David B. Moore

Contact Information

Morse Hall, room 458

8 College Rd

Durham, NH

03824

David.B.Moore@unh.edu

Overview

I am a plant biologist, an agronomist, and a former commercial syrup producer with a keen interest in applying expertise in tree anatomy and physiology to making syrup production more diverse, efficient, and sustainable. My work is firmly grounded in both basic and applied science as a consequence of my experiences in both research and the industry. As an academic, I've gained extensive and valuable experience with statistics, computer programming, electrical engineering, and analytical chemistry, which allows me to answer complex questions thoughtfully and comprehensively. Prior to my academic career, while working in the agricultural, horticultural, and construction industries, I gained extensive and valuable experience growing plants, operating power equipment, and with carpentry, which allows me to install and maintain diverse research projects competently and independently. Finally, I enjoy and welcome opportunities to teach and to provide consultation on experimental design, statistics, and statistical programming.

Statement of Ethics

In science, academia, and beyond, an important goal is to be as truthful as possible while being as compassionate as possible. In practice, it is easy to tend toward either being truthful without compassion (which can be harsh) or being compassionate without honesty (which can be disingenuous). As academics, our job is to publish research which often goes on to inform many other academic researchers, and our work may also inform industry and public policy. Therefore, it is imperative that the work we do is of the highest quality. Despite the demanding pressure to publish, I believe that we all individually have the power to make the choice to sacrifice the quality of our work to advance our careers. In light of the recent cases of high-profile academics who have been exposed for having repeatedly committed data fraud, and in light of the replication crisis, I vow to do my best as a researcher and a collaborator to collect sound data, to use sound experimental designs and statistical techniques, and to confront my colleagues politely and diplomatically when I have concerns about the integrity of any research projects I'm involved with.

Education

B. S., Environmental Horticulture, University of New Hampshire, Durham, NH, 2010

M. S., Plant Science and Landscape Architecture, University of Connecticut, Storrs, CT, 2018

Ph. D., Natural Resources & Earth Systems Science, University of New Hampshire, Durham, NH, 2025 (expected)

Peer-Reviewed Publications

French, K.L., M.A. Vadeboncoeur, H. Asbjornsen, S. Fraver, L.S. Kenefic, D.B. Moore, and J.W. Wason. 2023. Temporary thinning shock in previously shaded red spruce. Can. J. For. Res. 53:491-502. doi: 10.1139/cjfr-2022-0227

French, K.L., M.A. Vadeboncoeur, H. Asbjornsen, L.S. Kenefic, D.B. Moore, J.W. Wason. 2023. Physiological response of mature red spruce trees to partial and complete sapwood severing. Theor. Exp. Plant Physiol. 35:31-49. doi: 10.1007/s40626-023-00267-3

Peer-Reviewed Publications, continued

Moore, D.B., K. Guillard, X. Geng, T.F. Morris, and W.F. Brinton. 2019. Correlations between two alkali extractable amino-nitrogen tests and response to organic fertilizer in turfgrass soils. Soil Sci. Soc. Am. J. 83:791–799. doi:10.2136/sssaj2018.10.0371

Moore, D.B., K. Guillard, X. Geng, T.F. Morris, and W.F. Brinton. 2019. Predicting cool-season turfgrass response with Solvita soil tests, part 1: Labile Amino-Nitrogen concentrations. Crop Sci. 59:1779–1788. doi:10.2135/cropsci2018.11.0706

Moore, D.B., K. Guillard, T.F. Morris, and W.F. Brinton. 2019. Predicting cool-season turfgrass response with Solvita soil tests, part 2: CO_2-Burst concentrations. Crop Sci. 59:2237-2248. doi:10.2135/cropsci2018.11.0706

Moore, D.B., K. Guillard, T.F. Morris, and W.F. Brinton. 2019. Correlation between Solvita Labile Amino-Nitrogen and CO_2-Burst soil health tests and response to organic fertilizer in a turfgrass soil. Commun. Soil Sci. Plan. 50:2948-2959. doi:10.1080/00103624.2019.1689258

Academic Presentations

Moore, D.B. 2019. Winter-dormant-season sap flow dynamics in temperate woody eudicots. XI International Workshop on Sap Flow. Hyytiälä, Finland. 9 Oct 2019.

