

# KRISTY M. FERRARO

kristy.m.ferraro@gmail.com; www.kristymferraro.com

Greeley Memorial Laboratory

370 Prospect Street, New Haven, CT 06511

## EDUCATION

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<b>Yale University</b> School of the Environment, <i>PhD Candidate</i> Dissertation: The Zoogeochemistry of Northern Ungulates Environmental Humanities Graduate Certificate	New Haven, CT 2024 ( <i>expected</i> )
<b>Vanderbilt University</b> Earth and Environmental Sciences, <i>Master of Science</i> Thesis: Investigating the Role of Frugivorous Ungulates in Forest Nutrient Cycling	Nashville, TN 2018
<b>Boston College</b> Environmental Geoscience and Philosophy, <i>Bachelor of Science</i>	Chestnut Hill, MA 2015

## PROFESSIONAL EXPERIENCE

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<b>Graduate Fellow</b> , Law, Animals, and Ethics Program, Yale Law School	2018 - present
<b>Instructor of Record</b> , Yale School of the Environment	2023
<b>NSF Graduate Research Fellow</b> , Yale School of the Environment	2017 - 2022
<b>Fulbright Student Scholar</b> , University of Berne	2015 - 2016

## PEER-REVIEWED PUBLICATIONS

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\*Indicates shared first-authorship, <sup>+</sup>Indicates undergraduate mentee 11) Burak, M.K.\*, **K.M. Ferraro\***, K.D. Orrick\*, N.R. Sommer, D. Ellis-Soto, and O.J. Schmitz. Context matters when rewilding for climate change. (accepted at *People and Nature*).

Preprint: <https://ecoevorxiv.org/repository/view/5439/>

10) Welker, L.<sup>+</sup>, E.B. Ward, M.A. Bradford, and **K.M. Ferraro**. (2024) Mycorrhizal functional types shape nitrogen availability in a regenerating forest. *Plant and Soil*.

DOI: <https://doi.org/10.1007/s11104-024-06483-3>

9) Barbero-Palacios, L., **K.M. Ferraro**, I.C. Barrio, J.A. Krumins, J. Bartolomé, E. Albanell, L. Jarque-Bascuñana, J. Antonio Calleja, S. Lavín, J. A. Carriera, and E. Serrano. (2023). Faecal Nutrient Deposition of Domestic and Wild Herbivores in an Alpine Grassland. *Science of the Total Environment*.

DOI: <https://doi.org/10.1016/j.scitotenv.2023.166616>

8) **Ferraro, K.M.**, L. Welker<sup>+</sup>, E.B. Ward, O.J. Schmitz, and M.A. Bradford. (2023). Mycorrhizal association mediates the zoogeochemical effects of a calving subsidy by forest ungulates. *Journal of Animal Ecology*.

DOI: <https://doi.org/10.1111/1365-2656.14002>

7) **Ferraro, K.M.**, A.L. Ferraro, A.Z. Andis, and N.R. Sommer. Revisiting Two Dogmas of Conservation Science. (2023). *Conservation Biology*.

Winner, NYU Wild Animal Welfare Award, 2023

DOI: <https://doi.org/10.1111/cobi.14101>

6) Abraham, A., E. Duval, **K.M. Ferraro**, A. Webster, C. Doughty, E. le Roux, and D. Ellis-Soto. (2023). Understanding anthropogenic impacts on zoogeochemistry is essential for ecological restoration. *Restoration Ecology*. 31.3, e13778.

