://www.econewsvt.org/news/invasive-plants-threaten-national-forests-vermont-manages-to.

Schmitt, C. "All Hope is not lost: managing invasive plants in eastern parks." 22 February 2021. https://www.scsparkscience.org/all-hope-is-not-lost-managing-invasive-plants-in-eastern-parks/v

Campbell, F. "Invasive plants in national parks – Progress?" 10 February 2021. Center for Invasive Species Prevention Newsletter. http://nivemnic.us/invasive-plants-in-national-parks-progress/

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MDIslander News. "ANP least invaded park in study" *MDIslander.* 21 December 2020. p. B002.
Schmitt, C. "The Understory: The Future Forest of Acadia, Part 4." 2 October 2019. https://schoodicinstitute.org/understory-the-future-forest-of-acadia-part-4/
Barton, A. "Are Eastern USA Temperate Forests Regenerating?" 16 April 2019. *Envirobites Blog.* https://envirobites.org/2019/04/16/are-eastern-usa-temperate-forests-regenerating/
McLeish, T. "Discoveries: Barriers Ahead." 2019. *Northern Woodlands Magazine.* 26(3): 72-73.
Broom, D. "Acadia's forests 'super healthy'." *MDIslander.* 12 September 2019. p. A2.
Schmitt, C. "The Understory: The Future Forest of Acadia, Part 3." 31 July 2019. https://schoodicinstitute.org/understory-the-future-forest-of-acadia-part-3/
Ostrander, M. "Can we help our forests prepare for climate change?" *SIERRA Magazine.* January/February 2019 Issue. https://www.sierraclub.org/sierra/2019-1-january-february/feature/can-we-help-our-forests-prepare-for-climate-change
McDonough MacKenzie, C. "Hidden in plain sight: the secret tree diversity of cultural national parks in the east." *PLOS Ecology Community Blog*. 6 June 2018. https://blogs.plos.org/ecology/2018/06/06/hidden-in-plain-sight-the-secret-tree-diversity-of-cultural-national-parks-in-the-east/
Miller, K.M. 2016. Healthy Forests are Messy Forests! *Friends of Acadia Journal*. 21(2): 16-17.

PRESENTATIONS

Miller, K.M. 2024. How a regional perspective helps us understand Acadia's forests. Acadia National Park Science Symposium, Winter Harbor, ME, 10 October 2024 (Invited speaker).
Miller, K.M. 2023. Lessons learned from 18 years of monitoring in Acadia National Park. Schoodic Institute Lunch and Learn Series, Bar Harbor, ME. 22 August 2023 (Invited Speaker).
Miller, K.M. 2023. How do deer populations impact our forests? Marsh-Billings-Rockefeller National Historical Park Working Woodlands Workshop, Woodstock, VT. 22 June 2023 (Invited Speaker).
Miller, K.M. 2022. Resilient Forests in Eastern National Parks. Resilient Forest Training, National Conservation Training Center, Shepherdstown, WV. 1 November 2022 (Keynote Speaker).
Miller, K.M., A. Miller-Rushing, R. Cole-Will. 2022. A case study of applying RAD at Acadia National Park. NPS Southeast Region Climate Change Training. 2 March 2022.
Miller, K.M., R. Cole-Will, A. Miller-Rushing. 2022. Thinking outside the boundary: How regional analyses are informing management in Acadia National Park. NPS Inventory and Monitoring Division Scientists Meeting. 24 January 2022.
Miller, K.M. 2020. Forest health monitoring in eastern national parks: Lessons learned and future concerns. Forest Ecosystem Monitoring Cooperative Conference. December 17, 2020 (Invited Plenary).
Perles, S.J., K.M. Miller (co-presenters), E. Sharron. 2020. All hope is not lost: Trends in invasive plants in eastern national parks and a strategic tool to protect park resources. Inventory and Monitoring Division Webinar. December 10, 2020.
Miller, K.M. 2020. Regeneration issues in northeastern forests. Northern Institute of Applied Climate Science Forest Adaptation Webinar Series, 25 June 2020 (Invited Speaker).
Miller, K.M. 2019. Forest health in eastern national parks: Current trends and future concerns. Human Ecology Forum at College of the Atlantic, Bar Harbor, ME, 12 November 2019 (Invited Speaker).
Miller, K.M. 2019. 20 years after the Natural Resource Challenge: What next? Acadia National Park Science Symposium, Bar Harbor, ME, 24 October 2019 (Invited Speaker).
Miller, K.M. 2019. Managing for climate change in eastern national parks. Sierra Club- Maine Chapter Climate Action Conference, Belfast, ME, 4 May, 2019 (Invited Speaker).
Miller. K.M. 2018. Forest health in eastern national parks: current condition and future concerns. NPS-National Capital Region Science Forum Webinar Series, 12 December, 2018 (Invited Speaker).
Miller, K.M. 2018. Forest health in eastern national parks: current condition and future concerns. Sigurd Olson Environmental Institute Evening Lecture, Ashland, WI, 7 November, 2018 (Invited Speaker).
Miller, K.M. 2018. Forest health in eastern national parks: current condition and future concerns. Yale University Forest Forum, New Haven, CT, 25 October 2018 (Invited Speaker).

