John Eric Ezell, PhD

86 Cross Creek Rd.
Starkville MS 39759
662.617.2421
ezelljohn1@gmail.com

EDUCATION

2010-2016	**University of Florida** Gainesville, FL PhD in Geochemistry
2008-2010	**Mississippi State University** Starkville, MS MS in Biogeochemistry
2003-2008	**Mississippi State University** Starkville, MS BS in Environmental Geosciences
2003-2008	**Mississippi State University** Starkville, MS BS in Forest Management

RELEVANT EMPLOYMENT

2021 – Present **Teaching Professor**
Department of Geosciences
Mississippi State University
This is a 100% teaching appointment. Undergraduate courses taught include Survey of Earth Science 1, Survey of Earth Science II (Historical Geology), and Conservation of Natural Resources. Graduate courses taught include Hydrology, Rocks and Minerals, Field Methods in Geosciences, and Gulf Coast Field Course. In addition to teaching courses online and in person, I also serve as a student advisor, on the departmental textbook committee, on thesis committees, and assist with various departmental activities.

2017-2020 **Teacher**
Department of Sciences
Starkville Academy
This was a 100% teaching appointment. Courses taught 2017-2018 included Math 7, Pre-Algebra, and Honors Pre-Algebra. Courses taught 2018-2019 included Biology, Honors Biology, and Forensic Sciences. Courses taught 2019-2020 included Earth Science, Honors Biology, and Forensic Sciences. Courses taught 2020-2021 include Earth Science and Forensic Sciences. Duties include lecture development and presentation, lab development and supervision, development of course modules, creation of academic assessments (tests, quizzes, etc.), leading hands-on field-based learning opportunities, and evaluating student performance. In addition to the aforementioned duties, I serve as STEM coordinator for the school and assist with coaching the track team.

2018-2020 **Instructor**
Department of Geosciences
Mississippi State University

This position involved teaching an online course each Spring. I taught Rocks and Minerals in 2018 and 2020 as well as Hydrology in 2019. Each course is offered every other year. Duties involve course and lecture construction, making quizzes, tests, exams (midterm and final), and homework sets. I grade all materials and answer questions that may arise from the lectures or homework sets.

2010-2016 **Research Assistant/Teaching Assistant**
Department of Geological Sciences
University of Florida
My appointment alternated between teaching assistant and research assistant. Teaching assistant duties included lab lectures, class lectures, lab development, creating and grading exams and quizzes, and leading field trips. Research assistant duties included data management, grant and scientific paper writing, conference presentations, field data collection, and sample analysis. I also served as the lab coordinator and safety overseer for the last two years of my appointment.

2010 **Biogeochemistry Lab Research Coordinator**
Geoscience Department
Mississippi State University
During the summer between my masters and PhD programs, I coordinated research at Weeks Bay Reserve working with multiple departments at MSU, and personnel at Weeks Bay Reserve. I helped collect field samples and process them in the laboratory. I also taught the sampling process to students on site.

2008-2010 **Teaching Assistant**
Geoscience Department
Mississippi State University
My primary duties were teaching labs and grading quizzes. I assisted in setting up the labs each week and proctored a mid-term and final. Additional duties included writing grant proposals, collecting field and lab data, and ran sample and statistical analyses.

2008 **OPS Worker**
Geoscience Department
Mississippi State University
I helped set up the biogeochemistry lab in the geosciences department at Mississippi State. I also constructed lab and field sampling equipment. I collected field samples, ran laboratory tests, performed statistical analyses, and assisted in writing grant proposals.

TEACHING

2023 Mississippi State University

I taught one section of Gulf Coast Field Course, Hydrology, Survey of Earth Science I, and Survey of Earth Science II in the Spring. During the Fall, I taught, one section of Honors Survey of Earth Science I, Survey of Earth Science II, Conservation of Natural Resource, and two sections of Survey of Earth Science I.

New or modified Materials, Labs, and Lectures Generated:
The entire Gulf Field Course (lectures, exercieses, projects, and assessemnts) was new
Hydrology Shaft Problem and Answer Set
Cretaceous Creature/Supercontinent Presenation
Precambrian Lecture Video
Paleozoic and Cenozoic Lecture Videos
Alternative Energy Reserarch Project

2022 Mississippi State University

I taught one section of Rocks and Minerals, two sections of Hydrology, and one section of Survey of Earth Science II in the Spring. During the Fall, I taught one sections of Survey of Earth Science I, one section of Honors Survey of Earth Science I, one section of Survey of Earth Science II, and one section of Conservation of Natural Resource.

