

CURRICULUM VITAE
JASON M. GLEDITSCH

Oberlin College, Biology Department
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EDUCATION:

- Ph.D.** – Natural Resources and Environmental Science, University of Illinois 2019
Dissertation Title: Avian ecology and rapid morphological change in a novel plant-frugivore system
- M.S.** – Ecology, Pennsylvania State University 2012
Thesis Title: Living with aliens: the effect of an invasive shrub on avian nesting ecology
- B.S.** – Biology, Pennsylvania State University 2009

PROFESSIONAL APPOINTMENTS:

- Visiting Assistant Professor* – Biology Department, Oberlin College 2023-present
- Postdoctoral Fellow* – Department of Biology, Temple University 2020-2023

PUBLICATIONS: († mentored students; Google Scholar: h-index = 8, citations = 534)

Peer-reviewed Manuscripts: (total = 13 articles)

- Swartz, T. M[†], J. M. Gleditsch, and J. E. Behm. (2023) A functional trait approach reveals the effects of landscape context on ecosystem services provided by urban birds. **Landscape and Urban Planning** 234:104724.
- Gleditsch, J. M., J. E. Behm, J. Ellers, W. A. M. Jesse, and M. H. Helmus (2023) Contemporizing island biogeography theory with anthropogenic drivers of species richness. **Global Ecology and Biogeography**, 32(2):233-249.
- Vizentin-Bugoni, J., J. H. Sperry, C. E. Tarwater, J. T. Foster, D. R. Drake, S. B. Case, J. M. Gleditsch, A. M. Hruska, R. C. Wilcox, and J. P. Kelley (2022) Mechanisms underlying interaction frequencies and robustness of a novel seed dispersal network in Hawaii. **Proceedings of the Royal Society B**, 289(1982), 20221490.
- Behm, J. E., N. Bélouard, J. M. Gleditsch, P. M. Phillips[†], and T. M. Swartz[†] (2022) Trait-based approaches for understanding how biodiversity generates sustainable benefits in vegetated green infrastructure. **Current Opinion in Environmental Sustainability**, 57:101204.
- Vizentin-Bugoni, J., J. H. Sperry, J. P. Kelley, J. M. Gleditsch, J. T. Foster, D. R. Drake, A. M. Hruska, R. C. Wilcox, S. B. Case, and C. E. Tarwater (2021) Ecological correlates of species' roles in highly invaded seed dispersal networks. **PNAS**, 118(4):e2009532118.
- Gleditsch, J. M. and J. H. Sperry (2020) Ecomorphological relationships and invasion history of non-native terrestrial bird species on O'ahu, Hawai'i, suggest ecological fitting during novel community assembly. **Ecology and Evolution**, 10(21):12157-12169.

Gleditsch, J. M. and J. H. Sperry (2019) Rapid morphological change of non-native frugivores on the Hawaiian island of O‘ahu. **Evolution**. doi:10.1111/evo.13744
*Press Coverage in NewScientist

Vizentin-Bugoni, J., C. E. Tarwater, J. T. Foster, D. R. Drake, J. M. Gleditsch, A. M. Hruska, J. P. Kelley, J. H. Sperry (2019) Structure, spatial dynamics, and stability of novel mutualistic networks in Hawai‘i. **Science**, 364(6435):78-82.
*Press Coverage in NewsWeek, Forbes, Le Monde, Phys.Org, 2 more

Gleditsch, J. M., A. M. Hruska, and J. T. Foster (2017) Connecting Resource Tracking by Frugivores to Temporal Variation in Seed Dispersal Networks. **Frontiers in Ecology and Evolution** 5:98.

Gleditsch, J. M. and T. A. Carlo (2014) Living with aliens: the effect of invasive shrub honeysuckle on avian nesting. **PlosOne** 9(9):e107120.

