

KAGGIE ORRICK

Ph.D. Candidate • Yale School of the Environment
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EDUCATION

- Yale University, School of the Environment** New Haven, CT
Ph.D. Candidate, expected graduation May 2024
Dissertation: Social-Ecological Landscape of Makgadikgadi
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

RESEARCH EXPERIENCE

- Makgadikgadi Project Leader**, *Round River Conservation Studies*, Botswana 2018-present
Responsible for the design and implementation of research and conservation efforts in the Makgadikgadi community region of Botswana. Project manager for two Round River employees and helped secure over \$200,000 in funding.
- Botswana Program Coordinator**, *Round River Conservation Studies*, Botswana 2017-2018
Managed and led the community-based wildlife monitoring project and student program.
- Botswana Program Leader**, *Round River Conservation Studies*, Botswana 2015-2017
Led the community-based wildlife monitoring project and student program.
- 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.
- 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

- (*In review*) Burak, M.*, Ferraro, K.*, **Orrick, K.***, Sommer, N., Ellis Soto, D., Schmitz, O. "Context matters when rewilding for climate change". *People and Nature*. Pre-print: <https://doi.org/10.32942/X2>
*indicates first-author.
- (*In review*) **Orrick, K.**, Ferraro, K., Sommer, N. "Individuals in focus: Individuals as the ecological and ethical center of human-wildlife". *Biological Conservation*.
- (*In review*) **Orrick, K.**, Dove, M., Schmitz, O.J. "Human-nature relationships: An introduction to social-ecological practice theory for conservation". *Ambio*.
- (*In review*) **Orrick, K.**, Sommer, N., Rowland, F., Ferraro, K. "Disentangling the role of predator hunting mode, spatial domain size, and habitat complexity: An examination of consumptive and nonconsumptive effects". *Ecology*.

Zhou, W. **Orrick, K.** and Lim, A. and Dove, M.. 2021. "Reframing Conservation and Development Perspectives on Bushmeat." *Environmental Research Letters*. Doi: 10.1088/1748-9326/ac3db1.

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, no. 3: 572–81. [Link here.](#)

REPORTS

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, Sherman trap surveys, mark-recapture, VHF biotelemetry, and triangulation.
Software:	ArcGIS (including ArcPy and customized 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.
Select modeling concepts:	Hierarchical models, resource selection modeling, occupancy modeling, species distribution models for current and future climates, spatial analysis and autocorrelation, graph theory, home range estimation.
Language:	Setswana (basic).
Other:	Proficient in teaching college-level courses and public speaking. Proficient in analytical and leadership skills and people management.

Professional Development: ARSET (NASA's Applied Remote Sensing Training) certificate in "Selecting Climate Change Projection Sets for Mitigation, Adaptation and Risk Management Applications"; Graduate Certificate in the Environmental Humanities; FGASA (Field Guide Association of Southern Africa) Level Two qualified; FGASA Trails Guide qualified, Advanced Snake Handling certified; WFR certified; First Aid and CPR certified; "Airborne lidar for conservation ecology" training sessions (2015).

GRANTS

\$59,445 TO DATE

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, POSTERS, AND WORKSHOPS

2023

- 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" by 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

- "Local and Indigenous Community Inclusion in Conservation", *Yale University* 2022
Natural Science Methods course
- "Impacts of Colonialism on Conservation in Botswana Today" *Branson High School* 2021
Post-Colonial History course
- "Parachute Science in Conservation", *Yale University* 2020
Natural Science Methods course
- "Social Network Analysis in Conservation", *Yale University* 2021 / 2020 / 2019
Building a Conservation Toolkit course
- "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

- "A Conversation on Community-based Wildlife Conservation" with Dr. Andrew Stein. Talk organized through 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.
- Co-led an interactive workshop for Advanced Consortium on Cooperation, Conflict, and Complexity Conference. "Human-Wildlife Conflict: System Dynamics and Trans-Disciplinary Approaches". *Columbia University, NY*, March, 2015.

Awards and Service to the Academic Institution

- Community Conversations Committee, *Yale University* 2019–2021
- BIOMES Coordinator, *Yale University* 2019–2020
- Kroon Cup Award, *Yale University* 2020
- Student Affairs Committee, *Yale University* 2019
- Earth Institute Student Advisory Council Vice President, *Columbia University* 2014–2015
- Department Masters Representative, *Columbia University* 2013–2014

Invited Nonacademic Speaking Events

- Panelist, Prospectus and Qualifying Exam Guidance, *Yale University* 2022
- Introduction for His Excellency, the President of Botswana, *Yale University* 2021

Moderator, *The Last Animals* screening, *Environmental Film Festival at Yale* 2019
Speaker, *Big Cats and Where to Find Them*, ages 6-13, *multiple private events* 2019-2021
Speaker, Career Day, 1st grade, *Katherine Delmar Burke School* 2017

Mentor

Dylan Feldemeier, *Masters of Environmental Science* 2021-2023
Principal mentor for research and execution of fieldwork. Yale University
Urmila Mallick, *Masters of Environmental Science* 2021-2023
Principal mentor for execution of fieldwork. Yale University
Dineo Keithome, *Masters of Philosophy* 2022-2023
Principal mentor for research and execution of fieldwork. University of Botswana.

Media

- 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).
- 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.