New or modified Materials, Labs, and Lectures Generated:
Professions in Earth Science Exercise
How Gesociences Relate to Your Field Report
Cretaceous Creature/Supercontinent Presenation
Famous Fossil Presenation
Precious Stone Write Up
Investigations in Medical Geology Exercise
Rocks and Minerals Concept Map Relations
Local Water Resources Investigation

2021 Mississippi State University

I taught two sections of Survey of Earth Science I and two sections of Hydrology in the Spring. During the summer scession I taught one section of Geoscience field methods. During the fall, I taught three sections of Survey of Earth Science I, one section of Survey of Earth Science II (E Sci II), and one section of Conservation of Natural Resources (CNR).

New or modified Materials, Labs, and Lectures Generated:
Water Budget Assignment
Aquifer Research and Report
The Shaft Homework Set (applications of groundwater movement modeling)
Energy Plans for Developing Countries Exercise
Keystone Pipeline Class Debate
Human Dependance on Local Resources Exercise
Plate Tectonics Activty

2020 Starkville Academy

I tought two sections of Forensics, and four sections of Earth Science. These course are taught five days a week from August through May. I also restructed course content into an online compatable format featuing video lectures with built-in concept scaffolding.

New or modified Materials, Labs, and Lectures Generated:
Experimental Design Components
Differentiating Accuracy and Precision

2020 Mississippi State University

I taught Rocks and Minerals in the Spring.

New or modified Materials, Labs, and Lectures Generated:
Mineral Identification Work Set
Geologic-Volcanic History and Age Dating the Earth Exercise
"Castawayy" Mineral Island Adventure Exercise

2019 Starkville Academy

I taught two sections of Forensics, one section of Earth Science, and two sections of Honors Biology. These courses were taught five days a week from August through March. The remaining portion of the school year was taught online due to Covid-related school closure.

New or modified Materials, Labs, and Lectures Generated:
Forensics Crime Scene Analysis
Forensic Investigation into Refraction
Biological Research Capstone Project
Kinetic Learning Seismic Wave Demonstration

2019 Mississippi State University

I taught Hydrology in the Spring.

New Materials, Labs, and Lectures Generated:
Problems with Groundwater Supply and Quality Lecture
Role of Water Resrources in History and Current Geopolitics
Water Budget Exercise
Local Water Sources and Impact of Water Resources on the Historical Development of Cities Exercise
Aquifer Description and Regional Importance Exercise
Water Resource Hazzards - Dam Failures and Aquifer Pollution Exercise
Piper Diagram/Water Cehemistry Analysis Exercise
Karst Development/Cave Description Exercise

2018 Starkville Academy

I taught two sections of Forensics, one section of Biology, and two sections of Honors Biology. These courses were taught five days a week from August through May.

New Materials, Labs, and Lectures Generated:
Forensics Crime Scene Processing Lab
Forensics Fiber Analysis Lab
Forensics Hair Analysis Lab
Forensics Impressions Lab
Biology Island Popluaiton Exercise
Carbon dating Exercise
Evolution Lecture

2018 Mississippi State University

I taught Rocks and Minerals in the Spring.

New Materials, Labs, and Lectures Generated:
Minerals Start to Finish Exercise
Igneous Rock Formation and Age Dating the Earth Exercise
Mineral Island Adventure Exercise
Rock Type Lesson Plan Activity
Rocks and Minerals Concept Map Exercise

2017 Starkville Academy

I taught two sections of Honors Pre-Algebra, one section of Pre-Algebra, and two sections of Math 7. These courses were taught five days a week from August through May. Teaching a range of student abilities forced multiple forms of explanations for the same material.

New Materials, Labs, and Lectures Generated:
Escape the Maze Pre-Algebra Review Exercise
Statistics Outdoor Lab
Exponential Decay Curve Lab
Different Graphs and when to use the Lecture
Different Ways to find the Middle of Data Lecture
What Do Graphs Tell You? Lecture
Trends, R^2, and Error Bars Lecture
Hunger Games Probability Review Exercise

2015 University of Florida

I taught the laboratory section of Florida Geology.
I participated in the University of Florida Brown Bag Lecture Seminar Series.

New Materials, Labs, and Lectures Generated:
Dissolution Rates in Changing Environments (lecture)

2014 University of Florida

I taught the laboratory section of Florida Geology.
I guest lectured for Introduction to Earth Sciences at the University of Florida

2013 University of Florida

I taught the laboratory section of Physical Geology.
I guest lectured for Introduction to Earth Sciences at the University of Florida.

