



ACADEMIC HISTORY

Oklahoma State University (OSU) — Stillwater, OK Fall 2019 – Present

Ph.D. Integrative Biology GPA:
Thesis topic: Amphibian bioacoustics

Southeastern Louisiana University (SLU) — Hammond, LA Fall 2015 – Summer 2017

M.S. Biology GPA: 4.0/4.0
Thesis topic: The function of toe movements in amphibian feeding

University of Wyoming (UW) — Laramie, WY Fall 2013 – Spring 2015

B.S. Zoology, Minor in Chemistry GPA: 3.81/4.0
Senior paper: The evolution of viviparity in snakes

Laramie County Community College (LCCC) — Cheyenne, WY Summer 2010 – Spring 2013

A.S. Biology GPA: 3.54/4.0

WORK AND RESEARCH EXPERIENCE

Graduate Teaching Assistant — OSU, Stillwater, OK August 2019 – Present

Preparing and mentoring undergraduate students in BIOL 1114 labs. Research project development. Assisting with manuscript preparation, review, submission, and grading.

Biology Technician — OSU, Stillwater, OK April 2019 – August 2019

Set up research lab, including selecting equipment, garnering price quotes, and organizing and maintaining field and lab gear. Built and maintained field site access trails. Observed, recorded, measured, tattooed, VIE marked, photographed, and performed playbacks on gray treefrogs (*Hyla versicolor/chrysoscelis*) for acoustic and machine learning studies. Managed file collections and database.

Biology Technician — UW, Laramie, WY September 2018 – January 2019

Trapped and processed Western Spotted Skunks (*Spilogale gracilis*). Set, baited, and checked trail cameras and Tomahawk live traps. Traversed Wyoming, working (+ driving) in rugged terrain across seasons. Handled, anesthetized, measured, and photographed spotted skunks for population analyses.

Herpetology Technician — Wyoming Game & Fish Department, Laramie, WY April 2018 – August 2018

Developed amphibian call detectors. Built structures for, deployed, and retrieved, autonomous acoustic recording units. Analyzed acoustic data (using program R – packages `monitoR` and `warbleR`, writing custom loops and functions – and `RavenPro`). Wrote departmental tutorials and reports. Constructed and monitored drift fences. Performed amphibian and reptile visual encounter surveys and amphibian nocturnal call surveys.

Research Associate — SLU, Hammond, LA August 2017 – December 2017

Collected and analyzed environmental DNA (eDNA) of the endangered pearl darter (*Percina aurora*) in the Pearl River system. Filtered, extracted, and analyzed (qPCR, PCR and gel electrophoresis) samples to look for presence of target eDNA.

Graduate Assistant — SLU, Hammond, LA August 2015 – July 2017

Developed and executed independent thesis project. Collected and maintained captive amphibian and arthropod colonies. Collected and analyzed videos (Tracker) and data (program R). Trained and oversaw volunteers. Wrote collecting and Institutional Animal Care and Use Committee permits.

Collection Manager — SLU Vertebrate Museum, Hammond, LA August 2015 – July 2017

Curated wet and dry vertebrate collections. Managed book & journal library. Collected, fixed, preserved, cataloged, and digitized vertebrate specimens. Recruited, trained, and supervised over two-dozen volunteers. Managed and developed collection database (Specify). Coordinated and troubleshot printer, database, and microscope equipment. Identified, inventoried, and organized specimens. Decontaminated and restored specimens. Planned and performed various outreach and education activities. Developed

and maintained museum website. Refined and deployed integrated pest management protocols. Wrote and acquired government collecting permits.

Curatorial Assistant Volunteer — UW Museum of Vertebrates, Laramie, WY October 2014 – May 2015

Inventoried and organized museum specimens and equipment. Refilled, rehydrated, and transferred wet collection specimens. Prepared bird and mammal skins and skeletons.

Undergraduate Researcher — UW, Basile Lab, Laramie, WY January 2014 – June 2015

Prepared and analyzed samples using gas chromatography–mass spectrometry (GC–MS). Solid-phase microextraction headspace collection. Grew and infected bacteria with bacteriophage. Calibrated analytical instrumentation including GC–MS and UV-visible spectrophotometer.

Intern — Wyoming Natural Diversity Database (WYNDD), Laramie, WY October 2013 – May 2015

Compiled and analyzed statewide data of the amphibian pathogen *Batrachochytrium dendrobatidis* using database (Microsoft Access) and GIS software (ArcGIS). Identified tadpoles and constructed dichotomous identification key (Presentation #6, WYNDD guide in prep).

