

Y Alyssa Jo Sargent Y

PhD Candidate, Behavioral Ecophysics Lab, University of Washington

Email: sargena@uw.edu | Website: alyssajsargent.com

Education

- Ph.D., Biology (ongoing: candidate)**, Behavioral Ecophysics Lab, University of Washington 2020–
Topic: Characterization and modeling of movement behavior in hummingbirds (Advisor: Dr. Alejandro Rico-Guevara)
- B.Sc., Environmental Science**, Messiah University 2014–18
Independent research: Avian habitat associations and environmental impact assessment for Oakwood Hills (2017–18, Advisor: Dr. David Foster)
Departmental honors independent research: Noninvasive individual identification of the Panamanian golden frog (2016–17, Advisor: Dr. Erik Lindquist)

Publications & Manuscripts

- Hewes A, Cuban D, Groom DJE, **Sargent AJ**, Beltrán DF, Rico-Guevara A. 2022. Comparative functional morphology of nectar-feeding birds. *Journal of Morphology*. <https://doi.org/10.1002/jmor.21513>. 2022
- Van Dyke F, Harju S, Hindy M, Cannata N, Schmidt E, Hillman E, **Sargent AJ**, Keas B. 2022. Comparative Detection, Density, and Reproductive Performance of the Kirtland's Warbler in Jack and Red Pine Habitats. *Journal of Wildlife Management*. e22233. <https://doi.org/10.1002/jwmg.22233>. 2022
- Cuban D, Hewes A, **Sargent AJ**, Groom DJE, Rico-Guevara A. 2022. On the feeding biomechanics of nectarivorous birds, *Journal of Experimental Biology*, 225:2, p.jeb243096. <https://doi.org/10.1242/jeb.243096>. 2022
- Sargent AJ**, Groom DJE, Rico-Guevara A. 2021. Locomotion and energetics of divergent foraging strategies in hummingbirds: a review, *Integrative and Comparative Biology*, 61:2, 736–748. <https://doi.org/10.1093/icb/icab124>. 2021
- Hereward H, Facey R, **Sargent AJ**, Roda S, Couldwell M, Renshaw E, Shaw K, Devlin J, Long S, Porter B, Henderson J, Emmett C, Astbury L, Maggs L, Rands S, Thomas R. 2021. Raspberry Pi nest cameras: An affordable tool for remote behavioral and conservation monitoring of bird nests. *Ecology and Evolution*, 00, 1–13. <https://doi.org/10.1002/ece3.8127>. 2021
- Van Dyke F, Harju S, Hindy M, Cannata N, Schmidt E, Hillman E, **Sargent AJ**, Keas B. Comparative bird communities of jack pine and red pine ecosystems. Submitted to *Wildlife Society Bulletin*. In review
- Blue-throated Mountain-gem (*Lampornis clemenciae*) site preference and nest characterization. In prep

Fellowships (>\$164,800)

- Graduate Research Fellowship**, National Science Foundation (NSF GRFP), \$138,000 2022–
- Graduate Student Excellence Fellowship**, Washington Research Foundation & Benjamin Hall, \$10,866 2022
- Barbara Eddy Outreach Fellowship**, Burke Museum of Natural History and Culture, \$15,982 2021

Grants & Scholarships (>\$90,400)

- Outreach Grant**, Animal Behavior Society, \$1,000 2022
- Orians Award for Tropical Studies**, University of Washington, \$1,500 2021

Margo & Tom Wyckoff Award , University of Washington, \$3,500	2021
Federal Work-Study , Messiah University, \$6,998	2015–18
Messiah University Grant , Messiah University, \$19,440	2014–18
Provost Scholarship , Messiah University Honors Program, \$58,000	2014–18

Awards & Honors

Certified Field Naturalist , Au Sable Institute	2018
Departmental Honors (Research) , Department of Biology, Messiah University	2016–18
Dean's List ; School of Science, Engineering, and Health; Messiah University	2014–18

Science Communication Writing & Activities

Science Journalism Fellowship , Puget Sound Institute & <i>Salish Sea Currents</i> (Feature article) Bird Populations Improve After Elwha Dam Removals	2022
TED-Ed collaboration for hummingbird-focused animation Created supplementary learning materials for animation (>834,000 views)	2021
Current Conservation (Feature article, Vol. 14.4) The Secret World of Owl Migration	2021
Dispatches from the Field (Guest article) Praia, Paradise, & Petrel Poop	2020
Biology Website Accessibility Redesign , University of Washington Established, co-led taskforce to enhance website accessibility for prospective grad students	2020
President of Sigma Zeta Science and Mathematics Honor Society, Messiah University Coordinated seminars, community events (scientific demonstrations, judging K-8 science fairs)	2016–18
Oakes Museum of Natural History Assistant Collections Manager , Messiah University Volunteer guide; curated, identified, and catalogued bird, egg, nest, mammal, insect specimens; gave ornithological talks to public, created displays, contributed to blog	2015–18
Selected, additional publications on human-nature coexistence Artwork (<i>Peregrine Review</i>), personal essays (<i>Kelsey Review</i> , <i>Aspirations</i>), LEGO (<i>Beautiful LEGO: Wild!</i>)	2013–18

Science Communication Talks, Interviews, & Panels (>3,000 citizens reached)

Wildlife Webinar , Washington Chapter of The Wildlife Society Fast & Furious: Tracking the Movements of Territorial Hummingbirds (20 attendees)	2023
Interview , #itsawildlife Discussion for blog post and podcast on ornithological research, opportunities, & outreach	2022
Young Birders Talk , Seattle Audubon Invited storytelling on career trajectory, fieldwork, & research (13 students)	2022
Interview , Seattle Audubon Discussion for blog post on hummingbird snowflake capture	2021
Virtual Open Door , Burke Museum of Natural History and Culture Invited Instagram Live Q&A on research (>1,000 views)	2021

