

SHELBY P. MOSHIER

CONTACT INFORMATION:

The Ohio State University
Department of Evolution, Ecology, and Organismal Biology
Museum of Biological Diversity
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EDUCATION

- PhD in Evolution, Ecology, and Organismal Biology** **Ongoing**
The Ohio State University
Advisor: Dr. Bryan Carstens
- Masters of Science in Biology** **August 2018-May 2020**
California State University, Fresno
Advisor: Dr. Joshua Reece
- Bachelors of Science in Biology, *summa cum laude*** **August 2014-May 2018**
California State University, Fresno
- Certificate in Geographic Information Systems
 - Chemistry minor
 - Honors: Smittcamp Family Honors College Scholar, CSU Fresno Biology Honors Program

RESEARCH EXPERIENCE

- Graduate Research Assistant** **Summer 2020-Present**
Department of Evolution, Ecology, and Organismal Biology
Advisor: Dr. Bryan Carstens
- Student Researcher** **Fall 2016-Summer 2020**
Department of Biology, California State University, Fresno
Advisor: Dr. Joshua Reece
- Master's thesis: The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California
 - Two years of California coastal bird and invertebrate species identification
 - Undergraduate mentoring: Robert Seward and Lexi Walker
 - Bat monitoring project with Sequoia/Kings Canyon National Park
 - Bat monitoring/soundscapes at CSU Fresno and Fresno Chaffee Zoo
 - Phylogenetics of climate change extinction risk in California birds
 - Population genetics studies on Western Pond Turtle and California Tiger Salamander
 - Environmental DNA survey of fish/amphibian species in Sequoia/Kings Canyon National Parks

Adept with Esri ArcGIS, R, Microsoft Office programs, PCR and DNA extraction/isolation protocols

PUBLICATIONS

Carstens, B.C. and **Moshier, S.P.** (2022), Perspective: Giant tree frogs exemplify the promise of integrating multiple types of data in phylogeographic investigations. *Mol Ecol*. Accepted Author Manuscript. <https://doi.org/10.1111/mec.16593>

Manuscripts in progress

- Alfving, C., Reece, J., Brady, M., **Moshier, S.P.**, Richaud, M., Weinman, B. Assessing the geologic and biologic response of a beach system to a nourishment operation, Morro Bay, California. *Journal of Coastal Research*.

PRESENTATIONS

- Seward, R., **Moshier, S.P.**, Graves, C., Bever, S., Yorba, N. Coleman, Reece, J.S. Bat biodiversity within Sequoia and Kings Canyon (SEKI) National Parks. The Western Section of the Wildlife Society Annual Meeting. February 3-7, 2020, Redding, CA.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. US-IALE Conference, April 7-11, 2019, Fort Collins, CO.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. Guest lecture at CSU Fresno, March 22, 2019, Fresno, CA.
- ***Moshier, S.P.**, Dhaliwal, G., Reece, J.S. The phylogenetic distribution of climate change extinction risk in California's birds. The Western Section of the Wildlife Society, February 7-11, 2019, Tenaya Lodge at Yosemite, CA.
*won student award
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. CSUPERB Conference, January 3-7, 2019, Anaheim, CA.
- **Moshier, S.P.** Course-based undergraduate research experiences. High-Impact Practices (HIPs) Symposium, December 14, 2018, Fresno, CA.
- Seward, R., **Moshier, S.P.** Bat biodiversity in SEKI 2018. Sequoia-Kings Canyon Science Symposium, November 14-15, 2018, Three Rivers, CA.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. ESA Conference, August 5-10, 2018, New Orleans, LA.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. Central California Research Symposium, April, 2018, Fresno, CA.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. CSU Fresno College of Science and Mathematics donor event, March, 2018, Fresno, CA.
- **Moshier, S.P.**, Seward, R., Walker, L., Morrow, R., Reece, J.S. The effects of dredge deposition on avian and beach macroinvertebrate biodiversity in Morro Bay, California. Fresno State Undergraduate Research Experience, March, 2018, Fresno, CA.
- **Moshier, S.P.**, Dhaliwal, G., Reece, J.S. The phylogenetic distribution of climate change extinction risk in California's birds. CSUPERB Conference, January, 2018, Santa Clara, CA.
- **Moshier, S.P.**, Dhaliwal, G., Reece, J.S. The phylogenetic distribution of climate change extinction risk in California's birds. Evolution Conference, June 22-27, 2017, Portland, OR.
- **Moshier, S.P.**, Dhaliwal, G., Reece, J.S. The phylogenetic distribution of climate change extinction risk in California's birds. Fresno State Undergraduate Research Experience, May, 2017, Fresno, CA.
- Jorgensen, C., **Moshier, S.P.**, Reece, J.S. DNA Sequencing Can Help Identify the Origin of Western Pond Turtles in Captive Breeding Program. Fresno Chaffee Zoo outreach event, April, 2017, Fresno, CA.

