

Tyler James (T.J.) Clark-Wolf

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Education

Ph.D.	University of Montana Fish and Wildlife Biology <i>'Large Carnivore Recolonization Reshapes Population and Community Dynamics in the Rocky Mountains: Implications for Harvest Management'</i> Advisors: Mark Hebblewhite and Angela Luis	2021
MRes	University of Glasgow Ecology and Environmental Biology, <i>with distinction</i> <i>'Estimating the Population Size, Habitat Preferences, and Distribution of Sooty Shearwaters (Ardenna grisea) in the Falkland Islands'</i> Advisors: Jason Matthiopoulos and Ewan Wakefield	2017
B.S.	Ohio Wesleyan University Zoology and Neuroscience, <i>summa cum laude</i> Minors: Philosophy and Chemistry	2015

Professional History

Department of Wildland Resources and Ecology Center, Utah State University, Logan, UT Assistant Professor of Quantitative Population Ecology	2023-current
Center for Ecosystem Sentinels and eScience Institute, University of Washington, Seattle, WA Postdoctoral Researcher & UW Data Science Postdoctoral Fellow.	2021-2023

Publications

Total: 23 peer-reviewed articles. Citations = 383; H-index = 10 (Google Scholar; 1/27/25).

Peer-Reviewed

Clark-Wolf TJ, Miller DL, Drake H, Fifield DA, Rail JF, Wakefield ED, Wilhelm SI, Wong SNP, Gjerdrum C. 2025. Using model-based distance sampling to estimate decadal population change in Northern Gannets (*Morus bassanus*) across periods spanned by different at-sea methods. **Ibis**.

Clark-Wolf TJ, Boersma PD, Plard F, Rebstock G, Abrahms B. 2024. Increasing environmental variability inhibits evolutionary rescue in a long-lived vertebrate. **Proceedings of the National Academy of Sciences**, 121(34): e2406314121. [Commentary: Olazcauga L & Hufbauer R. 2024. Evolution fails to rescue a population in an increasingly variable environment. **PNAS**, 121(37): e2414877121.

Hazen EL, Savoca MS, **Clark-Wolf TJ**, Czapanskiy M, Rabinowitz PM, Abrahms B. 2024. Ecosystem sentinels as early warning indicators in the Anthropocene. **Annual Review of Environment and Resources**, 49: 1-26.

