# Pascal O. Title

Department of Ecology & Evolution Stony Brook University 650 Life Sciences Building Stony Brook, NY 11794 [last updated on January 14, 2025]

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### EDUCATION & APPOINTMENTS:

Assis	tant Professor Department of Ecology & Evolution, Stony Brook University	Sep. 2023 – present
Assis	tant Research Professor Department of Ecology & Evolution, Stony Brook University	Sep. 2020 – Aug. 2023
Spec	ies Distribution Modeling Postdoctoral Fellow & Assistant Research Scientist Environmental Resilience Institute, Indiana University	Oct. 2018 – Aug. 2020
Adju	nct Research Scientist Department of Biology, Indiana University	Oct. 2018 – Aug. 2020
PhD	University of Michigan Department of Ecology and Evolutionary Biology Advisor: Dr. Daniel L. Rabosky	Aug. 2012 – Sep. 2018
	University of Michigan graduate certificate Computational Discovery and Engineering	April 2017
MSc	San Diego State University Department of Biology, Evolutionary Biology Program Advisor: Dr. Kevin J. Burns	Aug. 2009 – Aug. 2012
BA	University of California, Berkeley Department of Integrative Biology	Aug. 2004 – Aug. 2008

### FELLOWSHIPS, GRANTS, AND AWARDS:

#### **Fellowships:**

2018 - 2020 Indiana University Environmental Resilience Institute Fellowship (\$240,000)

#### Grants & Awards:

2017	Rackham Predoctoral Fellowship (\$32,640)
2017	UMMZ Hinsdale Scholarship (\$4,137)
2017	Rackham Graduate Student Research Grant (\$3,000)
2016	Michigan Institute for Computational Discovery & Engineering fellowship (\$4,000)
2015	Honorable mention, SSAR Seibert Award in Systematics/Evolution
2015	EEB Block grant (\$2,290)
2014	ASIH Stoye award in general herpetology for best oral presentation
2014	Society for the Study of Evolution Rosemary Grant Award (\$2,500)
2014	Herp League E.E. Williams Research Grant (\$1,000)
2013/2014	UMMZ C. F. Walker Scholarship for field research in herpetology (\$2,500)
2013	UM Rackham Precandidate Graduate Research Grant (\$1,500)
2013	Society of Systematic Biologists Graduate Student Research Award (\$2,000)
2011	Mabel Meyers Memorial Scholarship, San Diego State University (\$2,000)
2010	IRA Student Travel Award, San Diego State University

### **PUBLICATIONS:**

Title P.O.\*, S. Singhal\*, M.C. Grundler, G.C. Costa, R.A. Pyron, T.J. Colston, M.R. Grundler,, I. Prates, N. Stepanova, M.E.H. Jones, L.B.Q. Cavalcanti, G.R. Colli, N. Di-Poï, S.C. Donnellan, C. Moritz, D.O. Mesquita, E.R. Pianka, S.A. Smith, L.J. Vitt and D.L. Rabosky\*. 2024. The macroevolutionary singularity of snakes. *Science* 383, 918-923.

\* denotes equal contribution to this work.

- \*\* Stony Brook Press Release
- \*\* University of Michigan Press Release
- \*\* Natural History Museum, London Press Release
- \*\* Popular Science article
- Cicero, C., N.A. Mason, Z. Oong, P.O. Title, M.E. Morales, M.S. Koo and R.C.K. Bowie. 2022. Deep ecomorphological and genetic divergence in Steller's Jays (*Cyanocitta stelleri*, Aves: Corvidae). *Ecology & Evolution* 12:e9517.
- Title, P.O., D.L. Swiderski and M.L. Zelditch. 2022. EcoPhyloMapper: an R package for integrating geographic ranges, morphometrics and phylogeny. Methods in Ecology & Evolution 13:1912–1922.
   \*\* made the long list for the MEE Robert May award for best paper submitted by an early career author
- Houser, M., A. Sullivan, T.M. Smiley, R. Muthukrishnan, E. Grennan Browning, A. Fudickar, P.O. Title, J. Bertram, and M. Whiteman. 2021. What fosters the success of a transdisciplinary environmental research institute? Reflections from an interdisciplinary research cohort. *Elementa: Science of the Anthropocene* 9.
- Smiley, T.M., R.C. Terry, P.O. Title and M.L. Zelditch. 2020. Dimensions of biodiversity: patterns of species richness, phylogenetic and ecological diversity, and endemism in North American rodents. *Global Ecology and Biogeography* 29:516-533.
- Title, P.O. and D.L. Rabosky. 2019. Tip rates, phylogenies and diversification: what are we estimating, and how good are the estimates? *Methods in Ecology and Evolution* 10:821-834. \*\* associated MEE blog post

