

Caleb A. Aldridge

Research Assistant – Wildlife, Fisheries and Aquaculture – Mississippi State University

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BIO BRIEF

Caleb was born and raised in rural northwest Alabama. Some of his earliest memories are of exploring the local streams, like the Sipsey River, with his parents, flipping rocks in search of crayfishes and salamanders. These early experiences set him on a career path in aquatic ecology and conservation. Caleb has participated in a variety of projects that include: responses of stream-associated salamander assemblages to forest road-effects; investigation on the life history of southern brook lamprey; optimizing sample sites to draw mechanistic inferences while accounting for cost; and improving survey protocols for the non-native Mediterranean Gecko. He is currently developing a planning support tool that helps fisheries biologists formulate lake management plans in a structured framework. Caleb is also passionate about mentoring budding ecologists and has served as a resource and mentor to a half-dozen undergraduate students. When not engaged in research pursuits, he enjoys visiting national parks, fishing small streams, and taking in live music.

📄 Citations: 18 *h*-index: 2

📖 Reads: 20,338 Score: 17.66 Interest: 54.0

EDUCATION

Degree-seeking

Ph.D. Forest Resources—Wildlife, Fisheries and Aquaculture

Current

Wildlife, Fisheries and Aquaculture, Mississippi State University

Dissertation title: *Planning Support for Reservoir Fisheries*

Committee: Leandro E. (Steve) Miranda (Co-Adviser), Michael E. Colvin (Co-Adviser), Scott A. Rush, and Anna C. Linhoss

Selected coursework: Decision Support Systems, Conservation and Natural Resource Decision Making, Estimation of Wildlife Populations, Management of Impounded Rivers

M.S. Biological Sciences

2017

Biology, University of Mississippi

Thesis title: *The Effect of Road Crossings on Stream-associated Salamanders within Holly Springs National Forest*

Committee: Stephen T. Threlkeld (Co-Adviser), William J. Resetarits, Jr. (Co-Adviser), Marjorie M. Holland, and Rebecca E. Symula

Selected coursework: Biometry, Experimental Design, Wetlands Ecology, Herpetology, Multivariate Analysis of Ecological Data

B.S. General Biology 2012
Biology, University of North Alabama

Adviser: Glenn A. Marvin

Selected coursework: Elementary Statistics, Aquatic Ecology, Entomology, Comparative Vertebrate Morphology, Plant Physiology

Certificates

Preparing Future Faculty Certificate 2020
Center for Teaching and Learning (CTL), Mississippi State University

Best Practices in Online Instruction Certificate 2018
Center for Teaching and Learning (CTL), Mississippi State University

RESEARCH EXPERIENCE

Graduate Research (Dissertation) 2018-Current

*Mississippi Cooperative Fish and Wildlife Research Unit and
Fishery Management and Aquatic Conservation Lab,
Wildlife, Fisheries and Aquaculture, Mississippi State University*

Supervisors: Michael E. Colvin and Leandro E. (Steve) Miranda

Thematic and evaluative analysis of US state inland fisheries bureaus' goals; case history of Mississippi Department of Wildlife, Fisheries, and Parks standardized fisheries sampling and analysis system; and development of a prototype computer application to regiment fisheries management plans, integrating long-term monitoring data with problem identification, objectives declaration, and action selection and implementation.

Research Assistant 2018-Current

*Mississippi Cooperative Fish and Wildlife Research Unit and
Fishery Management and Aquatic Conservation Lab,
Wildlife, Fisheries and Aquaculture, Mississippi State University*

Supervisors: Michael E. Colvin and Leandro E. (Steve) Miranda

Review of manuscripts and scholarly works; perform statistical and numerical analysis; design experiments and sampling schemes; and conduct field and laboratory sampling.

Research Associate 2016-2018

*Research and Education to Advance Conservation and Habitats (REACH),
Wildlife, Fisheries and Aquaculture, Mississippi State University*

Supervisor: Beth H. Baker

Investigation (field experiment) of the effects winter cover crops on soil properties and edge-of-field runoff.

Graduate Research (Thesis) 2015-2017

Biology, University of Mississippi

Supervisors: Stephen T. Threlkeld and William J. Resetarits

Investigation (quasi-experimental) of how road-crossings affect stream-associated salamander counts and richness in comparison to road-free streams.

Field Technician

2014

Biological and Environmental Sciences, Alabama A&M University

Supervisor: Dawn Lemke

Sampling of water quality parameters in the investigation (quasi-experimental) of responses to differing prescribed fire applications.

