

Acadia science publications – 2021

Acadia National Park and Schoodic Institute staff and adjuncts and Second Century Stewardship Fellows in **bold**

1. Baumflek M, K-A Kassam, C Ginger, MR Emery. 2021. Incorporating biocultural approaches in forest management: Insights from a case study of Indigenous plant stewardship in Maine, USA and New Brunswick, Canada. *Society and Natural Resources* DOI: 10.1080/08941920.2021.1944411
2. Blais BR, BE Smith, JS Placyck Jr, GS Casper, GM Spellman. 2021. Phylogeography of the smooth greensnake, *Ophedrys vernalis* (Squamata: Colubridae): divergent lineages and variable demographics in a widely distributed yet enigmatic species. *Biological Journal of the Linnean Society*, blab124.
3. Bowles P, Y Lyu, A McFann, J Merchan, M Rothstein. 2021. E-bike usage on the carriage roads. Worcester Polytechnic Institute, Worcester, MA.
4. Bragdon B, N Carrillo, Z Koval, J Parker, R Whittier. 2021. Acadia National Park trail view website. Worcester Polytechnic Institute, Worcester, MA.
5. Briones V. 2021. Forest phenology in Maine: Trends and drivers over the past two decades and implications for resource managers. Masters Thesis, University of Maine, Orono.
6. Chen Y, T Dombek, J Hand, Z Zhang, A Gold, AP Ault, KE Levine, JD Surratt. 2021. Seasonal contribution of isoprene-derived organosulfates to total water-soluble fine particulate organic sulfur in the United States. *ACS Earth and Space Chemistry* doi.org/10.1021/acsearthspacechem.1c00102
7. Crausbay SD, HR Sofaer, AE Cravens, BC Chaffin, KR Clifford, JE Gross, CN Knapp, DJ Lawrence, DR Magness, **AJ Miller-Rushing**, GW Schuurman, CS Stevens-Rumann. 2021. A science agenda to inform natural resource management decisions in an era of ecological transformation. *BioScience*, biab102.
8. Crock N, A Forgione, E Murguia, J Van Milligen, R Wheelock. 2021. Traffic mobility patterns on the Ocean Drive corridor. Worcester Polytechnic Institute, Worcester, MA.
9. Diamant R. 2021. Thinking and acting anew. *Parks Stewardship Forum* 37: 437-441.
10. Doser JW, **AS Weed**, EF Zipkin, **KM Miller**, AO Finley. 2021. Trends in bird abundance differ among protected areas but not bird guilds. *Ecological Applications* 31: e02377.

11. Ehbrecht M, D Seidel, P Annighöfer, H Kreft, M Köhler, DC Zemp, K Puettmann, R Nilus, F Babweteera, K Willim, M Stiers, D Soto, HJ Boehmer, N Fisichelli, M Burnett, G Juday, SL Stephens, C Ammer. 2021. Global patterns and climatic controls of forest structural complexity. *Nature Communications* 12: 519.
12. Gabe T. 2021. Impacts of COVID-19 on coastal tourism in Maine: Evidence from Bar Harbor. MPRA Paper No. 108180. mpra.ub.uni-muenchen.de/108180/
13. Gabe T. 2021. Measurement and analysis of neighborhood congestion: Evidence from sidewalk pedestrian traffic and walking speeds. *Growth and Change* <https://doi.org/10.1111/grow.12499>
14. Gallinat AS, ER Ellwood, JM Heberling, **AJ Miller-Rushing**, WD Pearse, RB Primack. 2021. Macrophenology: insights into the broad-scale patterns, drivers, and consequences of phenology. *American Journal of Botany* DOI: 10.1002/ajb2.1793
15. Gassett, PR, K O'Brien-Clayton, C Bastidas, JE Rheuban, CW Hunt, E Turner, M Liebman, E Silva, AR Pimenta, J Grear, J Motyka, D McCorkle, E Stancioff, DC Brady, AL Strong. 2021. Community science for coastal acidification monitoring and research. *Coastal Management* <https://doi.org/10.1080/08920753.2021.1947131>
16. Guarnieri LD, SE McBride, E Groden, **AM Gardner**. 2021. Interactions between sympatric invasive European fire ants (*Myrmica rubra*) and blacklegged ticks (*Ixodes scapularis*). *PLOS ONE* 16: e0251497.
17. Hansen AJ, BP Noble, J Veneros, A East, SJ Goetz, C Supples, JEM Watson, PA Jantz, R Pillay, W Jetz, S Ferrier, HS Grantham, TD Evans, J Ervin, O Venter, ALS Virnig. 2021. Toward monitoring forest ecosystem integrity within the post-2020 Global Biodiversity Framework. *Conservation Letters* e12822
18. **Horne L**, S De Urioste-Stone, E Seekamp, P Rahimzadeh-Bajgiran, L Rickard. 2021. Determinants of visitor climate change risk perceptions in Acadia National Park, Maine, USA. *Journal of Outdoor Recreation and Tourism* 35: 100401.
19. Ishaq SL, A Hotopp, S Silverbrand, JE Dumont, A Michaud, JD MacRae, P Stock, E Groden. 2021. Bacterial transfer from *Pristionchus entomophagus* nematodes to the invasive ant *Myrmica rubra* and the potential for colony mortality in coastal Maine. *iScience*, 102663.
20. Jozitis A, R Kern, T Lewis, T Lu, D Shaw. 2021. Visitor mobility in the Park Loop region. Worcester Polytechnic Institute, Worcester, MA.
21. Kaplan PD, ELP Dumont. 2021. The Ultraviolet Index is well estimated by the terrestrial irradiance at 310nm. *arXiv preprint*: 2104.02195.