\*\* featured in the MEE virtual issue: Phylogenetics and Comparative Methods: The Bright and Dark Sides

- von May, R., E. Biggi, H. Cardenas, M.I. Diaz, C. Alarcon, V. Herrera, R. Santa-Cruz, F. Tomasinelli, E.P. Westeen, C.M. Sanchez-Paredes, J.G. Larson, P.O. Title, M.R. Grundler, M.C. Grundler, A.R. Davis Rabosky, and D.L. Rabosky. 2019. Ecological interactions between arthropods and small vertebrates in a lowland Amazon rainforest. Amphibian & Reptile Conservation 13: 65-77.
  \*\* University of Michigan Press Release
- Singhal, S., H. Huang, M. Grundler, M.R. Marchán-Rivadeneira, I. Holmes, P.O. Title, S.C. Donnellan, P. Doughty and D.L. Rabosky. 2018. Does population structure predict the rate of speciation? A comparative test across Australia's most diverse vertebrate radiation. The American Naturalist 192:432-447.
- Rabosky, D.L.\*, J. Chang\*, P.O. Title\*, P.F. Cowman, L. Sallan, M. Friedman, K. Kaschner, C. Garilao, T.J. Near, M. Coll and M.E. Alfaro\*. 2018. An inverse latitudinal gradient in speciation rate for marine fishes. *Nature* 559: 392-395. \* denotes equal contribution to this work.
- Title, P.O. and J.B. Bemmels. 2018. ENVIREM: An expanded set of bioclimatic and topographic variables increases flexibility and improves performance of ecological niche modeling. *Ecography* 41: 291-307.
- Title, P.O. and D.L. Rabosky. 2017. Do macrophylogenies yield stable macroevolutionary inferences? An example from squamate reptiles. *Systematic Biology* 66: 843-856.
- Singhal, S., H. Huang, P.O. Title, S.C. Donnellan, I. Holmes, D.L. Rabosky. 2017. Genetic diversity is largely unpredictable but scales with museum occurrences in a species-rich clade of Australian lizards. *Proceedings to the Royal Society B* 284: 20162588.
- Bemmels, J.B., P.O. Title, J. Ortego, L.L. Knowles. 2016. Tests of species-specific models reveal the importance of drought in postglacial range shifts of a Mediterranean-climate tree: insights from iDDC modelling and ABC model selection. *Molecular Ecology* 25: 4889-4906.
- Davis Rabosky, A.R., C.L. Cox, D.L. Rabosky, P.O. Title, I.A. Holmes, A. Feldman, J.A. McGuire. 2016. Coral snakes predict the evolution of mimicry across New World snakes. *Nature Communications* 7:11484.
- Klicka, L.B., B.E. Kus, **P.O. Title**, K.J. Burns. 2015. Conservation genomics reveals multiple evolutionary units within Bell's Vireo (*Vireo bellii*). Conservation Genetics: 1-17.
- Rabosky, D.L., P.O. Title, H. Huang. 2015. Minimal effects of latitude on present-day speciation rates in New World birds. *Proceedings to the Royal Society B* 282: 20142889.
- **Title, P.O.** and K.J. Burns. 2015. Rates of climatic niche evolution are correlated with species richness in a large and ecologically diverse radiation of songbirds. *Ecology Letters* 18: 433-440. \*\* featured in the GBIF Science Review 2016.
- Rabosky, D.L., M.C. Grundler, C.J.R. Anderson, P.O. Title, J.J. Shi, J.W. Brown, H. Huang, J.G. Larson. 2014. BAMMtools: an R package for the analysis of evolutionary dynamics on phylogenetic trees. *Methods in Ecology and Evolution* 5: 701-707.
- Mason, N.A., P.O. Title, C. Cicero, K.J. Burns, R.C.K. Bowie. 2014. Genetic variation among western populations of Horned Lark (*Eremophila alpestris*) indicates recent colonization of the Channel Islands, mainland-bound dispersal, and post-glacial range shifts. *The Auk* 131: 162-174.
- Burns, K.J., A.J. Shultz, P.O. Title, N.A. Mason, F.K. Barker, J. Klicka, S.M. Lanyon, I.J. Lovette. 2014. Phylogenetics and diversification of tanagers (Passeriformes: Thraupidae), the largest radiation of Neotropical songbirds. Molecular *Phylogenetics and Evolution* 75: 41-77.

