Adrian D. Macedo
E-mail: adm74e@missouristate.edu

AREAS OF INTEREST: Community ecology, fisheries ecology, wildlife conservation, biodiversity, fish and wildlife research and management, education, leadership, and ecological restoration.

ACADEMIC HISTORY

August 2020/Present	**Candidate PhD in Zoology** GPA:3.8 Southern Illinois University, Carbondale, IL
August 2017/August 2019	**Masters of Science: Biological Sciences** **Thesis: Life History of the Coastal Tailed Frog (*Ascaphus truei*) Across an Elevational Gradient in the Trinity Alps Wilderness, CA** GPA:3.3 Humboldt State University, Arcata, CA
August 2014/May 2017	**Bachelor of Science: Wildlife-Conservation Biology and Applied Vertebrate Ecology** **Minor: Botany** GPA: 3.3 Humboldt State University, Arcata, CA
August 2012/June 2014	**Associates of Arts: General Studies-Natural Resources** GPA: 3.4 Mendocino College, Ukiah, CA
August 2008/June 2012	**High School Diploma** GPA: 3.3 Middletown High School, Middletown, CA

EMPLOYMENT

Visiting Assistant Professor **August 2020/2025**

I am currently working in the Biology Department at Missouri State University where I teach ichthyology, principles of wildlife management biology, fish ecology, and fisheries management. I am also managing an ichthyology specimen collection which I have been working on restoring and cataloging specimens. I currently have one graduate student and five undergraduate working on various projects with the ichthyology collection. I also advice undergraduate students on their coursework requirements for their degrees and helping them get employment and/or graduate research positions.

Teaching Assistant **August 2020/2024**

At SIU as a teaching assistant, I have assisted in teaching an upper division comparative animal physiology course in which I developed a course plan and independently taught a once-per-week laboratory section which directly related to the lectures taught by the full professor. I developed

the lab course to teach real world skills in comparative animal physiology. To do this, I used existing datasets from publicly available sources and developed artificial datasets, if no pre-existing datasets were available, of physiological measures such as metabolic rate, thermal performance curves, and evaporative water loss across various animal taxa. Each of these datasets tied into what was being taught in lecture by the professor. I taught students how to develop hypotheses from the data, conduct proper data management and cleaning, and how to analyze the data in both Microsoft Excel and Program R. The students then completed reports on their findings so they could learn proper scientific communication skills. I did all the grading and grade reporting for this lab section as well.

I taught two laboratory sections of introduction to animal biology, a lower-division undergraduate course which covered cell biology, genetics, evolution, animal diversity, anatomy (fetal pig dissection), and ecology. I prepared 15-minute lectures followed by an hour and half hands-on lab learning. I wrote and graded all my own quizzes and exams.

I also assisted in teaching a two-week wildlife techniques course at SIU with a full professor which covered techniques including small mammal trapping (including mark-recapture), radiotelemetry, mist-netting for bats, air gun darting for animal immobilization, turtle trapping, and use of coverboards for reptiles and amphibians. I also was invited and gave a guest lecture on the ecology of the Cache River State Natural Area for a forestry course at SIU.