Miller, K.M., C.E. Seirup, and A.S. Weed. 2018. Invasive species trends in Northeast Temperate Network park forests. Acadia National Park Science Symposium, Bar Harbor, ME, 20 October 2018 (poster).

Bietsch, S.A., K.M. Miller, C.E. Seirup, and A.S. Weed. Forest trends in Acadia National Park. Acadia National Park Science Symposium, Bar Harbor, ME, 20 October 2018 (poster).

Miller, K.M. 2018. Managing for change in Acadia's Forests. Acadia National Park Brown Bag Series, Bar Harbor, ME, 19 July 2018 (Invited Speaker).

Miller, K.M., and C.E. Seirup. 2018. Forest health trends in the Northeast Temperate Network. Acadia National Park Brown Bag Series, Bar Harbor, ME, 12 July 2018 (Invited Speaker).

Miller, K.M. 2018. Big data analyses for eastern temperate forests. NPS-Inventory and Monitoring Division National Scientist Meeting, Grand Canyon, AZ, 31 January 2018 (Invited Speaker).

Miller, K.M. 2017. Forests in Acadia National Park and impacts of red pine scale. Red Pine Decline and the Management of Acadia's Forests: A Community Discussion. Northeast Harbor Library, Northeast Harbor, ME, 17 August 2017 (Invited Speaker).

Miller, K.M., and B. Henkel. 2017. Wetland monitoring in Acadia National Park and implications for Great Meadow. Acadia National Park Brown Bag Series, Bar Harbor, ME, 14 February 2017 (Invited Speaker).

Miller, K.M., 2016. Wetland Monitoring in Acadia National Park. Northeast and Mid-Atlantic Wetland Working Group Joint Meeting. Galloway, NJ, 1 November 2016 (Invited Speaker).

Miller, K.M., 2016. New tools to assess condition of freshwater wetlands in the Northeastern US: Multimetric indices for vegetation, soil, chemistry, algae taxa, and water chemistry. New England Wetlands Webinar Series, 10 March 2016 (Invited Speaker).

Miller, K.M. 2015. Forest and Wetland Communities in Acadia National Park. Interpretive Division Resource Session. Acadia National Park, Bar Harbor, ME, 7 July 2015 (Invited Speaker).

Miller, K.M. 2015. Forest health in northeastern national parks: Current status and future concerns. University of Maine Forestry Seminar, April 17, Orono, ME (Invited Speaker).

Miller K.M., and J.S. Wheeler. 2014. 9 Years of forest health monitoring in Acadia National Park. Acadia National Park Science Symposium, Winter Harbor, ME, 1 October 2014 (poster).

Miller, K.M., B.R. Mitchell, and B.J. McGill. Using the Forest Service Climate Change Tree Atlas and National Land Cover Data to predict changes in forest composition in Northeastern National Parks. Ecological Society of America Annual Meeting, Baltimore, MD, 9-14 August 2015 (poster).

