

SCOTT ASHER LEWINS

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EDUCATION

University of Vermont, Burlington, VT;

Doctor of Philosophy, Plant and Soil Science, anticipated completion May 2024.

University of Maryland, College Park, MD;

Master of Science, Entomology, 2006. Thesis title: "The Influence of Predator Species Richness on Prey Mortality: Implications to Conservation Biological Control."

Environmental Science and Forestry - State Univ. of New York, Syracuse, NY;

Bachelor of Science, magna cum laude, Environmental and Forest Biology, 2000.

EXPERIENCE

University of Vermont, UVM Extension, Burlington, VT; 2012-present

Extension Coordinator: 2019-present

Provided leadership to, and represented Extension in, the Agroecology and Livelihoods Collaborative, a community of practice organized around agroecology, participatory action research, and transdisciplinarity, with a commitment to better understanding and seeking solutions to the issues facing our food systems. Contributed to the development of an Institute for Agroecology at UVM through a novel cooperative leadership model that leveraged my deep understanding of grant making and management, budget management and oversight, and experience with farmers and service providers in various agricultural systems of the Northeast.

Entomology Extension Educator: 2019-present

Provided leadership and implementation in the development and coordination of a sustainable pest management research, extension, and education program. Oversaw the development of complex pest management research projects. Planned, implemented, and evaluated multifaceted education, and research programs serving local and regional farming communities. Served on the Extension Diversity, Equity, and Inclusion Committee, and represented Extension on the College-wide Equity, Diversity, and Inclusion Committee. Taught undergraduate courses in entomology and agricultural production in the department of Plant & Soil Science.

Sustainable Agriculture, Food and Forests Result Area Team Co-Lead: 2021-present

Provided programmatic leadership to identify collaborative opportunities across the Result Area, connected team with resources within and outside of Extension, and identified gaps and needs for additional programming and funding. Assisted the Associate Director with efforts to provide leadership across all four Result Areas, including development, coordination, programmatic alignment, and promoting learning opportunities, modeled and created a team approach to programming building strong linkages and teamwork to foster an environment for strong interdisciplinary programming and facilitated the development of joint proposals for programs and funding. Provided input and advice to Director's Cabinet on programmatic direction.

Agricultural Entomology Researcher (part-time): 2012-2019

Brought entomology expertise to the UVM Extension Northwest Crops and Soils Team in order to provide the best and most relevant cropping information, both research-based and experiential, delivered in the most practical and understandable ways to Vermont farmers.

Saint Michael's College, Dept. of Biology, Colchester, VT; 2011-2019

Instructor (full-time)

Developed and instructed lecture and laboratory sections of Applied Insect Ecology and Insects & Society, examining the various interactions between insects, their environment and human society. Instructed lecture and laboratory sections of Introduction to Ecology and Evolution, laboratory sections of Introductory Cell Biology and Genetics, Biological Communications – a non-lab writing intensive course, and a Field Tropical Ecology in Costa Rica.

University of Vermont, Plant & Soil Science Dept., Burlington, VT; 2007-2019

Research Affiliate in Agricultural Entomology (part-time): 2015-2019

Collaborated with researchers in the Agroecology and Livelihoods Collaborative on Participatory Action Research projects focused on managing an emerging invasive pest of alliums and innovative approaches to managing existing pests on diversified vegetable farms in Vermont.

Adjunct Faculty: 2012-2016

Lecturer for *A Bug's Life*, a non-majors biology course that introduces students to the world of insects and their impact on our everyday lives, from the food we eat to solving crimes.

Insect Agroecology and Evolution Laboratory Manager and Research Technician: 2008-2011

Aided in the development and implementation of a research program in agroecology and sustainable pest management for a new faculty hire. Managed the day-to-day operations of the lab, including supervising undergraduate research technicians, providing technical assistance to graduate students and budget oversight. Contributed to the writing of multiple U.S. Department of Agriculture and National Science Foundation grants. Collected, managed and analyzed data on arthropods found in agricultural and unmanaged ecosystems

Entomology Research Technician: 2007-2008

Conducted research as part of U.S. Department of Energy grant studying the effects of climate change on ecosystems. As a member of a team of researchers studying a desert ecosystem in Moab, Utah, was responsible for characterizing the community of soil microarthropods found within the system. Duties consisted of extraction, identification, enumeration and preservation of mites and collembola found in the ecosystem and various statistical analyses, including multivariate analysis, on the community data gathered.

