

Matthew J. Lundquist, Ph.D.

Curriculum Vitae

mjlundquist01@gmail.com | lundquistecology.com | github.com/lundquist-ecology-lab | YouTube

CURRENT ROLES

Associate Teaching Professor, Department of Marine and Environmental Sciences, College of Sciences, Northeastern University – New York City 2026–present
Chair, Urban Ecosystem Ecology Section, Ecological Society of America 2024–present
Speaker-Elect, Council of the Ecological Society of America 2026–present
Editorial Board Member, *Agricultural and Environmental Modelling*

PAST ROLES

Associate Professor of Biology and Ecology, Marymount Manhattan College, New York, NY 2018–2026
Chair, Department of Natural Sciences, Marymount Manhattan College 2023–2026

EDUCATION

Ph.D., Biological Science, Binghamton University 2018
M.S., Entomology, Michigan State University 2013
B.S., Biology, State University of New York College at Oneonta 2010
A.A., Liberal Arts, Hudson Valley Community College 2007

RESEARCH PUBLICATIONS

[†] Marymount Manhattan College student co-author

Lundquist MJ (in revision). Mind the gap: Quantifying vegetation-gap frequency and length along least-cost routes among urban green spaces. *Landscape and Urban Planning*.

Corman JR, et al. (including **Lundquist MJ**) (2026). Limno-STOICH: a comprehensive database linking the elemental content of organisms with inland, aquatic habitats. *Limnology and Oceanography Letters*, 11(2), e70105.

Hernandez JE[†], **Lundquist MJ** (2025). Limited diets of Eastern Blacknose Dace (*Rhinichthys atratulus* Hermann) within the highly urbanized Bronx River, New York, USA. *Urban Naturalist Notes*, No. 11.

Lundquist MJ, Lovejoy PC, Fay BG[†], Hernandez JE[†], Madrid M[†] (2025). Bug roads: Modeling the green space connectivity and pollinator habitat in a large city using open GIS data and tools. *Ecological Applications*, 35(7), e70128.

Shen M, et al. (including **Lundquist MJ**) (2024). FreshLanDiv: A global database of freshwater biodiversity across different land uses. *Global Ecology and Biogeography*, 33(12), e13917.

Lundquist MJ, Aguanon A (2024). Here and there: A novel hybrid remote/in-person college-level science lab model at a small primarily undergraduate institution. *Journal of College Science Teaching*, 53(3), 205–210.

Leri AC, Fassihi GE[†], **Lundquist MJ**, Khan M[†], Arguin ML (2024). Vertical stratification and seasonality of fecal indicator bacteria in New York City playground sandboxes. *Ecotoxicology and Environmental Safety*, 273, 116152.

Lundquist MJ, Scott EA[†] (2023). Patterns of aquatic insect biodiversity in the highly urbanized Bronx River, NY. *Northeastern Naturalist*, 30(2), 122–134.

Lundquist MJ, Weisend MR[†], Kenmore HH[†] (2022). Insect biodiversity in urban tree pit habitats. *Urban Forestry & Urban Greening*, 78, 127788.

Lundquist MJ, Zhu W (2019). Aquatic insect diversity in streams across a rural–urban land-use discontinuum. *Hydrobiologia*, 837, 15–30.

Lundquist MJ, Zhu W (2018). Aquatic insect functional diversity and nutrient content in urban streams in a medium-sized city. *Ecosphere*, 9(5), e02284.