Carlo, T. A., G. García, D. Martínez, J. M. Gleditsch, and J. M. Morales (2013) Where seeds go when they go far? Integrating distance with directionality of avian-generated seed shadows in heterogeneous landscapes. **Ecology** 94:301-307

Carlo, T. A., R. A. Perez-Rivera, and J. M. Gleditsch (2012) Folivory by a tropical tanager: species of plant used and the relationship between leaf consumption and fruit abundance. **Journal of Field Ornithology** 83(1):11-16.

Gleditsch, J. M. and T. A. Carlo (2011) Fruit quantity of invasive shrubs predicts the abundance of common native avian frugivores in central Pennsylvania. **Diversity and Distributions** 17:244-253.

*Press Coverage in ScienceDaily, Phys.Org, Altoona Mirror, 10+ more

Book Contributions: (total = 3 chapters)

Gleditsch, J. M., K. Ohman, C. Marcheli, A. Conn, A. E. Dunham, and D. M. Brooks (2020). Northern Red Bishop (*Euplectes franciscanus* Iserl 1789). In: *Invasive Birds: Global Trends and Impacts* (eds. C. T. Downs and L. A. Hart), CABI, Wallingford, UK.

*Book Awarded The Wildlife Society’s Wildlife Publication Award

Gleditsch, J. M. and D. M. Brooks (2020) Scaly-breasted Munia (*Lonchura punctulata* Linnaeus 1758). In: *Invasive Birds: Global Trends and Impacts* (eds. C. T. Downs and L. A. Hart), CABI, Wallingford, UK.

* Book Awarded The Wildlife Society’s Wildlife Publication Award

Gleditsch, J. M. (2017) The role of invasive plant species in urban avian conservation. In: *Ecology and conservation of birds in urban environments* (eds. E. Murgui and M. Hedblom), Springer.

In Preparation: (drafts available upon request; total = 6 articles)

Gleditsch, J. M., J. E. Behm, and M. H. Helmus (*in prep*) The great acceleration of island saturation by species introductions in the Anthropocene has altered species-area relationships. *Intended for Ecology Letters*.

*Preprint DOI: 10.1101/2023.01.10.523426

Daniel, W. M., Sofaer, H. R., Jarnevich, C. S., Erickson, R. A., ..., J. M. Gleditsch, ..., D. Lieurance (*in prep*) Vertebrates in Trade Pose High Invasion Risk to the United States. *Intended for Science*.

- Gleditsch, J. M., J. Falciani[†], and J. E. Behm (*in prep*) Quantifying Caribbean shipping network properties: implications for species introductions in the Anthropocene. *Intended for **Anthropocene**.*
- Gleditsch, J. M., J. P. Kelley, J. T. Foster, D. R. Drake, A. M. Hruska, C. E. Tarwater, R. Wilcox, and J. H. Sperry (*in prep*) Drivers of avian community composition and habitat relationships of native and non-native birds in Hawaiian forests. *Intended for **Diversity and Distributions**.*
- Gleditsch, J. M., E. M. Ditmar, J. P. Kelley, C. E. Tarwater, J. T. Foster, D. R. Drake, A. M. Hruska, and J. H. Sperry (*in prep*) Fruit preference of non-native Hawaiian birds and its implications for forest conservation. *Intended for **Biological Invasions**.*
- Gleditsch, J. M., D. R. Drake, A. M. Hruska, and J. H. Sperry (*in prep*) Fruit toughness and its relation to bird-mediated seed dispersal. *Intended for **Biotropica**.*

AWARDS AND GRANTS: (amounts in USD; total awarded = \$149,395.58)

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| <i>The Science Support Program</i> , co-PI, \$143,155.18
Serraphilheira Institute (Brazil)
<i>Title:</i> Seeds of change: To what extent seed dispersal interactions can help tropical plant communities cope with climate change? | 2023 |
| <i>Educational Opportunity Travel Grant</i> , \$300.00
Dep. of Nat. Res. and Env. Sci., University of Illinois Urbana-Champaign | 2018 |
| <i>IOC Travel Award</i> , \$500.00
American Ornithological Society | 2018 |
| <i>Travel Award</i> , \$400.00
American Ornithological Society | 2018 |
| <i>Dissertation Travel Grant</i> , \$4,740.40
Graduate College, University of Illinois Urbana-Champaign
<i>Title:</i> Evolution of fruit hardness as a way for plants to select animal seed dispersers | 2017 |
| <i>Educational Opportunity Travel Grant</i> , \$300.00
Dep. of Nat. Res. and Env. Sci., University of Illinois Urbana-Champaign | 2016 |