Norwich University, Dept. of Biology & Physical Ed., Northfield, VT; 2010-2011

Adjunct Faculty

Instructed laboratory sections of Principles of Biology I, an introduction to biochemistry, cell biology, and human anatomy and physiology. Instructed laboratory sections of Principles of Biology II, which explores genetics, evolutionary theory, history and diversity of life on earth, and ecology. Instructed a laboratory section of Immunology, a course presenting the basic principles of immunology, including antigen/antibody characteristics, role of immune system in defense and disease, and applications of fundamental concepts in immunodiagnosis.

University of Maryland, College Park, MD; 2003-2006

Graduate Assistant

Instructed laboratory sections in Principles of Biology II, the first of three introductory biology courses offered, covering basic principles of biology with special emphasis on organismal, ecological, and evolutionary biology. Oversaw multiple concurrent laboratory and field studies in both agricultural and forest ecosystems. Duties included experimental design, data collection, statistical analysis, coordination of interns and design, setup and maintenance of equipment.

Washington Parks & People, Washington, DC; 2002-2003

Project Coordinator

Coordinated ecological restorations of the 1.6 mile long Watts Branch Park in the Far Northeast, DC. Facilitated the work of over 1000 volunteers at the Josephine Butler Park Center and in various city parks. Communicated with, or delegated volunteers or community members to contact, city officials regarding park advocacy and park maintenance.

United States Peace Corps, Morocco; 2001-2002

Volunteer - Environment Sector

Collaborated with officials from the Ministry of Water and Forests on the creation of the new Eastern High Atlas National Park, for the protection of the Barbary sheep. Conducted environmental and health education lessons with the inhabitants of the park. Served as the regional Gender and Development (GAD) representative.

GRANTS AWARDED

Research for Novel Approaches Grant Program (Northeast Sustainable Agriculture Research & Education), 2022-2025. "Development of above and below ground strategies using entomopathogenic fungi and RNAi technologies for the control root crop pests." Co-PI. \$199,710

Food and Agriculture Non-formal Education (AFRI Education and Workforce Development Program), 2022-2024 "AgroTek Innovation." Co-PI. \$645,846

Research and Extension Experiences for Undergraduates (AFRI Education and Workforce Development Program), 2021-2026 "Training and High-Impact Research Internships through Vermont Extension." PD. \$500,000

Partnership Grant Program (Northeast Sustainable Agriculture Research & Education), 2021-2023. "Field assessment of a novel behavioral disruptor for spotted wing Drosophila management in Northeastern berry crops." Co-PI. \$29,999

Research and Education Grant Program (Northeast Sustainable Agriculture Research & Education), 2020-2023. "Biological and Cultural Tactics for the Control of Wireworms in Root Crops." Co-PI. \$116,189

Research and Education Grant Program (Northeast Sustainable Agriculture Research & Education), 2019-2022. "Pre- and Post-Harvest Strategies for Leek Moth Control on Diversified Vegetable Farms." Co-PI. \$102,799

Research for Novel Approaches Grant Program (Northeast Sustainable Agriculture Research & Education), 2020-2023. "Attract-and-kill for sustainable striped cucumber beetle management." Co-PI. \$180,375

Professional Development Grant Program (Northeast Sustainable Agriculture Research & Education), 2020-2023. "Developing technical skills of Service Providers in the Northeast to Assist Farmers with Sustainable Hemp Production." Co-PI. \$185,370

Specialty Crop Block Grant Program (Vermont Agency of Agriculture, Food and Markets, USDA), 2020-2021. "Understanding the Risk Benefit of Brassica Cover Crops on Vegetable Farms in the Northeast." Key Personnel, \$47,584

Research and Education Grant Program (Northeast Sustainable Agriculture Research & Education), 2019-2022. "Biological Control of Corn Rootworm in Conventional and Organic Corn Production." Key Personnel. \$199,199

Specialty Crop Block Grant Program (Vermont Agency of Agriculture, Food and Markets, USDA), 2018-2020. "Using regionally adapted entomopathogenic nematodes as a biological control for Colorado potato beetle." Co-PI. \$40,563

Specialty Crop Block Grant Program (Vermont Agency of Agriculture, Food and Markets, USDA), 2017-2019. "Leek Moth Monitoring and Management Study." Co-PI. \$41,032