Wildlife Biologist Intern

2013

Freedom Hills Wildlife Management Area, Alabama Department of Conservation and Natural Resources

Supervisor: Mitchell Marks

Sampling and surveys of various wildlife populations for estimates of abundance, structure, and condition.

SCIENTIFIC AND TECHNICAL WORKS

Note: Names of undergraduate co-authors underlined.

Peer Reviewed Manuscripts

1. **Aldridge, C.A.** (Accepted). *Road-effects on plethodontid counts in a Southeastern Plains forest*. Herpetology Notes.
2. **Aldridge, C.A.** (2020). *Computing Skills Beyond R for Fisheries Students*. Fisheries 45(3):116–120. Available from <https://doi.org/10.1002/fsh.10392>
3. Rogers, T., T. Banks, and **C.A. Aldridge**. (2020). Geographic Distribution: *Hemidactylus turcicus* (Mediterranean Gecko). USA: MISSISSIPPI: LOWNDES CO. Herpetological Review 51(1):77.
4. Brooks, J.P., R.K. Smith, **C.A. Aldridge**, B. Chaney, A.R. Omer, J. Dentinger, G.M. Street, and B.H. Baker. (2020). *A preliminary investigation of wild pig (*Sus scrofa*) impacts on water quality*. Journal of Environmental Quality 49(1):27–37. Available from <https://doi.org/10.1002/jeq2.20036>
5. Dennison, J.L. and **C.A. Aldridge**. (2019). Geographic Distribution: *Hemidactylus turcicus* (Mediterranean Gecko). USA: ALABAMA: LAUDERDALE CO. Herpetological Review 50(3):527.
6. **Aldridge, C.A.**, B.H. Baker, and A.R. Omer. (2019). *Investigation of short-term effects of winter cover crops on compaction and total soil carbon in a long-term no-till agricultural system*. Journal of Soil and Water Conservation 74(1):78–85. Available from <https://doi.org/10.2489/jswc.74.1.77>
7. Baker, B.H., J.M. Prince Czarnecki, A.R. Omer, **C.A. Aldridge**, R. Kröger and J.D. Prevost. (2018). *Nutrient and sediment runoff from agricultural landscapes with varying suites of conservation practices in the Mississippi Alluvial Valley*. Journal of Soil and Water Conservation 73(1): 75–85. Available from <https://doi.org/10.2489/jswc.73.1.75>

Technical and Extension Manuscripts

1. Miranda, L.E., M. Colvin, A. Shamaskin, and **C.A. Aldridge**. (2019). *Review, revision and development of new monitoring protocols to facilitate the meeting of goals and objectives of freshwater fisheries management in Mississippi*. Mississippi Department of Wildlife, Fisheries, and Parks,

Jackson, MS.

Includes a user's manual for Fisheries Resources and Analysis System 3.0 (see Code and Programming below).

2. **Aldridge, C.A.** (2018). *A report for Morton Farms on the effects of winter cover on select soil metrics*. REACH, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
3. **Aldridge, C.A.** and B.H. Baker. (2018). *Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA–Natural Resource Conservation Service Annual report, January 2018*. REACH, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
4. Baker, B.H., **C.A. Aldridge**, and A.R. Omer. (2018). *Assessing and protecting water quality in the home and community*. Mississippi State University Extension, Mississippi State University. Available from <https://tinyurl.com/y63wrh9j>
5. **Aldridge, C.A.** (2017). *The Effect of road crossings on stream-associated salamanders within Holly Springs National Forest* (Master's thesis). Available from ProQuest Dissertations and Theses Global. (1925911777). Retrieved from <https://search.proquest.com/docview/1925911777>
6. **Aldridge, C.A.** and B.H. Baker. (2017). *Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA–Natural Resource Conservation Service Semi-annual report, July 2017*. REACH, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
7. **Aldridge, C.A.** and B.H. Baker. (2017). *Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA–Natural Resource Conservation Service Annual report, January 2017*. REACH, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
8. **Aldridge, C.A.** and B.H. Baker. (2017). *Watersheds: Role, importance, and stewardship*. Mississippi State University Extension, Mississippi State University. Available from <https://tinyurl.com/yyv2y9zj>
9. Baker, B.H., A.R. Omer, and **C.A. Aldridge**. (2017). *Water: Sink to sea*. Mississippi State University Extension, Mississippi State University. Available from <https://tinyurl.com/y2zs5z73>
10. **Aldridge, C.A.** and B.H. Baker. (2016). *Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA–Natural Resource Conservation Service Semi-annual report, July 2016*. REACH, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
11. Baker, B.H., **C.A. Aldridge**, and A.R. Omer. (2016). *Water: Availability and use*. Mississippi State University Extension, Mississippi State University. Available from <https://tinyurl.com/yxtcto7c>
12. **Aldridge, C.A.**, B.H. Baker, and A.R. Omer. (2016). *Concerns about long-term water security*. Mississippi State University Extension, Mississippi State University. Available from <https://tinyurl.com/y25uwm6g>

