

Noah Brady

PH.D CANDIDATE

Department of Ecology and Evolutionary Biology, Cornell University

☎ +1 219 796 3684 | ✉ nkb53@cornell.edu | 🏠 noahkbrady.github.io | 📷 [noahkbrady](https://www.instagram.com/noahkbrady) | 🐦 [Noahkbrady](https://twitter.com/Noahkbrady)

Education

PhD Candidate, Department of Ecology and Evolutionary Biology

ROBERT REED

Cornell University

August 2018–present

Bachelor of Arts in Biology

EMILY HEFFERNAN

New College of Florida

August 2013–May 2017

- Honors thesis: “Conservation Genetics of the Endangered Dakota Skippper”

Publications

1. Grace E. Hirzel, **Noah K. Brady**, Robert D. Reed, Erica L. Westerman (2024). Synchronous seasonal plasticity in colouration, behaviour, and visual gene expression in a wild butterfly population. *bioRxiv* 2024.06.15.598356; doi: <https://doi.org/10.1101/2024.06.15.598356>
2. Heffernan, E. V., Barkdull, M., **Brady, Noah K.** (2024). Microsatellites for butterfly conservation: historical challenges, current relevance, and a guide to implementation. <https://doi.org/10.3389/fevo.2024.1344065> *Frontiers in Ecology and Evolution*.
3. Chatterjee Martik, Yu Xin Y., **Brady, Noah K.**, Hatto Gabriel C., Reed Robert D. (2024). mirror determines the far posterior domain in butterfly wings. <https://doi.org/10.7554/eLife.96904.1> *eLife* 13:RP96904
4. Richard A. Fandino, **Noah K. Brady**, Martik Chatterjee, Jeanne M. C. McDonald, Luca Livraghi, Karin R. L. van der Burg, Anyi Mazo-Vargas, Eirene Markenscoff-Papadimitriou, Robert D. Reed (2024) The ivory lncRNA regulates seasonal color patterns in buckeye butterflies. *bioRxiv* 2024.02.09.579733; doi: <https://doi.org/10.1101/2024.02.09.579733> in-review at PNAS

Talks

- “How Do Butterflies Predict the Future?”. *Evolution* (2024), Montreal, QC.
- “How Do Butterflies Predict the Future?”. *Lepidopterists Society Meeting* (2024), Ithaca, NY.
- “How did molting pave the way for adaptive seasonal color pattern plasticity?”. *Evolution* (2023), Albuquerque, NM.
- “How Does Evolution Tune Seasonal Color Patterns in Butterflies”. *Cornell Evo Day Symposium* (2023), Ithaca, NY.
- “The Genomics of Color Pattern Plasticity in *Junonia coenia* Butterflies”. *Evolution* (2022), Cleveland, OH.
- “The Genetic Basis of Eyespot Plasticity”. *Cornell EEB Winter Symposium* (2019), Ithaca, NY.
- “Conservation Genetics of a Threatened Butterfly (*Hesperia dacotae*)”. 2017 BioFlorida Florida Biotech Expo, Sarasota, FL.

Mentorship

Yoel Dusi

DEPT. OF ECOLOGY & EVOLUTIONARY BIOLOGY

Cornell University

January 2020–December 2021

- Quantified eyespot plasticity using ImageJ
- Used CRISPR/Cas9 to mutate candidate genes associated with eyespot plasticity

Zachary Bellido

DEPT. OF ECOLOGY & EVOLUTIONARY BIOLOGY

Cornell University

July 2021–July 2022

- Used CRISPR/Cas9 to investigate the function of the Jak/Stat pathway in eyespot development
- Studied the role of the hedgehog signaling in plastic eyespot development using CRISPR/Cas9
- Trained fellow undergraduates on egg injection technique and wrote updated injection protocol

Zahra Kelsey

DEPT. OF ECOLOGY & EVOLUTIONARY BIOLOGY

Cornell University

May 2022–May 2023

- Investigated the role of the ecdysone receptor (*ecr*) on plastic color pattern development
- Used CRISPR/Cas9 to mutate candidate genes associated with eyespot plasticity

Service/Outreach

Co-leader, Cornell Diversity Preview Weekend

DEPT. OF ECOLOGY & EVOLUTIONARY BIOLOGY

Cornell University

September 2019–September 2021

- Organized three virtual recruitment events for over 80 undergraduates from underrepresented populations across the U.S.
- Planned and executed workshops on interviewing for graduate school
- Led weekly meetings of co-leaders and helped secure long-term funding for Cornell Diversity Preview Weekend (now Consider Cornell)

Diversity Equity Inclusion and Justice Hiring Committee

DEPT. OF ECOLOGY & EVOLUTIONARY BIOLOGY

- Developed guidelines for equitable hiring of undergraduates, post-docs, and faculty

Cornell University

August 2020–May 2022

Graduate Student Recruitment Committee

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- Assisted in the planning and hosting of virtual and in-person recruitment events

Cornell University

August 2021–March 2023

Grants/Awards

- Graduate Student Research Fund, Cornell University (\$4000)
- Graduate Research Travel Grant (\$2000)

Teaching

An Introduction to Evolutionary Biology and Diversity: Teaching Assistant

BIOEE1780

Cornell University

August 2018–May 2019

Cellular and Developmental Biology: Teaching Assistant

BIOMG1350

Cornell University

August 2021–December 2021