Undergraduate Research Fellow — Wyoming INBRE/EPSCoR, Laramie, WY May 2014 – August 2014

Surveyed, collected, preserved, photographed, and identified larval amphibians. Constructed dichotomous key for identification of amphibian larvae. Compared inter- and intraspecific variation of tadpoles relating to development.

Field Technician — WYNDD, Laramie, WY May 2014 – August 2014

Performed amphibian visual encounter surveys, reptilian rock outcrop surveys, amphibian skin pathogen swabbing, amphibian call surveys, and field herpetile identification. Extensive back-road navigation and hiking (10+ miles/day) in remote areas of Wyoming. Worked in pair for 1-week excursions with car camping.

Chemistry Lab Assistant — LCCC, Cheyenne, WY December 2012 – May 2013

Inventoried, monitored, and organized chemicals and equipment. Prepared and calibrated chemical solutions and instruments for General Chemistry I and II labs. Assisted students in laboratory methodology and interpretation.

Undergraduate Researcher — LCCC, Cheyenne, WY January 2012 – August 2013

Trapped and identified small mammals. Identified vegetation. Prepared specimens for museum/herbarium storage. Harvested, aliquotted, dried, and digested biological tissues. Chemically analyzed digested tissues using inductively-coupled plasma atomic emission spectrometer and x-ray fluorometer. Designed and executed small group and independent research projects. Dissected owl pellets and identified and measured rodent skulls.

SHORT AND PERIODIC TECHNICIAN POSITIONS

Research Technician, UW — Developed and executed methods to quantify plant (*Acacia*) size and size change based on photographs.

February 2018 – March 2018

Field Technician, SLU — Surveyed softshell turtle nesting beaches. Exposed turtle eggs to flood regimes. July 2015, August 2016

Amphibian Survey Contractor, WYNDD — Surveyed endangered amphibian species (Wyoming Toad). Perform detailed field sampling techniques. June 2015

Field Technician/Volunteer, UW/USGS — Tracked, collared, and monitored mule deer fawns. Surveyed birth site vegetation structure and diversity. Used VHF radio telemetry and GPS. Hiked 10+ miles a day in hazardous weather in bear country, gaining over 1,500' in elevation change. July 2015, June 2018

Field Technician, LCCC/UW — Trapped, PIT tagged, and powder tracked small mammals in Teton Mountain Range.

July 2014, June 2015, June 2018

Lab Assistant, UW — Fed and monitored fishes and temperature regimes. Treated diseased fishes. October 2014 – July 2015

Field Technician, UW — Mist-netted, identified, and handled neotropical birds. Observed and recorded Golden-winged Manakin calling, display, and lekking behavior. January 2015

Lab Assistant, UW — Extracted, amplified, and separated avian malarial DNA using PCR and gel electrophoresis.

October 2013 – May 2014

HONORS AND GRANTS

OSU GPSGA – Travel Award (\$350)

November 2019

Gans Collections and Charitable Fund – Workshop Grant (\$4,000)

February 2018

University of Louisiana at Lafayette Graduate Student Symposium – Best Biology Talk (\$100)	September 2017
Society for the Preservation of Natural History Collections – Fitzgerald Travel Grant (\$750)	March 2017
SLU Student Government Association Departmental Grant (\$202)	March 2017
Southeastern Partners in Amphibian and Reptile Conservation –Travel Grant (\$75)	February 2017
Lisa Aucoin Memorial Scholarship (\$700)	Fall 2016 – Spring 2017
AmeriCorps Education Award (\$1200)	Fall 2015 – Spring 2016
A&S Saunders-Walter Study Abroad Scholarship (\$1000)	Spring 2015
Dick and Lynne Cheney Study Abroad Grant (\$700)	Spring 2015
Wyoming INBRE Transition Fellowship (\$10,000)	Fall 2013 – Spring 2015
John W. Hoyt Transfer Scholarship (\$2000)	Fall 2013 – Spring 2015
Wyoming Hathaway Performance Scholarship (\$9720)	Fall 2010 – Spring 2012, Fall 2013 – Spring 2015
Wyoming INBRE/EPSCoR Summer Research Fellowship (\$2000)	Summer 2014
LCCC Foundation: Golden Apple Mini Grant (\$500)	Fall 2012 – Spring 2013
Wyoming NASA Space Grant Consortium Community College Scholarship (\$800)	Fall 2012 – Spring 2013
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Competitive funding secured to date: <u>\$34,097</u>	