DOI: <https://doi.org/10.1111/rec.13778>

- 5) Webber, Q.M.R., **K.M. Ferraro**, J.G. Hendrix, and E. Vander Wal. (2022). What do caribou eat? A review of the literature on caribou diet. *Canadian Journal of Zoology*. 100.3, 197-207.  
*Editor's Choice*  
DOI: <https://doi.org/10.1139/cjz-2021-0162>
- 4) **Ferraro, K.M.**, O.J. Schmitz, and M.A. McCary. (2022). Effects of ungulate density and sociality on landscape heterogeneity: a mechanistic modeling approach. *Ecography*. 2022.2.  
DOI: <https://doi.org/10.1111/ecog.06039>
- 3) Sommer, N.R. and **K.M. Ferraro**. (2022). An ethical framework for behavioural training in wildlife management. *Conservation Science and Practice*. 4.3, e616.  
DOI: <http://doi.org/10.1111/csp2.616>
- 2) **Ferraro, K.M.**, A.L. Ferraro, and N.R. Sommer. (2021). Challenges facing cross-disciplinary collaboration in conservation ethics. *Conservation Science and Practice*. 3.11, e523.  
DOI: <https://doi.org/10.1111/csp2.523>
- 1) Ellis-Soto, D.\*, **K.M. Ferraro\***, M. Rizzuto, E. Briggs, J.D. Monk, and O.J. Schmitz. (2021). A methodological roadmap to quantify animal-mediated nutrient subsidies. *Journal of Animal Ecology*, 90.7, 1605-1622.  
*Winner, Sidnie Manton Award 2021*  
DOI: <http://doi.org/10.1111/1365-2656.13538>

## PAPERS IN REVIEW OR REVISION

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\*Indicates shared first-authorship, +Indicates undergraduate mentee  
Drafts available upon request

Orrick, K., F. Rowland, N.R. Sommer, and **K.M. Ferraro**. Predator-prey interactions across hunting mode, spatial domain size, and habitat complexity. (in revision at *Ecology*).

**Ferraro, K.M.**, C. Hirst. Missing Carcasses, Lost Nutrients: Quantifying Nutrient Losses from Deer Culling Practices in Scotland. (in review at *Ecological Solutions and Evidence*).

Orrick, K.\*, **K.M. Ferraro\***, and N.R. Sommer. Individuals as the ecological and ethical center of human-wildlife conflict. (in review at *Biological Conservation*).

Trepel, J., E. Lundgren, A. Abraham, **K.M. Ferraro**, C. Fløjgaard, L. Haugaard, P. Sunde, R. Pedersen, M. Tietje, J. Kamp, E. Le Roux. Zoogeochemistry of a protected area: driven by anthropogenic impacts and animal behaviour. (in review at *Conservation Science and Practice*).

Gadsden, G.I., **K.M. Ferraro**, and N. C. Harris. Modeling Rodent Population Flux as an Indirect Result of Changing Residential Energy Efficiency for Public Health and Ecosystem Integrity. (in review at *Landscape and Urban Planning*).

## FELLOWSHIPS, AWARDS, AND HONORS

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### Fellowships and Scholarships [Total: \$198,000]

PEO Scholar Award, <i>Philanthropic Educational Organization</i> (\$20,000)	2022
NSF Graduate Research Fellowship, <i>National Science Foundation</i> (\$138,000)	2017
Fulbright/Swiss Excellence Scholarship, <i>Institute of International Education</i> (\$20,000)	2015
The Seydel Award, <i>Institute of International Education</i> - Declined (\$20,000)	2015

## Awards and Honours [Total: \$750]

Award Winner - Wild Animal Welfare Workshop, <i>NYU Environmental Studies</i> (\$500 prize)	2023
Sidnie Manton Award for Best Early Career Review, <i>J. of Animal Ecology</i> (\$250 prize)	2022
Mary Allen Stafford Named Scholar, <i>Philanthropic Educational Organization</i>	2022
Boston College Arts and Sciences Honors Program, <i>Boston College</i>	2015
Member of the Order of the Cross and Crown, <i>Boston College</i>	2015
Sophomore Scholar, <i>Boston College</i>	2013

## RESEARCH FUNDING

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### Grants [Total: \$171,405]