### **PRESENTATIONS:**

#### **Conference Papers:**

- Swiderski, D., P.O. Title and M. Zelditch. 2024. Hotspots in mountains, 2: combining landscape complexity and connectivity. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Montreal, Canada.
- Zelditch, M., P.O. Title and D. Swiderski. 2024. Hotspots in mountains, 1: interactions between the adaptive landscape and the physical landscape. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Montreal, Canada.
- Zelditch, M., **P.O. Title** and D. Swiderski. 2024. Landscape, climate and ecology interact to shape regional species assemblages. *North American Paleontological Convention*. Ann Arbor, Michigan.
- Farková, L., P.O. Title, I. Horáček and D. Storch. 2024. Spatial and temporal patterns of shrew diversification. Biennial conference of the International Biogeography Society. Poster Presentation. Prague, Czechia.
- **Title, P.O.**, S. Singhal and D.L. Rabosky. 2023. Assembling a new squamate tree of life. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Albuquerque, New Mexico.
- Zelditch, M., D. Swiderski and Title, P.O.. 2022. Disentangling explanations for diversity in topographically complex regions. Annual Meeting of the American Society of Mammalogists. Tucson, Arizona.
- **Title, P.O.**, M.C. Grundler and D.L. Rabosky. 2021. A definitive rejection of the Out of the Tropics model in marine fishes. *Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists.* Virtual Conference.
- Title, P.O., M.C. Grundler and D.L. Rabosky. 2019. Dispersal and the latitudinal diversity gradient in marine fishes. Annual Meeting of the Ecological Society of America. Louisville, Kentucky.
- **Title, P.O.** and M.L. Zelditch. 2019. speciesRaster: a platform in R for integrating species ranges, morphology and phylogeny. *Annual Digital Data in Biodiversity Research Conference (iDigBio)*. Yale University. New Haven, Connecticut.
- **Title, P.O.** and M.L. Zelditch. 2019. speciesRaster: a platform in R for integrating species ranges, morphology and phylogeny. *Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists.* Providence, Rhode Island.
- Title, P.O., M.C. Grundler and D.L. Rabosky. 2019. Dispersal and the latitudinal diversity gradient in marine fishes. *Biennial conference of the International Biogeography Society*. Malaga, Spain.
- Title, P.O. and D.L. Rabosky. 2017. Do macrophylogenies yield stable macroevolutionary inferences? Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Portland, Oregon.
- **Title, P.O.** and J.B. Bemmels. 2017. ENVIREM: An expanded set of bioclimatic and topographic variables increases flexibility and improves performance of ecological niche modeling. *Biennial conference of the International Biogeography Society.* Poster Presentation. Tucson, Arizona.
- **Title, P.O.** and D.L. Rabosky. 2016. Determinants of regional species diversity in Australian squamates. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Austin, Texas.