PRESENTATIONS AND GUEST LECTURES

- Lundquist MJ** (2026). Mind the gap: Least-cost path analysis reveals potential stepping stones among green spaces. Ecological Society of America Annual Meeting, Salt Lake City, UT.
- Lundquist MJ** (2025). If they can make it here: The persistence and protection of native species in the big city. INSPIRE talk, Ecological Society of America Annual Meeting, Baltimore, MD.
- Lundquist MJ** (2024). Bug roads: Modeling green space connectivity in a large city. Ecological Society of America Annual Meeting, Long Beach, CA.
- Lundquist MJ** (2024). Aquatic insect biodiversity and trophic dynamics in the highly urbanized Bronx River. Invited seminar, Columbia University Seminars: Population Biology, May 7, 2024.
- Lewthwaite J, Croy JR, Dittenmore C, Ulrich J, Guzman LM, **Lundquist MJ** (2023). Trends in North American insect populations and diversity: recent findings and the importance of public engagement. Special panel discussion, Ecological Society of America Annual Meeting, Portland, OR.
- Lundquist MJ** (2023). Patterns of insect biodiversity in the highly urbanized Bronx River. Ecological Society of America Annual Meeting, Portland, OR.
- Lundquist MJ** (2021). The New York City Urban Ecosystem: Combining first-year immersion and place-based learning in an urban ecology context. Ecological Society of America Annual Meeting (remote).
- Lundquist MJ** (2019). What is this grad school thing? Guest lecture, Field Entomology, SUNY Oneonta Biological Field Station, Cooperstown, NY.
- Lundquist MJ** (2018). The effects of urbanization on insect food chains in streams in upstate NY. Marymount Manhattan College Division of Sciences speaker series, New York, NY.
- Lundquist MJ, Zhu W** (2017). Responses of aquatic insect assemblages to urbanization in streams in a medium sized city. Poster, Upper Susquehanna Watershed Forum, Binghamton University, Binghamton, NY; and Three Rivers Evolution Event, University of Pittsburgh, Pittsburgh, PA.
- Lundquist MJ, Zhu W** (2017). The effects of urbanization on allochthonous and autochthonous energy sources in headwater streams in Greater Binghamton, NY. Poster, Mid-Atlantic Ecological Society of America meeting, Stockton University, Galloway, NJ.
- Lundquist MJ, Zhu W** (2017). Allochthonous vs autochthonous energy sources in urban headwater streams. Binghamton Graduate Student Organization symposium, Binghamton, NY.
- Lundquist MJ, Zhu W** (2016). Insect community composition is affected by urbanization in headwater streams in Binghamton, NY. Binghamton Graduate Student Organization symposium, Binghamton, NY.
- Lundquist MJ, Zhu W** (2015). The effects of urbanization on aquatic insect communities in low order streams in Binghamton, NY. Ecological Society of America Annual Meeting, Baltimore, MD.
- Lundquist MJ, Zhu W** (2015). The effects of urbanization on stream insect communities in Greater Binghamton. BGSO graduate student symposium, Binghamton University, Binghamton, NY.
- Lundquist MJ, Walker ED, Kaufman MG** (2013). The role of nitrogen in mosquito growth and competition between *Aedes japonicus* and *Aedes triseriatus*. Michigan Mosquito Control Association Annual Meeting, Bay City, MI.
- Lundquist MJ, Walker ED, Kaufman MG** (2012). Nitrogen dynamics in *Aedes triseriatus* and *Aedes japonicus* larval habitats and their relation to larval growth. Society of Vector Ecologists Annual Meeting, St. Augustine, FL.
- Lundquist MJ, Walker ED, Kaufman MG** (2012). Growing up fast: The ins and outs of why *Aedes japonicus* may exploit some larval habitats better than *Aedes triseriatus*. Michigan Mosquito Control Association Annual Meeting, Troy, MI.
- Lundquist MJ, Van Tran T, Huang ZY** (2011). *Nosema ceranae* decrease survival of caged honey bees. Poster, Graduate Student Research Day, Michigan State University.
- Lundquist MJ, Van Tran T, Huang ZY** (2010). Mixed infections of *Nosema apis* and *Nosema ceranae* decrease survival of caged honey bees. Poster, Entomological Society of America Annual Meeting, San Diego, CA.
- Lundquist MJ, Sposki L** (2010). Regression analysis of endangered species in the United States. Poster, SUNY Oneonta student research day.

Lundquist MJ (2010). Observation of honey bee (*Apis mellifera* L.) flower choice of native yellow trout lily (*Erythronium americanum* Ker Gawl.) and non-native garlic mustard (*Alliaria petiolata* (M. Bieb.)). Poster, SUNY Oneonta student research day.

TEACHING

Northeastern University – New York City

- Fundamentals of Biostatistics
- Resilient NYC: Climate, Ecology, and Human Health (*course created*)

Marymount Manhattan College

- Biostatistics, including honors and online sections (*course created*)
- Conservation Biology, including honors and online sections
- Ecology, including honors
- Environmental Science, including honors
- General Biology II, lecture and labs
- New York City: Urban Ecosystem

Binghamton University

- Instructor of record: Zoology
- Teaching assistant: Entomology, Zoology, Introductory Biology, Biostatistics with R, Ecology

STUDENT MENTORING

Marymount Manhattan College

Brianna Fay (2023–2026). Bug Roads: Modeling the potential dispersal routes of hymenopteran pollinators in New York City. Poster, William Paterson undergraduate research conference, Paterson, NJ, 2024. *Peer-reviewed paper co-author.*

Juliet Hernandez (2022–2026). The trophic ecology of blacknose dace (*Rhinichthys atratulus*) in the Bronx River. Honors Day 2024 and William Paterson undergraduate research conference, 2024. Assessment of insect biomass and food webs in the Bronx River. Honors Day 2023 and William Paterson undergraduate research conference, 2023. Winner of the Marymount Manhattan Alumni Association Award. *Peer-reviewed paper co-author.*

Elizabeth Michael (2024–2025). Assessing cooling potential of small parks in New York City using high-resolution LiDAR tree canopy images.

Michelle Choi (2024–present, post-baccalaureate scholar). Developing a machine vision model to track pollinator activity in urban gardens.