\*Co-awarded

Yale University Student Travel Award, <i>Yale Graduate School</i> (\$1,600)	2022, 2023
ESA Travel Award (non-competitive), <i>ESA Canada Chapter</i> (\$250)	2023
Doctoral Travel Award, <i>Yale School of the Environment</i> (\$1,500)	2020, 2022, 2023
LEAP Student Grant, <i>Yale Law, Animals, and Ethics Program</i> (\$5,000)*	2021, 2022
Graduate Student Travel Award, <i>NSF &amp; Geological Society of America</i> (\$500)	2022
International Dissertation Research Fellowship, <i>MacMillan Center</i> (\$18,000)	2022
Dissertation Improvement Award, <i>Yale Institute for Biospheric Studies</i> (\$5,000)	2021
Kohlberg-Donohoe Research Fellowship, <i>Yale School of Forests</i> (\$5,000)	2021
Research Fellowship Program, <i>Yale Institute for Biospheric Studies</i> (\$1,555)	2021
Stable Isotope Matching Funds, <i>Yale Institute for Biospheric Studies</i> (\$4,500)	2022, 2023
Christine Stevens Wildlife Award, <i>Animal Welfare Institute</i> (\$15,000)	2020
NSF/GSA Student Research Grant, <i>Geological Society of America</i> (\$2,500)	2020
Research Tools and Instruments, <i>NSERC Canada</i> (\$94,000)*	2020
Research Fellowship Program, <i>Yale Institute for Biospheric Studies</i> (\$5,000)	2020
Grants in Aid of Research, <i>Sigma Xi</i> (\$1,000)	2020
Doctoral Pilot Award, <i>Yale Institute for Biospheric Studies</i> (\$3,000)	2019
GSA Student Research Grant, <i>Geological Society of America</i> (\$2,500)	2017
Tinker Travel Award, <i>The Tinker Foundation</i> (\$3,000)	2017
Graduate Student Travel Grant, <i>Vanderbilt University</i> (\$500)	2017
ACC-IAC Thesis Research Grant, <i>Boston College</i> (\$2,000)	2014

## TEACHING AND MENTORING

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### Instructor of Record

Conservation Ethics, <i>Yale School of the Environment</i>	Spring, 2023
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### Academic Advising

Yale College, Undergraduate Thesis Advisor (2)	
Dara Albrecht	2022-2023
<i>"Caribou-ffet": The Nutritional Landscape of Caribou in Newfoundland.</i>	
Les Welker	2021-2022
<i>The Impact of Mycorrhizal Association of Understory Plants on Soil Dynamics</i>	
Vanderbilt University, Undergraduate Thesis Research Mentor (1)	2017-2018
Nashville Public Schools, Senior Research Project Mentor (1)	2017-2018

### Teaching Assistantships

Pests, Parasites, and Pathogens, <i>Yale School of the Environment</i>	Spring, 2019
Oceanography, <i>Vanderbilt University</i>	2016, 2017
Paleoclimate Reconstruction Methods, <i>University of Berne</i>	Spring, 2016

## Course Mentor

Undergraduate independent study, <i>Vanderbilt University</i>	Spring, 2018
High School independent study, <i>Vanderbilt University</i>	Spring, 2018

## Guest Lectures

Conservation Ethics, <i>North Dakota State University</i>	2023
Applied Ethics for Conservation, <i>Yale University</i>	2023
Ethics of Eradication and Control, <i>Yale University</i>	2023
Applications of Agent Based Modeling in Ecology, <i>University of Hohenheim</i>	2022
Conservation Ethics, <i>Yale University</i>	2022
Conservation Ethics, <i>Harvard University</i>	2022
Ecological Applications of Agent Based Modeling, <i>Vanderbilt University</i>	2021
Introduction to LaTeX, <i>Yale School of the Environment</i>	2020
Ethical Approaches to Conservation, <i>Vanderbilt University</i>	2018
Paleoclimate Reconstruction Methods using Chironomids, <i>University of Berne</i>	2016

