

KAGGIE ORRICK

University of California, Berkeley

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EDUCATION

Yale University, School of the Environment

New Haven, CT

Doctor of Philosophy, 2024

Dissertation: Social-Ecological Practice Theory and Human-Wildlife Interactions: People, Cattle, and Predators in Makgadikgadi, Botswana

Advisor: Dr. Oswald Schmitz

Columbia University, Dept of Ecology, Evolution, Environmental Biology

New York City, NY

Master of the Arts, 2015

Dissertation: Range size and drivers of African elephant (*Loxodonta africana*) space use on Karongwe Private Game Reserve, South Africa

Advisor: Dr. Joshua Drew

Colby College, Dept of Environmental Studies

Waterville, ME

Bachelor of the Arts, 2010

Concentration in Conservation Biology; minor in Mathematics

WORK EXPERIENCE

Project Director, UC Berkeley, Berkeley, CA

2024-present

Director of the California Wolf Project, a research initiative launched within UC Berkeley's Wildlife Program aimed at advancing the science and management of gray wolves in California. Includes leading project management and research of a nascent program. In partnership with the California Department of Fish and Wildlife with additional support from the National Geographic Society.

Postdoctoral Researcher, UC Berkeley, Berkeley, CA

2024-present

Postdoc for UC Berkeley's California Wolf Project. Included project management and research. In partnership with the California Department of Fish and Wildlife with additional support from the National Geographic Society.

PhD Candidate, Yale School of the Environment, New Haven, CT

2018-2024

Examining the environmental and social drivers of human-wildlife interactions in the Makgadikgadi region of Botswana. Work includes mapping human modification and social dynamics with wildlife occurrence in order to reduce conflicts between nature and people. Work includes the use of remote sensing, and spatial and statistical modeling.

Project Lead, Round River Conservation Studies, Botswana

2018-2024

Responsible for the design and implementation of research and conservation efforts in the Makgadikgadi community region of Botswana. Helped secure over \$200,000 in funding. Simultaneously a PhD student at Yale School of the Environment.

Botswana Program Coordinator, Round River Conservation Studies, Botswana

2017-2018

Managed and led the community-based wildlife monitoring project and college student program in remote locations around Northern Botswana. Primary liaison with government officials and local communities.

Botswana Program Leader, Round River Conservation Studies, Botswana

2015-2017

Led the community-based wildlife monitoring project and college student program in remote locations around Northern Botswana. Primary liaison with government officials and local communities.

Graduate Student Researcher, Columbia University, New York City, NY

2014-2015

Preliminary analysis of forest loss using remote sensing and GIS for the Rainforest Standard, a carbon credit program, to determine appropriate protected areas for forest loss evaluation.

Research Program Manager, Global Vision International, South Africa

2012-2013

Managed and facilitated research on a large carnivore project. Primary liaison with academic partners and lodge owners.

- Mountain Project Coordinator**, *Global Vision International*, South Africa 2010-2013
 Managed the small mammal, reptile, amphibian, and butterfly satellite research camp and collaborated with University of Pretoria.
- Assistant Researcher**, *Global Vision International*, South Africa 2010-2013
 Monitored large mammal movements including lion, cheetah, elephant, and all other large game.

PUBLICATIONS

10. Espinosa Schatz, C., Meier, K., **Orrick, K.**, Dove, M. "Marginal Ecologies: A framework for studying the social-ecological margins". *Environmental Research Letters*. DOI: 10.1088/1748-9326/add35f
9. Kanoi, L., Burow, P., Gao, Y., Lim, A., **Orrick, K.**, Singer, E., Dove, M. 2024. "Re-constructing Restoration: A Critical Review of the Practice, Politics, and Process of Restoration in Diverse Ecologies". *Environment and Society: Advances in Research*. 15(1):23-46. DOI: 10.3167/ares.2024.15010
8. Feldmeier, D.E., Schmitz, O.J., Carter, N.H., Masunga, G.S., **Orrick, K.** 2024. "Predictions and Perceptions: A social-ecological analysis of human-carnivore conflict in Botswana". *Biological Conservation*. DOI: 10.1016/j.biocon.2024.110615
7. **Orrick, K.***, Ferraro, K.*, Sommer, N. 2024. "Individuals in focus: Individuals as the ecological and ethical center of human-wildlife". *Biological Conservation*. * indicates first-author. DOI: 10.1016/j.biocon.2024.110614
6. **Orrick, K.**, Sommer, N., Rowland, F., Ferraro, K. 2024. "Predator-prey interactions across hunting mode, spatial domain size, and habitat complexities". *Ecology*. DOI: 10.1002/ecy.4316
5. Burak, M.*, Ferraro, K.*, **Orrick, K.***, Sommer, N., Ellis Soto, D., Schmitz, O. 2024. "Context matters when rewilding for climate change". *People and Nature*. * indicates first-author. DOI: 10.1002/pan3.10609
4. **Orrick, K.**, Dove, M., Schmitz, O.J. 2024. "Human-nature relationships: An introduction to social-ecological practice theory for human-wildlife interactions". *Ambio*, 53(2):201-211. DOI: 10.1007/s13280-023-01945-x
3. Gao, Y., Wang, Y., Lee, A.T.L., Liu, Y., Luo, Y., **Orrick, K.**, Alexander, J.S., Sangpo, J.T., Clark, S.G. 2023. "Contextualizing sociodemographic differences in Tibetan attitudes toward large carnivores". *Conservation Science and Practice*, 5(12):e13049. DOI: 10.1111/csp2.13049
2. Zhou, W., **Orrick, K.** and Lim, A., Dove, M. 2022. "Reframing Conservation and Development Perspectives on Bushmeat." *Environmental Research Letters*, 17(1). DOI: 10.1088/1748-9326/ac3db1
1. **Orrick, K.** 2018. "Range Size and Drivers of African Elephant (*Loxodonta africana*) Space Use on Karongwe Private Game Reserve, South Africa." *African Journal of Ecology*, 56(3): 572-81. DOI: 10.1111/aje.12500

