

Dr. Benjamin R. Goldstein
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Education

UC Berkeley	Berkeley, CA, USA	Ecology (Ph.D.)	2023
American University	Washington, DC, USA	Advisor: Dr. Perry de Valpine	
		Environmental Science (BS)	2018
		Philosophy (BA)	
		Computer science (minor)	

Employment

Postdoctoral Researcher, North Carolina State University. June 2023 - Present

- Lead the design and implementation of a multi-dataset, continental-scale distribution model for North American mammals

Statistical Consultant, Land Core. November 2021 - May 2023

- Design and implement a statistical model of risk-mitigating agricultural practices to inform insurers using more than 2 million observations of field-level corn yields, environmental conditions, and practices
- Work closely with the Risk Modeling Team to communicate statistical solutions and findings to stakeholders at bi-weekly internal meetings and external meetings

Scientific Aid, California Department of Fish and Wildlife. December 2020 - December 2021

- Design and implement statistical models for inference on wildlife distributions from camera trap data and communicate findings in publication
- Provide technical support for computational tasks related to wildlife monitoring

Publications

Selected

- Goldstein, B. R.**, Jensen, A. J., Kays, R., Cove, M. V., McShea, W. J., Rooney, B., Kierepka, E. M., & Pacifici, K. (2024). [Guidelines for estimating occupancy from autocorrelated camera trap detections](https://doi.org/10.1111/2041-210X.14359). *Methods in Ecology and Evolution*. <https://doi.org/10.1111/2041-210X.14359>
- Goldstein, B. R.**, Furnas, B. J., Calhoun, K. L., Larsen, A. E., Karp, D. S., & de Valpine, P. (2024). [Drought influences habitat associations and abundances of birds in California's Central Valley](https://doi.org/10.1111/ddi.13827). *Diversity and Distributions*, 30(5). <https://doi.org/10.1111/ddi.13827>
- Chapman, M., **Goldstein, B. R.**, Schell, C. J., Brashares, J. S., Carter, N. H., Ellis-Soto, D., Faxon, H. O., Goldstein, J. E., Halpern, B. S., Longdon, J., Norman, K. E. A., O'Rourke, D., Scoville, C., Xu, L., & Boettiger, C. (2024). [Biodiversity monitoring for a just planetary future](https://doi.org/10.1126/science.adh8874). *Science*, 383(6678), 34–36. <https://doi.org/10.1126/science.adh8874>
- Goldstein, B. R.**, & de Valpine, P. (2022). [Comparing N-mixture models and GLMMs for relative abundance estimation in a citizen science dataset](https://doi.org/10.1038/s41598-022-16368-z). *Scientific Reports*, 12(1), 12276. <https://doi.org/10.1038/s41598-022-16368-z>

All

- Goldstein, B. R.** and Stoudt, S. (2024). Evidence of novelty and specialization behavior in participatory science sampling. *In review*.
- Jensen, A. J., **Goldstein, B. R.**, Cove, M. V., Pacifici, K., Kierepka, E. M., McShea, W. J., Rooney, B., & Kays, R. (2024). Mammals on the margins: identifying the drivers and limitations of range expansion. *In review*.
- Goldstein, B. R.**, Stoudt, S., Lewthwaite, J. M., Shirey, V., Mendoza, E., & Guzman, L. M. (2024). Logistical and preference bias in participatory science butterfly data. *Frontiers in Ecology and the Environment*, e2783. <https://doi.org/10.1002/fee.2783>
- Jensen, A. J., Cove, M. V., **Goldstein, B. R.**, Kays, R., McShea, W., Pacifici, K., Rooney, B., & Kierepka, E. (2024). Geographic barriers but not life history traits shape the phylogeography of North American mammals. *Global Ecology and Biogeography*, e13875. <https://doi.org/10.1111/geb.13875>

- Parker-Shames, P., **Goldstein, B. R.**, & Brashares, J. (2024). Spatial and temporal activity of wildlife on and surrounding cannabis farms. *The Stacks*. <https://doi.org/10.60102/stacks-24003>
- Carlen, E. J., Estien, C. O., Caspi, T., Perkins, D., **Goldstein, B. R.**, Kreling, S. E. S., Hentati, Y., Williams, T. D., Stanton, L. A., Des Roches, S., Johnson, R. F., Young, A. N., Cooper, C. B., & Schell, C. J. (2024). A framework for contextualizing social-ecological biases in contributory science data. *People and Nature*, 6(2), 377–390. <https://doi.org/10.1002/pan3.10592>
- Calhoun, K. L., **Goldstein, B. R.**, Gaynor, K. M., McInturff, A., Solorio, L., & Brashares, J. S. (2023). Mammalian resistance to megafire in western U.S. woodland savannas. *Ecosphere*, 14(7), e4613. <https://doi.org/10.1002/ecs2.4613>
- Stoudt, S., **Goldstein, B. R.* (co-first author)**, & de Valpine, P. (2022). Identifying engaging bird species and traits with community science observations. *Proceedings of the National Academy of Sciences*, 119(16)
- Furnas, B. J., **Goldstein, B. R.**, & Figura, P. J. (2021). Intermediate fire severity diversity promotes richness of forest carnivores in California. *Diversity and Distributions*, ddi.13374. <https://doi.org/10.1111/ddi.13374>
- Socolar, Y., **Goldstein, B. R.**, de Valpine, P., & Bowles, T. M. (2021). Biophysical and policy factors predict simplified crop rotations in the US Midwest. *Environmental Research Letters*, 16(5), 054045. <https://doi.org/10.1088/1748-9326/abf9ca>
- Geeraert, N., Duprey, N. N., McIlroy, S. E., Thompson, P. D., **Goldstein, B. R.**, LaRoche, C., Kim, K., Raymundo, L. J., & Baker, D. M. (2020). The Anthropogenic Nitrogen Footprint of a Tropical Lagoon: Spatial Variability in *Padina* sp. $\delta^{15}\text{N}$ Values. *Pacific Science*, 74(1), 19. <https://doi.org/10.2984/74.1.2>
- LaRoche, C. K., **Goldstein, B. R.**, Cybulski, J. D., Raymundo, L. J., Aoki, L. R., & Kim, K. (2019). Decade of change in *Enhalus acoroides* seagrass meadows in Guam, Mariana Islands. *Marine and Freshwater Research*, 70(2), 246. <https://doi.org/10.1071/MF18062>

Software

- **Goldstein, B. R.**, Turek, D., Ponisio, L. C., & de Valpine, P. (2020). nimbleEcology: Distributions for Ecological Models in nimble (0.3.0) [Computer software]. <https://cran.r-project.org/package=nimbleEcology>

Fellowships

- National Science Foundation Graduate Research Fellow, 2020-2023
- Data Science for the 21st Century NSF Research Trainee, UC Berkeley 2018-2020
- Fulbright UK Summer Institute Awardee, University of Exeter, 2016

Presentations

- “Inferring species distributions from participatory science data.” Wildlife Seminar, University of California, Berkeley, California, USA 2023.
- “Drought impacts on birds in California's Great Valley revealed in eBird data.” The Wildlife Society, Spokane, Washington, USA 2022.
- “Identifying engaging bird species and traits with participatory science data.” Ecological Society of America, Montreal, Canada 2022.
- “Identifying engaging bird species and traits with participatory science data.” International Statistical Ecology Conference, Cape Town, South Africa 2022.
- “Implementing common hierarchical statistical models in R with nimbleEcology.” The Wildlife Society, Reno, NV 2019.