Research Spotlight , Burke Museum of Natural History and Culture Presentation with museum donors on research (51 attendees)	2021
Career Café with Girls in Science , Burke Museum of Natural History and Culture Invited livestream career talk and iNaturalist activity (>800 students)	2021
Skype a Scientist 14 hummingbird talks with all ages, class- and school-wide presentations (>1,040 students)	2020–
YouthForce (Boys & Girls Club) with Behavioral Ecophysics Lab Arranged & co-hosted virtual, career-oriented connection event (30 members)	2020

Teaching Assistantships (* included curriculum development; >140 students taught)

Scientific Writing in Marine Biology , University of Washington (48 undergraduates)	2022
Ornithology* , University of Washington (32 undergraduates)	2021
Introductory Biology , University of Washington (51 undergraduates)	2020
Environmental Chemistry , Messiah University (12 undergraduates)	2018

Invited Academic Talks & Guest Lectures (50 peers taught)

Plastic Punk Animal Games Workshop , University of Washington (20 graduate engineers) <i>Talk</i> : Using games and bespoke field methodology to increase understanding of hummingbirds	2022
Graduate & Professional Life , University of Washington (30 undergraduates) <i>Lecture</i> : The mechanics of science communication: effectively engaging with diverse audiences	2021–

Academic Conference Presentations

Animal Behavior Society <i>Talk</i> : Where do they go? Mysterious hummingbird foraging	2021
Society for Integrative and Comparative Biology <i>Talk</i> : Reassessing hummingbird foraging: the territoriality-traplining continuum	2021
School of Science, Engineering, and Health Research Symposia , Messiah University <i>Talk</i> : Kirtland's Warbler use of red pine stands in Northern Lower Michigan <i>Poster</i> : Survey of the Oakwood Hills avian community, stratified by habitat type <i>Talk, poster</i> : Non-invasive individual identification of the Panamanian golden frog (<i>Atelopus zeteki</i>)	2016–18
Internal Research Symposium , Au Sable Institute <i>Talk</i> : Kirtland's Warbler use of red pine stands in Northern Lower Michigan	2017

Professional Service

NSF GRFP Workshop Peer Reviewer , University of Washington	2022
Applying to Graduate School Panel , University of Washington Facilitator of Q&A panel for prospective grad students (>100 total attendees)	2020–

Academic Peer Review (2020–present)

Biology Letters (1), *Journal of Pollination Ecology* (1), *The Oriole* (1)

Students Mentored

Ana Melisa Fernandes , post-baccalaureate research associate, Centro de Investigación Colibrí Gorriazul	2022–
Linda Chen , Behavioral Ecophysics undergraduate, University of Washington	2020
Michelle Hsu , Behavioral Ecophysics undergraduate, University of Washington	2020
Monica Hu , Behavioral Ecophysics undergraduate, University of Washington	2020
Allison Li , Behavioral Ecophysics undergraduate, University of Washington	2020

Additional Research & Field Experience

Research Technologist , University of Washington, Dr. Alejandro Rico-Guevara Lab maintenance; virtual outreach; wrote protocols, permits, proposals, and papers; directed undergraduate research team (geometric morphometrics)	2020
Banding Assistant & Owl Banding Crew Leader , Long Point Bird Observatory, Kyle Cameron Fall migration constant-effort banding	2019
Research Intern , AMNH Southwestern Research Station, Dr. Susan Wethington Project: Blue-throated Mountain-gem site preference and nest characterization	2019
Field Assistant , Cardiff University, Dr. Veronica Neves Project: Nesting study and conservation of Monteiro's Storm-petrel	2019
Field Assistant , Cornell University & University of Queensland, Dr. Will Feeney Project: Avian brood parasitism and behavior at Lake Samsonvale, Australia	2018
Field Assistant , University of Missouri, Melissa Roach Project: Effects of lead (Pb) on success of ground-foraging birds in Southeast Missouri	2018
Collaboratory Intern/Project Leader , Messiah University, Dr. Thomas Soerens EPA-certified bacterial/chemical testing of commercial and student-designed water filters	2015–18
Research Student , Au Sable Institute, Dr. Fred Van Dyke Project: Kirtland's Warbler use of red pine in Northern Lower Michigan	2017

Skills Overview

Taxa handling: Trochilidae, Passeriformes, Procellariiformes, Strigiformes, Meliphagidae, Acanthizidae, Cuculidae, Piciformes

Avian processing: mist-netting and extraction, ground trapping, baited trapping, processing (e.g., aging, sexing, recording biometrics, banding), brachial blood sampling, aging nestlings and eggs

Avian field techniques: ID, resighting color bands, nest searching and monitoring, territory mapping, point counting, spot mapping, behavioral monitoring

Field electronics: Automated Radio-Telemetry System (ARTS) grid and base station setup, radio-telemeter backpack application and removal, GPS logger application and removal, passive integrated transponder (PIT tag) implantation, radio-frequency identification (RFID) antenna maintenance, Raspberry Pi load cell maintenance, camera trapping, field video recording (JVC, GoPro, Minolta)

Vegetation sampling: ID, line-transect, Daubenmire, quadrat, DBH, density, relative cover

Software: R, Raspberry Pi, Python, ArcGIS, SlicerMorph

Writing: subject reviews, developing methods/hypotheses, preparing manuscripts/grant proposals (e.g., NSF, ABS)