- Clark-Wolf TJ, Holt K, Johansson E, Nisi A, Rafiq K, West L, Boersma PD, Hazen E, Moore S, Abrahms B. 2024. The capacity of sentinel species to detect changes in environmental conditions and ecosystem structure. **Journal of Applied Ecology**, 61(7): 1638-1648.
- Carle RD, Varela T, Colodro V, Clark-Wolf TJ, Felis J, Hodum P, Castillo FJA, Lopez V. 2024. Breeding population of the pink-footed shearwater *Ardenna creatopus* on Isla Mocha, Chile. **Marine Ornithology**, 52: 85-96.
- Pearson DE, Clark-Wolf TJ. 2023. Predicting ecological outcomes using fuzzy interaction webs. **Ecology**, 104(7): e4072.
- Clark-Wolf TJ, Rebstock GA, Boersma PD, Abrahms A. 2023. Climate presses and pulses mediate the decline of a migratory predator. **Proceedings of the National Academy of Sciences**, 120 (3): e2209821120. [Coverage and podcast interview by NPR: <https://www.kuow.org/stories/stink-bugs-penguins-and-climate-change-oh-my>]. [PNAS Cozzarelli Prize Finalist].
- Abrahms B, Carter N, Clark-Wolf TJ, Gaynor K, Johansson E, McInturff A, Nisi A, Rafiq K, West L. 2023. Climate change as a global amplifier of human-wildlife conflict. **Nature Climate Change**. [Covered by 10+ media outlets, including NPR, NSF, Newsweek, and The Guardian].
- Clark-Wolf TJ, Hahn PG, Brelsford E, Francois J, Hayes N, Larkin B, Ramsey P, Pearson DE. 2022. Preventing a series of unfortunate events: using qualitative models to improve conservation. **Journal of Applied Ecology**, 59: 2322-2332.
- Clark TJ, Hebblewhite M. 2022. Trophic cascades as a basis for rewilding. **A Handbook for Rewilding**. [book chapter]. Eds: Convery I, Carver S, Beyers R, Hawkins S. Routledge Publishing, Oxford, UK.
- Clark TJ, Newton J, Wakefield E. 2022. Comment on “Evidence of prehistoric human activity in the Falkland Islands”. **Science Advances**, 8: eabo0928.
- Clark TJ, Vick B, Newton J, Marengo I, Wakefield E. 2021. A wolf in fox’s clothing? Using stable isotopes to quantify ecological replacement. **Conservation Letters**, 14(3): e12791.
- Stokes A, Catry P, Matthiopoulos J, Boldenow M, Clark TJ, Guest A, Marengo I, Wakefield E. 2021. Combining survey and remotely sensed environmental data to estimate the habitat associations, abundance and distribution of breeding thin-billed prions *Pachyptila belcheri* and Wilson’s storm petrels *Oceanites oceanicus*. **Polar Biology**, 44(4): 809-821.
- Pearson DE, Clark TJ, Hahn PG. 2021. Evaluating unintended consequences of intentional species introductions and eradications for improved conservation management. **Conservation Biology**, 36(1): e13734. [Wildlife Society Best Paper Finalist].
- Clark TJ, Hebblewhite M. 2021. Predator control may not increase ungulate populations in the future: a formal meta-analysis. **Journal of Applied Ecology**, 58(4): 812-824.
- Clark TJ, Hebblewhite M, Luis AD, Horne J. 2021. Stochastic predation exposes prey to predator pits and local extinction. **Oikos**, 130(2): 300-309.
- Bonnet-Lebrun AS, Catry P, Clark TJ, Campioni L, Kuepfer A, Tierny M, Kilbride E, Wakefield E. 2020. Habitat preferences, foraging behavior and bycatch risk among chick-provisioning sooty shearwaters *Ardenna grisea* in the Southwest Atlantic. **Marine Ecology Progress Series**, 651: 163-181.
- Clark TJ, Luis AD. 2020. Nonlinear population dynamics are ubiquitous in animals. **Nature Ecology & Evolution**, 4(1): 75-81.
- Catry P, Clark TJ, Crofts S, Stanworth A, Wakefield E. 2019. Changes and consistencies in marine and coastal bird numbers on Kidney Island (Falkland Islands) over half a century. **Polar Biology**, 42(11): 2171-2176.
- Clark TJ, Matthiopoulos J, Bonnet-Lebrun AS, Campioni L, Catry P, Marengo I, Poncet S, Wakefield E. 2019. Integrating habitat and partial survey data to estimate the regional population of a globally declining seabird species, the sooty shearwater. **Global Ecology & Conservation**, 17: e0054.

- Clark TJ, Bonnet-Lebrun AS, Campioni L, Catry P, Wakefield E. 2018. The depth of Sooty Shearwater *Ardenna grisea* burrows varies with habitat and increases with competition for space. **Ibis**, 161(1): 192-197.
- Stewart RA, Clark TJ, Shelton J, Stringfellow M, Scott C, White SA, McCafferty DJ. 2017. Urban grasslands support threatened water voles. **Journal of Urban Ecology**, 3(1): jux007.
- Levri EP, Clark TJ. 2015. Behavior in invasive New Zealand mud snails (*Potamopyrgus antipodarum*) is related to source population. **Biological Invasions**, 17(1): 497-506.

Non Peer-Reviewed Publications and Products

- Miller D, Clark-Wolf TJ. 2023. Distance: Sampling Detection Function and Abundance Estimation. R Package. Version: 1.0.9. URL: <https://github.com/DistanceDevelopment/Distance/>.
- Clark TJ, Vick B, Marengo I, Wakefield ED. 2019. The impact of the invasive Patagonian grey fox on the native and farmed fauna of Weddell Island, Falkland Islands. Report to the Falkland Islands Government.
- Catry P, Wakefield ED, Stokes A, Guest A, Boldenow M, Clark TJ. 2018. A baseline survey of burrowing seabirds on Bird Island, West Falklands. Report to the Falkland Islands Government.
- Wakefield ED, Clark TJ, Matthiopoulos J, Bonnet-Lebrun AS, Campioni L, Catry P. 2017. The population size and fine-scale foraging distribution of Kidney Island Sooty Shearwaters - a baseline study. Report to the Falkland Islands Government.

