

KRISTY M. FERRARO

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Greeley Memorial Laboratory

370 Prospect Street, New Haven, CT 06511

EDUCATION

Yale University	New Haven, CT
School of the Environment, <i>PhD Candidate</i>	2018 - Present
Vanderbilt University	Nashville, TN
Earth and Environmental Sciences, <i>Master of Science</i>	2016 - 2018
Boston College	Chestnut Hill, MA
Environmental Geoscience and Philosophy, <i>Bachelor of Science</i>	2011 - 2015

GRANTS, FELLOWSHIPS, AWARDS

Fellowships and Scholarships [Total: \$198,000]	
PEO Scholar Award, <i>Philanthropic Educational Organization</i>	2022
NSF Graduate Research Fellowship, <i>National Science Foundation</i>	2017
Fulbright Student Research Fellow, <i>The Institute of International Education</i>	2015
The Seydel Award, <i>The Institute of International Education</i> - Declined	2015
Grants [Total: \$165,575]	
GSA/NSF Graduate Student Travel Award, <i>NSF & Geological Society of America</i> (\$500)	2022
Doctoral Travel Award, <i>Yale School of the Environment</i> (\$500)	2022
LEAP Student Grant, <i>Yale Law, Animals, and Ethics Program</i> (co-awarded) (\$2,500)	2022
MacMillan International Dissertation Research Fellowship, <i>MacMillan Center</i> (\$18,000)	2022
Doctoral Dissertation Improvement Award, <i>Yale Institute for Biospheric Studies</i> (\$5,000)	2021
LEAP Student Grant, <i>Yale Law, Animals, and Ethics Program</i> (co-awarded) (\$2,500)	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)	2020
Stable Isotope Matching Funds, <i>Yale Institute for Biospheric Studies</i> (\$1,500)	2021
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> (co-awarded) (\$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
Awards and Honours	
Sidnie Manton Award for Best Review in Animal Ecology, <i>Journal of Animal Ecology</i>	2022
Mary Allen Stafford Named Scholar, <i>Philanthropic Educational Organization</i>	2022
Boston College Arts and Sciences Honors Program, <i>Boston College</i>	2015
Geosciences Honors Program, <i>Boston College</i>	2015
Philosophy 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

PEER-REVIEWED PUBLICATIONS

*Indicates shared first-authorship

6) Abraham, A., E. Duval, **K.M. Ferraro**, A. Webster, C. Doughty, E. le Roux, and D. Ellis-Soto. (2022). Understanding anthropogenic impacts on zoogeochemistry is essential for ecological restoration. *Restoration Ecology*.

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*.

DOI: <https://doi.org/10.1111/ecog.06039>

3) Sommer, N.R. and **K.M. Ferraro**. (2021). 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 PREP, REVIEW, OR REVISION

Drafts available upon request

Orrick, K., F. Rowland, N.R. Sommer, and **K.M. Ferraro**. Disentangling the role of predator hunting strategy, spatial domain size, and habitat complexity: An agent-based examination of consumptive and nonconsumptive effects. (in revision).

Burak, M.K., **K.M. Ferraro**, K.D. Orrick, D. Ellis-Soto, J.D. Monk, N.R. Sommer, and O.J. Schmitz. Rewilding to Animate the Carbon Cycle. (in review).

Ferraro, K.M., A. Ferraro, A. Andis, and N.R. Sommer. Two Dogmas of Conservation. (in prep).

OTHER PUBLICATIONS

Caribou nutrition: when eating your greens isn't quite enough *Codversations*. 2022.

What do caribou eat? *Codversations*. 2022.

Animals in the Driver's Seat: A Methodological Roadmap To Animal Mediated Nutrient Translocation. *Animal Ecology in Focus*. 2021.

Tips for fellowship applications. *N.R. Sommer's Ecology Blog*. 2021.

PRESENTATIONS

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.

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

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.

Ferraro, K.M., A.L. Ferraro, N.R. Sommer. The need for cross-disciplinary communication to inform

conservation ethics, The New School, New York, 2021

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, COVID-19.

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.

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

Barnes, K.M. A Paleoclimate Reconstruction Using Coleoptera Remains Representing the Chelford Interstadial at Arclid Quarry, Cheshire. *Oral Presentation*. Boston College Department of Environmental Geoscience Undergraduate Research Symposium, Boston MA. 2015.

