

# Brooke Quinn

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Brown University  
171 Meeting St  
Providence, RI 02912



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## EDUCATION

**Ph.D. Candidate in Ecology,  
Evolution, & Organismal Biology**  
Aug. 2020 – May 2026

**Brown University, Providence, RI, USA**  
Advisor: Dr. Sharon Swartz  
Committee: Dr. Beth Brainerd,  
Dr. Kenny Breuer, Dr. Matthew Fuxjager

**B.S. in Biology**  
Aug. 2016 – May 2020

**Temple University, Philadelphia, PA, USA**

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## PEER-REVIEWED PUBLICATIONS

\*indicates undergraduate co-author

- Rummel, A.D., **Quinn, B.L.**, Kim, A.K.\*, and Swartz, S.M. (2025). Extreme regional heterothermy during flight in diverse wild bats. *iScience*. (*in press*). doi.org/10.1016/j.isci.2025.113651
- Kane, S.A., **Quinn, B.L.**, Wu, X.K., Xi, S.Y.\*, Ochs, M.F., and Hsieh, S.T. (2025). Unsupervised learning reveals rapid gait adaptation after leg loss and regrowth in spiders. *Journal of Experimental Biology*, 228 (12): jeb250243. doi.org/10.1242/jeb.250243
- Quinn, B. L.**, Bajic, J. L.\*, Romo, S. J.\*, Wu, A.\*, Bortoni, A., Breuer, K., and Swartz, S. M. (2025). Anatomical distribution and flight control function of wing sensory hairs in Seba's short-tailed bat. *The Anatomical Record*, 1–17. doi.org/10.1002/ar.25679
- Håkansson, J., **Quinn, B. L.**, Shultz, A. L.\*, Swartz, S. M., and Corcoran, A. J. (2024). Application of a novel deep learning-based 3D videography workflow to bat flight. *Annals of the New York Academy of Science*, 1-15. doi.org/10.1111/nyas.15143
- Rummel, A.D., Sierra, M.M.\*, **Quinn, B.L.**, and Swartz, S.M. (2023). Hair, there and everywhere: A comparison of bat wing sensory hair distribution. *The Anatomical Record* 1-12. doi.org/10.1002/ar.25176
- Quinn, B.L.** (2020). Digest: Incomplete convergence drives form–function relationship in gliders\*. *Evolution*, 74: 2746-2747. doi.org/10.1111/evo.14115

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## PUBLICATIONS IN PREPARATION

- Quinn, B.L.**, Lee, G., Moody, N.M., and Swartz, S.M. Prey handling behavior in insectivorous bats. (*in prep*)
- Quinn, B.L.** & Swartz, S.M. Flight trajectories and kinematics after sensory hair depilation of the insectivorous bat *Myotis auriculus*. (*in prep*)
- Quinn, B.L.**, Morales, A., and Simmons, N.B. Convergent evolution and ecomorphology of *Myotis* bats. (*in prep*)

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## GRANTS, FELLOWSHIPS, & AWARDS

<b>National Science Foundation Graduate Research Fellowship</b> National Science Foundation, 2021	<b>\$138,000</b>
<b>Doctoral Dissertation Enhancement Grant</b> Dept. of Ecology, Evolution, & Organismal Biology; Brown University, 2024 <i>Competitive departmental grant requiring a full NSF-style application. Provides funds for late-stage graduate students to conduct research independent of their advisor's.</i>	<b>\$12,000</b>
<b>Theodore Roosevelt Memorial Fund</b> American Museum of Natural History, 2023 <i>Funding to support field research on bat flight in Belize.</i>	<b>\$3,300</b>
<b>Anatomy Training Program</b> American Association for Anatomy, 2025 <i>Selective program providing coursework in pedagogical training and advanced dissection for anatomy instructors.</i>	

