Graduate Research Assistant
Wildlife, Fisheries & Aquaculture
Mississippi State University
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Caleb A Aldridge

> "There are two things that interest me: the relation of people to each other, and the relation of people to land."
> — Aldo Leopold

Leopold and others like John Muir, Wendell Berry, and Edward Abbey have been deeply influential on my personal values and professional goals—to draw mankind in closer harmony with nature. I hope to accomplish this through research with fundamental and applied components and communicate findings through formal (e.g., peer-reviewed articles) and informal (e.g., public talks) outlets.

EDUCATION

DOCTOR OF PHILOSOPHY
Mississippi State University
Starkville, Mississippi

Wildlife, Fisheries & Aquaculture | Current
We are working on knowledge development (explorartory analysis) of a long-term fisheries dataset for the state of Mississippi. We'll also be developing a web application for adaptive management of fisheries.
Dissertation title: *TBD.*

MASTER OF SCIENCE
University of Mississippi
Oxford, Mississippi

Biological Sciences | 2017
Graduate training focused heavily on ecological theories, applied conservation, and study design and analysis. Selected coursework: Experimental Design, Biometry, Wetland Ecology, Environmental Biology, Hydrology and Watershed Management, and GIS, Spatial Analysis, and Modeling.
Thesis title: *The effect of road crossings on stream-associated salamanders within Holly Springs National Forest.*

BACHELOR OF SCIENCE
University of North Alabama
Florence, Alabama

General Biology | 2012
Wide exposure to life science from cell theory to the Gaia hypothesis. Selected coursework: Genetics, Microbiology, Comparative Vertebrate Morphology, Vascular Plants, and Aquatic Ecology.

EXPERIENCE

GRADUATE RESEARCH ASSISTANT
Mississippi State University
Starkville, Mississippi

February 2018 –Current
Analysis and manuscript preparation of a long-term fisheries dataset compiled by the Mississippi Department of Wildlife, Fisheries, and Parks. Support for other projects of PIs.

RESEARCH ASSOCIATE
Mississippi State University
Starkville, Mississippi

June 2016 – January 2018
Employed under supervision of Beth Baker, PhD and the REACH program (Research and Education for the Advancement of

Conservation and Habitat). Manages a collaborative conservation agriculture project between REACH, Mississippi Department of Environmental Quality, and the Natural Resource Conservation Service, investigating the effect of cover crops on water quality. Other duties include support for projects through literature reviews, experimental and survey design, data collection and analysis, and writing and editing of manuscripts.

GRADUATE TEACHING ASSISTANT

University of Mississippi
Oxford, Mississippi

August 2014 – May 2016

Assisted or directed classroom and laboratory lectures, demonstrations, and grading for General Ecology, Aquatic Biology, Diversity and the Environment, and Human Anatomy and Physiology. Teaching philosophy involves igniting interest in the subject matter and challenging students to thoroughly examine theoretical and applied aspects of topics. Received a 3.89/4.00 teacher rating from student evaluations. Student comments: "*Passionate about the material being taught"; "He was very helpful... [but] he would not give you the answer, he would make you work for it.*"

FIELD TECHNICHIAN

Alabama Agriculture and Mechanical University
Normal, Alabama

January 2014 – June 2014

Assisted professors, researchers, and students with field data collection. Responsibilities involved recording water quality parameters from handheld electronic units, including flow, turbidity, and common water quality constituents (D.O., pH, Temp, etc.).Insured equipment was maintained, calibrated, and functional and instructed students in use of equipment.

WILDLIFE BIOLOGIST INTERN

Alabama Department of Conservation and Natural Resources – Wildlife and Freshwater Fisheries
Freedom Hills Wildlife Management Area, Cherokee, Alabama

February 2013 – August 2013

Assisted wildlife biologists and staff with daily tasks and projects. Regular tasks included: Equipment maintenance, area grounds improvement, boundary maintenance, wildlife habitat improvement, and large equipment operation (e.g., utility tractors, dozers, & backhoe loaders). Projects included: Whitetail Deer population survey, Whitetail Deer fawn recruitment, prescribed burn land management, Eastern Turkey liver biopsy for disease studies, migratory songbird point-plot study, Mourning Dove banding, Eastern Turkey population survey, establishment of new management area access roads, establishment of new wildlife supplementary fields, (re)establishing property boundary markers, and general surveys of animal wildlife and plant habitat for improvement purposes.

SKILLS

CREATIVE PROBLEM SOLVING & CRITICAL THINKING
★★★★★

Formal approach is a synthesis of the scientific method and design process. Generally consist of five steps: 1) Question and, or, problem defined, 2) literature review conducted and concepts developed, 3) hypothesis and objectives set, 4) study designed and experiment conducted, 5) results analyzed and discussed and, or, 6) solutions or conclusion made.
Informal approach (i.e., on-the-fly) consist of four steps: 1) Assess situation and identify problem(s), 2) generate ideas through incubated thinking and peer discussion, 3) implement best idea, 4) evaluate solution.