Isabelle Fehr (2023, post-baccalaureate scholar). DNA barcoding of aquatic insects.

Emily Westpfal (2023). Insect and fish interactions in the Bronx River.

Victoria Perez (2022). Heterogeneity of caddisfly community composition within the highly urbanized Bronx River. William Paterson undergraduate research conference, Paterson, NJ, 2022.

Elizabeth Scott (2020–2022). Aquatic insect biodiversity along an urban–rural gradient in the Bronx River watershed (honors thesis). Assessment of Lowerre Family Terrace and its potential as an intensive green roof; poster, Honors Day 2021 and Ecological Society of America 2021 (remote). Winner of the Marymount Manhattan Alumni Association Award. *Peer-reviewed paper co-author.*

Martha Madrid (2020–2021). Using GIS to assess the relationship between tourism and green space distribution in New York City. Poster, Ecological Society of America 2021 (remote).

Hope Kenmore (2020). Insect biodiversity survey of tree beds in New York City, NY, USA. Poster presented virtually to the MMC community (conference travel cancelled due to COVID-19). *Peer-reviewed paper co-author.*

Madison Weisend (2019–2020). Exploring water scarcity through the dynamics of social power: The case of the Thar Desert; poster, Mid-Atlantic SENCER conference, New York, NY, 2019. Insect biodiversity survey of tree beds in New York City, NY, USA. *Peer-reviewed paper co-author.*

Recruiting assistants, Department of Natural Sciences: Dayanara Hidalgo Ambrosi (2022), Elizabeth Scott (2020–2021)

First-year experience peer leaders: Jade Johnsamson (2020–2022), Madison Weisend (2019–2020), Rachel Swedberg (2018–2019)

Binghamton University

Erika Kalgren (Spring 2016, independent study). The effects of road salt on aquatic invertebrates. Undergraduate research grant award winner.

Sophia Osorio (Fall 2016 – Spring 2017, independent study). The effects of urbanization on litter decomposition in submerged litter bags in Greater Binghamton streams. Undergraduate research grant award winner.

Sabrina Jorge (Fall 2016, independent study). Density of algal cells in periphyton from urban streams.

Connor Daniel (Summer 2014 – Spring 2015, HHMI STEM Interdisciplinary Research Program scholar). Microbial metal cycling and bioaccumulation in roadside soils and streams.

Herut Tekilu (Summer 2015, Bridges to the Baccalaureate scholar). Contrasting litter inputs and debris dams between urban and rural stream sites.

Dejoghn Llamas (Summer 2016, Bridges to the Baccalaureate scholar). The effects of urbanization on allochthonous and autochthonous energy sources in headwater streams in Greater Binghamton, NY.

GRANTS AND AWARDS

MMC Faculty Scholarship Award	2020–21, 2021–22, 2022–23, 2023–24
Sr. Colette Mahoney Natural Sciences Research Fund Award	2019–20, 2022–23
Center for Integrated Watershed Study Travel Award	2018
Binghamton University Teaching Excellence Award – nominated	2017–18
Graduate Student Poster Award – second place, Mid-Atlantic ESA	2017
Binghamton University Sustainable Communities TAE grant	2015
Society of Vector Ecology Student Presenter Stipend	2012
Hutson Research Grant, Department of Entomology, Michigan State University	2012
Hutson Travel Grant, Department of Entomology, Michigan State University	2010, 2011, 2012

SERVICE

Marymount Manhattan College

Recruiter for Natural Sciences	2020–2023
Ad hoc Academic Review Committee	2019–2022, 2024–present
Curriculum Committee	2020–2023
Environmental Sustainability SPIN Committee	2018–2019
Moderator, panel on environmental sustainability, 6th Annual MMC Leadership Summit	2020

Professional

Judge, William Paterson University Undergraduate Research Symposium	2022–2024
Judge, Joan Ehrenfeld Award for Best Student Presentation in Urban Ecology, ESA	2020, 2021

Scientific reviewer: *Science, Hydrobiologia, Community Ecology, The Great Lakes Entomologist, International Journal of Odonatology, The Canadian Entomologist*

OUTREACH

Bronx River Alliance EELS mentor	2022–2023
Ask a Scientist, Binghamton Press and Sun Bulletin	February 2017
Aquatic insect collecting and stream health. Sierra Club Water Sentinels meeting, Binghamton University	2014

Michigan Mosquito Control table, Lansing Earth Day Celebration

2011, 2012

PROFESSIONAL TRAINING AND EXPERIENCE

HHMI mentor training, SUNY Binghamton

Summer 2014

Lab Assistant, Griffin Lab West Nile Laboratory, Wadsworth Center, NYS Department of Health (P.I. Laura Kramer)

2010

Residential Advisor, Matteson Hall, SUNY Oneonta

2008–2010

PROFESSIONAL MEMBERSHIPS

Ecological Society of America · Entomological Society of America · Society for Freshwater Science