Moore, D.B. 2023. Sap flow, stem pressure, and sap yield: Using tree physiology data to draw conclusions about syrup production. 2023 North American Maple Conference: Quality from Tree to Table. Sturbridge, MA. 27 Oct 2023.

Moore, D.B. 2023. Modeling winter-dormant-season sap flow in deciduous, woody angiosperms in New England. 12th International Workshop on Sap Flow. Rotorua, New Zealand. 3 Nov 2023.

Other Presentations

Moore, D.B. 2012. Birch syrup production. New York State Maple Conference. Verona, NY. 6 Jan 2012.

Moore, D.B. 2014. Birch syrup production. Durham Great Bay Rotary Club, Durham, NH, May 21st, 2014.

Moore, D.B. 2014. Birch syrup production. Greater Seacoast Permaculture Group, Madbury, NH, February 16th, 2014.

Moore, D.B. 2014. Birch syrup production. New Hampshire Maple School. Tilton, NH. 18 Oct 2014.

Moore, D.B. 2015. Birch syrup production. League of New Hampshire Craftsmen, Laconia, NH, August 8th, 2015.

Moore, D.B. 2017. Turfgrass performance and Solvita® soil test kits. University of Connecticut College of Agriculture, Health and Natural Resources Graduate Student Research Forum, Storrs, CT, March 25th, 2017.

Moore, D.B. 2017. Producing syrup from trees other than maples. The Arnold Arboretum of Harvard University Tree Mob. Boston, MA. 30 May 2017.

Moore, D.B. 2019. Winter-dormant-season sap flow dynamics in temperate woody eudicots. University of New Hampshire Department of Natural Resources and the Environment Seminar Series, Durham, NH, February 5th, 2019.

Moore, D.B. 2019. Syrup production. Durham Garden Club, Durham, NH, October 19th, 2019.

Moore, D.B. 2020. A new statistical analysis called ‘the shared area under probability distribution curves test’, which is a much less-parametric alternative to the commonly-used analysis of variance for determining if groups are different. University of New Hampshire Earth Systems Research Center Pizza Lunch, virtual, March 31st, 2020.

Moore, D.B. 2020. A new statistical analysis called ‘the shared area under probability distribution curves test’, which is a much less-parametric alternative to the commonly-used analysis of variance for determining if groups are different. University of New Hampshire Graduate Research Conference, virtual, April 21st, 2020.

Moore, D.B. 2021. Producing syrup from trees other than maples. University of New Hampshire NH Agricultural Experiment Station Specialty Syrup Research Field Day. 18 Mar 2021.

Moore, D.B. 2021. Harvesting sap and producing syrup from trees other than maples. New Hampshire Maple Producers Association Annual Meeting. Plymouth, NH. 22 May 2021.

Other Presentations, continued

Moore, D.B. 2021. Harvesting sap and producing syrup from trees other than maples. Rotary Club of Salem – Oregon – Rotary District 5100, virtual, July 13th, 2021.

Moore, D.B. 2021. Harvesting sap and producing syrup from trees other than maples. Wonalancet Preservation Association, Wonalancet, NH, August 8th, 2021.

Moore, D.B. 2021. Harvesting sap and producing syrup from trees other than maples. Wilmington's Earth Year, Wilmington Memorial Library, virtual, September 23rd, 2021.

Moore, D.B. 2022. Maple syrup production and climate change. Spring Break in Maple Nation: Sugaring in Vermont's Northeast Kingdom, virtual, March 7th, 2022.

Moore, D.B. 2022. Harvesting sap and producing syrup from trees other than maples. New England Society of American Foresters annual meeting. Portland, ME. 24 Mar 2022.

Moore, D.B. 2022. Modelling winter-dormant-season sap flow with wood temperature. University of New Hampshire Department of Natural Resources and the Environment Seminar Series, Durham, NH, April 26th, 2022.

Moore, D.B. 2022. Syrup tasting. The University of New Hampshire College of Life Sciences and Agriculture's Taste of COLSA reception, Durham, NH, October 7th, 2022.