New Materials, Labs, and Lectures Generated:
History of Age Dating the World
Overview of Hydrology

2012 University of Florida

I taught the laboratory section of Environmental Engineering.
I guest lectured for Physical Geology.

New Materials, Labs, and Lectures Generated:
Calculating Underwater Cave Expansion Rates
Soil Overview: Texture, Properties, and Analysis

2011 University of Florida

I taught the laboratory section of Florida Geology.

2010 Mississippi State University

I taught the laboratory sections of Introduction to Earth Science.

2009 Mississippi State University

I taught the laboratory sections of Introduction to Earth Science.

Descriptions of Courses

Lectures

Conservation of Natural Resources – (MSU) – This course explores Earth's natural reseources including fossil fules, renewable energies, food production capcities, etc. and their use by a growing human population. It focused on tying human interactions with a variety of natural resources to their sustainability as well as natural cycles/requirments governing their production. The course centers around structured discussions and relies heavily on student research and presenations. One exercise at the end of the energy unit asks students to generate an "energy plan" for the country. This requires consideration of geology, topography, climates, culture, and several other fields; it tends to be the favorite exercise of the class.

(Honors) Earth Science – (MSU) – Survey of Earth Science I and Honors Survey of Earth Science I are undergraduate level courses taught face to face as well as online asynchronusly. Sections taught face to face tend to be large classroom settings. The course material focused on Earth: its formation, its rock types, its mineral resources, and a variety of other topics traditionally covered in introductory courses. Both courses are taught using the same general materials with the primary difference coming in the depth of knowledge required and more of an open discussion dialoge in class with the honors section. The exams were also structed differently with more discussion required for the honors section.

(Honors) Survey of Earth Science II – (MSU) – Survey of Earth Science II and Honors Survey of Earth Science II would be known as historical geology at many universities and focus on Earth history, the evolution of life in response to a changing planet, and the major events that mark transions/structure the geologic timeline. These courses are taught face to face as undergradute courses where the geologic history of the Earth was covered. A primary focus is to link major formation events in Earth's past with the history of life as it developed. The favorite assignment tends to be the "Dinosaur Presenation".

Field Methods in Geosciences – (MSU) – This was an asynchnrous, online course where gradute students built an Earth sceince field course for their local region. Students had to plan stops, educational content, readings, lodging, food, and transportation. There were few deliverables in this course constant check points on a mjor porject provided most of the grades. Students generally enjoyed learning about their area and potential activities.

Hydrology – (MSU) - This is an online course offered in the Spring and centers around pre-recorded lecture videos. Each week the students take a lecutre quiz and these along with their mid-term and final comprise their grades. The course focuses on tracking water resources from precipiation, to runoff/infiltation, to arrival at aquifers/surface water bodies. It incorpprates konwledge from several fields (geology, meterology, and chemistry) while requiring sufficint math skills to understand fluid flow. Students tend to both love and hate the "Shaft Problem" where they are required to apply fluid flow equations to a real life scenerio.

Rocks and Minerals – (MSU) - This is an online course offered in the Spring to graduate students and centered around pre-recorded lecture videos. Students are graded on weekly quizzes, homeworks, a mid-term, and final. For this course, the homeworks are varied across a range of topics and required more "outside-the-box" problem solving techniques. The homeworks are also designed to develop scientific writing abilities and force students to use logic and their background knowledge to solve real life problem sets. Most studnets report that their favorite homework set is "Castawayy" where they have to use their geologic knowledge to help survive being shipwrecked on a small Pacific island.

Gulf Coast Field Course – (MSU) – This is a face to face course offered in the Spring that leads graduate students on field trip crossing the Gulf Coast from New Orleans, LA to Jacksonville, FL. Students prepare presenations on designated topics prior to the trip and present to the group a various stops along the way offering a chance for them to gain insturctional experience as well as an enhanced familiarity with the regional topics. I lead several different excursions including a beach morphology/ecology trail walk, a project dealing with estuarine water chemistry and parameters, and a tour of rivers and springs, but the hits of the trip are the air boat ride, kayaking trip, and vist to Stennis Space Center.

(Honors) Biology – (SA) - The biology courses were primarily lecture based with some lab components, most notably investiagtions into photosynthesis using leaf structures, and and exploration of anatomy through disection. I was also

able to bring in guest speakers from a variety of biological fields. The highlihgt of the course was a zoo trip where students observed, researched, and reported on the evolutionary adaptations possessed by an animal of their choosing.