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

INVITED TALKS AND PANELS

Memorial University Biology Seminar Series, St. John's, CAN	2022
Because Animals Matter: Zoogeochemistry of North American Ungulates	
Memorial University Biology Department Workshop, St. John's, CAN	2022
Because Animals Matter: Applied Ethics for Conservationists	
Yale Confluence Series, New Haven, CT	2022
Applied Ethics for Conservationists	
Yale Animal Ethics Reading Group, New Haven, CT	2022
Challenges to Conservation Ethics	
The Association for Tropical Biology and Conservation, Virtual	2021
Applying to Graduate School Seminar - Panelist	
Behaviour, Ecology, & Physiology seminar series, University of Bangor, UK	2021
The role of ungulate density and sociality on landscape nutrient distribution	
Vanderbilt University Latin American Studies Brazil Week, Nashville, TN	2018
Investigating the Role of White-Lipped Peccaries in Nitrogen Cycling in the Cerrado of Brazil	
University of Bern Paleoclimate Group Seminar, Bern, CH	2016
A Chironomid-inferred Holocene Temperature Reconstruction at Goullé Rion	

INVITED PUBLIC TALKS

Philanthropic Educational Organization guest speaker, <i>Hamden, CT</i>	2022
Earth Day guest speaker, <i>Cheshire Academy, CT</i>	2020
Visiting scientist, <i>Georgia Aquarium, GA</i>	2020
Visiting scientist, <i>Boston Public Schools, MA</i>	2017
Department seminar, <i>Vanderbilt University, TN</i>	2017

RESEARCH EXPERIENCE

Yale School of the Environment	New Haven, CT
<i>NSF Graduate Research Fellow, PhD Candidate</i>	2018 - Present
· Research on how ungulates act as nutrient vectors and impact soil carbon and nitrogen storage, especially in arctic and boreal ecosystems	
Vanderbilt University Department of Earth and Environmental Sciences	Nashville, TN
<i>NSF Graduate Research Fellow, Masters Student</i>	2016- 2018
· Masters project exploring how ungulates impact nutrient cycling in the Cerrado of Brazil	
Vanderbilt Women in Earth Science Science	Nashville, TN
<i>Research Assistant</i>	2017
· Comprehensive literature review on the impacts of implicit bias in student teaching evaluations supported by a Vanderbilt - sponsored by a Equality, Diversity, and Inclusion SEED Grant	

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| University of Berne Department of Paleoecology | Berne, Switzerland |
| <i>Fulbright Student Fellow</i> | 2015-2016 |
| · Created a high resolution chironomid-based Alpine paleoclimate reconstruction | |
| Boston College Department of Earth and Environmental Science | Chestnut Hill, MA |
| <i>Undergraduate Thesis</i> | 2014 - 2015 |
| · Environmental Geoscience Honors Program Thesis: “Reconstructing Paleoclimates of Cheshire, UK, Using Beetle Fossils” | |
| Boston College Department of Philosophy | Chestnut Hill, MA |
| <i>Undergraduate Thesis</i> | 2014 - 2015 |
| · Philosophy Honors Program Thesis: “Consideration For All Beings: A Utilitarian Approach to the Treatment of Domesticated Non-Human Animals” | |
| University of Edinburgh School of Geosciences | Edinburgh, UK |
| <i>Atlantic Coast Conference-International Academic Collaborative Research Fellow</i> | 2014 |
| · Conducted a paleoclimate reconstruction using the Mutual Climatic Range Method | |
| Boston College Department of Earth and Environmental Science | Chestnut Hill, MA |
| <i>Undergraduate Research Assistant</i> | 2014 |
| · Conducted field work to gather data on sediment formation in the Connecticut River | |

FEELLOWSHIPS AND CERTIFICATES

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| Yale Law School <i>Law, Ethics, and Animals Program Fellow</i> | 2019-present |
| Yale Environmental Humanities Center <i>Certificate in the Environmental Humanities</i> | |

RELEVANT WORK EXPERIENCE

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| Yale College Fellowships Office | New Haven, CT |
| <i>National Fellowships Graduate Assistant</i> | 2019 - 2022 |
| · Review and edit over 100 applications for fellowships including Fulbright, Truman, Marshall, Mitchell, Rhodes, Soros, and internal Yale fellowships each year | |
| · Serve on interview panels for various fellowships including Fulbright and Soros | |
| · Schedule and conduct mock interviews for Yale College applicants of the Rhodes, Marshall, Mitchell, Fulbright, Truman and Goldwater fellowships | |
| · Compose and edit campus endorsement letters for Marshall, Mitchel and Rhodes Fellowships | |
| · Provide general advice to applicants regarding fellowship choice and application | |
| · Helped improved Yale College’s rank in the Top Producing Institutions for Fulbright U.S. Students list from 15 th to 5 th | |
| Yale Analytical and Stable Isotope Center | New Haven, CT |
| <i>Research Assistant</i> | 2019 |
| · Prepared and ran samples for stable isotope analysis on an Costech ECS 4010 Elemental Analyzer with Conflo III interface | |

