

CHARLOTTE M. PROBST

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EDUCATION

Ph.D. candidate, School for Environment and Sustainability. University of Michigan. *Advisor*: Brian Weeks.

B.S., Biological Sciences and Philosophy, *magna cum laude*. University of Notre Dame. Degree awarded May 2022.

RESEARCH EXPERIENCE

Weeks Lab, University of Michigan 2022-present

PhD dissertation: Mechanistic underpinnings of widespread organismal responses to global change

Ralston Lab, Saint Mary's College 2018-2022

Undergraduate research project: The effect of climate on bill morphology within and across *Toxostoma* thrashers

Undergraduate thesis: Roosting occupancy and behaviors at local Chimney Swift (*Chaetura pelagica*) roost

Undergraduate Research Fellow, Notre Dame Institute for Advanced Study 2021-2022

Project: Scientific capacity building in Uganda

Betts Lab, HJ Andrews Experimental Forest Summer 2021

REU: Contributing to long-term study of forest bird distributions

PUBLICATIONS

(* indicates undergraduate mentee)

[10] Zou H-X, Yang X, Hajamaideen TH, Stein OJ, Beltran RS, Freeman BG, Lindquist M, Miller ET, Mengarelli S, **Probst CM**, Valdovinos FS, Van Berkel D, Zarnetske PL, Weeks BC, Zhu K. Large language models unlock the ecology of species interactions. *In prep*.

[9] **Probst CM**, Yanco S, Clark I, Ziebell M*, Fuirst M, Mackenzie SA, Weeks BC. Resource declines shape morphological and phenological responses to climate change. *Submitted*.

[8] **Probst CM**, Berv JS, Zhou Z, Zhang M, Dias T, Alofs K, Fouhey DF, Weeks BC. Temperature predicts insulation but not size in the world's passerines. *Submitted*.

[7] Berv JS, **Probst CM**, Claramunt S, Shipley JR, Friedman M, Smith SA, Fouhey DF, Weeks BC. Rates of passerine body plan evolution in space and time. *In review*.

[6] Weeks BC, Berv JS, Cho Y, Clark I, Cole M, Ferentinos AM, Fuller JR, Guza M, Hammond T, Hetrick C, Li Z, **Probst CM**, Yanco SW, Ziebell M*, Zou H-X, Zimova M. (2026). Exploring the data demands and global opportunities for reconstructing morphological responses to climate change. *Evolutionary Ecology*, 40(1), 11. <https://doi.org/10.1007/s10682-025-10368-x>

[5] Humphries E, Smith I, Ziebell M*, **Probst CM**, Carter N, Weeks BC. (2026). Evaluating the empirical basis for threat attribution in the IUCN Red List. *Conservation Biology*, e70213. <https://doi.org/10.1111/cobi.70213>

[4] Weeks BC, Zhou Z, **Probst CM**, Berv JS, O'Brien B, Benz B, Skeen H, Ziebell M*, Bodt L, Fouhey D. (2025). Skeletal trait measurements for thousands of bird species. *Scientific Data*, 12(1), 884. <https://doi.org/10.1038/s41597-025-05234-y>

[3] Bentley I, Ralston J, Garman SD, Hershberger O, **Probst CM**, Washer C. (2023). Introducing the Scientific Image Analysis Application: A Free and User-Friendly Program for Extracting Bioinformatics From Digital Images. *2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC)*, 0778-0787.

[2] Weeks BC, Klemz M, Wada H, Darling R, Dias T, O'Brien BK, **Probst CM**, Zhang M, Zimova M. (2022). Temperature, size, and developmental plasticity in birds. *Biology Letters*. <https://doi.org/10.1098/rsbl.2022.0357>

[1] **Probst CM**, Ralston J, Bentley I. (2021). The effect of climate on bill morphology within and across *Toxostoma* thrashers. *Journal of Avian Biology*. <https://doi.org/10.1111/jav.02871>

In the Media

Interviewed in: Mullinx, N. (Fall 2025). From measuring by hand to AI-assisted computer vision. *Stewards Magazine*. <https://seas.umich.edu/stewards/fall-2025/measuring-hand-ai-assisted-computer-vision>

Interviewed in: Weiler, B. (2023, Oct 6). Experts share tips for helping migrating birds through Michigan. *Michigan Radio*. <https://www.michiganradio.org/environment-climate-change/2023-10-26/experts-share-tips-for-helping-migrating-birds-through-michigan>

Research profiled in: Fosmoe, M. (2022, Sep 05). The Chimney Swifts of Columba Hall. *Notre Dame Magazine*. <https://magazine.nd.edu/stories/the-chimney-swifts-of-columba-hall/>

Probst, CM. (2022, May 20). A spectacle of nature in our backyard: Thousands of birds return to Notre Dame. *South Bend Tribune*. <https://www.southbendtribune.com/story/opinion/columns/2022/05/20/chimney-swifts-migratory-birds-return-notre-dame-campus-spring/9765707002/>

Selected as one of the top 3 most memorable op-eds of 2022

CONFERENCE PRESENTATIONS

Probst CM, Clark IJ, Cameron K, Furst M, Mackenzie SA, Yanco SW, Ziebell M*, Weeks BC. Disentangling drivers of morphological change over 50 years in Tree Swallows (*Tachycineta bicolor*). Oral presentation at: Society of Canadian Ornithologists/Société des ornithologistes du Canada Annual Meeting. 2025, August 16; Saskatoon, Canada. *Recipient of outstanding student presentation award*.