Research Assistant August 2020/Present

On the research side at SIU, I studied the effects of water level management on the herpetofaunal community of the Cypress/Tupelo swamps of the Cache River State Natural Area. This involves installing and checking coverboard/tin arrays, PVC refuge pipes, turtle traps, funnel traps, call boxes and dipnet surveys to sample and identify various snake, lizard, turtle, salamander, and frog species. Including the state endangered Bird-voiced Tree Frog (*Hyla avivoca*) and the Eastern Ribbon Snake (*Thamnophis sauritus*). I have designed and are currently completing a population ecology study on Lesser Siren (*Siren intermedia*) via capture-mark-recapture to assess movement, home range, and population abundance across differing habitat types, an occupancy study on Cope's Gray Tree Frog (*Hyla chrysoscelis),* and a community ecology study of abundances of larval amphibian communities across pond types. I also studied the hibernation ecology of northern Cottonmouth in which I caught them prior and post-hibernation to study how hibernation influences immune function, microbiomes, and disease. In the lab, I conducted studies on amphibian thermal and disease physiology such as studying how thermal tolerance and stress hormones can influence the thermal maxima of Blanchard's Cricket Frog (*Acris blanchardii*) and how animal microbiomes may allow for increases resistance and/or tolerance of Ranavirus in wood frog tadpoles (*Lithobates sylvaticus*). I have also been assisting in research on fish in the Cache River State Recreation Area by using electrofishing boats, fyke nets, plankton tows, and light traps. Beyond my field research and dissertation, I have assisted in review of manuscripts submitted to various scientific journals including Ecology, California Fish and Wildlife Journal, Folia Microbiologica, and Frontiers in Zoology.

Lastly, I hired and managed undergraduate technicians to assist in field research and mentored various undergraduates on their own research projects. This included assisting two undergraduates in formulating hypotheses, securing funding through grants, collecting and analyzing data, and presenting their work at scientific conferences and publications in scientific journals. One student studied isotopic changes of cottonmouth blood pre and post-hibernation

and has submitted the paper for publication. The other student is currently finishing the laboratory work on heavy metal concentrations in hibernating cottonmouth blood.

Field Station Manager **August 2020/2024**
At SIU, I managed the Middle Mississippi River Wetland Field Station near McClure, IL, which involved conducting water level manipulations of wetlands to improve habitat for waterfowl and other wildlife, collect data on hunter use, maintain trails and roads, and host outreach events.

Research Assistant **August 2023/2024**

At SIU, I was hired to assist in a white-tailed deer GPS collaring study covid-19 prevalence, immune function, and influence of recreation on movement behavior. I was trained in deer capture with clover and drop-net traps, physical and chemical immobilization, collecting blood, hair, tissue biopsy, swabbing nostrils for covid-19 and monitoring vital rates.

Research Assistant **May 2020/ August 2020**
I was hired as a research assistant at Humboldt State University to collect tissue samples and photographic morphological data on Southern Torrent Salamanders (*Rhyacotriton variegatus*) across the entire Smith River watershed in northern California to assess biogeographic patterns in genetic distinct clades of the species. This research ongoing and I am expecting to co-author on at least one publication.

Teaching Assistant **August 2017/August 2019**
I have two years of experience as a teaching assistant in the Biological Sciences department at Humboldt State University. I taught two semesters of laboratory sections for the Human Biology (BIOL 102) course which is a science course geared toward non-science majors. Teaching the course required giving 30 to 60 minutes lectures at the beginning of lab, preparing and teaching hands-on labs that included the use of microscopes to study cellular anatomy, cellular reproduction, and histology. I also prepared and taught a fetal pig and sheep brain dissection as well as human anatomy. I graded weekly quizzes, two laboratory practicals, and a group poster project.

I taught two semesters of laboratory sections for the Principles of Ecology (BIOL 330) course which is an upper division course for Biology majors. This laboratory involved teaching field data collection techniques including estimating tree species population size and spatial distribution using plot sampling, estimating populations size using capture-mark-recapture on Rainbow Trout (*Oncorhynchus mykiss*), and estimating species diversity and community structure of dune plants. Outside of the field, I taught statistical analysis of field data including descriptive statistics (mean, variance, and graphing), and quantitative statistics: t-tests/Mann-Whitney U tests, ANOVA /Kruskal-Wallis, regression, and correlation using a combination of Excel and R programs. The class had a significant amount of scientific writing through bi-weekly lab reports in which I taught hypothesis formation and scientific communication. Lastly, I advised students on conducting their own research projects in groups, were they formed their own hypotheses, collected and analyzed data, wrote a manuscript, and made an oral presentation. For this class I graded lab reports, manuscripts, and oral presentations. I also graded weekly lecture quizzes and the two mid-term exams. I mentored undergraduate students on various research projects on their own which

included a study on patterns of global desert plant species richness which included four undergraduate students which was published in a scientific journal. I also mentored three undergraduate students on studies of aging amphibians by their bones (skeletochronology) and one undergraduate who studied disease in coastal tailed frogs who co-authored an a publication with me.