Manuscripts Pending

1. Banks, T., T. Rogers, and **C.A. Aldridge**. (In review). Geographic Distribution: *Hemidactylus turcicus* (Mediterranean Gecko). USA: MISSISSIPPI: CLAY CO. Herpetological Review.
2. **Aldridge, C.A.**, L.E. Miranda, and M.E. Colvin. (In review). *Themes of contemporary inland fisheries goals*. Fisheries.
3. **Aldridge, C.A.**, A.R. Omer, and B.H. Baker. (In review). *Potential effects of tailwater recovery systems on downstream hydrology*. Irrigation and Drainage.
4. Omer, A.R., **C.A. Aldridge**, and B.H. Baker. (In review). *Outflow hydrology of tailwater recovery systems with comparisons to a control catchment*. Journal of Irrigation and Drainage Engineering.
5. **Aldridge, C.A.**, D.M. Norris, M.E. Colvin, and L.E. Miranda. (In review). *Structural persistence of brush piles within a Southeastern flood control reservoir*. North American Journal of Fisheries Management.
6. **Aldridge, C.A.**, T.P. Rogers, W.T. Banks, and S.A. Rush. (In review). *Improving detection of an introduced gecko, Hemidactylus turcicus*. Herpetological Conservation and Biology.
7. Faucheux, N.M., A.R. Sample, **C.A. Aldridge**, D.M. Norris, C. Owens, V.R. Starnes, S. Vanderbloemen, L.E. Miranda. (In preparation). *Reservoir attributes display cascading spatial patterns along river basins*. Water Resources Research.
8. Baker, B.H., **C.A. Aldridge**, A. Lucore, A.R. Omer, and A.G. Firth (In preparation). *Nutrients and sediment in edge-of-field runoff from fields under long-term no-till and winter cover crop treatments: A case study*. Journal of Soil and Water Conservation.
9. **Aldridge, C.A.**, N. Faucheux, D. Norris, C. Owens, V. Starnes, A. Sample, S. Vanderbloemen, L.E. Miranda. (In preparation). *Reservoir fish habitat impairments under future climate projections*.
10. Henderson, C., S.A. Rush, **C.A. Aldridge**. (In preparation). *Association of Lampropeltis holbrooki coloration to latitude and canopy cover*. Journal of Herpetology.

Presentations, Workshops, and Outreach

1. **Aldridge, C.A.**, L.E. Miranda, and M.E. Colvin (Presenter). (2020-02-20–23). *Same profession different jobs — fisheries goals across the US*. Oral presentation, 2020 Southern Division–American Fisheries Society Meeting. Little Rock Marriott–Downtown, Little Rock, AR.
2. **Aldridge, C.A.**, L.E. Miranda, and M.E. Colvin (Presenter). (2020-02-20–23). *For management plans, consult a computer?* Poster presentation, 2020 Southern Division–American Fisheries Society Meeting. Little Rock Marriott–Downtown, Little Rock, AR.
3. **Aldridge, C.A.**, L.E. Miranda, and M.E. Colvin (Presenter). (2020-02-12–14). *Same profession different jobs — fisheries goals across the US*. Oral presentation, 46th Annual Meeting of the Mississippi Chapter of the American Fisheries Society. Courtyard Gulfport Beachfront, Gulfport MS.
4. **Aldridge, C.A.**, D.M. Norris, H.R. Hatcher, G. Coppola, M.E. Colvin, and L.E. Miranda (Presenter). (2020-02-12–14). *Brush piles: Understanding structural dynamics to help plan habitat management*. Poster presentation, 46th Annual Meeting of the Mississippi Chapter of the American Fisheries Society. Courtyard Gulfport Beachfront, Gulfport MS.