## Workshops

Applying to Fellowships, <i>Vanderbilt University</i>	2023
Introduction to LaTeX, <i>Yale School of the Environment R-rodeo</i>	2020
Introduction to IBMs using NetLogo, <i>Yale School of the Environment R-rodeo</i>	2020
Safety in the Field - workshop organizer, <i>Yale School of the Environment</i>	2019

## Disabilities Tutor

Department of Environmental Geosciences, <i>Boston College</i>	2012
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## Professional Mentorship

Yale University, Women in Science Undergraduate Mentee-Match (2)	2018-present
Yale College, Fellowship Office Graduate Affiliate	2018-present
Boston College, Women's Center Mentoring Program (2)	2015-present
Yale School of the Environment, PhD Peer Mentoring Program (1)	2020-2021

## INVITED TALKS, PANELS, AND WORKSHOPS

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<b>New York University Wild Animal Welfare Workshop, New York, USA</b>	2023
Revisiting Two Dogmas of Conservation Science	
<b>Memorial University Biology Seminar Series, St. John's, CAN</b>	2022
Because Animals Matter: Zoogeochemistry of North American Ungulates	
<b>Memorial University Biology Department Workshop, St. John's, CAN</b>	2022
Because Animals Matter: Applied Ethics for Conservationists	
<b>Yale Confluence Series, New Haven, CT</b>	2022
Applied Ethics for Conservationists	
<b>PEO Chapters C and F Summer Meeting, Hamden, CT</b>	2022
The Role of Ungulates in Nutrient Cycles	
<b>Yale Animal Ethics Reading Group, New Haven, CT</b>	2022
Challenges to Conservation Ethics	
<b>The Association for Tropical Biology and Conservation, Virtual</b>	2021
Applying to Graduate School Seminar - Panelist	
<b>University of Bangor Behaviour, Ecology, &amp; Physiology Seminar Series, UK</b>	2021
The Role of Ungulate Density and Sociality on Landscape Nutrient Distribution	
<b>Vanderbilt University Latin American Studies Brazil Week, Nashville, TN</b>	2018
Investigating the Role of White-Lipped Peccaries in Nitrogen Cycling in the Cerrado of Brazil	
<b>University of Bern Paleoclimate Group Seminar, Bern, CH</b>	2016
A Chironomid-inferred Holocene Temperature Reconstruction at Goullé Rion	

## PRESENTATIONS

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*Talk.* **Ferraro, K.M.**, Ellis-Soto, D., M. Rizzuto, E. Briggs, J.D. Monk, and O.J. Schmitz. A roadmap to quantifying zoogeographical impacts of animals on the move. Ecological Society of America, Portland, USA, 2023.

*Talk.* **Ferraro, K.M.**, Ellis-Soto, D., M. Rizzuto, E. Briggs, J.D. Monk, and O.J. Schmitz. A methodological roadmap to quantify animal-mediated nutrient subsidies. British Ecological Society, Edinburgh, UK, 2022.

*Talk.* **Ferraro, K.M.**, O.J. Schmitz, M.A. McCary. The role of ungulate density and sociality on landscape nutrient redistribution, Ecological Society of America, Montreal, CAN, 2022.

*Talk.* **Ferraro, K.M.** The role of caribou in nutrient redistribution, Max-Planck Yale Center 2021 Mini-Conference, New Haven, CT, 2021.

*Talk.* **Ferraro, K.M.**, O.J. Schmitz, M.A. McCary. The role of ungulate density and sociality on landscape nutrient redistribution, Yale School of the Environment Research Day, New Haven, CT, 2021.

*Talk.* **Ferraro, K.M.**, A.L. Ferraro, N.R. Sommer. The need for cross-disciplinary communication to inform conservation ethics. Animalhouse: Animals and Their Environs, The New School, New York, 2021

*Talk.* **Ferraro, K.M.**, N.R. Sommer. A Call for a New Conservation Ethic in the Age of Climate Change. Animalhouse: Animals and Their Environs, The New School, New York, Cancelled.