Partnership Grant Program (Northeast Sustainable Agriculture Research & Education), 2017-2018. "Application of regionally adapted nematodes for root maggot management. Co-PI. \$13,046

City Market Co-op Patronage Seedling Grant Program, 2017-2018. "Plugging a 'leek' in the local food system: Innovative strategies for managing the invasive leek moth." Co-PI. \$2,777

PUBLICATIONS

Lewins, S.A., & V. Izzo (in prep) Assessment of host preference and yield losses from the leek moth, *Acrolepiosis assectella*, pressure in onions (*Allium cepa*).

Lewins, S.A., Bruce, J., Darby, H.M. (in prep) Disease and Insect Pests of Industrial Hemp in the Northeastern U.S.

Horner C. E., C. Morse, N. Carpenter, K.L. Nordstrom, J.W. Faulkner, T. Mares, E. Kinnebrew, M. Caswell, V. Izzo, V.E. Méndez, **S.A. Lewins**, N. McCune. 2021. Cultivating Pedagogy for Transformative Learning: A Decade of Undergraduate Agroecology Education. *Frontiers in Sustainable Food Systems*, 5, pp. 412-430.

Calderwood, L., **S.A. Lewins**, H. Darby. 2015. Survey of Northeastern hop (*Humulus lupulus*) pests and their natural enemies. *Journal of Integrated Pest Management* 6(1): 18-32.

Moreno, C.R., **S.A. Lewins**, and P. Barbosa. 2010. Influence of relative abundance and taxonomic identity on the effectiveness of generalist predators as biological control agents. *Biological Control*, 52, pp. 96-103.

Neher, D. A., **S.A. Lewins**, T. R. Weicht and B. J. Darby. 2009. Microarthropod communities associated with biological soil crusts in the Colorado Plateau and Chihuahuan deserts. *Journal of Arid Environments*, 73, pp. 672-677.

SELECTED PRESENTATIONS

Lewins, S.A. & H. Darby. 2022. Cultural Practices to Consider in the Management of Insect Pests of Hemp. Entomological Society of America Eastern Branch Mtg. Philadelphia, PA.

V. Izzo and **S.A. Lewins**. 2021. Using biocontrol strategies for the control of pests in allium and sweet potatoes. New England Vegetable and Fruit Conference; Virtual.

Lewins, S.A., and V. Izzo. 2021. On PAR with pests: Participatory Action Research (PAR) and the promotion of ecological pest management. Entomological Society of America Annual Meeting; Denver, CO.

Lewins, S.A. 2021. An assessment of insect pests found in New England industrial hemp in 2020. Hemp Entomology in the Northeast, Symposium at Entomological Society of America Eastern Branch Meeting, Virtual.

Lewins, S.A. 2021 A survey of disease and insect pests found on Northeastern industrial hemp in 2020. University of Vermont Extension Industrial Hemp Conference, Virtual.

Lewins, S.A. and V. Izzo. 2019. Strategies and Opportunities in Leek Moth Management. New England Vegetable and Fruit Conference; Manchester, NH.

Izzo, V. and **S.A. Lewins**. 2019. Our onions are crying: Pre- and post-harvest tactics for the management of leek moth, *Acrolepiosis assectella*. Entomological Society of America Annual Meeting; St. Louis, MO.

Lewins, S.A. and V. Izzo, 2019. (Biological) Agents of Change: Managing Natural Enemies for Sustainable Pest Control. NOFA Vermont 37th Annual Winter Conference, Burlington VT.

Hazelrigg, A., V. Izzo, **S.A. Lewins**. 2019. Disease and Pest Problems. NOFA Vermont 37th Annual Winter Conference, Burlington VT.

Motyka, C. and **S. Lewins**. 2019. Hemp Pest Management. University of Vermont Extension Industrial Hemp Conference, Burlington, VT.

Lewins, S.A., and V. Izzo. 2018. Locally adapted entomopathogenic nematodes for long-term sustainable pest management in vegetable agroecosystems. Entomological Society of America Annual Meeting; Denver, CO.

Lewins, S.A. and V. Izzo, 2018. Getting more from your beneficial nematodes. NOFA Vermont 36th Annual Winter Conference, Burlington VT.