PUBLICATIONS IN REVIEW OR IN PREPARATION

- (in press) **Orrick, K.**, Burak, M., Schmitz, O. "The Trait-Mediated Indirect Effects of Human Interactions". In *Apex Predators in the Anthropocene: How Humans Shape Large Carnivore Populations*. Oxford University Press.
- (In review) **Orrick, K.**, Masunga, G., Dove, M., Schmitz, O. "The linkages between cattle rearing logics, habitus, and human-wildlife interactions in the Makgadikgadi Region of Botswana".
- (In review) **Orrick, K.**, ..., Loveridge, A., Schmitz, O. "Effects of land management type on conflict species in the greater Makgadikgadi National Park landscape in Botswana".
- (In review) Mallick, U.B., **Orrick, K.**, Masunga, G., Schmitz, O.J. "Landscape-scale variation in large herbivore functional guilds and soil carbon storage across a semi-arid rangeland".

PUBLISHED REPORTS

Middleton, A., Brashares, J., Curras, M.R., Hyde, M., **Orrick, K.**, Winters, C., Byrtus, M. 2024. Science to Support California Wolf Recovery: California Wolf Project 2024 Annual Report. [Link here.](#)

Orrick, K., Heinemeyer, K., Masunga, G.S., Triska, M. 2021. Community-based Wildlife Monitoring in Selected Concessions of the Okavango Delta, 2013 - 2019.

Heinemeyer, K., Masunga, G.S. **Orrick, K.**, Smith, J., Sinvula, M., Dain-Owens, S. 2016. Community-based wildlife monitoring in selected concessions of Chobe and the Okavango Delta, 2013-2015. [Link here.](#)

Report for Colby Environmental Assessment Team, Colby College and Problems in Environmental Science course (Biology 493), Colby College. (2009). "A Watershed Analysis of Salmon Lake and McGrath Pond: Implications for Water Quality And Land Use Management". Colby College Watershed Study: Salmon Lake and McGrath Pond (2009, 1993). 1. [Link here.](#)

TECHNICAL SKILLS

Field Research:	Transect surveys, camera trapping methods and technology, semi-structured qualitative interviews, ethnographic studies, GPS tracking and VHF biotelemetry, and triangulation, Sherman trap surveys, mark-recapture.
Software:	ArcGIS (including ArcPy and custom script tools), QGIS, R, ENVI, Google Earth Engine, Netlogo, MaxEnt, Circuitscape, Nvivo, Mendeley Desktop, Adobe Photoshop, Microsoft Office (Word, Excel, Powerpoint). Basic knowledge of Python, Latex, and Distance Sampling.
Other:	Proficient in teaching college-level courses and public speaking. Proficient in analytical and leadership skills and people management.
Professional Development:	Graduate Certificate in the Environmental Humanities; ARSET (NASA's Applied Remote Sensing Training) certificate in "Selecting Climate Change Projection Sets for Mitigation, Adaptation and Risk Management Applications"; FGASA (Field Guide Association of Southern Africa) Level Two qualified; FGASA Trails Guide qualified, Advanced Snake Handling certified; "Airborne lidar for conservation ecology" training sessions (2015).

