

JACQUELYN LEE FITZGERALD

Chicago Botanic Garden
Plant Conservation Science Center
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EDUCATION

- 2019- **PhD Candidate**, Plant Biology and Conservation
Northwestern University, Evanston, IL, USA
Chicago Botanic Garden, Glencoe, IL, USA
Advisor: Dr. Paul J CaraDonna
- 2016 **B.S., Biological Sciences**
North Carolina State University, Raleigh, NC, USA
Concentration in Evolution, Ecology, and Conservation

RESEARCH APPOINTMENTS

- 2020-24 **Principal Investigator**
Rocky Mountain Biological Laboratory
Gothic, CO, USA
- 2019-24 **Graduate Research Fellow** (NSF-GRFP)
National Science Foundation

PUBLICATIONS

Refereed journal articles

- 2024 **Fitzgerald, J.L.**, J.E. Ogilvie, P.J. CaraDonna. *Intraspecific body size variation across distributional moments reveals trait filtering processes.* Journal of Animal Ecology, special issue on intraspecific variation in evolution and ecology.
- 2022 **Fitzgerald, J.L.**, J.E. Ogilvie, P.J. CaraDonna. 2022. *Ecological drivers and consequences of bumble bee body size variation.* Environmental Entomology, 51, no 6: 1055-1068.

- 2021 **Fitzgerald, J.L.**, K.L. Stuble, L.M. Nichols, S.E. Diamond, T.R. Wentworth, S.L. Pelini, N.J. Gotelli, N.J. Sanders, R.R. Dunn, CA. Penick. 2021. *Abundance of spring- and winter-active arthropods declines with warming*. Ecosphere, 12, no. 4: e03473.
- 2020 Pinilla-Gallego, M.S., E.E. Williams, A. Davies, **J.L. Fitzgerald**, S. McArt, R.E. Irwin. 2020. *Within-colony transmission of microsporidian and trypanosomatid parasites in honey bee and bumble bee colonies*. Environmental Entomology, 49, no. 6: 1393-1401.
- 2019 Beasley, D.E., **J.L. Fitzgerald**, A. Fowler, K. Keleher, M.M. Lopez-Urbe, S.D. Frank, D.R. Tarp, R.R. Dunn. *Do Bee Wings Adapt for Flight in Urban Environments?* 2019. Southeastern Naturalist , 18, no. 2:183–191

Manuscripts in preparation

Fitzgerald, J.L., J.E. Ogilvie, P.J. CaraDonna. *Do morphological integration and trait scaling influence foraging specialization in bumble bees?* [writing phase]

Fitzgerald, J.L., J.E. Ogilvie, P.J. CaraDonna, *Expansion and packing of trait-driven niche space in subalpine bumble bees*. [analysis phase]

Fitzgerald, J.L., *The Near Future of Field Notes*. [writing phase]

Godfredsen, E.B., et al, including **J.L. Fitzgerald**. *Demographic consequences of phenological shifts*. [writing phase]

Schenker, O.J. *, **J.L. Fitzgerald**, K.C. Arrowsmith. *Allometric scaling and variation in proboscis length across Rocky Mountain bumble bees (Bombus spp.)*. [writing phase]

* = undergraduate student

GRANTS, FELLOWSHIPS, & AWARDS (total = \$162,186)

2024	Theodore Roosevelt Memorial Research Grant	\$1,000
	Rocky Mountain Biological Laboratory Fellowship Enderlein Fund	\$800
	Northwestern University Plant Biology and Conservation Research Award	\$1,650
2023	Rocky Mountain Biological Laboratory Fellowship Hunter Endowment	\$1,450
	Northwestern University Plant Biology and Conservation Research Award	\$900
2022	Lewis and Clark Fund for Exploration and Field Research	\$4,800
	Rocky Mountain Biological Laboratory Fellowship Hunter Endowment	\$1,200
	Northwestern University Plant Biology and Conservation Research Award	\$750
	Colorado Mountain Club Foundation	\$500
2021	Rocky Mountain Biological Laboratory Fellowship Snyder Endowment	\$1,500
	Northwestern University Plant Biology and Conservation Research Award	\$1,200