- Title, P.O. and J.B. Bemmels. 2016. ENVIREM: An expanded set of bioclimatic and topographic variables increases flexibility and improves performance of ecological niche modeling. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Poster Presentation. Austin, Texas.
- **Title, P.O.** and D.L. Rabosky. 2015. Spatial macroevolutionary patterns in Australian squamates. Meeting for the Society for the Study of Amphibians and Reptiles. Lawrence, Kansas.
- **Title, P.O.** and D.L. Rabosky. 2015. Spatial macroevolutionary patterns in Australian squamates. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Guaruja, Brazil.
- Title, P.O. and D.L. Rabosky. 2015. The spatial distribution of Australia's squamate radiations. Society for Systematic Biologists meeting. Ann Arbor, Michigan.
- **Title, P.O.** and K. J. Burns. 2014. Niche evolution and diversification in tanagers. Annual meeting of the American Ornithologists' Union, Cooper Ornithological Society, and the Society of Canadian Ornithologists. Estes Park, Colorado.
- Title, P.O. and D. L. Rabosky. 2014. Niche evolution dynamics and their role in Australian squamate diversification. *Joint Meeting of Ichthyologists and Herpetologists*. Chattanooga, Tennessee.
- Title, P.O. and K. J. Burns. 2013. Niche evolution in relation to diversification in tanagers, the largest radiation of songbirds in the Neotropics. Poster presentation. *Early Career Scientist Symposium on Macroevolution*. Ann Arbor, Michigan.
- Title, P.O. and K. J. Burns. 2011. Acquiring and processing occurrence data for georeferencing, niche modeling and subsequent comparative analyses. Poster presentation. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Norman, Oklahoma.
- **Title, P.O.** and K. J. Burns. 2010. The evolution of ecological niches in neotropical tanagers. Joint Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. Portland, Oregon.

#### Invited Talks & Seminars:

- Ecomorphological innovations and the global diversity of snakes. 2023. Department of Biology Seminar, City College of New York. New York, New York.
- The date of occurrence: Is it worth incorporating in Species Distribution Modeling & in the analysis of climatic niches? 2023. New York Species Distribution Modeling Discussion Group. New York, New York.
- Ecomorphological innovations and the global diversity of snakes. 2023. Department of Ecology and Evolution Seminar, Stony Brook University. Stony Brook, New York.
- Big data for big questions: Spatial macroevolution at continental and global scales. 2022. Department of Biological Sciences, Auburn University. Auburn, Alabama.
- Species richness in time and space: a phylogenetic and geographic perspective. 2020. Department of Biological Sciences Seminar, George Washington University. Washington, D.C.
- Species richness in time and space: a phylogenetic and geographic perspective. 2019. Department of Ecology and Evolution Seminar, Stony Brook University. Stony Brook, New York.

Species richness in time and space: a phylogenetic and geographic perspective. 2019. Department of Biology Ecolunch Seminar, Indiana University. Bloomington, Indiana.

Niche evolution in relation to diversification in tanagers, the largest radiation of songbirds in the Neotropics. 2012. VertNet Biodiversity Informatics Training Workshop. Boulder, Colorado.

### **RESEARCH AND FIELD EXPERIENCE:**

Specimen collection and data management – Field Assistant       2         Amazon basin, Peru       2         University of Michigan Museum of Zoology       2         Field expedition to Los Amigos and Villa Carmen biological stations to sample reptile and a diversity.       2	2016, 2017 Imphibian
Curatorial Assistant – Herpetology       2         University of Michigan Museum of Zoology       2         Curation and maintenance of specimen collections, accessioning of new material.       2	2015, 2016
Specimen collection – Field AssistantAGreat Victoria Desert, Western AustraliaUniversity of Michigan Museum of ZoologyField expedition to Lorna Glen and Shark Bay to sample lizard and snake diversity.	April 2015
Specimen collection – Field Assistant       May-3         Kimberley, Australia       Australian National University         Participated in a field expedition organized by Dr. Craig Moritz of ANU to sample lizard divers the Kimberley.	June 2013 ity across
Grinnell Centennial Resurvey Project – Field Assistant       Southern Sierra Nevada, California         Museum of Vertebrate Zoology, UC Berkeley       Museum expedition member, collected and prepared specimens as part of a 100-year resurvey pro	June 2009 ject.
Specimen collection – Field Assistant Mojave Desert, California Museum of Vertebrate Zoology, UC Berkeley Museum expedition member on a one week collecting trip to the Granite Mountains Research Collected and prepared specimens, and recorded data.	May 2009 n Station.
Specimen collection – Field Assistant       A         Guatemala       Museum of Vertebrate Zoology, UC Berkeley         Participated in an expedition to Guatemala to collect tropical salamanders and other herpetofaun of a collaboration with the Biological Natural History Museum of Guatemala City.	April 2009 .a, as part
Curatorial Assistant – Herpetology Spring 2008 – Sum Museum of Vertebrate Zoology, UC Berkeley Assisted herpetology curator in managing the museum collection. Processed specimen loans, ca tissue subsampling, and prepared reptiles and amphibians to be added to collection.	umer 2009 arried out

#### **Research** Assistant Palm Desert, California

Museum of Vertebrate Zoology, UC Berkeley

Gathered data on the mechanism of display diving in the Costa's Hummingbird, at the Boyd Deep Canyon Research Station, Riverside Co.