Lab Assistant **August 2017/August 2019**

I gained experience collecting tissue samples, extracting, amplifying, and purifying DNA for a phylogeographic study on the Coastal Tailed Frog (*Ascaphus truei*). I was trained in Chelex DNA extraction, Polymerase chain reaction (PCR), gel electrophoresis and gel photo documentation using Ethidium bromide, QIAquick PCR column purification, using Bio Edit program to view sanger sequences, and making trees using MIX explorer program. This research ongoing and I am expecting to co-author on at least one publication.

Museum Specimen Preparation Specialist **August 2017/August 2019**

I worked at the Humboldt State Wildlife Museum collecting and preparing research specimens of birds and mammals. Preparing museum research specimens involves species identification and recording morphometric and locality data. Then skinning, stuffing, and preserving the skin for future research or education. I also have experience measuring internal gonads and taking tissue samples for genetic work. Species I have experience making research specimens include: North American River Otters, long-tailed weasels, squirrels, chipmunks, moles, mice, and Sooty Grouse.

Bat Technician **September 2016/September 2017**

I assisted a research biologist for the United States Forest Service conducting studies on migrating and non-migratory bats in Humboldt Redwoods State Park. This work consisted of setting up mist nests to catch bats, and monitor them throughout the night. Once a bat was captured, I helped collect data on species, age, sex, and the presence of parasites and white-nose fungus. For Hoary bats and Western Red bats we took hair and tissue samples for genetic data, and inserted PIT tags for a recapture study. We also recorded bat communications.

Wildlife Technician **December 2016/February 2016**

I worked on a Mountain Lion (*Puma concolor*) study, in which baited trail cameras were used to capture adults to be radio-collared. This included baiting sites with roadkill mule deer (that we tested for disease), analyzing trail camera footage, and assisting in capture attempts. Once a lion was radio-collared, I helped assist in describing kills, which included habitat measurements, investigative track and sign to determine feeding behavior, and kill site, and describing the kill remains.

Scientific Aid **July 2015/August 2020**

I worked as a Scientific Aid for the California Department of Fish and Wildlife on the Echo Lake Basin Restoration and Research Project and the California range wide assessment of the state endangered Cascades Frog (*Rana cascadae*) in the Klamath Mountains. The restoration work was carried out by a crew of two, working on the first high mountain lake fish removal in the Klamath Mountains. The restoration consisted of removal of nonnative invasive brook trout from a lake, surrounding ponds and streams within a basin. This involved backpacking into the basin at about 7,000ft for 8-day camp trips, and operating equipment including: Backpack Electrofisher, Seine nets, and Gill nets. The Research side of this work included doing the field work for a continuing studies on the Cascades frog (*Rana cascadae)*, the terrestrial garter snake (*Thamnophis sirtalis*) and the aquatic garter snake (*Thamnophis atratus*). I was trained to conduct a mark-recapture study, by field surgically implanting PIT (Passive Integrated Transponder) tags into hand caught frogs and snakes including collecting data on recaptures, sex, and weight. On a smaller percentage of individuals we also took tissue sample via toe clippings for genetic research. Once out of the field I organized data and corresponded with supervising scientists. For the California range wide assessment of Cascades Frog, I conduced spatial digitizing of all possible habitats in the Cascades Frog California range and collected spatial data to determine basin size and other geographical features using infrared imagery and made a survey grid to select sites for surveys. I then went into the wilderness often backpacking solo into remote sites to look for Cascades Frogs and set up long term monitoring sites across the species California range.