	American Alpine Club Research Grant	\$750
	Northwestern University Data Visualization Contest (1 st place)	\$250
2020	Rocky Mountain Biological Laboratory Fellowship Hunter Endowment	\$1,200
2019	National Science Foundation Graduate Research Fellowship Award	\$138,000
2015	National Science Foundation / Society for the Study of Evolution Travel Grant	\$2,256
	Atlantic Coast Conference Inter-Institutional Academic Collaborative Fellowship	\$2,980
2014	North Carolina State University Undergraduate Research Award	\$1,000
2013	Gamma Sigma Delta recognition of Outstanding Academic Achievement Sigma Xi Undergraduate Research Award	

CONFERENCE PRESENTATIONS

Contributed talks

- 2024 **Fitzgerald, J.L.**, J.E. Ogilvie, P.J. CaraDonna. *Trait scaling and foraging in bumble bees*. Entomological Society of America Annual Meeting, Phoenix, AZ, USA.
* 1st place Student Competition for the President's Prize, Graduate SysEB: Morphology and Phylogenetics
- 2023 **Fitzgerald, J.L.**, P.J. CaraDonna. *Intraspecific variation of thermal tolerance in bumble bees*. Ecological Society of America Annual Meeting, Portland, OR, USA.
- 2022 **Fitzgerald, J.L.**, J.E. Ogilvie, P.J. CaraDonna. *Drivers and Consequences of Bumble Bee Body Size Variation*. Ecological Society of America Annual Meeting, Montréal, Québec, CA.
- 2016 **Fitzgerald, J.L.**, M. Lopez-Uribe, D. Beasley, D. Tarpy. *Morphometric Wing Analysis of Urban Bees*. Southern Appalachian Honeybee Research Consortium, Clemson, SC, USA.
- 2015 **Fitzgerald, J.L.**, T. Wentworth, C. Penick, K. Stuble, R. Dunn. *Seasonal Effects of Climate Warming on Forest-Floor Arthropod Communities*. Association of Southeastern Biologists Annual Meeting, Chattanooga, TN, USA.

Posters

- 2021 **Fitzgerald, J.L.**, J.E. Ogilvie, P.J. CaraDonna. *Intraspecific body size variation in subalpine bumble bees*. Ecological Society of America Annual Meeting, Virtual.
- 2015 **Fitzgerald, J.L.**, T. Wentworth, C. Penick, K. Stuble, R. Dunn. *Seasonal Effects of Climate Warming on Forest-Floor Arthropod Communities*. Evolution Annual Meeting, Guarujá, São Paulo, Brazil.

- 2014 **Fitzgerald, J.L.**, R. Wong. *Visualizing the expression of brain aromatase in Zebrafish: Identifying brain regions associated with estrogenic endocrine disruption*. W. M. Keck Center for Behavioral Biology Symposium, Raleigh, NC.
- 2013 **Fitzgerald, J.L.**, C. Bachman, K. Henkel, and G. Jou. *Species adaptation to environmental stressors*. NC State College of Agriculture and Life Sciences Undergraduate Research Symposium, Raleigh, NC.

TEACHING

Instructor

2022-23 *Analytical Toolkit for Ecologists* (PBC 470/499), Northwestern University

Guest Lecture

- 2024 "Ecological Responses to Climate Change," *Critical Topics in Ecology and Conservation* (PBC 451), Northwestern University
- 2022 "Evolution of Pollination," *Pollination Ecology* (BIOL_SCI 101), Northwestern University
- 2022 "Pollinators and Climate Change," *Pollination Ecology* (BIOL_SCI 101), Northwestern University
- 2022 "Bumble Bees and Climate Change," *Critical Topics in Ecology and Conservation* (PBC 451), Northwestern University

Teaching Assistant

- 2025 *Population & Community Ecology* (BIO 349/PBC 402), Northwestern University
- 2020 *Evolutionary Processes* (BIO 342), Northwestern University
- 2016 *Ecology* (BIO 360), North Carolina State University

MENTORING

Undergraduate research advisor

- 2024 Olivia Schenker, Northwestern University & Rocky Mountain Biological Laboratory
- 2023 Hannah Burke, Florida State University & Rocky Mountain Biological Laboratory
- 2022-23 Brayden Saunders, Lake Forest College & Rocky Mountain Biological Laboratory

High school research advisor

- 2023 Megan Li, Hockaday School & Rocky Mountain Biological Laboratory
- 2023 Savannah Chun, Hockaday School & Rocky Mountain Biological Laboratory