PEER-REVIEWED PUBLICATIONS

6. **Erdmann, J. A.**, O. Ljustina, and C. A. Maiese. 2018. *Ophedrys aestivus* (Rough Greensnake). Nocturnal foraging. *Herpetological Review* 49:349. (Natural history note)
5. **Erdmann, J. A.***, C. D. Godwin, M. R. Villalba-Guerra, D. C. Campbell, J. Donini, C. E. Parker, A. E. E. Rupp, C. A. Weyand, M. A. J. Partin, T Borgardt, and C. K. Beachy. 2018. Larval Life History of the Southern Leopard Frog (*Lithobates sphenocephalus*) in Southeast Louisiana. *Southeastern Naturalist* 17:221–229. *Corresponding author
4. **Erdmann, J. A.**, W. A. Estes-Zumpf, C. Snoberger, Z. J. Walker, and A. Pocewicz. 2018. Expanding knowledge of *Batrachochytrium dendrobatidis* in Wyoming, USA. *Herpetological Review* 49:37–41
3. Godwin, C. D., O. Ljustina, and **J. A. Erdmann**. 2018. *Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad). Arboreal activity. *Herpetological Review* 49:95–96. (Natural history note)
2. Ljustina, O, **J. A. Erdmann**, and J. S. Doody. 2017. *Nerodia clarkii* (Saltmarsh Watersnake). Retreat site use. *Herpetological Review* 48:678–679. (Natural history note)
1. **Erdmann, J. A.** 2017. *Hemidactylus parvimaclatus* (Sri Lankan Spotted House Gecko). *Herpetological Review* 48:125. (Geographic distribution note)

NON-PEER-REVIEWED PUBLICATIONS/POPULAR SCIENCE

3. **Erdmann, J.** 2017. SLU or SELU?. Southeastern Louisiana University Vertebrate Museum Blog. Blog post. <http://www2.southeastern.edu/orgs/vertebratemuseum/blog/SLU.html>
2. Glorioso, B. M., and **J. Erdmann**. 2017. Gulf Coast Toad - *Incilius nebulifer*. Amphibians and Reptiles of Louisiana. Species Account. <http://louisianaherps.com/gulf-coast-toad-incilius-ne.html>
1. Glorioso, B.M. and **J. Erdmann**. 2017. L.A.R.E. Fact Sheet #1: Box Turtles. Louisiana Amphibian and Reptile Enthusiasts. 1 p. (Educational flier).

RESEARCH PRESENTATIONS

28. **Erdmann, J.** 2018. Aggressive anglers, seductive serpents, and titillating toads: a discussion of luring and prey manipulation strategies. Joint Meeting of Ichthyologists and Herpetologists. Oral presentation.
27. **Erdmann, J.** 2017. A framework for distinguishing feeding methods using Gulf Coast Toads and woodlice. University of Louisiana at Lafayette 17th annual Graduate Student Symposium. Oral presentation. Best biology talk award.
26. Campbell, D., **J. Erdmann**, C. Weyand, A. Gruskiewicz, Z. Nikolakis, C. Parker, J. Kattawar, and K. Piller. 2017. Forensic ichthyology: identifying the type basin for *Bryconops affinis* (Characiformes: Iguanodectidae). Joint Meeting of Ichthyologists and Herpetologists. Poster presentation.
25. **Erdmann, J.** 2017. This little piggy: why do amphibians vibrate their feet while hunting? Joint Meeting of Ichthyologists and Herpetologists. Oral presentation.
24. **Erdmann, J.** and K. R. Piller. 2017. The Southeastern Louisiana University vertebrate collections: a small collection with a big agenda. Society for the Preservation of Natural History Collections. Poster Presentation.
23. **Erdmann, J.** 2017. Distinguishing Feeding Strategies in the Gulf Coast Toad. 40th Annual Florida Herpetology Conference. Oral Presentation.
22. **Erdmann, J.**, C. Beachy, T Borgardt, D. Campbell, J. Donini, C. Godwin, C. Parker, M. Partin, A. Rupp, M. Villalba-Guerra, and C. Weyand. 2017. Larval Life History of the Southern Leopard Frog (*Lithobates sphenocephalus*) in Southeastern Louisiana. Southeastern Louisiana University Student Showcase. Poster Presentation