Bird Banding Technician **June 2015/August 2015**

I assisted the Humboldt Bay Bird Observatory in capturing, banding, and data collection on wild birds using mist nets. This work consisted of setting up mist nets to capture birds and checking them regularly. Once birds were captured, I collected data on species, age, sex, molt patterns, body condition, and presence of parasites. I also recorded leg band numbers and installed leg bands on newly captured birds.

Scientific Aid **July 2014/August 2014**

I worked as a Scientific Aid for the California Department of Fish and Wildlife on a High Mountain Lake Survey Crew of 4, that worked primarily in the Marble Mountain ranges. This work composed of driving state vehicles sometimes off road, and backpacking into high elevation lakes that have or are being considered to be stocked with fish. This work involved collecting data by surveying amphibian populations, catching fish in the lakes with gill nets and hook and line, as well as surveying possible spawning habitat, and outlet and inlet morphology. I was trained in setting gill nets, using GPS, and identifying fish, amphibian tadpoles, and amphibian adults.

Grant Manager and Board Member **August 2022/January 2025**

I was elected to the board of the Friends of the Cache River, a non-profit organization, which works to assist and promote protection, restoration and appreciation of the Cache River watershed in southern Illinois. My position on the board was to apply for various grants to assist in land conservation and grants to improve facilities, education, and appreciation in the Cache River wetlands. I also advocated for the Cache River Visitor Center run by the IDNR by coordinating with the public and local/state-wide government officials to prevent the visitor center from closing

permanently. I also advocated for the Cypress Creek National Wildlife Refuge by coordinating with the refuge manager, nearby Crab Orchard NWR manager, US house and senate representatives, Ducks Unlimited, and the public when the management of Cypress Creek NWR was absorbed into the Crab Orchard NWR to ensure the refuge would still be managed properly. In addition to this I also wrote articles in our weekly newsletter and presented research and advocacy work at our annual meetings.

Chapter Representative and Board Member August 2014/August 2016

I was elected as a board member and chapter representative of the Wildlife Society's Student Chapter of Humboldt State University for two years. I represented the students at Humboldt State University at Wildlife Society board meetings and conferences, by providing input and votes on the chapter's interests in society. My duties as a board member included coordinating events such as our annual "beast feast" which involved reaching out to the hunting and fishing community to provide donations of various game and fish meat, coordinating the venue, live music, permits, and volunteer assistance. As our chapter representative, I traveled to the Western Section meetings and represented our chapter's interests by voting on various items, providing input on decisions, and addressing pressing items in our chapter.

Seminar Coordinator and Board Member August 2020/August 2024

I was elected as a board member in the Graduate Students for Biological Sciences at Southern Illinois University- Carbondale which advocated for the needs of graduate students in our department, organized events, and coordinated the School of Biological Sciences Seminar Series at Southern Illinois University. As a board member, I organized outreach events at local primary schools to teach about careers in biological sciences, and organized fundraising events. As the seminar coordinator, I invited speakers that were leaders in their fields from all over the world to come speak at SIU. This involved outreach within the university and voting on which speakers to invite, coordinating travel and travel funds, and organizing event locations and various meetings with the speakers.

Seminar Coordinator, Treasurer, and Board Member August 2017/August 2019

I was elected as a board member in the Biology Graduate Student Association at Humboldt State University which advocated for the needs of graduate students in our department, organized fundraisers , and coordinated the School of Biological Sciences Seminar Series at Humboldt State. As a treasurer, I organized a coffee table and raised for graduate student travel and research grants. I managed the associations funds in association with the university. As the seminar coordinator, I invited speakers that were leaders in their fields from all over the world to come speak at HSU. This involved outreach within the university and voting on which speakers to invite, coordinating travel and travel funds, and organizing event locations and various meetings with the speakers.