STUDY DESIGN & ANALYSIS
★★★★☆

Knowledge and experience gained from graduate coursework, independent study, and multiple projects (lead and assistant). Projects included basic to advanced comparison, association, & relational designs and analysis within Microsoft Excel and the R environment for statistical computing.

ADAPTABILITY & COLLABORATION
★★★★☆

Employment in state government and academic environments have given exposure to diverse schedules, management styles, colleague personalities, and workloads. This has offered thorough development of soft skills and team oriented work objectives.

WRITTEN, ORAL, & VISUAL COMMUNICATION
★★★★☆

Skills built from formal and informal instruction and experience at multiple stages of the writing and presentation process. Successful skillset demands intermediate to advanced knowledge of reference, word processing and graphic applications, such as: Mendeley, Read Cube, Microsoft Word, LibreOffice, R Markdown, R plotting and mapping packages, and geographic information systems programs (i.e., ArcGIS & QGIS).

STRONG, GOAL ORIENTED WORK ETHIC
★★★★☆

Ability to work long, hard hours demonstrated in nature of work of previous employment – projects often demand 10+ hour days in adverse conditions. Motivated by challenge of work and interest in question or problem being addressed (i.e., eager to learn and improve product).

WILDLIFE SURVEYING & HABITAT MANAGEMENT
★★★☆☆

Wide range of experiences and study of wildlife survey and monitoring techniques, examples include bird point-count surveys, aquatic funnel trapping, camera traps for mammals, and belt-transect amphibian surveys. Habitat management techniques include stream buffer establishment and preservation, supplemental wildlife plantings, and constructed wetland hydrology restoration.

MANUSCRIPTS

PUBLISHED OR ACCEPTED

Baker, B. H., Czarnecki, J. M. P., Omer, A. R., **Aldridge, C. A.**, Kröger, R. , & Prevost, J. D. (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. doi:10.2489/jswc.73.1.75

Aldridge, C. A. (2017). The effect of road crossings on stream-associated salamanders within Holly Springs National Forest (10259416). Available from *ProQuest Dissertations & Theses Global*. (1925911777). Retrieved from https://search.proquest.com/docview/1925911777

Aldridge, C. & Baker, B. (2017). Watersheds: Role, importance, & stewardship. *Mississippi State University Extension Service Publications*. Mississippi State University. http://extension.msstate.edu/sites/default/files/publications/publications/p3082.pdf

Baker, B., Omer, A., & **Aldridge, C.** (2017). Water: Sink to sea. *Mississippi State University Extension Service Publications*. Mississippi State University. http://extension.msstate.edu/sites/default/files/publications/publications/p3074.pdf

Baker, B., **Aldridge, C.**, & Omer, A. (2016). Water: Availability and use. *Mississippi State University Extension Service Publications*. Mississippi State University. http://extension.msstate.edu/sites/default/files/publications/publications/p3011.pdf

Aldridge, C., Baker, B., & Omer, A. (2016). Concerns about long-term water security. *Mississippi State University Extension Service Publications*. Mississippi State University. http://extension.msstate.edu/sites/default/files/publications/publications/p2997.pdf

IN REVIEW, SUBMITTED, IN PREPARATION, OR UNPUBLISHED

Aldridge, C. (In Review). The effect of road crossings on stream associated salamanders within Holly Springs National Forest, Mississippi, USA. *Journal of North American Herpetology*.

Baker, B., **Aldridge, C.**, & Omer, A. (In Review). Assessing and protecting water quality in the home and community. *Mississippi State University Extension Service Publications*. Mississippi State University.

Aldridge, C. & Baker, B. (In Review) Short communication: Preliminary results of cover crop effects on soil metrics, Graves Farms. *Journal of Soil and Water Conservation.*

Baker, B. & **Aldridge, C.** (In Preparation) Farmer-initiated research can provide scientific results and build farmer-researcher relationship: Morton Farm case study. *Journal of Extension*.

Aldridge, C., Omer, A., Baker, B. (In Preparation) Exploring potential effects of tailwater recovery systems (TWR) on downstream hydrology. *Agriculture, Ecosystem, & Environment*.

Omer, A., **Aldridge, C.,** Baker, B. (In Preparation) Outflow hydrology of tailwater recovery systems. *Agriculture, Ecosystem, & Environment*.

Brooks, J. P., Smith, R. K., **Aldridge, C.**, Chaney, B., Omer, A., Street, G. M., Baker, B. H. (In Preparation). A preliminary investigation of Feral Hog (*Sus scrofa*) impacts on water quality. *Water Research*.