5. **Aldridge, C.A.**, L.E. Miranda, and M.E. Colvin (Presenter). (2020-02-12–14). *For management plans, consult a computer?* Poster presentation, 46th Annual Meeting of the Mississippi Chapter of the American Fisheries Society. Courtyard Gulfport Beachfront, Gulfport MS.
6. Boudreau, M.R. and **C.A. Aldridge**. (Co-instructor). (2019-12-11–13). Departmental Workshop, Wildlife, Fisheries and Aquaculture. Workshop, Berryman Cabin at Mississippi State University, Mississippi State, MS.
7. **Aldridge, C.A.** (Presenter). (2019-11-14). *Stream site selection using conditioned Latin hypercube sampling*. Oral presentation, Southeastern Fishes Council 45th Annual Meeting. Holiday Inn at World's Fair Park, Knoxville, TN.
8. **Aldridge, C.A.** and A.B. Alford. (Co-instructor). (2019-11-13). *An ecologist's first encounter with R*. Workshop, Southeastern Fishes Council 45th Annual Meeting. Holiday Inn at World's Fair Park, Knoxville, TN.
9. Bush, C., S.A. Rush, C. Bethel, and **C.A. Aldridge**. (Content author). (2019-08-02). *A web-based interface designed to promote biological conservation and education within Mississippi*. Poster presentation, Shackouls Honors College 2019 Summer Undergraduate Research Symposium, Mississippi State University, Mississippi State, MS.
10. Baker, B., **C.A. Aldridge**, A. Lucore, J. Dyer, and R. Kroger. (Content author). (2019-06-23–25). *Effects of cover crops on edge-of-field runoff in row-crop production systems*. Oral presentation, Southern Region Water Conference, Texas A&M Hotel and Conference Center, Texas A&M University, College Station, TX.
11. **Aldridge, C.A.** (Presenter). (2019-05-02). *A planning support tool for MDWFP statewide fisheries management*. Oral presentation, Mississippi Cooperative Fish and Wildlife Research Unit Annual Coordinating Committee Meeting, Berryman Institute, Mississippi State University, Mississippi State, MS.
12. Wilmoth, B.M., D.A. Schumann, B.M. Richardson, **C.A. Aldridge**, and M.E. Colvin. (Content author). (2019-04-16). *Ontogeny of Southern Brook Lamprey (*Ichthyomyzon gagei*) with emphasis on abundance, distribution, and morphology in a small watershed*. Poster presentation, Shackouls Honors College 2019 Spring Undergraduate Research Symposium, Mississippi State University, Mississippi State, MS. Available from <https://tinyurl.com/y536pzdj>
13. **Aldridge, C.A.**, M.E. Colvin, and L.E. Miranda. (Presenter). (2019-02-20–22). *Early look: Performance of machine learning to classify age from age-length data*. Poster presentation, 45th Annual Meeting of the Mississippi Chapter of the American Fisheries Society. Mississippi Museum of Natural Science, Jackson, MS. Available from <https://tinyurl.com/y28gqycg>
14. Wilmoth, B.M., D.A. Schumann, B.M. Richardson, **C.A. Aldridge**, and M.E. Colvin. (Content author). (2019-02-20–22). *Ontogeny of Southern Brook Lamprey, *Ichthyomyzon gagei*, with emphasis on abundance, distribution, and morphology in a small watershed*. Oral presentation, 45th Annual Meeting of the Mississippi Chapter of the American Fisheries Society. Mississippi Museum of Natural Science, Jackson, MS. Available from <https://tinyurl.com/y456pvtd>
15. **Aldridge, C.A.**, B.M. Richardson, D.A. Schumann, and M.E. Colvin. (Presenter). (2018-11-08). *Identifying barriers to the use and detection of passive integrated transponder (PIT) tags in Southern Brook Lamprey ammocoetes (*Ichthyomyzon gagei*, Hubbs and Trautman, 1937)*. Oral presentation, Southeastern Fishes Council 44th Annual Meeting. Hickory Knob State Park Resort, McCormick, SC. Available from <https://tinyurl.com/y8hvb2sw>