Grants

Total grants while at USU: \$864,000

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| <i>Utah Division of Wildlife Resources</i> . Evaluating Drivers of Great Salt Lake Waterbird Populations to Facilitate Future Management Strategies (\$371,409). T.J. Clark-Wolf (PI) and Dave Dahlgren. | 2024 |
| <i>Utah Division of Wildlife Resources</i> . Intermountain West Shorebird Survey: Providing the science needed to ensure shorebirds are resilient at Great Salt Lake. (\$84,000). Emily Clark, Max Malmquist, John Neill, Keith Hambrecht, T.J. Clark-Wolf (co-PI). | 2024 |
| <i>USGS Climate Adaptation Science Center</i> . Shifting frontiers: understanding species' abundance range shifts for informed conservation strategies. (\$310,000). T.J. Clark-Wolf (PI) and Erica Stuber. | 2024 |
| <i>Utah Department of Forestry, Fire and State Lands</i> . Intermountain West Shorebird Survey: Providing the science needed to ensure shorebirds are resilient at Great Salt Lake. (\$58,000). Emily Clark, Max Malmquist, John Neill, Keith Hambrecht, Carly Biedel, T.J. Clark-Wolf (co-PI). | 2024 |
| <i>Utah Agricultural Experiment Station</i> . Integrated models to understand and forecast population and community dynamics to advance natural resource management. (\$32,000), T.J. Clark-Wolf (PI). | 2023 |
| The Wildlife Society Early Career Travel Grant (\$500) | 2022 |
| Environment and Climate Change Canada (\$16,000) | 2021 |
| Natural Environment Research Council, Life Sciences Mass Spectrometry Facility (\$8500) | 2018 |
| Environmental Studies Budget, Falkland Islands Government (\$4,300) | 2018 |
| National Science Foundation Graduate Research Fellowship (\$138,000) | 2018 – 2021 |

Selected Presentations

Invited

“Advancing new perspectives on marine predators as ecological indicators of marine species: An overview”. 2024. **Ocean Sciences Meeting**. New Orleans, LA. Co-author.

“Navigating a variable world: understanding eco-evolutionary responses to global change” 2023. **University of California – Santa Cruz, Department of Ecology & Evolutionary Biology Seminar Series**. Santa Cruz, CA.

“Large carnivore recolonization reshapes population and community dynamics: implications for harvest management.” 2022. **The Wildlife Society Annual Conference, Multiple Predator-prey Symposium**. Spokane, WA.

“Climate presses and pulses mediate the decline of a migratory predator.” 2022. **Washington Cooperative Fish and Wildlife Research Unit Seminar Series**. Webinar.

“Meeting the risk analysis challenges of persistent engineered traits.” 2022. **International Society for Biosafety Research Conference**. St. Louis, MO. [cancelled – COVID19]. Co-author.

“Conservation in the Anthropocene: can community ecology help avoid unintended outcomes and improve conservation success?” 2021. **GeneConvene Global Collaborative Webinars – Controlling Gene Drives, Foundation for the National Institutes of Health**. Webinar.

“Predator control may be unlikely to increase ungulate populations.” 2020. **The Wildlife Society Annual Conference, Meta-Analysis Symposium**. Webinar.

Contributed

“Climate change as a global amplifier of human-wildlife conflict: a quantitative review of case studies across our lands and oceans”. 2024. **European Congress of Conservation Biology**. Bologna, Italy. Co-author.

“Ecosystem Sentinels as Early Warning Indicators in the Anthropocene.” 2024. **Ocean Sciences Meeting**. New Orleans, LA. Co-author.