*Poster.* **Barnes, K.M.** Investigating the Role of White-Lipped Peccaries in Nitrogen Cycling in the Cerrado of Brazil. *Poster.* Vanderbilt University Earth and Environmental Graduate Research Symposium, Nashville TN. 2017.

*Poster.* **Barnes, K.M.** Simulating Ungulate Impact in Forests: A Century-Based Model of White Lipped Peccary Presence in the Forests of the Cerrado, Brazil. Ecological Society of America, Portland OR. 2017.

*Talk.* **Barnes, K.M.** A Paleoclimate Reconstruction Using Coleoptera Remains Representing the Chelford Interstadial at Arclid Quarry, Cheshire.

*Talk.* **Barnes, K.M.** Boston College Department of Environmental Geoscience Undergraduate Research Symposium, Boston MA. 2015.

*Talk.* **Barnes, K.M.** Consideration For All Beings. *Oral Presentation.* Boston College Department of Philosophy Undergraduate Research Symposium, Boston MA. 2015.

## RELEVANT WORK EXPERIENCE

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**Yale College Fellowships Office** New Haven, CT  
*National Fellowships Graduate Assistant* 2019 - 2022

- Reviewed and edited over 100 applications for fellowships including Fulbright, Truman, Marshall, Mitchell, Rhodes, Soros, and internal Yale fellowships each year
- Served on interview panels for various fellowships including Fulbright and Soros
- Scheduled and conducted mock interviews for Yale College applicants of the Rhodes, Marshall, Mitchell, Fulbright, Truman and Goldwater fellowships
- Composed and edited campus endorsement letters for Marshall, Mitchell and Rhodes Fellowships
- Improve Yale College's rank in the Top Producing Institutions for Fulbright U.S. Students list from 15<sup>th</sup> to 5<sup>th</sup>

**Yale Analytical and Stable Isotope Center** New Haven, CT  
*Research Assistant* 2019

- Prepared and ran samples for stable isotope analysis on a Costech ECS 4010 Elemental Analyzer with ConFlo III interface

## PROFESSIONAL SERVICE

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**University Service**

Faculty Search Committee Student Representative	2020
Yale School of the Environment Doctoral Committee Founder	2020

Yale School of the Environment Student Committee Rep	2019-2020
Yale School of the Environment Student Interest Group Leader	2019-2020
Vanderbilt Women in Earth Science Event Coordinator	2016-2018

### Committees

Yale Graduate Student Disability Alliance	2020-present
Yale Anti-Racism Network	2020-2022
Yale Environment Doctoral Funding COVID-19 Response	2020
Yale School of the Environment BIOMES Committee	2019-2020
Yale School of the Environment Student Activities Committee	2019-2020

### Invited Editor

Special issue of the <i>Journal of Animal Ecology</i> entitled <i>Animal Vectorized Subsidies</i>	2022
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### Ad Hoc Reviewer

*Ecological Applications* (2), *Oecologia*, *Journal of Animal Ecology* (2), *Ecology and Evolution*, *Functional Ecology*

### Symposia Organized

Zoogeochemistry as a Throughline in Ecology, and for a Changing World <i>co-organizer</i>	2023
Ecological Society of America, Portland, OR	
The Consequences and Mechanisms of Zoogeochemistry <i>co-organizer</i>	2023
Ecological Society of America, Portland, OR	
Approaches to Studying Zoogeochemistry <i>co-organizer</i>	2023
Ecological Society of America, Portland, OR	

### Talks Organized

Feral Earth: Introduced Megafauna and the Biological Reality of Naiveness	2023
Speaker: Erick Lundgren	
Black Veganism: Race, Animals, and Ethics	2021
Speaker: Lindgren Johnson and Sly Ko	
Through the Prism of Individual Differences: Integrating the Geometry of the Selfish Herd and the Ideal Free Distribution Using Caribou Calving Aggregations	2020
Speaker: Eric Vander Wal	
Cutting it Close in the Canadian Boreal Forest: How Logging is Eroding the Great North Forest and Fueling the Climate and Biodiversity Crises	2020
Speaker: Jennifer Skene	