16. **Aldridge, C.A.** (Presenter). (2018-11-06). *Equipment and video demonstration of stream fish sampling techniques*. Demonstration, New Hope STEM Night. New Hope High School, New Hope, MS.
17. Richardson, B.M., **C.A. Aldridge**, D.A. Schumann, M.E. Colvin. (Content author). (2018-08-20). *Assessing viability of passive integrated transponder (PIT) tags for ecological studies of lamprey ammocoetes*. Poster presentation, 148th Annual Meeting of the American Fisheries Society, Atlantic City, NJ. Available from <https://tinyurl.com/yazju8mm>
18. **Aldridge, C.A.** (Guest). (2017-11-15). *White-tailed deer: Hunting regulations and concerns* [Radio program]. In J. Campbell and J. Webster (Hosts and Producers), Tennessee Valley Outdoor Report Live. Florence, AL:WSBM.
19. Chaney, B., J.P. Brooks, **C.A. Aldridge**, A.R. Omer, G.M. Street, and B.H. Baker. (Content author). (2017-04-13). *Preliminary investigation of Feral Hog impacts on water quality*. Poster presentation, Shackouls Honors College 2017 Spring Undergraduate Research Symposium, Mississippi State University, Mississippi State, MS. Available from <https://tinyurl.com/y9p63j9q>
20. Omer, A.R., B.H. Baker, B., and **C.A. Aldridge**. (Co-presenter). (2017). *Water resources lecture and demonstrations for 6th - 8th graders*. Demonstration, 2017 Conservation Camp–Day Camp Edition. Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
21. Omer, A.R., B.H. Baker, **C.A. Aldridge**, and A. Firth. (Co-presenter). (2017). *Water resources lecture and demonstrations for 7th graders*. Demonstration, 2017 Conservation Camp–Wildlife and Recreation Edition, Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS.
22. Baker, B.H., A.R. Omer, and **C.A. Aldridge**. (Co-presenter). (2017). *Water resources lecture and demonstrations*. Demonstrations, Grade 5 Classrooms. Lawndale Elementary, Tupelo, MS.
23. **Aldridge, C.A.** (Presenter). (2017). *The effect of road crossings on stream-associated salamanders within Holly Springs National Forest*. Oral presentation–thesis defense, Departmental Seminar Series. Biology, University of Mississippi, University, MS.
24. Baker, B.H., A. Jacobs, J. Estes, and **C.A. Aldridge**. (Co-presenter). (2017-02-23). *Cover crops field day*. Demonstration and discussion, MSU Extension and USDA–NRCS field day. Graves Farm, Ripley, MS.
25. **Aldridge, C.A.** (Presenter). (2016). *Results: Comparisons of stream-associated salamander abundance and richness in road-crossed and road-free low-order streams in Holly Springs National Forest*. Oral presentation, Brown Bag Presentation Series. Holly Springs Ranger District, University, MS.
26. **Aldridge, C.A.** (Presenter). (2015). *The effect of road crossings on stream-associated salamanders within Holly Springs National Forest*. Oral presentation–thesis prospectus, Departmental Seminar Series. Biology, University of Mississippi, University, MS.
27. Bohenek, J. and **C.A. Aldridge** (Co-presenter). (2015). *Chittum Tubby Pond cleanup: A restoration effort*. Oral presentation, Wetland Ecology Course. Biology, University of Mississippi, University, MS. Available from <https://youtu.be/VwtDOspsTGo>

28. **Aldridge, C.A.** (Content author). (2014). *Influences of forest management on flow regime, Bankhead National Forest, AL*. Poster presentation, STEM Day 2014. Biological and Environmental Sciences, Alabama A&M University, Normal, AL.
29. **Aldridge, C.A.** (Content author). (2014). *Facts for flow study: Bankhead National Forest, AL*. Oral presentation, GIS, Spatial Analysis, and Modeling Course. Biological and Environmental Sciences, Alabama A&M University, Normal, AL.
30. **Aldridge, C.A.** (Presenter). (2014-02-05). *Assessing the impact of active forest management on watershed stream flow, turbidity, and dissolved oxygen*. Oral presentation—project proposal. Center for Forest Ecosystems Assessment, Alabama A&M University, Normal, AL.

Code and Programming

1. **Aldridge, C.A.**, M.E. Colvin, and L.E. Miranda. (Author). (2019). *FRASps: Fisheries Resources Analysis System—Planning Support*. (Version 0.1) [Software], Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS and Mississippi Department of Wildlife, Fisheries, and Parks, Jackson, MS.
2. **Aldridge, C.A.** (Contributor). (2018). *Age-length key*. In Miranda, L.E. and M.E. Colvin (Authors), *FRAS: Fisheries Resources Analysis System* (Version 3.0) [Software], Wildlife, Fisheries and Aquaculture, Mississippi State University, Mississippi State, MS and Mississippi Department of Wildlife, Fisheries, and Parks, Jackson, MS.
3. **Aldridge, C.A.** (2018). *Calculations of common metrics of hydrographs* [R Code]. Available from <https://tinyurl.com/y9yh6pw7>
4. **Aldridge, C.A.** (2017). *Unique dates axis labels in multi-panel lattice graphics* [R Code]. Available from <https://tinyurl.com/y9mkv663>
5. **Aldridge, C.A.** (2017). *Functions to convert DD to DMS for ggmap axis plotting* [R Code]. Available from <https://tinyurl.com/ycr3m9k4>