Earth Science – (SA) - Earth science covered indroductory environmnetal content with a focus on hands-on labs to downscale Earth-wide concepts into comprehensible units. The course provided an overview of the major Earth system processes responsible for shaping the world. We also stressed the interconnectedness of the Earth systems and humans, with the goal of a deeper understanding of our natural resources.

Forensics – (SA) - Forensics was a primarily lab- and project-based course with some lecture component. In this course we utilized a variety of scientific disciplines to analysize cirme scenes and data. The process-driven methodology eventually lead to a conclusion in these inquiry-based excersises. Scientific disciplines including mathmatics, physics, chemistry, and geology are integrated into a forensic setting which ultimately results in students having to "think outside the box" in this hands-on course.

Math 7 – (SA) - The Math 7 courses covered much of the same material as pre-algebra but in a different order and at a slower pace. The course was designed to help prepare students who needed a bit more background in basic mathmateics before they were ready to begin pre-algrbra.

(Honors) Pre-Algebra – (SA) - The Pre-Algebra and Honors Pre-Algebra courses were primarily lecture based with some lab and in-class experiment components incorporated. Some of the labs included using student generated data to run a two week stastic overview course and modeling mineral half life decay to investigate exponential decay curves. Ties to additional fields were incorporated whenever possible.

Labs

Florida Geology – (UF) course covered introductory Earth science topics. Lab was designed to work with the lecture to add a hands-on component and reinforce concepts.

Environmental Engineering – (UF) course covered simple geologic concepts with a focus on structural properties of different rock and sediment types. The lab focused primarily on landscape evolution processes and subsurface properties with several labs conducted in the field.

Physical Geology – (UF) this course focused on Earth shaping processes and provided an introduction into Earth history. The labs were a reflection of these two topics with several exercises using geologic maps and focusing on the geologic timeline.

Introduction to Earth Science – (MSU) covered general geoscience topics with the lab meant to foster visual learning and scientific investigation

PUBLICATIONS

Ezell, A.W., A.B. Self, and **J.E. Ezell**. 2022. Use of glufosinate to control natural pines—A possible replacement for glyphosate. P. 59-61 In: Proceedings of the 21st Biennial Southern Silviculture Research Conference. Gen. Tech. Rep. SRS-268.Asheville, NC: USDA For. Serv., Southern Research Station. 262 pp. (Peer-revied proceeding publication)

Ezell, A.W., A.B. Self, **J.E. Ezell**, and J. Belcher. 2022. Three-year growth of loblolly pine seedlings following herbaceous weed control applications of sulfometuron, imazapyr, hexazinone, and indaziflam. P. 56-58. In: Proceedings of the 21st Biennial Southern Silviculture Research Conference. Gen. Tech. Rep. SRS- 268.Asheville, NC: USDA For. Serv., Southern Research Station. 262 pp. (Peer-revied proceeding publication)

Brown, A. L., Martin, J. B., Kamenov, G. D., **Ezell, J. E.**, Screaton, E. J., Gulley, J. Spellman, P. 2018. Trace metal cycling in karst aquifers subject to periodic river water intrusion. *Chemical Geology.* https://doi.org/10.1016/j.chemgeo.2018.05.020

Gulley, J. D., Martin, J. B., Moore, P. J., Brown, A., Spellman, P. D., & **Ezell, J.** 2015. Heterogeneous distributions of CO_2 may be more important for dissolution and karstification in coastal eogenetic limestone than mixing dissolution. *Earth Surface Processes and Landforms*, *40*(8), 1057-1071.

Brown, A. L., Martin, J. B., Screaton, E. J., **Ezell, J. E.**, Spellman, P., & Gulley, J. 2014. Bank storage in karst aquifers: the impact of temporary intrusion of river water on carbonate dissolution and trace metal mobility. *Chemical Geology*, *385*, 56-69.

Martin, Jonathan B., Amy Brown, and **John Ezell**. "Do carbonate karst terrains affect the global carbon cycle?"/ALI KRASKA OBMOCJA NA KARBONATIH VPLIVAJO NA GLOBALNO KROZENJE OGLJIKA?." 2013 *Acta Carsologica* 42, no. 2/3: 187.