22. Karasov-Olson A, MW Schwartz, JD Olden, S Skikne, JJ Hellmann, S Allen, C Brigham, D Buttke, DJ Lawrence, **AJ Miller-Rushing**, JT Morissette, GW Schuurman, M Trammell, C Hawkins Hoffman. 2021. Ecological risk assessment of managed relocation as a climate change adaptation strategy. Natural Resource Report NPS/NRSS/CCRP/NRR—2021/2241, National Park Service, Fort Collins, Colorado.
23. Karasov-Olson A, MW Schwartz, S Skikne, JJ Hellmann, JD Olden, DJ Lawrence, JT Morissette, GW Schuurman, S Allen, C Brigham, D Buttke, **AJ Miller-Rushing**, M Trammell, C Hawkins Hoffman. 2021. Co-development of a risk assessment strategy for managed relocation. *Ecological Solutions and Evidence*. 2: e12092.
24. Koester AJ, JD Shakun, PR Bierman, PT Davis, LB Corbett, BM Goehring, AC Vickers, SR Zimmerman. 2021. Laurentide ice sheet thinning and erosive regimes at Mount Washington, New Hampshire, inferred from multiple cosmogenic nuclides. In Watt RB, GD Thackray, AR Gillespie (eds). *Untangling the Quaternary Period: A Legacy of Stephen C. Porter*. p. 299-314.
25. Konoreva LA, SV Chesnokov, IS Stepanchikova, T Spribille, C Björk, P Williston. 2021. Nine *Micarea* species new to Canada including five species new to North America. *Herzogia* 34: 18-37.
26. Lu ZN, A Briggs, S Saadat, IM Algaze. 2021. The associations between visitation, social media use, and search and rescue in United States national parks. *Wilderness & Environmental Medicine* <https://doi.org/10.1016/j.wem.2021.08.005>
27. Malekshahi CR. 2021. Discerning demographics: biodiversity of testate amoebae based on analyses of single-cell transcriptomes. Honors Project, Smith College, Northampton, MA. <https://scholarworks.smith.edu/theses/2348>
28. Marcotte C, PA Stokowski. 2021. Place meanings and national parks: A rhetorical analysis of social media texts. *Journal of Outdoor Recreation and Tourism* 35: 100383.
29. Michaud T, C Metcalf, M Bampton. 2021. Changing tourist movement and social media behavior in a destination: Visualizing COVID-19 impacts through Flickr VGI. *International Journal of Gaming Hospitality and Tourism* 1: 1.
30. **Miller KM**, BJ McGill, **AS Weed**, **CE Seirup**, JA Comiskey, ER Matthews, S Perles, JP Schmit. 2021. Long-term trends indicate that invasive plants are pervasive and increasing in eastern national parks. *Ecological Applications* 31: e02239.
31. **Miller-Rushing AJ**, N Athearn, T Blackford, C Brigham, **L Cohen**, **R Cole-Will**, T Edgar, ER Ellwood, **N Fisichelli**, C Flanagan Pritz, AS Gallinat, **A Gibson**, A Hubbard, S McLane, K Nydick, RB Primack, S Sachs, PE Super. 2021. COVID-19 pandemic impacts on

conservation research, management, and public engagement in US national parks. *Biological Conservation* 257: 109038.