Agriculture Technician March 2013/May 2014

I worked for the Mendocino College Agriculture Department helping run the plant nursery, and managing the orchards and gardens. The department grew ornamental and restoration plants in the nursery, and food for the culinary department. My scope of work consisted of propagating plants for sale and for various restoration projects. I am experienced in installing, repairing and maintaining irrigation systems. I'm also proficient in pruning, watering, fertilizing, and shifting of plants into different size containers. I've prepared various potting soils for different growth

stages and types of plants. I also helped design and maintain the vegetable gardens by weeding and use of herbicides. I worked on planting a large garden for the College's culinary department. In this job, I was training in operating machinery including hand tillers, kubota tractor, lawnmowers, and a herbicide applicator.

Fisheries Technician July 2012/July 2015

I worked on a summer salmon rearing survey project alongside PG&E biologists and survey crews seasonally. I completed PG&E Tech Safety training. I conducted underwater fish counts using free-diving techniques. I also operated backpack electro-fishing and raft electro-fishing equipment to capture salmonids and other aquatic species from the Eel River and tributary streams. I recorded data on captured animals and various environmental parameters. During the winter period, I worked on another crew collecting data on salmon spawning in remote tributary streams. This involved collecting data on carcass size, location, and quantity. I have experience identifying steelhead, as well as, chinook, and coho salmon.

I'm experienced working in remote locations over difficult terrain. I'm proficient in off-road driving and operating four-wheel drive vehicles.

Prescribed Fire Assistant December 2024

I assisted in a 100-acre prescribed fire in a natural prairie community on private lands in southern Illinois. I was trained in measuring weather conditions (temperature, relative humidity, wind speed/direction and topography), site preparation (fire breaks, pre-burning, fuel reduction), appropriate burning apparel, ignition, management of the burn, and clean up. I have experience using flappers, rakes, blowers, and chainsaws during prescribed fires.

Associate Biologist and Consultant August 2017/August 2018

I worked as an associate Biologist for Trans-Terra Consulting conducting biological assessments and rare plant surveys on permitted Cannabis operations and Mendocino Redwood Company timber harvests. These involved the scoping of possible rare or listed species at sites using GIS, then in the field inventories of all plants and animals at sites. If I found rare or listed species, I flagged a buffer and reported them. I also continue to act as an amphibian and reptile consultant for the company on various projects.

Scientific Park Aid January 2014/June 2014

I worked as a scientific park aid for the California State Parks in the Mendocino district. I worked in a crew on various projects in California State Parks along highway 1. Work included the Ten mile dune restoration project where I constructed silt fencing along areas on road to protect endangered species of plants and to protect archaeological sites while the road was removed. I helped in the monitoring of the Snowy Plover population near the construction site. I also helped relocate the Ten Mile Shoulder Band Snail away from construction areas. I worked in removing invasive species including European Beach Grass, non-native Lupine, and Ice plant. I helped do some streambed restoration, which including making willow cuttings and transplanting other native species. I was trained in driving state vehicles as well.

QUALIFICATIONS AND SKILLS

Managing Research Projects: During my Masters thesis work I was awarded a grant to hire one field technician to assist in data collection. I managed the hiring and training of that individual. She was trained on back-pack electrofishing for stream amphibians, night eye-shine surveys, use of anesthesia using MS-222 on amphibians, marking amphibians using visual implant elastomer (VIE), making precise measurements, writing detailed notes and data, and back country safety. In the laboratory, I managed over 10 undergraduate volunteers. They were trained on laboratory techniques including tissue collection for genetic study, decalcification of bone, embedding samples in paraffin wax, sectioning using a microtome, staining with hematoxylin/eosin, and making slides. They were trained on proper use of hazardous materials such as Zylenes and Toluenes. Lastly, I trained them in skeletochronological techniques by viewing sections under microscopes to estimate ages and ages at sexual maturity. I also mentored students in their pursuit of their own research projects using the samples and wrote letters of recommendation. I currently manage eight undergraduate volunteers and one paid technician in herpetofauna surveys in the Cache River State Natural Area. During my PhD, I currently manage research on herptetofauna of a swamp ecosystem in which I designed and implemented research study design in which I've hired and trained two student technicians and managed 13 student volunteers to collect data in the field and analyze frog call recorder data. I mentored one of the hired technicians to pursue writing a publication from the frog calling data which we intend to publish.