“A Perfect Storm: Top-down and bottom-up factors catalyze alternative stable states in a large mammal predator-prey system.” 2024. **Gordon Research Conference – Predator-prey Interactions**. Ventura, CA. [poster].

“Climate presses and pulses mediate the decline of a migratory predator.” 2022. **The Wildlife Society Annual Conference**. Spokane, WA.

“Stochastic predation exposes prey to predator pits and local extinction.” 2020. **Gordon Research Conference – Predator-prey Interactions**. Ventura, CA. [poster].

“Fine-scale foraging distribution and exposure to by-catch risk of Sooty Shearwaters in the Falkland Islands.” 2018. **World Seabird Twitter Conference**. [online, poster].

“Estimating the population size and habitat preferences of Sooty Shearwaters in the Falkland Islands.” 2017. **British Ornithologists’ Union (BOU) Twitter Conference**. [online, poster].

“Using breeding habitat to estimate the population size of Sooty Shearwaters.” 2017. **Montana Chapter of the Society for Conservation Biology Research Symposium**. Missoula, MT.

“Estimating the population size and burrow distribution of Sooty Shearwaters in the Falkland Islands.” **Scottish Ecology, Environment & Conservation Conference**. Aberdeen, Scotland, UK [award: 2nd place].

Teaching

Utah State University, WILD 3810: Wildlife Population Ecology (undergrad, 3 credits, 50 students).

2025-present

Utah State University, WILD 6900: Applied Bayesian Analysis for Ecological Data (grad, 3 credits, 20 students).	2025-present
Utah State University, Guest Lecturer. WILD 3810 (2024); WILD 2400 (2024); WILD 6150 (2024).	2023-present
University of Montana, WILD 241: Rewilding Animal Populations, Primary Lecturer.	2020
University of Washington, ERSM 150: Wildlife in the Modern World, Guest Lecturer.	2022
University of Washington, BIOL 497: Conservation of Large Vertebrates, Guest Lecturer.	2021
University of Montana, WILD 240: Biostatistics, Guest Lecturer (2 classes).	2019-2020
University of Montana, WILD 541: Research Design, Guest Lecturer.	2019

Mentorship

Graduate Student Advisees

Sharon Montecino , M.S. Thesis Advisor. <i>Links between water availability and shorebird abundance in the Intermountain West.</i>	2024-present
Michael Procko , Ph.D. Thesis Advisor. (USU Presidential Doctoral Research Fellow; \$40,000). <i>Resolving food web complexity in natural systems.</i>	2024-present
Bugge Vick , University of Glasgow, Masters Thesis Co-Advisor. <i>The diet, distribution, and population size of the introduced South American grey fox (<i>Lycalopex griseus</i>) in the Falkland Islands and its potential role as an ecological replacment for the extinct Falkland Islands wolf (<i>Dusicyon australis</i>).</i>	2018-2019

Postdoctoral Researcher Advisees

Daniel Gorczynski , co-advised with Dean Pearson and Jedediah Brodie, University of Montana, <i>Fuzzy community models for ecology and conservation.</i>	2023-present
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Undergraduate Student Advisees

Chandni Rajesh , University of Washington, Undergraduate Honors Thesis Advisor. <i>What drives population cycles in caribou? Assessing the impacts of climate, predation, and harvest management.</i>	2022
Jack St. John , University of Montana, Undergraduate Honors Thesis Advisor. <i>Understanding caribou population cycles.</i>	2021

Service

On-campus

Member, Wildlife Extension Faculty hiring committee	2024-present
Member, Movement Ecology Faculty hiring committee	2023-2024
Ecoinformatics Graduate Certificate Committee	2023
Serving on 5 graduate student committees (3 MS, 2 PhD)	2023-present

Off-campus

Reviewed manuscripts for the following scientific journals and book publishers:

Arctic, Ecology and Evolution, Oecologia (2x), Bird Conservation International, Journal of Biogeography, NSF Review: NSF CAREER grant

2024-present

Ecology and Evolution, Population Ecology, Scientific Reports (2x), Conservation Biology (2x), Emu, Ecology Letters, PNAS Nexus, Book: A Handbook for Rewilding, Routledge Publishing

Before 2024