Miller, K.M. 2014. 8 Years of Forest Health Monitoring in Acadia National Park. Schoodic Institute, Winter Harbor, ME, 05 March 2014 (Invited Speaker).

Miller, K.M., and J.S. Wheeler. 2014. 8 Years of forest health monitoring in Acadia National Park. Acadia National Park Science Symposium, Winter Harbor, ME, 16 April 2014 (poster).

Miller K.M. 2014. 8 Years of Forest Health Monitoring in Acadia National Park. Interpwoods. Bar Harbor, ME, 18 June 2014 (Invited Speaker).

Wheeler, J.S., K.M. Miller, F.W. Dieffenbach, and B.R. Mitchell. 2014. Comparing metrics of forest health between Acadia national Park and surrounding forestlands. Northeast Natural History Conference 2014, Springfield, MA, 7-9 April 2014.

Wheeler, J.S. K.M. Miller, F.W. Dieffenbach, and B.R. Mitchell. 2014. 2014. Comparing metrics of forest health between Acadia national Park and surrounding forestlands. Acadia National Park Science Symposium, Winter Harbor, ME, 16 April 2014 (poster).

Miller, K. M., F.W. Dieffenbach, and B.R. Mitchell. 2013. Comparing metrics of forest health between national parks and surrounding forestlands using data collected by the Northeast Temperate Network and the U.S. Forest Service Forest Inventory and Analysis program. Ecological Society of America annual meeting. 7 August 2013 Minneapolis, MN.

Miller, K.M. 2013. Vital Signs Monitoring in the Northeast Temperate Network. Maine Association of Professional Soil Scientists Annual Meeting. 12 March 2013, Hallowell, ME. (Invited Speaker)

Miller, K. M. and S. J. Perles. 2012. Patterns in forest soil chemistry across Eastern U.S. national parks. Ecological Society of America annual meeting. 7 August 2012, Portland, OR.

Miller, K.M., J.S. Wheeler, and B.R. Mitchell. 2012. 7 years of forest health monitoring in Acadia National Park. Acadia Science Symposium. Winter Harbor, ME, 23 October 2012 (poster).

Wheeler, J.S., and K.M. Miller. 2012. Early detection of invasive species – surveillance monitoring and rapid response in northeastern parks. Acadia Science Symposium. Winter Harbor, ME, 23 October 2012.
Miller, K.M. 2011. Applications of vegetation monitoring data for management and planning. George Wright Society Biennial Meeting, 16 March 2011, New Orleans, LA. (presented by J. Comiskey)
Miller, K.M., G.L. Tierney, B.R. Mitchell, and D. Faber-Langendoen. 2010. Using the USNVC to enhance assessment of forest health in Northeastern U.S. National Parks. Ecological Society of America annual meeting. 3 August 2010, Pittsburgh, PA.
Miller, K.M., and S.A. Woods. 2005. Arboreal invertebrate associations with lichen epiphytes and impacts of harvested canopy gaps. Entomological Society of America annual meeting. 17 December 2005, Fort Lauderdale, FL.
Miller, K.M., S.A. Woods, and S.B. Selva. 2005. Characterizing the influence of canopy gaps on the arboreal invertebrate and macrolichen community in the Acadian spruce/fir forest. Society for Conservation Biology annual meeting. 18 July 2005, Brasilia, Brazil (poster).
Miller, K.M., and S.A. Woods. 2005. Arboreal lichen and invertebrate associations and impacts of gap harvesting. Acadian Entomological Society annual meeting. 20 June 2005, Fredericton, New Brunswick.

WEBSITES
GitHub:https://katemmiller.github.io/wetlandHTLN/ https://github.com/KateMMiller;
Google Scholar: https://scholar.google.com/citations?user=p8gc_rEAAAAJ&hl=en&oi=sra
Research Gate: https://www.researchgate.net/profile/Kathryn_Miller8

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