RESEARCH EXPERIENCE:

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| <i>Postdoctoral Fellow</i> – Temple University, Dr. Jocelyn Behm
Research focused on the macroecological patterns of herpetofauna in the Caribbean bioregion in relation to human disturbance and species introduction | 2020-present |
| <i>Taxon Expert</i> – USGS National Horizon Scan
Provided rapid risk assessments for bird species in the pet trade | 2021-present |
| <i>Graduate Researcher</i> – University of Illinois, Dr. Jinelle Sperry
Research focused on the rapid evolution of frugivorous birds introduced to the Hawaiian island of Oahu and seed dispersal and avian ecology on Oahu | 2014-2019 |

- Banding Technician* – Powdermill Avian Research Center 2013-2014
Trapped and banded birds using mist-nets and potter traps, collected blood samples from birds to measure metabolites in plasma
- Research Technician* – Powdermill Nature Reserve 2013
Collected stream macro-invertebrate samples for stream health assessments
- Research Assist. / Lab Manager* – Penn State University, Dr. Tomas Carlo 2009-2012
Research focused on seed dispersal, plant physiology, and community ecology employing both experimental and observational techniques
- Graduate Researcher* – Penn State University, Dr. Tomas Carlo 2010-2012
Research focused on the effects of invasive shrubs on avian nesting ecology including predation, parental behavior, and nestling development
- Undergraduate Researcher* – Penn State University, Dr. Tomas Carlo 2008-2010
Research focused on the effects of invasive fruiting shrubs on avian population distributions and seed dispersal networks in central Pennsylvania
- Lab Technician* – Ashland Chemical’s R&D laboratory in Dublin, Ohio 2006-2007
Performed wet property tests on vinyl ester resins

TEACHING EXPERIENCE: (*instructor; †course designer)

Oberlin College, Oberlin, Ohio, USA

- *†*Ornithology* (BIOL 309), Instructor Fall 2023
Instructed and designed a course on avian biology, evolution, and ecology with a field lab component.
- **Genetics, Evolution, and Ecology* (BIOL 200), Lab Instructor Fall 2023
Instructed a lab section that showed students how scientists collect and use data to study topics such as phylogenies, evolution, population ecology, community ecology, and ecosystems.

Temple University, Philadelphia, Pennsylvania, USA

- Guest Lecturer*, “Chapter 15: Mutualisms” Spring, Fall 2022
Lectured in undergraduate class, Principles of Ecology, on plant reproductive mutualism with a real-world example based on my research in Hawai’i
- Guest Lecturer*, “Working with and analyzing data: an example” 2020
Lectured in a graduate-level statistics course on how to handle data sets with the R statistical software and how to analyze data using a real data example

University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois, USA

- *†*Upland Habitat Techniques* (NRES 285 UHT), Instructor 2018
Instructed and co-designed a field-based course to teach students various methods to measure habitat for wildlife management and conservation purposes
- Introduction to NRES* (NRES 102), Teaching Assistant 2016
Graded and helped tutor students for an online introductory class for non-majors about the basic concepts of natural resources and environmental sciences

- Penn State University**, University Park, Pennsylvania, USA
Ecotoxicology (BIOL 415), Teaching Assistant 2011
 Helped teach students through one-on-one tutoring, plan class activities, and grading for an upper- and graduate-level course about ecotoxicology centered on toxins behavior in the environment and affect environmental and human health.
- **Basic Concepts and Biodiversity* (BIOL 110), Lab Instructor 2010
 Instructed two lab sections that covered the hierarchy and organization of life and introductory cellular biology, genetic, physiological, and ecological concepts.
- Penn State University: Erie, The Behrend College**, Erie, Pennsylvania, USA
 Tutored students for the Biology and Chemistry Core Courses for majors 2007-2008