#### **Research** Assistant

Museum of Vertebrate Zoology, UC Berkeley Diet analysis of western diamondback rattlesnakes for a study of a Southeastern AZ snake community.

### Grinnell Centennial Resurvey Project - Field Assistant

Lassen Volcanic National Park, California Museum of Vertebrate Zoology, UC Berkeley

Conducted point count surveys of birds in Lassen Volcanic National Park over a 6-week period for a hundredyear resurvey.

#### **GIS** Curatorial Assistant

Museum of Vertebrate Zoology, UC Berkeley Entered, edited and corrected locality information and data using GIS (Geographic Information Systems) for a database of over 600,000 vertebrate specimens.

#### Georeferencer – HerpNet

Museum of Vertebrate Zoology, UC Berkeley

Used a variety of electronic mapping programs and gazetteers (Topozone, Google Earth, Terrain Navigator, USGS maps) to determine latitude, longitude, and maximum error of specimen localities for a communitywide online herpetological database.

### **TEACHING EXPERIENCE:**

#### EEB690: Spatial Analysis in R for ecology & evolution Stony Brook University Graduate seminar on spatial analysis for ecological and evolutionary research in R. Transmitting Science Workshop – lead instructor May 2021 Virtual Instructor for a 5-day workshop on spatial patterns of biodiversity, with a focus on geographic mapping of geometric morphometric and phylogenetic data. Workshop web link. **BIO211:** Statistics and Data Analysis – A Conceptual Approach Fall 2020 to present Stony Brook University Primary instructor for an introductory course in statistics for biologists. Workshop instructor for field course on field data collection and manipulation November 2017 Los Amigos Biological Station, Peru

Instructor for a module on the manipulation of spatial data in R, with an emphasis on species occurrence records and species range polygons.

#### Workshop instructor at iDigBio conference

#### University of Michigan

Instructor for a hands-on workshop entitled Automated species range map construction through aggregated global museum records at the inaugural Digital Data in Biodiversity Research Conference.

Fall 2024

June 2017

Spring 2008

Summer 2007

Spring 2008

Fall 2007 – Spring 2009

University of Michigan Led class discussions covering lecture material as well as scientific literature. Introductory R programming workshop Fall 2013/2014/2015/2016 University of Michigan Co-instructor for a one-day workshop for incoming graduate students, introducing programming basics in R. EEB372: General Ecology Lab – Graduate Student Instructor Fall 2012

University of Michigan Lab instructor for general ecology. Goals of the coarse were to teach students to formulate hypotheses, design and conduct experiments, collect and analyze data, and present the results.

#### Introduction to Evolutionary Analyses with R Workshop – Co-instructor Summer 2012 San Diego State University

In conjunction with co-instructor Nicholas Mason, designed and implemented a three day workshop that introduced students to the basic skills needed to read data sets, manipulate phylogenies, and carry out comparative analyses within the R programming environment.

#### Biol509: Evolutionary Biology – Guest Lecturer

San Diego State University Lecture and associated class discussion on the study of climatic niches in an evolutionary context.

#### Biol212: Human Anatomy Lab – Teaching Associate

EEB390: Evolutionary Biology – Graduate Student Instructor

San Diego State University Laboratory instructor for human anatomy lab. Duties included teaching from models, charts, cadavers, mentoring undergraduate teaching assistants, lab set up, and dissections.

#### Biol524: Ornithology – Field Teaching Associate

San Diego State University Instructed students on bird identification through sight and sound in the field.