Moore, D.B. 2023. Syrup tasting and a question-and-answer session. University of New Hampshire Department of Natural Resources and the Environment Seminar Series, Durham, NH, March 28th, 2023.

Moore, D.B. 2023. Syrup tasting. New Hampshire Farm, Forest, and Garden Expo. Deerfield, NH. 5 May 2023.

Moore, D.B. 2023. Tree identification and syrup production. Day of the Forest, Moharimet Elementary School, Madbury, NH, May 25th, 2023.

Moore, D.B. 2023. Syrup tasting. Moose Mountains Regional Greenways' 2023 Woods Water and Wildlife Festival, Milton Mills, NH, August 12th, 2023.

Moore, D.B. 2023. Syrup tasting. The University of New Hampshire College of Life Sciences and Agriculture's Taste of COLSA reception, Durham, NH, October 13th, 2023.

Moore, D.B. 2024. Maple sugaring. Hampton Academy 8th-grade science class presentation, Hampton, NH, February 8th, 2024.

Teaching

Silviculture (NR 729/829, University of New Hampshire, Fall 2024)

Funded Grant Proposals

Moore, D.B. and H. Asbjornsen. 2018. Harvesting Sap and Producing Syrup from Trees Other Than Maples, Birches, and Walnuts. Northeast SARE (Sustainable Agriculture Research & Education) Graduate Student Grant. $14,848.00.

Foppert, J., N. Maker, and D. Moore. 2024. Developing and Disseminating a Handbook of Sugarbush Silviculture. U.S. Department of Agriculture. Agricultural Marketing Service. Acer Access and Development Program. $499,993.00.

Academic Awards

Granite State Division – New England Society of American Foresters Graduate Student of the Year award, February 2021

University of New Hampshire College of Life Sciences and Agriculture Shiva and Elizabeth Nanda Award for Innovation, $10,000.00, May 2022

Other Articles

Guillard, K., D. Moore, and W. Brinton. 2015. Solvita® soil test kits to categorize turfgrass site responsiveness to nitrogen fertilization – 2015 results. University of Connecticut College of Agriculture, Health and Natural Resources 2015 Annual Turfgrass Research Report. p. 67-73.

Guillard, K., A. Switz, and D. Moore. 2015. Kentucky bluegrass and tall fescue lawn response to seaweed extracts – 2015 results. University of Connecticut College of Agriculture, Health and Natural Resources 2015 Annual Turfgrass Research Report. p. 74-76.

Moore, D., S. Atallah, S. Bigornia, M. Lima, M. Vadeboncoeur, and H. Asbjornsen. 2023. Diversification of the Syrup Industry. INSPIRED. New Hampshire Agricultural Experiment Station. University of New Hampshire College of Life Sciences and Agriculture.

Moore, D., K. Guillard, and W. Brinton. 2016. Solvita® soil test kits to categorize turfgrass site responsiveness to nitrogen fertilization – 2016 results. University of Connecticut College of Agriculture, Health and Natural Resources 2016 Annual Turfgrass Research Report. p. 58-67.

Moore, D.B. 2020. Winter-dormant-season sap flow dynamics and the environmental conditions that drive them. In: Hölttä, T., and Y. Salmon, eds. Proc. XI International Workshop on Sap Flow. ISHS. Acta Hortic. 1300:97-104.

Wang, X., D. Moore, and K. Guillard. Clippings sap nitrate-N concentrations and relationship to NDVI and DGCI – 2016. University of Connecticut College of Agriculture, Health and Natural Resources 2016 Annual Turfgrass Research Report. p. 68-72.

Journals Refereed

Agricultural and Forest Meteorology

Literature and Media Appearances

Anonymous. 2012. Tapping NH's Giving Trees. Business NH Magazine.

Bascomb, B. 2021. Not Just Maple Syrup: Birch, Beech and Other Sappy Trees. Living on Earth.

Brown, J. 2012. New England's Other Syrup. Northern Woodlands.

Carley, K. 2023. NH Researchers Study Alternative Syrups to Build Forest Climate Resiliency. Public News Service.