PROFESSIONAL SERVICE:

- Temple University Postdoctoral Association**
 Vice President 2021-present
- Temple University, College of Science and Technology**
 Diversity, Equity, and Inclusion Committee Member 2022-present
- Guest Editor** – *Frontiers in Bird Science* 2023-present
 Special issue: *Birds as Seed Dispersers*
- Reviewer of Manuscripts** (18 different journals)
Selected journals: Global Change Biology, Ecology Letters, Global Ecology and Biogeography, Biological Invasions, Ecosphere, Biotropica, Biological Reviews, Frontiers in Eco. and Evo., Wildlife Society Bulletin, J. Field Ornithol., Plant Ecology, Urban Ecosystems

SELECTED PRESENTATIONS:*Invited Speaker:*

- UIUC Student Chapter of the Wildlife Society 2019
 “Species invasions in a community and evolutionary ecology context”
- Old Dominion University, Walters Lab 2012
 “Relationships between birds and invasive plants: what does it mean for avian ecology and ecosystem functions”

Contributed Presentations:

- International Ornithological Congress, 2018
 “Ecomorphology of the introduced avian frugivores on the Hawaiian Island of Oahu and how it relates to rapid morphological change”
 *Also presented at the 2018 American Ornithological Society Conference
- North American Ornithological Conference 2016
 “Rapid evolutionary change of introduced forest birds on the Hawaiian island of Oahu”

Association of Tropical Biology and Conservation Conference 2015
 “The bird community composition and the factors that influence the distribution of bird species in Oahu forests”

Poster Presentations:

American Ornithologists Union/Coopers Ornithological Society Conference 2013
 “Living with aliens: the effects of invasive shrub honeysuckles on avian nesting ecology”

5th International Frugivory and Seed Dispersal Symposium 2010
 “Fruit quantity of invasive shrubs predicts the abundance of common native avian frugivores in central Pennsylvania”
 *Also presented at the 2010 Ecological Society of America Annual Meeting

WORKSHOPS:

Frugivory and Seed Dispersal on Islands – Invited Scholar 2016
 Synthesis of the current knowledge of frugivory and seed dispersal on islands.

Schreyer Institute Penn State Course in College Teaching 2010-2011
 A course designed on applying effective principles of course design and planning, the integration of teaching and assessment strategies to enhance student learning and reflect on and articulate personal beliefs and practices about teaching and learning by referring to their own teaching experiences.

OUTREACH:

Letters to a Pre-Scientist 2022-2023
 Exchanged letters with a young student scientist to talk about what it is like to be a scientist and answer questions that they had about careers in science.

Banding Demonstrations

Conducted public presentations about mist netting and avian ecology
 Allerton Park and Retreat Center 2017
 Hawaii VINE Project 2015-2017
 Powdermill Avian Research Center 2013-2014
 Penn State Arboretum 2010

Avian Ecology and Seed Dispersal Presentations

Conducted public presentations about avian ecology and seed dispersal to elementary school aged kids and the general public
 Hawaii VINE Project 2015-2017
 Powdermill Avian Research Center 2013-2014

TECHNICAL PROFICIENCIES:

Field techniques:

bird trapping, banding, blood sampling, and measuring; population surveys; telemetry; stable isotope labeling; phenology surveys; habitat measuring; small mammal trapping; plant censusing, measurements, experimentation, and cultivation

Statistical methods:

Generalized linear, hierarchical, and n-mixture models; multivariate analyses;
information-based inference; population modeling

Software:

R, SAS, Python, and SQL programming languages; Google Earth Engine; ArcGIS

LINKS:

Personal Website:

ecogled.wixsite.com/site

Google Scholar:

scholar.google.com/citations?user=p3Hs6UoAAAAJ&hl

ResearchGate:

www.researchgate.net/profile/Jason-Gleditsch