Aldridge, C. & Baker, B. (Unpublished, 2018). Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA – Natural Resource Conservation Service – Annual report, January 2018. Department of Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

Aldridge, C. & Baker, B. (Unpublished, 2017). Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA – Natural Resource Conservation Service – Semi-annual report, July 2017. Department of Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

Aldridge, C. & Baker, B. (Unpublished, 2017). Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA – Natural Resource Conservation Service – Annual report, January 2016. Department of Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

Aldridge, C. & Baker, B. (Unpublished, 2016). Mississippi State University 201 and 202 monitoring network for Mike Graves and the USDA – Natural Resource Conservation Service – Semi-annual report, July 2016. Department of Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

PRESENTATIONS & OUTREACH

Chaney, B., Brooks, J. P., **Aldridge, C.**, Omer, A. R., Street, G. M., Baker, B. H. [data analysis, content author] (2017-04-13). Preliminary investigation of Feral Hog impacts on water quality. *Spring 2017 Undergraduate Research Symposium*. Shackouls Honors College, Mississippi State University, Starkville, MS.

Omer, A., Baker, B., & **Aldridge, C.** [co-instructor] (2017). Water resources lecture and demonstrations for 6th - 8th graders. *2017 Conservation Camp – Day Camp Edition*. Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

Omer, A., Baker, B., **Aldridge, C.**, & Firth, L. [co-instructor] (2017). Water resources lecture and demonstrations for 7th graders. *2017 Conservation Camp – Wildlife and Recreation Edition*. Wildlife, Fisheries & Aquaculture, Mississippi State University, Starkville, MS.

Aldridge, C. [volunteer]. (2017). Earth Day Prairie Restoration. *ConserVANtion & the Biology Graduate Student Association, MSU*. Osborne Prairie, Osborne, MS.

Baker, B., Omer, A., & **Aldridge, C.** [co-instructor] (2017). Water resources lecture and demonstrations for 5th graders. Lawndale Elementary, Tupelo, MS.

Aldridge, C. [presenter] (2017). The effect of road crossings on stream-associated salamanders within Holly Springs National Forest. *Departmental Seminar – Thesis Presentation.* Biological Sciences, University of Mississippi, Oxford, MS.

Baker, B., Jacobs, A., Estes, J., & **Aldridge, C.** [co-presenter] (2017-02-23). Cover crops field day. *MSU Extension and USDA – NRCS*. Graves Farm, Ripley, MS.

Aldridge, C. [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. *Brown Bag Presentation Series*. Holly Springs Ranger District, Oxford, MS.

Aldridge, C. [presenter] (2015). The effect of road crossings on stream-associated salamanders within Holly Springs National Forest. *Departmental Seminar – Thesis Prospectus.* Biological Sciences, University of Mississippi, Oxford, MS.

Bohenek, J. & **Aldridge, C.** [co-presenter] (2015). Chittum Tubby Pond cleanup: A restoration effort. *Wetland Ecology Course Project Presentation*. Biological Sciences, University of Mississippi, Oxford, MS. https://youtu.be/VwtDOspsTGo

MEMBERSHIPS & ASSOCIATIONS

Association of Southeastern Biologist | **January 2017 – Present**

Southeast Partners in Amphibian and Reptile Conservation | **2016 – Present**

Ducks Unlimited | **2013 – Present**

National Parks Foundation | **2016 – Present**

National Parks Conservation Association | **2016 – Present**

iNaturalist Community Member | **2016 – Present**

University of Mississippi Graduate Student Council Executive | **2014 – 2015**

RESEARCH INTERESTS

Exploration of long-term fisheries data and development of decision support tools for fisheries management	This project will be part of PhD education under the mentorship of Drs. Michael Colvin (Assistant Professor, Wildlife, Fisheries & Aquaculture, MSU) and Steve Miranda (Mississippi Cooperative Fish and Wildlife Research Unit Assistant Unit Leader -- Research Fish Biologist and Adjunct Professor, Wildlife, Fisheries & Aquaculture, MSU).
Fauna of Northwest Alabama and Northeast Mississippi	**Aldridge, C.** (In Development). Mapping of salamander occurrence and richness in Mississippi using a publically available dataset with discussion of bias and data gaps. **Aldridge, C.** (Conceptual). In search of Mississippi's cryptic giant salamander (*Cryptobranchus alleganiensis*): Using an emergent tool at the distribution boundary. **Aldridge, C.** (Conceptual). In search of a locally elusive salamander (*Desmognathus aeneus*): A case of a population disjunction, individuals adrift, or misidentification?
Protection, Conservation, & Restoration of Water Resources	**Aldridge, C.**, Baker, B., and REACH Lab members. (In Development). Use of native cool-season grasses as a water management tool in agricultural fields. **Aldridge, C.** (Conceptual). Detection of springs and seeps in the Upper Gulf Coast Plains of Northeast Mississippi and Northwest Alabama.
Ecological Restoration, Methodological Design, & Habitat Planning	**Aldridge, C.**, Baker, B., and REACH Lab members. (Conceptual). Use of native cool-season grasses as in-field and edge-of-field wildlife habitat in agricultural settings.

Aldridge, C. (Conceptual). It's what their made of: Performance comparisons of a new type of cover board to traditional board and natural cover.

REFERENCES

References or manuscripts available on request.