Lewins, S.A. 2018. Basics of pest ID and IPM. 9th Annual University of Vermont Extension Winter Hops Conference, Burlington, VT.

Izzo, V. and **S.A. Lewins**. 2017. Garlics and onions and leeks, oh no! Monitoring and management of the invasive leek moth, *Acrolepiopsis assectella*. Entomological Society of America Annual Meeting; Denver, CO.

Hazelrigg, A., V. Izzo, **S.A. Lewins**. 2017. Disease and Pest Problems. NOFA Vermont 35th Annual Winter Conference, Burlington VT.

Lewins, S.A., J. Cubins, L. Calderwood. 2017. Basics of pest ID and IPM. 8th Annual University of Vermont Extension Winter Hops Conference, Burlington, VT.

Lewins, S.A., V. Izzo. 2016. Developing Sustainable Pest Management tactics for the Invasive Leek Moth. NOFA Vermont 34th Annual Winter Conference, Burlington VT.

Lewins, S.A., V. Izzo, M. Seto. 2015. The leek moth invasion: A monitoring program detailing the current and potential distribution of leek moth within Vermont and New York. Entomological Society of America Annual Meeting; Minneapolis, MN.

Lewins, S.A., L. Calderwood. 2015. Vermont Hops Statewide Scouting and Integrated Pest Management Options. 6th Annual University of Vermont Extension Winter Hops Conference, Burlington, VT.

Calderwood, L., **S.A. Lewins**, C. Burke, H. Darby. 2014. What Hops in a Hopyard? 5th

Annual University of Vermont Extension Winter Hops Conference, Burlington, VT.

Darby, H., R. Madden, **S.A. Lewins**. 2013. Varietal Evaluations, Pests, Fertility, and Cover Crops in Vermont Hops. 4th Annual University of Vermont Extension Winter Hops Conference, Essex, VT.

Lewins, S.A., T.R. Weicht, D.A. Neher. 2008. The Microarthropod Community Associated with Desert Biological Crusts of the Colorado Plateau. Entomological Society of America Eastern Branch Annual Meeting; Syracuse, NY.

Chen, Y.H., **S.A. Lewins**, G.A. Langellotto. 2008. What value do forests have for pest control in agroecosystems? Entomological Society of America Annual Meeting; Reno NV.

Moreno, C.R., **S.A. Lewins**, P. Barbosa. 2008. The Influence of Relative Abundance and Taxonomic Identity on the Effectiveness of Generalist Predators as Biological Control Agents. Entomological Society of America Pacific Branch Annual Meeting; Napa, California.

Lewins, S.A., P. Barbosa. 2007. The Influence of Predator Species Richness on Prey Mortality: Implications to Conservation Biological Control. University of Vermont Department of Plant and Soil Science Seminar Series; Burlington, VT.

Lewins, S.A., P. Barbosa. 2006. The Influence of Predator Species Richness on Prey Mortality: Implications to Conservation Biological Control. University of Maryland Department of Entomology Colloquium Series; College Park, MD.

Lewins, S.A., C.R. Moreno, P. Barbosa. 2006. The Influence of Predator Species Richness on Prey Mortality: Implications to Conservation Biological Control. Entomological Society of America Eastern Branch Annual Meeting, Charlottesville, VA.

Moreno, C.R., **S.A. Lewins**, P. Barbosa. 2006. Do the numerically dominant species in an assemblage of generalist predators consume the most prey? Entomological Society of America Eastern Branch Annual Meeting; Charlottesville, VA.

Lewins, S.A., C.R. Moreno, P. Barbosa, A. Caldas. 2005. Analysis of the Predator Community Affecting Crucifer Herbivores. Entomological Society of America Eastern Branch Annual Meeting, Harrisburg, PA.

CERTIFICATIONS

Certified Pesticide Applicator, State of Vermont; Categories 1A & 10

OTHER PROFESSIONAL EXPERIENCE

*Fairbank's Museum and Planetarium, Board of Directors, Board Member
Randolph Union High School, Board of Directors, Chairperson
Orange Southwest Supervisory Union, Board of Directors, Board Member
Randolph Technical Career Center, Board of Directors, Board Member
Vermont Soccer Officials Association, Official
Vermont Soccer League, Official
Randolph Youth Soccer, Coach
University of Vermont Staff Council, Representative
University of Maryland Entomology Student Organization, President*