Wildlife Research Techniques: I have been trained to use many wildlife survey techniques including radio telemetry, small mammal trapping, spotlight lighting techniques, GPS, azimuth triangulation, and identification of track and sign, birds, mammals, reptiles, amphibians and fish. I have experience operating backpack and boat electrofishers, installing coverboards/tin, pipe refuge traps, turtle traps, camera traps, audio recorders for amphibians and the data processing, ibuttons for temperature and humidity and data processing and analysis. I have experience marking animals with PIT tags, visual implant elastomer (VES), and ventral scale clipping and branding. I have experience handling and collecting data on venomous snakes.

Botanical Research Techniques: I was trained on increment boreing techniques, canopy cover, ecological sampling methods, stand development analysis, microclimate analysis, and restoration and biodiversity. I am trained in identifying plants, fungi, algae, lichens and bryophytes, and using dichotomous keys.

Laboratory Techniques: I have experience running immune function assays such as agglutination/lytic capacity, IgY, white blood cell counts, and Hemocrit. I also have experience running Corticosterone hormone assays. I have experience extracting DNA, amplifying DNA, and doing post processing of DNA sequence data.

Policy and Environmental Law: I have experience with Environmental Impact Assessment including knowledge on the state, national, North American, and international environmental assessment process(es) and covers the legislative/judicial history and current implementation of the NEPA and CEQA. I have experience analyzing, preparing and presenting impact assessments for a variety of projects and actions, and am make critical reviews of current environmental assessments.

Computer Program Proficiency: I have experience in overall computer literacy including using Excel, JMP, program R, mothur, program MARK, Raven Pro, Audacity, OneWire, and ArcMap to manage data and statistical analysis.

Leadership: I was a board member, and representative of the Wildlife Society's Student Chapter of Humboldt State University for two years. My position was the Western Section Representative. I represented the students of Humboldt State University at Wildlife Society board meetings and conferences, by providing input and votes on the club's interests in the Society.

I was the treasurer for the Biology Graduate Student Association and manage funds made from a coffee table to fund travel for graduate students to conferences for 1.5 years. As wells as, apply for grants to fund the Biology Seminar Series, which brings researchers from all over the country to talk about their research.

I was the coordinator for the Zoology Graduate Student's Seminar Series at SIU for two years where we invite speakers from all over the country to talk about their research and network with students and faculty.

I am currently on the board of the Friends of the Cache River, a non-profit organization, which works to assist and promote protection, restoration and appreciation the Cache River watershed in southern Illinois. My position on the board has been to apply for various grants to assist in land conservation and grants to improve facilities, education, and appreciation in the Cache River wetlands.

Invited Talks

The study of Herpetofauna in Cypress Tupelo Swamps-**Department of Forestry SIU**
Life History of the Coastal Tailed Frog-**SIU Herpetological Society**
Tips for Navigating Graduate School-**SIU Chapter of the Wildlife Society**
Ecology of Herptiles of the Cache River- **Friends of the Cache River**
Reptiles and Amphibians of Southern Illinois-**Southern Illinois Audubon Society**
Amphibians of the Cache River Wetlands-**IDNR Division of Education**
Preliminary Findings on the Herpetofauna of the Cache River- **SIU Herpetological Society**

PUBLICATIONS AND CONFERENCE ABSTRACTS

Publications

*Undergraduate co-author

Macedo A. D., J. D. Demianew, J. G. Garwood, and J. O. Reiss. 2023. Larval Life History of Coastal Tailed Frogs (Ascaphus truei) Across an Elevational Gradient in Northern California: Implications for a Changing Climate. Journal of Herpetology 57(1):52-59.