32. **Newsom B**, N Dana Lolar, I St. John. 2021. In conversation with the ancestors: Indigenizing archeological narratives at Acadia National Park, Maine. *Genealogy* 5: 96.
33. Novik E. 2021. Characterization and analysis of the microbiota of *Bangia atropurpurea* and other freshwater and marine algae in North America. Masters Thesis, University of Waterloo, Ontario.
34. Pilla RM, EM Mette, CE Williamson, BV Adamovich, R Adrian, O Anneville, E Balseiro, S Ban, S Chandra, W Colom-Montero, SP Devlin, MA Dix, MT Dokulil, NA Feldsine, H Feuchtmayr, NK Fogarty, EE Gaiser, SF Girdner, MJ González, KD Hambright, DP Hamilton, K Havens, DO Hessen, H Hetzenauer, SN Higgins, TH Huttula, H Huuskonen, PDF Isles, KD Joehnk, WB Keller, J Klug, LB Knoll, J Korhonen, NM Korovchinsky, O Köster, BM Kraemer, PR Leavitt, B Leoni, F Lepori, EV Lepskaya, NR Lottig, MS Luger, SC Maberly, S MacIntyre, C McBride, P McIntyre, SJ Melles, B Modenutti, DC Müller-Navarra, L Pacholski, AM Paterson, DC Pierson, HV Pislegina, P Plisnier, DC Richardson, A Rimmer, M Rogora, DY Rogozin, JA Rusak, OO Rusanovskaya, S Sadro, N Salmaso, JE Saros, J Sarvala, É Saulnier-Talbot, DE Schindler, SV Shimaraeva, EA Silow, LM Sitoki, R Sommaruga, D Straile, KE Strock, H Swain, JM Tallant, W Thiery, MA Timofeyev, AP Tolomeev, K Tominaga, MJ Vanni, P Verburg, RD Vinebrooke, J Wanzenböck, K Weathers, GA Weyhenmeyer, ES Zadereev, TV Zhukova. 2021. Global data set of long-term summertime vertical temperature profiles in 153 lakes. *Scientific Data* 8: 200.
35. Rosemartin A, T Watkins, **AJ Miller-Rushing**. 2021. Monitoring phenology in US national parks through citizen science: Some preliminary lessons and prospects for protected areas. *Parks Stewardship Forum* 37: 552-560.
36. Ross L, S Alahmed, SMC Smith, G Roberts. 2021. Tidal and subtidal transport in short, tidally-driven estuaries with low rates of freshwater input. *Continental Shelf Research* 224: 104453.
37. Schuver A, G Oppler. 2021. Connectivity conservation: Supporting thriving ecosystems for people and planet. *Parks Stewardship Forum* 37: 604-615.
38. Shi M, K Janowicz, L Cai, G Mai, R Zhu. 2021. A socially aware Huff model for destination choice in nature-based tourism. *AGILE GIScience Series* 2: 14.
39. **Soukup M, GE Machlis**. 2021. American Covenant: National Parks, Their Promise, and Our Nation's Future. Yale University Press, New Haven, Connecticut.

40. Stasinski L, DM White, **PR Nelson**, RH Ree, JE Meireles. 2021. Reading light: Leaf spectra capture fine-scale diversity of closely related, hybridizing arctic shrubs. *New Phytologist* doi.org/10.1111/nph.17731
41. Vukomanovic J, J Randall. 2021. Research trends in U.S. national parks, the world's "living laboratories." *Conservation Science and Practice* e414.
42. Williams B, PTW Chan, IT Westfield, DB Rasher, J Ries. 2021. Ocean acidification reduces skeletal density of hardground-forming high-latitude crustose coralline algae. *Geophysical Research Letters* e2020GL091499.
43. Yuan J, K Beard, TR Johnson. 2021. A quantitative assessment of spatial patterns of socio-demographic change in coastal Maine: one process or many? *Applied Geography* 134: 102502.