21. **Erdmann, J.** 2017. Toe movements associated with increased feeding success in toads. Louisiana Academy of Science 91st annual conference. Oral Presentation.
20. **Erdmann, J.**, C. Beachy, T Borgardt, D. Campbell, J. Donini, C. Godwin, C. Parker, M. Partin, A. Rupp, M. Villalba-Guerra, and C. Weyand. 2017. Larval Life History of the Southern Leopard Frog (*Lithobates sphenoccephalus*) in Southeastern Louisiana. Southeastern Partners in Amphibian and Reptile Conservation. Poster Presentation
19. **Erdmann, J.** 2016. Evolution of life history traits in plethodontid salamanders. Historical Ecology class project. Oral Presentation.
18. **Erdmann, J.** 2016. Toe-wiggling Show. Ernest Liner Louisiana Herpetologists meeting. Oral presentation.
17. **Erdmann, J.** 2016. This little piggy: the significance of toe movements in amphibian feeding. Joint Meeting of Ichthyologists and Herpetologists. Poster presentation.
16. **Erdmann, J.** 2016. This little piggy: the significance of toe movements in amphibian feeding. 39th Annual Florida Herpetology Conference. Poster presentation.
15. **Erdmann, J.** 2016. This little piggy: the significance of toe movements in amphibian feeding. Louisiana Academy of Science 90th annual conference. Poster presentation.
14. **Erdmann, J.** 2016. This little piggy: the significance of toe movements in amphibian feeding. Southeastern Louisiana University Student Showcase. Poster presentation.
13. **Erdmann, J.** 2016. The function of toe movements in amphibian feeding. Southeastern Partners in Amphibian and Reptile Conservation. Poster Presentation.
12. Trebelcock, W., and **J. Erdmann.** 2015. Microbe farts: detecting volatile organic compounds from fungi and bacteria using gas-chromatography/mass spectrometry. University of Wyoming Undergraduate Research Day 2015. Oral presentation.
11. **Erdmann, J.**, K. Scott, D. Nelson, J. McFall, D. Perkins, and M. Ben-David. 2014. Biology of least chipmunks in the Laramie Range, Wyoming. UW Dept. of Zoology and Physiology Brown Bag Seminar Series. Oral presentation.
10. **Erdmann, J.** 2014. A year as a transition fellow. Wyoming INBRE Community College Network 10th Annual Retreat. Oral presentation.
9. **Erdmann, J.** 2014. Coccidia in herptiles. Wyoming Coccidia Workshop 2014. Oral presentation and discussion leader.
8. Black, J., L. Kabwar, **J. Erdmann**, and F. Basile. 2014. Analysis of volatile metabolites during phage-bacteria infection via gas chromatography/mass spectrometry. University of Wyoming Undergraduate Research Day 2014. Poster presentation.
7. Trebelcock, W. and **J. Erdmann.** 2014. Quantifying nitrites in bacon using UV-vis spectrophotometry. Quantitative Analysis class project. Oral presentation.
6. **Erdmann, J.**, W. Estes-Zumpf, C. Snoberger, and Z. Walker. 2014. A key to the tadpoles of Wyoming. Colorado Partners in Amphibian and Reptile Conservation 2nd Annual Meeting. Poster presentation. First runner up in poster competition.
5. **Erdmann, J.**, Z. Roehrs, and A. Wangeline. 2013. Elemental analysis of vegetation in the selenium-rich Wind River Basin of Wyoming. Botanical Society of America Botany 2013 Conference. Poster and oral presentation.
4. **Erdmann, J.** 2013. Natural history of amphibians and their parasites in SE Wyoming. Wyoming INBRE Community College Network 9th Annual Retreat. Oral presentation.
3. Kilpatrick, A. **J. Erdmann**, D. Barbosa, S. Seville, and Z. Roehrs. 2013. Examination of three Wyoming vertebrates for infection with coccidia (Apicomplexa: Eimeriidae). University of Wyoming Undergraduate Research Day 2013, poster presentation.
2. M. Riggle, W. Trebelcock, **J. Erdmann**, Z. Roehrs, and A. Wangeline. 2012. Selenium in a central Wyoming ecosystem. Wyoming INBRE Community College Network 8th Annual Retreat. Oral presentation.
1. M. Riggle, **J. Erdmann**, X. Guo, and A. Wangeline. 2012. Evaluation of sterilization, germination, and controlled growth methods for basin, mountain, and Wyoming big sagebrush. University of Wyoming Undergraduate Research Day 2012. Poster presentation.