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## ORAL PRESENTATIONS

- Quinn, B.L., Moody, N.M., Lee, G., Barber, J. and Swartz, S.M.** October 2025. *Prey handling behavior in insectivorous bats.* Talk presented at: North American Society for Bat Research; Edmonton, Canada.
- Quinn, B.L., Romo, S.J., Wu, A., Bortoni, A., Breuer, K., and Swartz, S.M.** November 2024. *Sensory hairs' impact on flight control in Seba's short-tailed bat.* Talk presented at: Northeast Regional Society for Integrative and Comparative Biology; Cambridge, Massachusetts.
- Quinn, B.L., Bajic, J.L., Romo, S.J., Wu, A., Bortoni, A., Breuer, K., and Swartz, S.M.** October 2024. *Sensory hairs' distribution and impact on flight control in Seba's short-tailed bat.* Talk presented at: North American Society for Bat Research; Guadalajara, Mexico.
- Quinn, B.L., Rummel, A.D., Sierra, M.M., and Swartz, S.M.** July 2023. *Hair, there and everywhere: A comparison of bat wing sensory hair distribution.* Talk presented at: International Congress of Vertebrate Morphology; Cairns, Australia.
- Quinn, B.L., Breuer, K., Bortoni, A., and Swartz, S.M.** January 2023. *Sensing on the fly: sensory hairs help bats battle turbulence.* Talk presented at: Society for Integrative and Comparative Biology; Austin, TX.
- Quinn, B.L., Morales, A., and Simmons, N.B.** January 2020. *Predicting foraging strategies from morphological traits in Myotis.* Talk presented at: Society for Integrative and Comparative Biology; Austin, TX.
- Quinn, B.L., Morales, A., and Simmons, N.B.** October 2019. *Predicting foraging strategies from morphological traits in Myotis.* Talk presented at: North American Society for Bat Research; Kalamazoo, MI.
- Quinn, B.L., Xi, S.Y., and Hsieh, S.T.** January 2019. *Can learning facilitate perturbation recovery following autotomy?* Talk presented at: Society for Integrative and Comparative Biology; Tampa, FL.

Quinn, B.L., Xi, S.Y., Carter, A.M., and Hsieh, S.T. January 2018. *Bending rules for terrestrial locomotion*. Talk presented at: Society for Integrative and Comparative Biology; San Francisco, CA.

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## INVITED LECTURES

University of Massachusetts Lowell, Department of Biomedical Engineering. October 2025. *How sparse sensors guide bat flight*.

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## TEACHING

- 2023-25 **Study Group Leader**, *REU site: Biology of animal movement and performance*  
Serve as the study group leader for two summers for an REU site at Brown University. Conceive of, produce, and lead weekly professional development activities. Oversee research progress for ten students each year.
- 2022-23 **Teaching Assistant**, *Human Anatomy I & II*  
2021-22 Warren Alpert Medical School of Brown University  
Class of 150 first-year medical students with lecture and cadaveric lab components. Teach labs, work with students in groups and 1:1, grade assessments, create formative assessments, guest lecture, host review sessions.
- 2021 **Teaching Assistant**, *Human Anatomy and Biomechanics*, Brown University  
Class of 40 upper-level undergraduates. Teach labs, work with students in groups and 1:1, grade assessments, run cadaveric lab dissection sessions.
- 2020 **Teaching Assistant**, *Diversity of Life*, Brown University  
Class of 100 lower-level undergraduates. Host office hours, be responsive to students via email, grade assessments.
- 2019 **Teaching Assistant**, *Principles of Ecology*, Temple University  
Class of 100 undergraduates. Create assessment materials, grade assignments, hold office hours, guest lecture, host review sessions.
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## MENTORSHIP

### Undergraduate Researchers

- 2025-26 Gregory Lee, Ariel Wu, Calder Montross, Nathaniel Valentine
- 2024-25 Santiago Romo, Andrew Kim, Gregory Lee, Ariel Wu, Yaffa Segal, Zechariah Brown
- 2023-24 Joao Lima, Jade Bajic, Santiago Romo, Andrew Kim, Gregory Lee, Marcus Lewis, Ariel Wu, Alberto Lopez Resendiz
- 2022-23 Chloe Finch, Jasmine Shum, Joao Lima, Santiago Romo, Andrew Kim, Marcus Lewis, Julie Park, Yoshi Yajima
- 2021-22 Rea Yoh, MC Vigilante, Sophia Sordilla, Jasmine Shum, Melissa Sierra
- 2020-21 Emily Dai, Kiley Kellum, Sascha Morris
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## COMPUTER & LABORATORY SKILLS

MATLAB  
R  
DeepLabCut  
Python  
High-performance computing cluster use  
High-speed videography  
3D video calibration techniques  
Animal husbandry  
Human and animal cadaveric dissection  
Euthanasia techniques (in field and lab)  
Electrode construction and insertion  
Microchipping in small mammals  
Fluorescence microscopy

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## CERTIFICATIONS & WORKSHOPS

2025	<b>Phylogenetic Comparative Methods Workshop</b> , led by Daniel Moen
2024	<b>Course Design Seminar</b> , Sheridan Center for Teaching and Learning
2024	<b>Teaching Consultation Program</b> , Sheridan Center for Teaching and Learning
2022	<b>Teaching Certificate</b> , Sheridan Center for Teaching and Learning

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## SERVICE & OUTREACH

2024-25	<b>BioMed Graduate Research Steering Committee</b> , Brown University
2024-25	<b>President, Graduate Student Association</b> , Brown EEOB
2023-24	<b>Vice President, Graduate Student Association</b> , Brown EEOB
2021 –	<b>Skype a Scientist Speaker</b>
2020 –	<b>Developed educational/informational website</b> , <a href="http://batflight.org">batflight.org</a>
2020-21	<b>Polygence Mentor</b>