PROFESSIONAL SERVICE & LEADERSHIP

- 2022-24 Graduate Student Coordinator, Rocky Mountain Biological Laboratory
- 2021-23 Graduate Student Representative to the Science Department, Chicago Botanic Garden
- 2020-21 Graduate Mentor, NSF-GRFP workshop, Botanical Society of America
- 2019- Manuscript reviewer (* = multiple assignments)
*Global Change Biology**, *Ecology**, *Functional Ecology**, *Journal of Animal Ecology**, *Journal of Pollination Biology**, *Ecology Letters*, *Journal of Ecology*, *Oikos*, *Ecosphere*, *Oecologia*, *Plant Biology*, *Western North American Naturalist*
- 2016 Member, College Advisory Council, North Carolina Museum of Art

PROFESSIONAL DEVELOPMENT

- 2024 Workshop, *Integrating Theory and Data in Plant Pollinator Interactions*, Rocky Mountain Biological Laboratory, Gothic, CO, USA
- 2024 Workshop, *Communicating Science*, National Institute for Theory and Mathematics in Biology, Chicago, IL, USA
- 2020 Workshop, *Public Writing Workshop*. Center for Civic Engagement, Northwestern University, Evanston, IL, USA
- 2019 Workshop, *Bee Diversity and Identification in North Carolina*, North Carolina State University, Raleigh, NC, USA
- 2017 Workshop, *Storytelling for Science Communication*, Story Collider, Raleigh, NC, USA.
- 2017 Workshop, *Elements of Visualization Design*, North Carolina State University, Raleigh, NC, USA.

DIVERSITY, EQUITY, & INCLUSION

- 2024 Attendee, *Centering Identities in STEM*, Searle Center for Advancing Learning and Teaching at Northwestern University
- 2022-24 Organizer, *RMBL Buddies Mentoring Program*, Rocky Mountain Biological Laboratory
- 2024 Attendee, *Identity Based Field Safety Training*, Rocky Mountain Biological Laboratory
- 2023 Organizer, *Inclusive Mentorship Training*, Rocky Mountain Biological Laboratory
- 2023 Attendee, *Entering Mentoring: Mentoring Up + Down (3-day training)*, Northwestern University Graduate School
- 2022 Organizer, *Entering Graduate School Discussion Panel*, Rocky Mountain Biological Laboratory

SELECT SCIENCE COMMUNICATION & OUTREACH

2022-24 Expert Hike Leader, Wildflower Festival, Crested Butte, CO, USA

2018-24 Program on Bees and Pollination

1. sustainNU, Evanston, IL, USA 2024
2. Amigos International, Gothic, CO, 2022
3. Citizens Climate Lobby Wildlife Action Team, Virtual, 2022
4. Crested Butte Land Trust, Rocky Mountain Biological Laboratory, Gothic, CO, 2021
5. College First, Chicago Botanic Garden, Glencoe, IL, 2020
6. Appalachian State University Academy at Middle Fork, Walkertown, NC, 2019
7. Erwin Montessori School, Greensboro, NC, 2018

2015-18 Presenter, North Carolina Museum of Natural Sciences

1. *Pollinator Booth*. Prairie Ridge Ecostation, Raleigh, NC, 2018. ~300 attendees
2. *Carnivorous Plants of North Carolina*. BugFest, North Carolina Museum of Natural Sciences, Raleigh, NC, 2017 ~35,000 attendees
3. *The Physics of Ant Colonies*. BugFest, North Carolina Museum of Natural Sciences, Raleigh, NC, 2015. ~35,000 attendees

2018 Popular Science Writing

1. *"How Bee Hotels Support Urban Pollinators and Educate Locals on One College Campus,"* Entomology Today
2. *"New proposal for Denver airport development prioritizes prairie habitat and connectivity,"* Conservation Corridor
3. *"Wind Energy Infrastructure May Funnel Wildlife Movement,"* Conservation Corridor

2016 Opening Remarks, *"Celebrating the Intersection of Art and Science,"* College of Sciences Donor Dinner, North Carolina State University

2015 Co-organizer, The Insects of M.C. Escher. College Night at the North Carolina Museum of Art, Raleigh, NC. ~1,600 attendees