HIGHER EDUCATION INSTRUCTION

Graduate Teaching Assistant – BIOL 1114 Introductory Biology. Lab Instructor	Fall 2019 – Present
Guest Lecturer – GBIO 439/539 Freshwater Biology. Stream Modifications; Food Webs	23, 25 October 2017
Guest Lecturer – ZOO 475/575 Animal Behavior. Foraging Theory	8 November 2015
Teaching assistant – CHEM 1020/1030. General Chemistry I and II. General lab prep and assistance	Spring 2013
Teaching assistant – LIFE 2023 Plant and Fungal Biology. General lab prep and assistance	Fall 2012

SCIENCE OUTREACH

• Booth educator – Oklahoma Wildlife Expo	29 September 2019
• Booth educator (vertebrates) – Highland Park Elementary School Bioblitz	27 April 2019
• Booth educator – Wyoming Outdoor Expo	17 – 18 May 2018
• Mentor/Tour guide – Southeastern Louisiana University Vertebrate Museum	August 2015 – July 2017
• Team leader (mammals) – BREC Bioblitz	14 – 15 April 2017
• Booth educator – Audubon Zoo. World Wetlands Day	4 February 2017

- Organizer & team leader (arthropods, fungi) – SLU Fall 2016 Bioblitz 28 – 29 October 2017
- Booth educator – Louisiana Northshore Wild Things! Event 15 October 2016
- Classroom educator – Girl Scouts Louisiana East: B.I.G. (Believe in Girls) Event 24 September 2016, 12 September 2015
- Booth educator – Louisiana Children’s Discovery Center 9 – 10 September 2016
- Student mentor – TRiO/Upward Bound June 2016
- Team leader (mammals) – BREC Bioblitz 2 April 2016
- Booth educator – Rock N Roar Literary Rally 5 March 2016
- Big Brother – Wyoming Big Brothers Big Sisters program 2014 – 2016
- Cleanup volunteer – Lake Pontchartrain Basin Foundation: Beach Sweep (26th annual) 19 September 2015
- Assistant organizer and booth educator – Louisiana Department of Wildlife and Fisheries: Get Out and Fish! Event 13 September 2015, 3 October 2015
- Participant – Pecos National Historical Park PARC Herpblitz 11 July 2015
- AmBASSador – Bassnectar 2011 – 2015
- STEM Corps Educator – AmeriCorps program Fall 2014 – Spring 2015
- Team leader (herptiles, fungi) – LCCC Annual Bioblitz 19 – 20 September 2014
- Participant – Annual Wyoming BioBlitz 21 – 22 June 2014
- Assistant (mammals) – LCCC Annual Bioblitz 27 – 28 September 2013
- Project designer and presenter – Golden Apple Mini Grant in Chemistry 2012 – 2013
- Classroom educator – Girls for STEM: Ready, Set, Go! 3 November 2012
- Participant – LCCC Annual Bioblitz 5–6 October 2012

PROFESSIONAL SERVICE

- Judge – Wentz Research Scholars Symposium 26 April 2019
- Committee Member – ASIH Conservation Committee (Student Chair 2018-2019) 2017 – Present
- Manuscript Reviewer – Journal of Herpetology 2018 – Present
- Committee Member – Wyoming Chapter of The Wildlife Society Communications Committee 2017 – Present
- Committee Member – ASIH Web Content Committee 2017 – Present
- Editor – SSAR Common Names Database (<https://ssarherps.org/cndb>) 2017 – Present
- Committee Member – ASIH Book Raffle Committee (Chair 2017–2018) 2017 – Present
- Judge – Region VIII Louisiana Science Fair 26 January 2017
- Committee Member – ASIH Ichthyological and Herpetological Collections Committee (Student Co-chair 2016–2018) 2016 – Present
- Judge – Wyoming State Science Fair 2 March 2015

ORGANIZATION MEMBERSHIPS AND AFFILIATIONS

- American Association for the Advancement of Science (2012–2015)
- American Fisheries Society – UW Student Subunit (2013–2015)
- American Society of Ichthyologists and Herpetologists
- American Society of Naturalists
- Animal Behavior Society
- Biology Graduate Student Organization, SLU – (2015–2017) President (2016–2017)
- Colorado Reptile Humane Society
- Friends of the Albany County Library
- Golden Key International Honour Society
- Herpetologists’ League
- Laramie Audubon Society (2013–2018)
- International Ambassadors, LCCC – Secretary (2011)
- North American Amphibian Monitoring Program – Colorado Volunteer Coordinator (2014)
- Partners in Amphibian and Reptile Conservation (Colorado, Southeast sections)
- Rocky Mountain Amphibian Project
- Secular Student Alliance, UW – Vice President (2014–2015)
- Society for Integrative and Comparative Biology
- Society for the Preservation of Natural History Collections
- Society for the Study of Amphibians and Reptiles
- Southeastern Fishes Council (2017–2018)
- STARR (Science, Technology, Anthropology, Research, & Recreation) Club: Treasurer (2012) & Vice President (2013)
- The Wildlife Society – UW Student Chapter (2013–2015)
- Zoology Graduate Student Society, OSU