### Conference Volunteer

Ecological Society of America	2018
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## PROFESSIONAL DEVELOPMENT

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### Programs

Law, Ethics, and Animals Program Fellow, <i>Yale Law School</i>	2019-present
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### Short Courses

Ecosystem roles of Megafauna in the Past, Present, and Future	Aarhus, Demark 2022
Yale Interdisciplinary Center for Bioethics Summer Course	New Haven, CT, 2020
Climate Change Ethics and Animal Ethics Seminars	
Metabarcoding of Trophic Interactions	Innsbruck, Austria, 2019
Survivor's Guide to Stable Isotope Ecology	Siracusa, Italy, 2017

### Workshops

Anti-racism Learning Community for Graduate Students and Postdocs	New Haven, CT, 2020
Incorporating Environmental Justice into Teaching Symposium	New Haven, CT, 2019



## OUTREACH AND SCIENCE COMMUNICATION

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### Public Writing

- Codversations. *Caribou nutrition: when eating your greens isn't quite enough.* 2022  
Codversations. *What do caribou eat?* 2022  
Animal Ecology in Focus. *Animals in the Driver's Seat: A Methodological Roadmap To Animal Mediated Nutrient Translocation.* [Available here](#) 2022  
N.R. Sommer's Ecology Blog. *Tips for fellowship applications* [Available here](#) 2022

### Select Media Coverage

- Psychology Today *Conservation Science Must Value Individuals and Anthropomorphism.* [Available here](#)  
Medium *A Bear is not just a Bear: Recognizing the Individual in Wildlife Conservation* [Available here](#)  
Raincoast Investigate and Inform. *How studying animal culture can inform conservation.* [Available here](#)  
Sierra Magazine. *Can Conservation Be Compassionate?* [Available here](#)  
Green Blob Podcast. *Christmas Special with Sidnie Manton Award winner Kristy Ferraro* [Available here](#)  
Yale School of the Environment. *Yale Doctoral Students Highlight 'Animal-Vectored Subsidies' in Journal of Animal Ecology* [Available here](#)  
Ecology in Focus. *Winners Announced: Sidnie Manton Award* [Available here](#)  
Yale Environmental Humanities Program. *Q&A With Environmental Humanities Student Kristy Ferraro* [Available here](#)  
Journal of Animal Ecology. *Diego Ellis Soto and Kristy M. Ferraro win the Sidnie Manton Award* [Available here](#)  
Yale Law School LEAP. *Q&A Kristy Ferraro Ph.D. '24 on How Caribou Impact Ecosystems and the Ethics of Wildlife Management* [Available here](#)

### Invited Public Talks

- Earth Day guest speaker, Cheshire Academy Hamden, CT 2020  
Visiting scientist, Georgia Aquarium Atlanta, GA, 2020  
Visiting scientist, Boston Public Schools Boston, MA, 2017

### Outreach Programing

- Yale Pathways to Science 2019-2021

## TECHNICAL SKILLS

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**Programming Languages:** R, MATLAB, NetLogo

**Software & Tools:** LaTeX, CENTURY, Microsoft Office, ArcGIS

**Research:** VHF telemetry and triangulation, ungulate calf capture, denitrification assays, carbon mineralization assays, soil sample processing, chironomid identification

**Instrumentation:** IRGA, Elemental Analyser with Conflow III, Isotope-radio mass spectrometry

## PROFESSIONAL AND SCHOLASTIC MEMBERSHIPS

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- Women in Science at Yale  
Yale Animal Ethics Study Group  
Ecological Society of America  
Geological Society of America

British Ecological Society  
Society for Conservation Biology