AWARDS, SCHOLARSHIPS, AND GRANTS**Research Grants: \$36,016****Awards/Scholarships: \$63,950****2020**

OSU Graduate Fellowship

2019

Graduate Research and Creative Activities Support Grant \$1000

Travel grant for Evolution workshop \$500

The Western Section, San Joaquin Valley Chapter Travel Grant \$600

The Western Section Annual Conference, 3rd place in student poster competition \$100

CMSI-COAST Scholar \$1,000

Robert and Norma Craig Research Grant \$1,000

Robert Weigel Scholarship for Coastal Studies \$1,000

CSU Fresno President's Graduate Scholarship \$1,500

Grilione Environmental Biology Scholarship \$1,500

Dick Hass Scholarship \$700

2018

Faculty Supported Student Research Grant \$1,000

CSUPERB Student Travel Grant \$1,500

Graduate Net Initiative Research Grant \$1,000

Student coauthor on Save the Redwoods League Research Grant \$25,000

Doris F. Falk Memorial Scholarship \$1,400

Howard P. Kubo Award for Outstanding Achievement \$500

George Van Vleet Jr. Memorial Scholarship \$1,200

Richard Rockwell Memorial Scholarship \$2,000

Liliane D. Wells Memorial Scholarship \$2,000

2017

CSU Trustees' Award for Outstanding Achievement Scholarship \$3,000

Faculty Supported Student Research Grant \$1,000

COAST Undergraduate Research Support Grant \$416

ASI Undergraduate Research Grant \$1,000

Smittcamp Family Honors College Scholarship \$10,000

Grilione Environmental Biology Scholarship \$1,500

CSU Fresno Middle Class Scholarship \$2,298

2016

Smittcamp Family Honors College Scholarship \$10,000

Grilione Environmental Biology Scholarship \$2,181

Fly Fishers for Conservation Scholarship \$503

2015

Smittcamp Family Honors College Scholarship \$10,000

Grilione Environmental Biology Scholarship \$2,000

2014

Smittcamp Family Honors College Scholarship \$10,000

CSU Fresno Middle Class Scholarship \$768

Elks Lodge Scholarship

\$800

WORKSHOPS

- Evolutionary Biology for Graduate Students, Mountain Lake Biological Station, Pembroke, VA
- Geospatial Modeling with NASA Earth Observations using Google Earth Engine and R, US-IALE Annual Meeting, Fort Collins, CO
- Using GIS Techniques to Visualize and Analyze Environmental Time-Series Data, US-IALE Annual Meeting, Fort Collins, CO
- R Bootcamp, The Western Section of the Wildlife Society, Tenaya Lodge at Yosemite, CA

EMPLOYMENT

Graduate Teaching Assistant **Fall 2021-Present**

The Ohio State University, Department of Evolution, Ecology, and Organismal Biology

- Spring 2022 Semester: laboratory TA for undergraduate-level Evolution course through the Ecology, Evolution, and Organismal Biology department
- Fall 2021 Semester: laboratory TA for undergraduate-level Biology 1114 – Form, Function, and Ecology course through the Center for Life Sciences Education

Graduate Fellow **Summer 2020-Summer 2021**

The Ohio State University, Department of Evolution, Ecology, and Organismal Biology

Research Laboratory Manager **Spring 2017-Summer 2020**

California State University, Fresno

- Manage/implement procedures for Dr. Joshua Reece's conservation/ecology research lab
- Provide assistance for various projects
 - Western pond turtle genetics and captive breeding study
 - California tiger salamander environmental DNA study
 - Bat monitoring/soundscape study

Student Teaching Assistant **Fall 2018-Spring 2019**

California State University, Fresno

- Instructional Assistant for CSM BOND program:
 - Provide support as a peer mentor to first-year College of Science and Mathematics students
 - Grade assignments, provide feedback to students, and facilitate in-class discussions
 - Design in-class activities and an on-campus research project for students
- Instructional Assistant for Dr. Joshua Reece's undergraduate Evolution course
 - Provide instructional/grading assistance and scientific writing feedback to students

Biological Science Technician (Wildlife), GS-4 **May-August, 2015-2017**

US Forest Service, Sierra National Forest, High Sierra Ranger District

- Field surveys on four forest-sensitive bird species, assisted with bat field surveys
- Training: GPS use, survey protocols/field notes, 4WD vehicles/trail repair, Basic-32 Wildland Fire training, CPR/First Aid certification

COMMUNITY SERVICE

2019

Bats & Scientists public outreach presentations at Sequoia/Kings Canyon National Parks

Senior division judge at the 66th Central California Regional Science, Mathematics & Engineering Fair

2014-2018, Volunteering through CSU Fresno/Smittcamp Family Honors College

Bulldog Pantry
Fresno State Rotaract annual Cioppino dinner fundraiser
Richter Center Serving Fresno events

PROFESSIONAL REFERENCES

Dr. Bryan Carstens (Ph.D. advisor)

Professor

The Ohio State University, Department of Evolution, Ecology and Organismal Biology
300 Aronoff Laboratory, 318 W 12th Ave, Columbus, OH 43210

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Dr. Joshua Reece (Undergraduate and M.S. advisor)

Assistant Professor of Biology

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Dr. David Lent (M.S. graduate committee member)

Associate Professor of Biology

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Dr. Rory Telemeco (M.S. graduate committee member)

Assistant Professor of Biology

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