## **SPECIAL SKILLS:**

### **Programming Skills:**

R programming language & package development Python programming language familiarity with high performance computing clusters **L**ATEX typesetting language

ESRI ArcGIS and ArcPy

Language Skills:

**French** – Fluent in reading, writing, and speaking. **English** – Native speaker.

Spring 2013/2014

Fall 2009 – Spring 2012

Spring 2011

Spring 2012

### **SERVICE & OUTREACH:**

**Reviewer for:** American Naturalist, Anais da Academia Brasileira de Ciencias, BMC Evolutionary Biology, Diversity, Ecography, Ecology Letters, Evolution, Evolutionary Ecology, Folia Zoologica, Global Ecology & Biogeography, Journal of Animal Ecology, Journal of Biogeography, Molecular Ecology, Nature Ecology & Evolution, Proceedings of the Royal Society B, Systematic Biology.

#### Society Memberships:

Ecological Society of America International Biogeography Society Society of Systematic Biologists Society for the Study of Evolution Herpetologists' League American Society of Ichthyologists and Herpetologists American Ornithologists Union

#### University Service:

SBU E&E – Member of search committee 2024-2025

E&E Genomics in a Changing World faculty position.

Hosted/organized 4-day **workshop** on phylogenetic comparative methods in January 2024 that included graduate students from E&E, Anthropology and Anatomy (instructors Liam Revell and Luke Harmon).

SBU E&E – Member of search committee	2023-2024
E&E/IACS Computational Biodiversity and Climate Change faculty position.	
SBU F&F DhD admissions committee	2022 2024
SDU E&E - I IID admissions committee	2023-2024
SBU E&E – Member of Darwin Day Committee	2023-2025
Part of organizing committee tasked with inviting a special speaker for Darwin Day.	
SBU E&E – Member of search committee	2022
Search for CAS data manager for Centre ValBio, Madagascar, headed by Andreas K	lonig.
SBU CAS Working group	Fall 2021/Spring 2022
Member of the College of Arts & Science working group on data literacy.	1 am 2021/ Spring 2022
SBU E&E – member of social media committee	2020 -

Promoted department news on social media.

#### SBU E&E Dissertation committees

Thomas Bertino	ongoing
Kaylee Johnson	ongoing
Chelsi Napoli	ongoing
Raisa Rizzieri	ongoing
Megan Wyatt	ongoing
Anna Thonis	completed 2024

#### Title lab members

Anna Wilkinson [PhD student] Leroy Núñez [Postdoctoral researcher]	2024 - 2024 -
Outreach:	
Science on Tap, Bloomington IN Panelist to discuss climate change research with the general public.	2018
Great Lakes regional competition for the National Ocean Science Bowl Volunteer	2015-2017
University of Michigan EEB Executive Committee Elected as student representative on the executve committee.	2015, 2016
Workshop Instructor Ran a short module on integrating GIS and R, University of Michigan.	March 2015
Workshop Instructor Se Co-taught an introductory R workshop at the joint meeting of AOU, COS and SCO in Estes	ptember 2014 Park, CO.
Workshop Instructor Augus Co-taught a 1-day introductory R workshop for incoming graduate students in UM EEB.	st 2013 - 2016
<b>UMMZ events</b> Participated in ID day and behind-the-scene events as a herpetology expert for the general pu	ıblic.
University of Michigan EEB Student Committee Elected as student representative on the seminar committee.	2014, 2015
Co-Chair, Evolutionary Biology and Ecology Seminar Series Student Committee San Diego State University	Spring 2011
Science Olympiad Assistant Event Captain – Ornithology February 2010, H Science competition for high school students, ornithology event.	February 2011
Session Assistant Served as a Session Assistant during the joint meeting of the SSEB, SSB, and ASN meeting Oregon and during the joint meeting of the AOU, COS, and CSO meeting in San Diego, Calif	2010 g in Portland, fornia.
Mentoring:	
Stony Brook University Honors College Thesis mentor for undergraduates in the SBU WISE Honors College: Vandana Menser (2023-2024) Jessica Moylan (2024-2025)	
University of Michigan SNRE BEAR Program Graduate student mentor for the Program in the Environment.	2014, 2015
Research Assistants	2011

Trained and mentored 3 undergraduate and/or volunteer research assistants in georeferencing methods for my MSc thesis. Mentees: Matthew Faughender, Ryan House, Sarah Tuley.