Davis, K., and J. Dankosky. 2021. Making Syrup From More Than Maple Trees. Science Friday.

Farrell, M. 2013. The Sugarmaker's Companion: An Integrated Approach to Producing Syrup from Maple, Birch, and Walnut Trees. Chelsea Green Publishing. White River Junction, VT.

Haas, K. 2021. Specialty Syrups Steal Spotlight From Maple Trees. New Hampshire Union Leader.

Jones, C. 2013. Wednesday May 8th: Birch Syrup. WMUR Manchester.

Lounsbury, N. 2023. Harvesting Maple & Other Tree Syrups as a Climate Adaptive Farm Strategy, w/ David Moore. The No-Till Growers Podcast Network.

Ramer, H. 2013. Birch syrup explored as add-on to maple industry in New Hampshire. The Associated Press.

Ropeik, A. 2021. Branching Out: Novel Tree Syrups Could Make Forests, Farmers More Resilient. New Hampshire Public Radio.

Smith-Mayo, J., and M.P. Mayo. 2012. New Hampshire Icons: 50 Classic Symbols of the Granite State. Globe Pequot Press. Guilford, CT.

St. James, P. 2021. New Hampshire Department of Agriculture, Markets and Food's spotlight series on Granite State agriculture. WNTK, New London, NH.

Trapani, R. 2021. Sap & Syrup Beyond Maple with Crooked Chimney's David Moore. From the Forest. Catskill Forest Association, Inc. WIOX, Roxbury, NY.

Literature and Media Appearances, continued

von Brackel, B. 2022. Nowhere Left to Go: How Climate Change is Driving Species to the Ends of the Earth. The Experiment, LLC. New York, NY.

Wingate, J. 2013. Birches: Learn About New Hampshire's State Tree. New Hampshire Magazine.

Guest Lectures

Silviculture (NR 729/829, University of New Hampshire, December 2nd, 2021, taught by: Heidi Asbjornsen; topics: syrup production and sugarbush management)

Silviculture (NR 729/829, University of New Hampshire, November 23rd, 2021, taught by: Heidi Asbjornsen; topic: quantitative thinning using variable-radius plot data)

Silviculture (NR 729/829, University of New Hampshire, November 18th, 2021, taught by: Heidi Asbjornsen; topics: stocking guides and stand density indices)

Silviculture (NR 729/829, University of New Hampshire, September 2nd, 2021, taught by: Heidi Asbjornsen; topics: taking tree measurements and working up variable-radius plot data)

Silviculture (NR 729/829, University of New Hampshire, December 3rd, 2020, taught by Heidi Asbjornsen; topics: sugarbush silviculture and maple syrup production)

Silviculture (NR 729/829, University of New Hampshire, November 10th, 2021, taught by: Heidi Asbjornsen; topic: quantitative thinning using variable-radius plot data)

Silviculture (NR 729/829, University of New Hampshire, November 5th, 2020, taught by Heidi Asbjornsen; topics: stocking guides and density management diagrams)

Silviculture (NR 729/829, University of New Hampshire, September 16th, 2020, taught by: Heidi Asbjornsen; topic: quantifying regeneration using abundance and presence-absence methods)

Silviculture (NR 729/829, University of New Hampshire, September 3rd, 2020, taught by: Heidi Asbjornsen; topics: taking tree measurements and working up variable-radius plot data)

Analysis of Microbial Communities (NR 995, University of New Hampshire, April 17th, 2020, taught by Jessica Ernakovich; topics: permutational analysis of variance and partial least squares regression)

Analysis of Microbial Communities (NR 995, University of New Hampshire, April 10th, 2020, taught by Jessica Ernakovich; topics: an overview of the statistical software R, distance measures, and principal component analysis)

Silviculture (NR 729/829, University of New Hampshire, December 6th, 2019, taught by Heidi Asbjornsen; topics: sugarbush silviculture and maple syrup production)

Silviculture (NR 729/829, University of New Hampshire, November 1st, 2019, taught by Heidi Asbjornsen; topic: thinning methods)

Silviculture (NR 729/829, University of New Hampshire, September 30th, 2019, taught by Heidi Asbjornsen; topics: site classification and catenas)