Probst CM, Berv JS, Zhang M, Fouhey D, Dias T, Alofs K, Weeks BC. Temperature predicts insulation but not body size in the world's passerines. Oral presentation at: Hans Kristiansson Symposium in Animal Ecology: Changing Animals in a Changing World. 2024, November 25-27; Lund, Sweden.

Probst CM, Zhang M, Fouhey D, Dias T, Skeen H, Alofs K, Weeks BC. Differentiating the effect of temperature versus latitude on passerine body size. Oral presentation at: American Ornithological Society Conference and Society of Canadian Ornithologists/Société des ornithologistes du Canada Joint Conference; 2023, August 8-12; London, ON.

Probst CM, Ralston J. Seasonal differences in Chimney Swift (*Chaetura pelagica*) roosting behaviors. Oral presentation at: Northeast Natural History Conference; 2022, April 24; Albany, NY.

Probst CM. Quantifying the importance of a local Chimney Swift (*Chaetura pelagica*) roost. Poster session presented at: Notre Dame Fall Undergraduate Research Fair; 2021 October 29; Notre Dame, IN.

Probst CM, Ralston J, Bentley I. The effect of climate on bill morphology in *Toxostoma* thrashers. Paper session presented at: Society of Integrated and Comparative Biology Annual Meeting 2021; 2021 January 3-7; online.

Probst CM, Ralston J. The effect of climate on bill morphology in *Toxostoma* thrashers. Poster session presented at: 2019 Joint Meeting of the Association of Field Ornithologists and the Wilson Ornithological Society; 2019 October 27-30; Cape May, NJ.

GRANTS, HONORS, & AWARDS (total: \$50,012)

- AI Expanded Communication Boundaries Rackham Working Group (\$500) 2026
- Outstanding Student Presentation Award, SCO-SOC 2025 Annual Meeting (CA\$300) 2025
- Rackham Predoctoral Fellowship (\$41,310) 2025
- SEAS Conference Travel Grant (\$250) 2025
- Rackham International Travel Grant (\$2,102) 2023, 2025
- Rackham Graduate Student Research Award (\$1,500) 2023
- Courtney R. Wilson Award (\$2,000) 2023
Awarded to a first-year SEAS PhD committed to addressing critical environmental issues
- NSF-GRFP Honorable Mention 2022, 2024
- John A. Oesterle Award in Philosophy (\$100) 2022
Recognizes a graduating student who has excelled in the study of philosophy
- Honors Final Colloquium Invited Speaker, Notre Dame Glynn Honors Program 2022
- Glynn Honors Program, University of Notre Dame 2018-2022
- Dean's List, University of Notre Dame College of Science 2018-2019, S2020, 2021, S2022
- Glynn Honors Program Conference Funding (\$2,050) 2019, 2022

TEACHING & MENTORING

Teaching & Course Development

- EAS 538, Natural Resources Statistics Fall 2022, Winter 2023
University of Michigan, Graduate Student Instructor
- EAS 639.013, Introduction to R Winter 2023
University of Michigan, Graduate Student Instructor
- ENGL 20760, Witnessing Climate Change Spring 2022
University of Notre Dame, Course Development Assistant ([interactive syllabus](#))
- University Writing Center 2019-2022
University of Notre Dame Writing Center, Writing Tutor

Guest Lectures

- “Climate Change and Resource Declines” – Conservation Biology, 23 February 2026
- “Principal Components for Ecology and Evolution” – Multivariate Statistics, 10 February 2026
- “Decolonization in Natural History Collections” – Decolonizing Museums, 6 November 2024
- “Principal Components for Ecology and Evolution” – Multivariate Statistics, 19 September 2024
- “Science & Values” – Undergraduate Research Opportunity Program Seminar, 17 November 2023

Mentoring

- Center for Alaskan Coastal Studies Master's Student Project co-advisor (Winter 2026-present)
- Mark Ziebell (Fall 2022-present)
 - MRADS Symposium poster: Validating a method for rapid handling and measuring of museum specimens
 - Undergraduate thesis: Nest site selection in Tree Swallows (*Tachycineta bicolor*)
- Ting Ting Li (Spring 2024-Winter 2025)
- Eliana Adler (Winter 2025)
- Zach Cavanaugh (Winter 2025-Fall 2025)
- Jessica Falls (Fall 2023-Winter 2024, Winter 2025)
 - UROP Symposium poster: Temporal trends of climate-driven changes in body size: a meta-analysis
- Isabelle Relyea (Winter 2024)

SERVICE & OUTREACH

Specimen preparation, University of Michigan Museum of Zoology	2023-present
Letters to a Pre-Scientist	2023-present
SEAS NextGen Proposal Reviewer	Fall 2024-present
SEAS Executive Committee PhD Representative	Winter 2025-present
EAS 841: PhD Seminar Student Organizer	Winter 2025
SEAS AI in Biodiversity & Society Faculty Search Committee	Winter 2024
SEAS Doctoral Organizing Committee Service Co-Chair	2023-2024
Peer reviewer for: Journal of Animal Ecology, Ecosphere, Current Biology, Nature Ecology & Evolution, Global Ecology & Biogeography, Journal of Avian Biology, Ecology & Evolution, Avian Research.	