Contributed Blog Posts

1. **Aldridge, C.A.** (2020-01-31). Same profession different jobs — fisheries goals across the US.
2. **Aldridge, C.A.** (2019-10-30). There's models and then there's inference.
3. **Aldridge, C.A.** (2019-09-26). Reasoning in ecology, conservation biology, and natural resource management. Available from <https://tinyurl.com/y3fb63fg>
4. **Aldridge, C.A.** (2019-04-03). Story Framing with the Message Box: A tool for writing a SUCCES story. Available from <https://tinyurl.com/yynbj44>
5. **Aldridge, C.A.** (2019-03-22). Design and decisions, part II: Using crunched numbers in decision support. Available from <https://tinyurl.com/y4uq64xb>
6. **Aldridge, C.A.** (2019-01-25). Design and decisions, part I: Thinking about the decision to be made *before* the numbers are crunched. Available from <https://tinyurl.com/y5x4wqex>
7. **Aldridge, C.A.** (2018-10-18). You so random: Selecting random stream sampling locations using R. Available from <https://tinyurl.com/y473zkbz>
8. **Aldridge, C.A.** (2018-10-05). The effects of sediment on PIT tag detection—The setup. Available from <https://tinyurl.com/y38sjsk7>

9. Aldridge, C.A., B.M. Richardson, D.A. Schumann, and M.E. Colvin. (2018-10-05). Lamprey abstract for Southeastern Fishes Council meeting. Available from <https://tinyurl.com/y4qbdhwa>
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RESEARCH INTERESTS

Ecology and conservation of headwater ecosystems with focus on population status (e.g., occupancy) and dynamics (e.g., survival), and assemblage responses to disturbance and restoration.

Optimization of monitoring and sampling protocols, e.g., how many samples are needed to detect an elusive species at a site or conclude it is no longer present?

Development of decision and planning support tools and for natural resource management to structure actions and research activities.

SKILLS

Field

Sampling and labor: Backpack electrofishing, seine netting, gillnetting, trapping (aquatic), visual encounter surveys, coverboard traps, call surveys, passive integrated transponder tagging and equipment, camera trap arrays, standardized stream habitat survey, soil, air, and water sampling (stationary and handheld), environmental DNA sampling, non-lethal tissue sampling, point count songbird survey, bird banding, internal organ biopsy, prescribed burning, establishment of wildlife supplementary fields, construction of forest roads, boundary survey, timber cruise and stand measurements

Heavy equipment: Four-wheel drive vehicle (with trailer), all-terrain vehicle (with spraying and planting implements), utility side by side, utility tractor (with spraying, mowing, and planting equipment), backhoe tractor, bulldozer, grader

Bench and Computer

Laboratory: Flow injection analysis (nutrient concentrations in water samples), water chemistry testing, suspended sediment measurement, polymerase chain reaction, otolith aging

Analysis: Experimental and sampling design (factorial, regressive, occupancy and abundance), univariate modeling (linear, generalized linear, generalized additive, hierarchical linear and generalized, spatial regression, time series analyses, classical and Bayesian inference), multivariate modeling (unconstrained ordination, cluster analyses, constrained ordination, discriminate analyses, gradient analyses, multivariate factorial and regressive, geometric morphometrics), spatial analysis (cost conditional Latin hypercube sampling, species distribution modeling, hydrological modeling, spatial autocorrelation, interpolation), machine learning (association rules, hierarchical clustering, classification and regression trees, ensemble models, text mining), decision analysis and optimization (linear programming, analytic hierarchy process, decision trees, Bayesian decision networks)

Programming: R, Git, SQL, T_EX, markdown, R Markdown, HTML, CSS (Novice), JavaScript (Novice), Python (Novice), VBA (Novice)

Applications: RStudio, Microsoft Office Suite, Mendeley Desktop, G Suite, Shiny, GitHub Desktop, Atom, GIS in R, Quantum GIS, ArcGIS, HOBOWare PRO, Blackboard, Canvas, AUTHOREA, GRASS (Novice), JMP (Novice), PAST (Novice), InVest (Novice)