GRANTS

\$69,745 TO DATE

Sequoia Conservancy, <i>National Park Service</i> (\$7,000)	2025
Graduate Student Assembly Conference Travel Fellowship, <i>Yale University</i> (\$800)	2023
Environmental Public Humanities Grant, <i>Yale University</i> (\$2,500)	2022
Tropical Research Institute, <i>Yale University</i> (\$8,000)	2022
Mobley Family Humanities Grant, <i>Yale University</i> (\$2,600)	2022
Lindsay Fellowship, <i>Yale University</i> (\$3,000)	2022
Yale Institute for Biospheric Studies, <i>Yale University</i> (\$4,965)	2021
MacMillan International Dissertation Research Fellowship, <i>Yale University</i> (\$16,000)	2021
Lewis and Clark Fund, <i>American Philosophical Society</i> (\$5,000)	2020
FES Research Grant, <i>Yale Institute for Biospheric Studies</i> (\$4,965)	2020
Tropical Research Institute, <i>Yale University</i> (\$7,415)	2020
Doctoral Pilot Award, <i>Yale University</i> (\$3,000)	2019
AC4 Graduate Student Fellowship, <i>Columbia University</i> (\$3,000)	2014
E3B Biology Graduate Student Fellowship, <i>Columbia University</i> (\$1,500)	2014

PRESENTATIONS AND POSTERS

2024

- Wildlife Seminar, "Social-Ecological Practice Theory and Human-Wildlife Interactions: People, Cattle, and Predators in Makgadikgadi, Botswana." Berkeley, CA, September.

2023

- Ecological Society of America, "Disentangling the role of predator hunting mode, spatial domain size, and habitat complexity: An examination of consumptive and nonconsumptive effects." Portland, OR, August.
- International Congress of Conservation Biology, "The Social-Ecological Landscape of Makgadikgadi: Practices of Humans, Cattle, and Wildlife." Kigali, Rwanda, July.
- Yale School of the Environment Research Day Conference. "Human-nature relationships: Social-ecological practice theory for Conservation efforts in Botswana." Yale University, New Haven CT, April.

2022

- Research Talk Series, Public Outreach Program Kwando Safaris and The University of Botswana. "Human-Predator Coexistence." Maun, Botswana, August.

2021

- Confluence Series, "The Human-Cattle-Wildlife Landscape: Insights from Preliminary Findings in Makgadikgadi." Yale University, New Haven, CT, November

2019

- Yale Forestry and Environmental Studies Research Day Conference. "Humans and the Environment: Exploring Human-Wildlife Conflict through social and ecological patterns." Yale University, New Haven CT, April.

2018

- Research Talk Series, Public Outreach Program Kwando Safaris and The University of Botswana. "Community-based Wildlife Monitoring from 2013-2015." Maun, Botswana, April.

2017

- Proceedings of the Botswana Symposium on Wetlands and Wildlife Conference. "Community-based Wildlife Monitoring from 2013-2015." Maun, Botswana, Fall 2017.

2016

- Department of Wildlife and National Parks and the University of Botswana. "Community-based wildlife monitoring in selected concessions of Chobe and the Okavango Delta, 2013-2015." Maun, Botswana, May.

2015

- International Congress for Conservation Biology-European Congress for Conservation Biology Conference. "African elephant space use on Karongwe Private Game Reserve, South Africa: A call for a greater understanding of anthropogenic effects on wildlife." Montpellier, France, August.
- Association for Environmental Studies and Science: Confronting Frontiers, Borders, and Boundaries. "Roads and African Elephants in a Small South African Reserve: Understanding the Impacts of Roads on Space Use of Wildlife." San Diego, CA, June.
- Poster at Advanced Consortium on Cooperation, Conflict, and Complexity Conference. "Roads and African elephants in a small private game reserve: A call for greater understanding of the impacts of roads on space use of wildlife." Columbia University, NY, March.

2014

- Earth Institute Student Research Showcase. "Vehicle noise disturbance on carnivores and large herbivores in Karongwe Private Game Reserve." Columbia University, NY, April.

2012

- Poster at Southern African Wildlife Management Association based on Wilson, J., Scantlebury, M.'s work. "The response of small mammals to natural and human-altered edges associated with afro-montane forests of South Africa." South Africa, September.

2010

- Poster at Maine Water Conference. The influence of land use changes on water quality in Salmon Lake and McGrath Pond." Holmen, A., Gildesgame, E., **Orrick, K.**, Firmage, D., Cole, R., Greenwood, T. Augusta, ME, April.