Holmquist, H. M., **A. D. Macedo**, J. Garvey, G. Whitledge. 2023. Habitat associations and demographics of a newly recorded population of taillight shiner in Illinois. Environmental Biology of Fishes 107:5-18.

Macedo, A.D. and *Van Gilder, N., 2022. Examining Batrachochytrium dendrobatidis presence in Coastal Tailed Frog (Ascaphus truei) populations across an elevational gradient. Herpetological Review, 53(3), pp.408-412.

Macedo, A. D. 2022. Nest descriptions for birds of sub-alpine meadows in the trinity alps wilderness, California. Western Wildlife 9:1-4. Available at: https://wwjournal.org/home/current_volume/

A. D. Macedo and H. M. Holmquist. 2022. Nest descriptions for the mudpuppy (*Necturus maculosus*). Herpetological Review 53(2):279-280.

Hutton, J.M., **Macedo, A.D**., Brown, J.L. and Warne, R.W., 2024. A novel indicator to assess PIT tag retention in an aquatic amphibian: impact of body size. Animal Biotelemetry 12(1), p.37.

Hutton, J. M., **A. D. Macedo**, S. C. Richter, R. W. Warne, S. J. Price. 2021. Does the non-lethal gastric lavage method affect subsequent feeding behavior in adult and larval plethodontid stream salamanders?. Herpetological Review 52 (3): 511-516.

Macedo, A. and *M. Mota. 2019. Evaluating the Effect of Time of Day on Singing Behavior in Anna's Hummingbirds. IdeaFest: Interdisciplinary Journal of Creative Works and Research from Humboldt State University: Vol. 3, Article 4.
Available at: https://digitalcommons.humboldt.edu/ideafest/vol3/iss1/4

Delevich, C, M. Reilly, **A. Macedo**, C. Nasir, J. Saler, S. Horrack, W. Hull, A. Bouissou, and S. Nunes. 2019. Graduate Student Perspectives on Scale and Hierarchy in Ecology. IdeaFest: Interdisciplinary Journal of Creative Works and Research from Humboldt State University: Vol. 3 , Article 3.
Available at: https://digitalcommons.humboldt.edu/ideafest/vol3/iss1/3

Macedo, A. D., *A. R. Easton, and R. W. Warne. *In Review*. Carbon and nitrogen isotope dynamics in hibernating cottonmouth snakes. Physiological and Biochemical Zoology.

Hutton, J.M., **Macedo, A.D.,** and Warne, R.W. 2024. Factors Influencing the Occupancy and Detection of Non-breeding Hyla chrysoscelis Within Artificial PVC Refugia. Herpetologica 80(3), pp.221-233.

Hutton, J. M., **A. D. Macedo**, J. Dallas, and R. W. Warne. *In review*. Effects of acclimation and stress hormone on thermal maximum of Blanchard's Cricket Frog (*Acris blanchardii*).

Holmquist, H. M., **A. D. Macedo**, J. Garvey, G. Whitledge. *In review*. Evaluating the influence of biotic and physical associations on fish community structure across a river floodplain connectivity gradient in the cache river, Illinois.

*Leppin, M. V., C. Cousins, **A. D. Macedo**, J. G. Garwood, M. P. Hayes, R. Ojoala-Barbour, J. Tyson, J. Bracken, R. Duncan, C. L. Kunkel, and G. W. Bury. *In review*. Observations relating to the breeding season of the coastal tailed frog (*Ascaphus truei*). Northwest Naturalist.

Macedo, A. D., and R. W. Warne. *In preparation.* Interactions between microbiomes, immune function, and disease in a hibernating snake.