Silviculture (NR 729/829, University of New Hampshire, August 26th, 2019, taught by: Heidi Asbjornsen; topics: taking tree measurements and working up variable-radius plot data)

Silviculture (NR 729/829, University of New Hampshire, November 29th, 2018, taught by Heidi Asbjornsen; topics: sugarbush silviculture and maple syrup production)

Silviculture (NR 729/829, University of New Hampshire, November 6th, 2018, taught by: Heidi Asbjornsen; topic: quantitative thinning using variable-radius plot data)

Silviculture (NR 729/829, University of New Hampshire, October 16th, 2018, taught by: Heidi Asbjornsen; topic: thinning guidelines)

Silviculture (NR 729/829, University of New Hampshire, September 25th, 2018, taught by: Heidi Asbjornsen; topics: thinning and grading)

Guest Lectures, continued

Silviculture (NR 729/829, University of New Hampshire, September 18th, 2018, taught by: Heidi Asbjornsen; topics: quantifying regeneration using abundance and presence-absence methods)

Silviculture (NR 729/829, University of New Hampshire, September 11th, 2018, taught by: Heidi Asbjornsen; topic: stand development stages)

Silviculture (NR 729/829, University of New Hampshire, August 28th, 2018, taught by Heidi Asbjornsen; topics: taking tree measurements and working up variable-radius plot data)

Teaching Assistantships

Soil Fertility (SOIL 3620, University of Connecticut, Fall 2016, taught by Thomas Morris)

Turfgrass Management (TURF 1100, University of Connecticut, Fall 2016, taught by Steve Rackliffe; I taught the entire lab portion of this course)

Introduction to Soil Science (SAPL 300, University of Connecticut, Fall 2016, taught by Jason Henderson)

Soil Fertility (SOIL 3620, University of Connecticut, Fall 2015, taught by Thomas Morris)

Turfgrass Management (TURF 1100, University of Connecticut, Fall 2015, taught by Geoff Ecker)

Introduction to Soil Science (SAPL 300, University of Connecticut, Fall 2015, taught by Jason Henderson)

Natural Resources Field Methods (NR 415, University of New Hampshire, Fall 2015, taught by Matthew Vadeboncoeur)

Community Ecology (NR 765, University of New Hampshire, Spring 2020, taught by James Taylor)

Previous Employment

Short Cuts Tree Service, Manchester, CT, July 2015 to July 2017

Bradford Equestrian Center, Haverhill, MA, January 2015 to February 2015

Shady Hill Greenhouses and Nursery, Londonderry, NH, May 2014 to December 2014

Sanborn Mills Farm, Loudon, NH, June 2009 to August 2013

Charmingfare Farm, Candia, NH, November 2012 to January 2014

University of New Hampshire Organic Dairy Farm, Lee, NH, January 2008 to March 2011

Pawtuckaway Nursery Corporation, Lee, NH, September 2007 to December 2008

River Berry Farm, Fairfax, VT, September 2006 to November 2006

Willow Pond Nursery, Merrimack, NH, April 2006 to August 2007

Crotched Mountain Ski and Ride, Francestown, NH, December 2006 to March 2008

Weathervane Seafood Restaurant, Bedford, NH, July 2006 to July 2007

Camp Belknap, Tuftonboro, NH, June 2004 to August 2004

Entrepreneurial Ventures

Moore School of Music, Bedford, NH, October 2013 to present

Henrietta House Gardens, Ashford, CT, January 2016 to November 2016

The Crooked Chimney, Lee, NH, July 2009 to May 2015

Other Activities

Organizer and leader, Tuckaway Farm draft horse workshops, Lee, NH, July 2018 to August 2018

Founder and organizer, University of New Hampshire R Coding Club, March 2019 to December 2021

Natural Resources and Earth Systems Science Social Network Team, August 2019 to May 2020

Ph.D. representative, University of New Hampshire Natural Resources and the Environment department's monthly faculty meetings, September 2019 to May 2020

University of New Hampshire Statistical Consulting Club, January 2023 to present

Online Presences

GitHub

Google Scholar

SoundCloud

Stack Overflow

YouTube