Ezell, J. 2013. How Do Florida's Water-Filled Caves Grow? Alliance News, North Florida Springs Alliance. January 2013. Vol. 2, No. 1 (Non-peer Reviewed Publication)

Puckett, M.K., McNeal, K.S., Kirkland, B.L., Corley, M.E., **Ezell, J.E.**, 2011. Biogeochemical stratification and carbonate dissolution-precipitation in hypersaline microbial mats (Salt Pond, San Salvador, The Bahamas). Aquatic Geochemistry 17, 397–418.

Invited Book Chapter:
McNeal, K.S., Anderson, E., **Ezell, J.E**., Guthrie, C., and Spry, J. 2013. Microelectrodes in marine environments: The exploration of sedimentary sulfide dynamics in shallow estuaries, salt marshes, and hypersaline microbial mats. In Microelectrodes: Techniques, Structures for Biosensing and Potential, Nova Science Pub Inc.

PRESENTATIONS AND ABSTRACTS

Ezell, J., Nagel, A. 2023. Encouraging critical thinking through assignments in upper level geoscience courses when students have access to AI. Geological Society of America 2023 Annual Meeting. Pittsburgh, PA. October 15-18

Self, A., **Ezell, J.**, and Ezell, A. 2023. A Comparison of Garlon 4 XRT, Vista, Vastlan, Chopper GEN2, and Terravue in Site Preparation Applications. 22nd Biennual Southern Silviculture Research Conference. Nacogdoches, TX. March 21-22.

Ezell, J., Self, A., and Ezell, A. 2023. A Comparison of Glufosinate Products for the Control of Natural Pines. 22nd Biennual Southern Silviculture Research Conference. Nacogdoches, TX. March 21-22.

Ezell, A., **Ezell, J.**, and Self, A. 2023. Mid-Rotation Brush Control in a Loblolly Pine Plantation Using Chopper GEN2 and Selected Glufosinate Products. 22nd Biennual Southern Silviculture Research Conference. Nacogdoches, TX. March 21-22.

Ezell, J. E., A. B. Self, and A. W. Ezell. 2023. Control of natural pines using glufosinate - A comparison of application timings. 76th Annual Meeting of Southern Weed Science Society. January 22-26. Baton Rouge, LA.

Self, A. B., **Ezell, J.**, and A. W. Ezell. 2023. Site preparation with mixtures containing triclopyr, fluroxypyr, imazapyr, 2,4-D, and aminopyralid + florpyrauxifen. 76th Annual Meeting of Southern Weed Science Society. January 22-26. Baton Rouge, LA.

Ezell, A.W., **Ezell, J.**, and A. B. Self. 2023. Efficacy of mid-rotation brush control applications using imazapyr and glufosinate. 76th Annual Meeting of Southern Weed Science Society. January 22-26. Baton Rouge, LA.

Ezell, A. W., A. B. Self, and **Ezell, J.** 2023. Loblolly seedling tolerance to increased rates of fluropyrauxifen- benzyl applied during site preparation. 76th Annual Meeting of Southern Weed Science Society. January 22-26. Baton Rouge, LA.

Ezell, J.E., A.B. Self, and A.W. Ezell. 2022. Tolerance of loblolly pine seedlings to increased rates of aminopyralid+ florpyrauxifen. 75th Annual Meeting of Southern Weed Science Society. Austin, TX. January 23-27.

Ezell, A.W., A.B. Self, and **J.E. Ezell**. 2022. Early pine control response to July applications of different glufosinate products. 75th Annual Meeting of Southern Weed Science Society. Austin, TX. January 23-27.

Ezell, A. W., **J.E. Ezell**, and A.B. Self. 2022. Loblolly pine seedling growth following HWC applications using Oust XP, Arsenal AC, Arsenal, Velpar L, and Esplanade SC. 75th Annual Meeting of Southern Weed Science Society. Austin, TX. January 23-27.

Self, A.B., **J.E. Ezell** and A.W. Ezell. 2022. Site preparation with mixtures using triclopyr, imazapyr, triclopyr choline, fluroxypyr, and aminopyralid + florpyrauxifen. 75th Annual Meeting of Southern Weed Science Society. Austin, TX. January 23-27.

Ezell, A., Self, A., **Ezell, J**., Belcher, J. 2021. Three-year growth and survival of loblolly pine seedlings following various HWC treatments with sulfometuron, imazapyr, hexazinone, and indaziflam. 21st Biennial Southern Silvicultural Research Conference. March 16-17. Starkville, MS.

Ezell, A., Self, A., **Ezell, J**. 2021. Glufosinate in site prep tank mixtures for control of natural pines. 21st Biennial Southern Silvicultural Research Conference. March 16-17. Starkville, MS.