Platforms: Microsoft Windows, Android, macOS (Novice), Linux (Novice)

ACCOLADES

Awards and scholarships

1. SDAFS Student Lodging Award [\$725] 2020
2. SFC Boschung Student Travel Award [\$100] 2019
3. AAAS/Science Program for Excellence in Science Recipient [Sponsored membership] 2019
4. Fernando Vizcarra Memorial Photo Contest (Fall) [3rd Place]
"Sunrise Mesa Arch, Canyonlands National Park, Utah" 2018
5. SFC Boschung Student Travel Award [\$100] 2018
6. Graduate Research Assistantship, Mississippi State University [\$25,000 yr⁻¹] 2018-Current
7. Graduate Teaching Assistantship, University of Mississippi [\$18,000 yr⁻¹] 2014-2016
8. NUCOR Steel Foundation Scholarship [\$40,000] 2008-2012
9. Pate—Sterling Memorial Scholarship [\$10,000] 2008-2009
10. Alabama Youth Leadership Conference 2007
11. Alabama Boys' State 2007

Grants

1. Miranda, L.E., M.E. Colvin and C.A. Aldridge. (2019). *FRASps: a planning support tool for inland fisheries management*. Mississippi Department of Wildlife, Fisheries, and Parks. [\$109,526]
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PROFESSIONAL AFFILIATIONS

American Fisheries Society

Mississippi Chapter

Fisheries Management Section

Student Subsection of the Education Section

Student Member

2018-Current

Miss. St. Univ. Sub-unit

Treasurer

2018-2020

American Society of Ichthyologists and Herpetologists

Student Member

2018-Current

Southeastern Fishes Council

Student Member

2018-Current

Association of Southeastern Biologists

Student Member

2017-Current

Southeastern Partners in Amphibian and Reptile Conservation

Member

2016-Current

TEACHING EXPERIENCE

Adjunct eLearning Biology Instructor

2018-Current

eLearning Science, Northwest Mississippi Community College

Supervisor: Angel Nickens

Instruction of elementary biological science and laboratory simulations; proctoring of examinations. (24 hrs taught; "Meets or Exceeds Expectations" on performance reviews)

Graduate Teaching Assistant

2014-2016

Biology, University of Mississippi

Supervisor: Denis C. Goulet

Instruction of elementary biological, human anatomy and physiology, and ecological science laboratories; proctoring of examinations. (22 hrs taught; 3.89/4.00 from student reviews)

Guest Lecturer

Wildlife Fisheries and Aquaculture, Mississippi State University

Instructor: Scott A. Rush

Course: Herpetology

2020-02-28

"Location, Location, Location"

Wildlife Fisheries and Aquaculture, Mississippi State University

Instructor: Michael E. Colvin

Course: Fisheries Management

2019-10-02

"Management Plans"

Biology, University of Mississippi

Instructor: Stephen T. Threlkeld

Course: Ecology

2015-09-28

"Population Dynamics" based on material from M.C. Molles Jr., "Ecology: Concepts and Applications"

Laboratory Teaching Assistant

2011-2012

Alabama Math, Science, and Technology Initiative: Science in Motion

Supervisor: Kim Pounders

Prototyped and maintained laboratory equipment and demonstration supplies. Assisted with demonstrations and instruction to secondary school teachers.

ACADEMIC AND COMMUNITY SERVICE

2020 Nabi Award Selection Committee

Member

2020

Utilized analytic hierarchy process (AHP) in decision process.	
<i>2020 Southern Division–American Fisheries Society Meeting</i>	
Student Moderator	2020
<i>46th Annual Meeting of the Mississippi Chapter of the American Fisheries Society</i>	
Student Moderator	2020
<i>Shackouls Honors College Undergraduate Research Symposium</i>	
Judge	Summer 2019
<i>Shackouls Honors College Undergraduate Research Symposium</i>	
Judge	Spring 2019
<i>12th Annual Biological Undergraduate Research Program</i>	
Judge	2019
<i>2019 Nabi Award Selection Committee</i>	
Member	2019
Utilized analytic hierarchy process (AHP) in decision process.	
<i>45th Annual Meeting of the Mississippi Chapter of the American Fisheries Society</i>	
Student Moderator	2019
<i>Wildlife, Fisheries, and Aquaculture Graduate Student Association</i>	
Committee Member	2019-Present
<i>Southeastern Fishes Council 44th Annual Meeting</i>	
Student Moderator	2018
<i>Bridging 662</i>	
Board Member	2018-Present
<i>Cook Elementary P-16 Community Engagement Council</i>	
Council member	2018-Present
<i>Earth Day Prairie Restoration, Osborne Prairie, Osborne, MS</i>	
<i>ConserVANTion and the MSU Biology Graduate Student Association</i>	
Volunteer	2017
<i>University of Mississippi Graduate Student Council</i>	
Social and Philanthropic Chair	2015-2016