Macedo, A. D., J. Hutton, *K. Karl, R. W. Warne, and J. G. Boyles. *In preparation*. Influence of climate variables and annual climate variability on anuran calling phenology in a bottomland swamp ecosystem.

Macedo, A., J. Hutton, and R. Warne. *In preparation.* Amphibian and Reptile community dynamics across an hydrological gradient in flood plain habitats of the northern most cypress tupelo swamp in north America.

Macedo, A., H. Holmquist, and R. Warne. *In preparation.* Turtle community dynamics of the northern most cypress tupelo swamp in north America.

Macedo A. D., J. D. Demianew, J. G. Garwood, and J. O. Reiss. *In preparation*. Life History of post-metamorphic coastal tailed frogs (*Ascaphus truei*) in the trinity alps wilderness of northern California.

Bury, R.B., Guiley, C., G.W. Bury, **A. Macedo**, and* N. Waters. *In preparation*. Phylogeography of the Tailed frog (*Ascaphus truei*) in the Klamath-Siskiyou ecoregion.

Garwood, J., **A. D. Macedo**, R. Bourque, J. Demianew, and B. Bury. *In preparation*. Geographical variation in eyespot occurrence and size on tails of larval Coastal Tailed Frogs (*Ascaphus truei*) in northern California

Demianew, J, **A. D. Macedo**, J. Garwood, and D. Barton. *In preparation.* Changes in demography, distribution, and diet in gartersnakes following eradication of a non-native prey subsidy.

<u>Recent Conference Presentations</u> * denotes undergraduate co-author

Macedo, A., *A. Easton, and R. Warne. 2023. Hibernation associated immune function in northern cottonmouth. Oral Presentation. Midwest Partners for Conservation of Amphibians and Reptiles. Makanda, IL.

*A. Easton, **A. Macedo**, and R. Warne. 2023. Carbon and nitrogen isotope dynamics in hibernating cottonmouth snakes. Poster. Midwest Partners for Conservation of Amphibians and Reptiles. Makanda, IL.

Hutton, J.M., **Macedo, A.D.,** and Warne, R.W. January 4, 2023. Society for Integrative and Comparative Biology Annual Meeting. Austin, Texas. Poster. "Environmental Thermal and Hydrological Variation: Examining Temporal Treefrog Population Dynamics."

Hutton, J.M., **Macedo, A.D**., and Warne, R.W. February 13, 2023. Midwest Fish and Wildlife Annual Conference. Overland Park, Kansas. Poster. "Environmental Thermal and Hydrological Variation: Examining Temporal Treefrog Population Dynamics."

Hutton, J.M., **Macedo, A.D.,** and Warne, R.W. February 25, 2023. Southeast Partners in Amphibian and Reptile Conservation Annual Conference. Black Mountain, North Carolina. Poster. "Environmental Thermal and Hydrological Variation: Examining Temporal Treefrog Population Dynamics."

Hutton, J.M., **Macedo, A.D**., and Warne, R.W. August 26, 2023. Midwest Partners in Amphibian and Reptile Conservation Annual Conference. Carbondale, Illinois. Talk. "Factors Influencing the Occupancy and Detection of Hylid Treefrogs Within Artificial PVC Refugia."

Macedo, A, J. Hutton, H. Holmquist, and R. Warne. 2022. Ecohydrology effects on breeding amphibians of Cache River Buttonland Swamps. Midwest Wildlife Conference. Kansas City, MO.

Awards

2011 Presidential Award for Educational Achievement
2012 Golden Mustang Award AP Environmental Science

Grants:

2022 Society for Integrative and Comparative Biology Professional Development Award
2017 Research, Scholarship, and Creative Activities Program
2012 CAPS (California Association of Professional Scientists)
2012 Sierra Club Lake Group
2012 Ryan Depp One Love Foundation
2012 Callayomi Masonic Lodge
2012 Calpine
2012 Tricounties Bank
2012 Middletown Lions Club