

# Jessie F. Salter

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## RESEARCH INTERESTS

Drivers of speciation in birds, phylogenomics, phylogeography, next generation methods, & historical DNA.

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## EDUCATION

**PhD Candidate • Louisiana State University, Baton Rouge, LA** **2015 – present**

*Department of Biological Sciences and Museum of Natural Science*

Advisors: Brant C. Faircloth and Robb T. Brumfield

Qualifying Exam passed May 6, 2016

**BA • Occidental College, Los Angeles, CA** **2010 – 2014**

*Biology, cum laude*

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## RESEARCH EXPERIENCE

**Faircloth Lab, Louisiana State University** *ongoing*

- Compiled sampling, extracted DNA, and **prepared samples for next-generation sequencing** of ultraconserved element (UCE) loci to infer a **complete genus-level phylogeny of Typical Owls (Strigidae)**.
- Captured **genomic-scale DNA from 100+ year-old museum specimens**.
- **Designed project to reconstruct ancestral biogeography** and **character evolution** of bilateral ear asymmetry within Strigidae.

**Moore Laboratory of Zoology, Occidental College** **2013 – 2014**

*Undergraduate Research Advisor: John E. McCormack*

- **Designed project to resolve disputed localities in the Fulvous Owl (*Strix fulvescens*)**. Extracted DNA from **toepad tissues** and amplified sections of two mitochondrial genes (CO2, ND6).
- Designed and optimized primers and amplified **historical DNA from museum specimens** (ND2, ATPase). Contributed to **international study** resolving controversial **evolutionary history of Pine Siskins (*Spinus pinus*)**.
- Identified blood and feather samples, extracted DNA, and amplified genes using PCR for **NSF-funded project** to build new **phylogenies of bird species of the Mexican highlands**. Used **genome-scale molecular methods** and **biogeographic methods** to determine the influence of geological and climatic events on their evolutionary history.

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## PUBLICATIONS

Alvarez, S, **JF Salter**, JE McCormack, and B Mila. 2015. Speciation in mountain refugia: phylogeography and demographic history of the pine siskin and black-capped siskin complex. *Journal of Avian Biology*. DOI: [10.1111/jav.00814](https://doi.org/10.1111/jav.00814)

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## SCIENTIFIC PRESENTATIONS

**Salter, JF**, CH Oliveros, JD Manthey, PA Hosner, MB Robbins, RG Moyle, BC Faircloth. 2016. A phylogenomic hypothesis of relationships among Typical Owls (Strigidae). Talk. North American Ornithological Conference, Aug. 16-20, Washington, D.C.

**Salter, JF**, CH Oliveros, JD Manthey, PA Hosner, MB Robbins, RG Moyle, BC Faircloth. 2016. A phylogenomic hypothesis of relationships among Typical Owls (Strigidae). Lightning Talk. The Evolution Conference, Jun. 17-21, Austin, TX. (*video available here: [https://youtu.be/0z8v-N26\\_qQ](https://youtu.be/0z8v-N26_qQ)*).

**Salter, JF**, JM Maley, JE McCormack. 2014. Sequencing DNA from museum specimens helps elucidate disputed localities in the Fulvous Owl (*Strix fulvescens*). Talk. Annual Meeting of the American Ornithologist's Union, Sep. 23-27, Estes Park, CO.

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## GRANTS & AWARDS

<b>LSU BioGrads Student Travel Award (\$400)</b>	<b>2016</b>
<b>North American Ornithological Conference Student Travel Award (\$240)</b>	<b>2016</b>
<b>Society for the Study of Evolution Student Travel Award (\$500)</b>	<b>2016</b>
<b>Occidental College Summer Research Program Fellowship (\$3900)</b>	<b>2013</b>

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## TEACHING EXPERIENCE

<b>BIOL 2153 Principles of Genetics</b>	<b>Spring 2016</b>
<b>BIOL 1208 Intro Biology Lab for Science Majors</b>	<b>Fall 2015</b>

*Graduate Teaching Assistant*

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## CURATORIAL EXPERIENCE

<b>LSUMNS Genetic Resources Collection</b>	<b>Aug 2016 – present</b>
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*Curatorial Assistant*

Catalogue and install incoming tissues in collection and database, assist with database maintenance.

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## SERVICE

<b>LSU College of Science Executive Committee</b>	<b>Apr 2016 – present</b>
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*Graduate Student Member*

Member of the Development & Membership Focus Initiative Group. Work with the College of Science Dean Cynthia Peterson on fundraising strategies, new member recruitment to the Dean's Circle, and future development of the College of Science.

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## OUTREACH

<b>LSU Museum of Natural Science - Night at the Museum, Ornithology Collection</b>	<b>Sep 29, 2016</b>
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*Presenter*

Selected owl specimens and spoke with event-goers about the unique adaptations owls have for hunting, the diversity of owls around the world and in Louisiana, and the findings of my research into their phylogenetic relationships (video online: <https://goo.gl/rXmQMK>). Event was targeted to LSU undergraduates and community members; attended by 40 people. (Press coverage of the event in The Advocate : <https://goo.gl/o30EFk>).

<b>LSU Fall Fest</b>	<b>Sep 16, 2016   Oct 2, 2015</b>
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*LSUMNS Volunteer*

Selected bird specimens from the LSUMNS collection to teach students and community members about the museum and ornithology program at LSU. Event was targeted to undergraduates and affiliated community members.

<b>Louisiana Earth Day</b>	<b>Apr 17, 2016</b>
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*LSUMNS Volunteer*

Selected bird specimens from the LSUMNS collection to teach the general public about the museum and ornithology program at LSU. Event was targeted to families.

**Yellow Rails and Rice Festival (7<sup>th</sup> Annual)****Oct 29, 2015***Field Trip Facilitator*

Facilitated day-long field trip to local rice farms and wetlands in Jennings, LA, highlighting local bird diversity. Festival participants came from all over the country to experience native Louisiana habitats and avifauna.

**History 355 / Moore Laboratory of Zoology Collaboration****Jan – May 2014***Education in Action Program Facilitator*

Developed a curriculum and six research topics for students in History 355 (Indigenous Peoples of Mexico). Using specimens and other resources from the MLZ collection, students investigated how the biology of Mexican bird species influenced their relative importance in Aztec culture, religion, and economy. Project culminated in a presentation to the Board of Trustees.

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**FIELD EXPERIENCE****SE Arizona****May 31 – Jun 11, 2015***MLZ collecting trip*

Focus on bird species of the Dragoon and Chiricahua Mountain sky islands

**Costa Rica and Panama****May 21 – Jun 14, 2014***Occidental College Tropical Ecology Field Course*

La Selva Biological Station, Pacuare Nature Reserve (CR); Institute for Tropical Ecology and Conservation (Bocas del Toro, PA)

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**PROFESSIONAL SOCIETY MEMBERSHIPS****American Ornithologist's Union****Sigma Xi****Society for the Study of Evolution****Society of Systematic Biologists**

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