OTHER

Non-degree-seeking coursework

Graduate Coursework 2013-2014

Biological and Environmental Sciences, Alabama A&M University

Adviser: Dawn Lemke

Selected coursework: Envir. Biology, GIS, Spatial Analysis and Modeling, Hydrology and Watershed Mgmt.

Undergraduate Coursework

2008-2010

Biological, Physical, and Human Sciences, Freed-Hardeman University

Adviser: Brian P. Butterfield

Selected coursework: Principles of Biology, Human Anatomy and Phys., Microbiology

Developmental coursework

Crayfishes of the Southeastern USA: a workshop 2020
Susie Adams, US Department of Agriculture, Forest Service

All About eLearning [1.5 CEU] 2019

Machine Learning A-Z™: Hands-On Python and R in Data Science 2019
Udemy

GTA Series: Active Learning Techniques Workshop 2018
Center for Teaching and Learning (CTL), Mississippi State University

Teaching Effectively Online (TEO): Canvas Basics 2017
Mississippi Virtual Community College Academy

Sustainable Agricultural Land Management 2016
Coursera and University of Florida

The Land Ethic Reclaimed: Perceptive Hunting, Aldo Leopold, and Conservation 2015
Coursera and University of Wisconsin-Madison

Watershed Management Training Certificate 2015
The Watershed Academy Web-Based Training Program, U.S. Environmental Protection Agency

R Programming 2014
Coursera and John Hopkins University

University Teaching 101 2014
Coursera and John Hopkins University

'Building Models for GIS Analysis Using ArcGIS' webcourse 2014
esri Training Academy

Bird Bootcamp 2013
Alabama State Lands Division

Conferences attended

Upcoming

1. *American Fisheries Society Annual Meeting.* (2020-09-14–25). Virtual.

Past

1. *2020 Southern Division–American Fisheries Society Meeting.* (2020-02-20–23). Little Rock Marriott–Downtown, Little Rock, AR.
2. *46th Annual Meeting of the Mississippi Chapter of the American Fisheries Society.* (2020-02-12–14). Courtyard Gulfport Beachfront, Gulfport MS.

3. *Southeastern Fishes Council 45th Annual Meeting*. (2019-11-13–15). Holiday Inn at World's Fair Park, Knoxville, TN.
4. *45th Annual Meeting of the Mississippi Chapter of the American Fisheries Society*. (2019-02-20–22). Mississippi Museum of Natural Science, Jackson, MS.
5. *2019 Diversity Conference: Our Voices, When Diversity Matters*. (2019-01-31–02-01). The Mill Conference Center at Mississippi State University, Mississippi State, MS.
6. *Southeastern Fishes Council 44th Annual Meeting*. (2018-11-08–09). Hickory Knob State Park Resort, McCormick, SC.
7. *Data Summit 2018*. (2018-09-13–14). The Mill Conference Center at Mississippi State University, Mississippi State, MS.
8. *Cover Crop Symposium*. (2017-11-29). Capps Building, Delta Research and Extension Center, Stoneville, MS.
9. *2017 SEC Academic Conference: The Future of Water*. (2017-03-27–28). The Mill Conference Center at Mississippi State University, Mississippi State, MS.

Non-professional affiliations

<i>National Parks Conservation Association</i>	2016-Current
<i>National Parks Foundation</i>	2016-Current
<i>Tennessee Valley Outdoor Report</i>	
Content Contributor	2017-Current
<i>Sipsey River Rats</i>	
Content Contributor	2017-Current

Languages

English (Native), Spanish (Novice)

REFERENCES

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Please send questions, feedback, or type errors to caa134@msstate.edu. This document was produced using RStudio, an Integrated Development Environment (IDE). it was written using **R** (statistical and programming language), R Markdown (markup language), \TeX (macro language), HTML (markup language), and JavaScript (programming language).