TEACHING EXPERIENCE

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| 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 Bern</i> | Spring, 2016 |
| Course Mentor | |
| Undergraduate independent study, <i>Vanderbilt University</i> | Spring, 2018 |
| High School independent study, <i>Vanderbilt University</i> | Spring, 2018 |
| Disabilities Tutor | |
| Department of Environmental Geosciences, <i>Boston College</i> | 2012 |

Guest Lectures

Conservation Ethics, <i>Yale University</i>	2022
Research Ethics, <i>Harvard University</i>	2022
Ecological Applications of Agent Based Modelling, <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 Bern</i>	2016

Workshops

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

MENTORSHIP

Research Mentorship

Yale College, Undergraduate Thesis Advisor (2)	
Dara Albrecht	2022-2023
<i>The stoichiometry of Caribou Diet</i>	
Les Welker	2021-2022
<i>The Impact of the Mycorrhizal Association of Understory Plants on Soil Dynamics</i>	
Vanderbilt University, Undergraduate Thesis Research (1)	2018
Nashville Public Schools, Senior Research Project (1)	2018

Professional Mentorship

Yale School of the Environment, PhD Peer Mentoring Program (1)	2020-present
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)	2018-present

LEADERSHIP AND OUTREACH

Yale Graduate Student Disability Alliance	2020-present
Member of the Yale Graduate Student Disability Alliance, which works to promote fellowship and awareness regarding disabilities within the Graduate School	
Yale Anti-Racism Network	2020-2022
Member of the Yale Anti-Racism Network, a collective of PhD students and Post-Docs working to promote diversity within the School of the Environment	
Faculty Search Committee	2020
Student representative and member of a search committee for a new faculty member in the Yale School of the Environment in Wildlife and Land Management	
Yale School of the Environment Doctoral Committee Founder	2019-2020
Led the formation of an independent YSE PhD committee of 12 students to represent the needs specific to the PhD community	
Advocated for students' educational, financial, and personal support due to COVID-19 disruptions	
Yale School of the Environment BIOMES Committee	2019-2020
Co-organized the YSE's weekly all-school seminar, which included contacting speakers, organizing visits, and creating a lecture series that is meaningful and interesting to all members of the school's community	
Yale School of the Environment Student Activities Committee	2019-2020
Elected PhD representative of the YSE Student Activities Committee serving as a liaison between the PhD students and the larger YSE community	
Yale School of the Environment Student Interest Group Leader	2018-2019

Leader of RODEO, a weekly meeting for doctoral students to learn R and troubleshoot coding problems

Yale Pathways to Science

2019-2021

Presenter in the Yale Pathways to Science Environmental Cafe (2021)

Organizer of the Yale Pathways to Science Environmental Cafe and Research Day which brings New Haven high school students to experience a research conference (2019)

Vanderbilt Women in Earth Science

2016-2018

Events coordinator for the Women in Earth Science group at Vanderbilt University, a chapter of American Women in Geoscience

PROFESSIONAL SERVICE

Ad Hoc Reviewer: Ecological Applications, Oecologia, Journal of Animal Ecology, Ecology and Evolution, Functional Ecology

Conference Volunteer: Ecological Society of America 2018

Talks Organized:

Black Veganism: Race, Animals, and Ethics with Lindgren Johnson and Sly Ko	2021
Through the Prism of Individual Differences: Integrating the Geometry of the Selfish Herd and the Ideal Free Distribution Using Caribou Calving Aggregations with Eric Vander Wal	2020
Cutting it close in the Canadian boreal forest: how logging is eroding the Great Northern Forest and fueling the climate and biodiversity crises with Jennifer Skene	2020

PROFESSIONAL DEVELOPMENT

Short Courses

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
Diversity in Academia Workshop	New Haven, CT, 2019
STEM Policy and Advocacy: Making Your Voice Heard	Nashville, TN, 2017

TECHNICAL SKILLS

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

SELECT MEDIA COVERAGE

Yale Law School LEAP Q&A Kristy Ferraro Ph.D. '24 on How Caribou Impact Ecosystems and the Ethics of Wildlife Management

Yale School of the Environment Canopy In Defence of Predators by Josh Anusewicz

PROFESSIONAL AND SCHOLASTIC MEMBERSHIPS

Women in Science at Yale

Yale Animal Ethics Study Group

Association of Women in Geosciences

Ecological Society of America

Geological Society of America