TEACHING EXPERIENCE

Teaching Fellow / Reading Assistant

- Conservation Science and Landscape Planning, *Yale University* 2023
- Methods and Research in Molecular Anthropology, *Yale University* 2021
- Natural Science Methods, *Yale University* 2019
- Building a Conservation Toolkit, *Yale University* 2019
- Conservation Biology, *Columbia University* 2015
- Introduction to Environmental Biology, *Columbia University* 2014

Undergraduate instructor, Round River Conservation Studies

2015-2018

- Field Methodology
- Natural History
- Applied Conservation Biology
- Humans and the Environment
- Community-Based Natural Resource Management

Invited Lecture

- American Wildlife: Management and Policy in the 21st Century, *UC Berkeley* 2025
"Wolves of California"
- Conservation in Action, *UC Berkeley* 2025
"Introduction to Human-Wildlife Conflict"
- Conservation in Practice, *Yale University* 2024
"Where the Wild Things Are: Camera trapping in Botswana"
- Natural Science Methods, *Yale University* 2023
"Science and Advocacy Panel Discussion"
- Conservation Biology, *Yale Round River Conservation Studies* 2022
"Human-Wildlife Coexistence Strategies"
- Conservation Ethics, *Yale University* 2023
"The Science of Trophy Hunting" and "Moral Considerations of Trophy Hunting"
- Natural Science Methods, *Yale University* 2022
"Local and Indigenous Community Inclusion in Conservation"
- Conservation Biology, *Yale Round River Conservation Studies* 2022
"The Makgadikgadi Human-Livestock-Wildlife Landscape"
- Post-Colonial History, *Branson High School* 2021
"Impacts of Colonialism on Conservation in Botswana Today"
- Natural Science Methods, *Yale University* 2020
"Parachute Science in Conservation"
- Building a Conservation Toolkit, *Yale University* 2021 / 2020 / 2019
"Social Network Analysis in Conservation"
- "Community-based Conservation in Conservation Biology", *Portland State University* 2016
Invited speaker
- "Community-based Conservation in Conservation Biology", *Colby College* 2016
Invited speaker

SELECT OUTREACH AND PROFESSIONAL SERVICE

Talks and Workshops Organized

- "California Wolf Project Updates". Various Fish and Game Commission Meetings and California Cattlemen's Meetings, Northern California, 2024-2025.
- "A Conversation on Community-based Wildlife Conservation" with Dr. Andrew Stein. Talk organized through the Conservation Biology Student Interest Group, Yale University, 2022.
- "Black Veganism: Race, Animals, and Ethics" with Dr Lindgren Johnson and Sly Ko. Talk organized through Environmental Humanities, Yale University, 2021.
- "Human-Wildlife Conflict: System Dynamics and Trans-Disciplinary Approaches". Co-led an interactive workshop for Advanced Consortium on Cooperation, Conflict, and Complexity Conference. Columbia University, NY, March, 2015.

Awards and Service

Board Member, <i>Round River Conservation Studies</i>	2024-present
Board Member, <i>Round River Botswana Trust</i>	2025-present
Community Conversations Committee, <i>Yale University</i>	2019–2021
BIOMES Coordinator, <i>Yale University</i>	2019–2020
Kroon Cup Award, <i>Yale University</i>	2020
Student Affairs Committee, <i>Yale University</i>	2019
Earth Institute Student Advisory Council Vice President, <i>Columbia University</i>	2014–2015
Department Masters Representative, <i>Columbia University</i>	2013 –2014

Invited Nonacademic Speaking Events

Speaker, Edward Jones Earth Day Expo, Conservation Success Stories, <i>Remote</i>	2025
Panelist, Postdoc Panel for Yale PhD Graduates <i>Remote</i>	2025
Panelist, Prospectus and Qualifying Exam Guidance, <i>Yale University</i>	2022
Introduction for His Excellency, the President of Botswana, <i>Yale University</i>	2021
Moderator, <i>The Last Animals</i> screening, <i>Environmental Film Festival at Yale</i>	2019
Speaker, Big Cats and Where to Find Them, ages 6-13, <i>multiple private events</i>	2019-2021
Speaker, Career Day, 1st grade, <i>Katherine Delmar Burke School</i>	2017

Media

- Yale Environmental Humanities Newsletter, July 11, 2023. "Dylan Feldmeier and Kaggie Orrick create story-map about human-wildlife interactions in Botswana"
- Audio podcast episode In *Heartwood Podcast*, Yale Podcast Network, June 8, 2022. "Conservation and Community Development in Botswana: A Conversation with Kaggie Orrick, Lauren Sadowski and Dikatholo Kedikilwe." By Thomas Easley (Host).
- YSE 3 Newsletter, February 14, 2022. "Reframing the Controversial Bushmeat Trade"
- Canopy Magazine, Spring 2021. "Fanning out across the Globe in Search of Big Cats." By Fran Silverman.
- Yale Daily News, October 8, 2021. "Yale Hosts President of Botswana, Partners with Nation on Sustainability Efforts." By Hamera Shabbir.