Ezell, J.E., A.W. Ezell, and A.B. Self. 2020. Control of natural pines following July treatments of imazapyr and glufosinate – brownout response. Presentation at 73rd Annual Meeting of Southern Weed Science Society. Jan. 26-30, Biloxi, MS.

Ezell, A.W., A.B. Self, and **J.E. Ezell**. 2021. Use of glufosinate to control natural pines – a possible replacement for glyphosate. Presentation at 21st Biennial Southern Silviculture Conference. March 14-16, Starkville, MS.

Ezell, J., Carbonate dissolution rates and volumes in changing aqueous settings. PhD Defense. University of Florida, March 3, 2016

Ezell, J., Martin, J., Brown, A., Screaton, E. Spring reversal records and their impact on carbonate dissolution: possible ties to climate cycles? Water Institute Symposium, University of Florida February 16, 2016

Gulley, J., Martin, J. B., Moore, P. J., Spellman, P., Brown, A. L., and **Ezell, J.** Digging beneath the soil: examining the role of organic carbon oxidation in vadose zones and water tables in karstification of eogenetic limestone. GSA Annual Meeting 2015. Nov. 4, 2015

Brown, A. L.**,** Martin, J. B., Screaton, E., **Ezell, J.** and Gulley, J., From the spring to the basin: the influence of recharge patterns on aquifer redox state and contaminant transport. GSA Annual Meeting 2015. Nov. 2, 2015

Ezell, J., Martin, J. B. and Brown, A. L., Biogeochemical controls on carbonate dissolution in a Bahamian blue hole: Potential impacts on atmospheric C fluxes. GSA Annual Meeting 2014. Oct. 20, 2014

Brown, A.L., Martin, J. B., Screaton, E. and **Ezell, J.** The influence of diffuse recharge and intruding river water on oxygen and nitrate concentrations at two karst springs. GSA Annual Meeting 2014. Oct. 21, 2014

Brown, A., Martin, J., Screaton, E., **Ezell, J.**, Sutton, J., Spellman, P. 2013. Redox state in karst aquifers: impacts of DOC and DO rich river water intrusion into Floridan aquifer springs. Carbon Boundaries in Karst. Karst Waters institute Meeting. Jan. 9, 2013

Brown, A. L.**,** Martin, J. B., Screaton, E., **Ezell, J.** and Spellman, P. 2013. The influence of local recharge on river intrusion into an eogenetic karst aquifer. GSA Annual Meeting 2013. Oct 28, 2013.

Ezell, J.E., Martin, J. B., Brown, A. L. and Gulley, J. 2013. Tidal effects on the chemical composition of water within a blue hole: a possible control on their morphologic evolution. GSA Annual Meeting 2013. Oct. 29, 2013

Martin, J. B., **Ezell, J**., Brown, A., Gulley, J., and Spellman, P., Davis, R. L. 2012. Dissolution in Bahamian Blue holes, GSA Annual Meeting 2012. Nov. 6, 2012

Brown, A., Martin, J. B., Screaton, E., **Ezell, J**. and Spellman, P. 2012. The impact of river water intrusion on trace metal concentrations in karst aquifers: a tale of two "floods", GSA Annual Meeting 2012. Nov. 6, 2012

Ezell, J., Martin, J. B., S., E., Brown, A., Gulley, J., and Spellman, P., 2012. The effect of flood magnitude on carbonate dissolution rates during spring reversals, GSA Annual Meeting 2012. Nov. 6, 2012

Ezell, J., Martin, J., Screaton, E., Brown, A., Gulley, J., Spellman, P. 2011. The effect of flood magnitude on carbonate dissolution rates during spring reversals. University of Florida NSF Research Day, Gainesville, FL. Oct. 11, 2011

Diaz-Ramirez, J., McAnally, W., Martin, J.L., McNeal, K., **Ezell, J.E.**, Sharp, J., and Phipps, S. 2010. Assessment of Weeks Bay and Its Watershed, Alabama, 2010 Alabama Water Resources Conference, Auburn University, Sept. 9-10

Ezell, J., McNeal, K.S. 2010. Biogeochemistry of Weeks Bay during bottom water hypoxic and normoxic events. Goldschmidt Conference Abstracts 2010. A275, June 15, 2010

Ezell, J., 2010. The sediment and water column biogeochemistry of Weeks Bay during bottom water hypoxic and normoxic events. MS defense, Mississippi State University. March 2010

Ezell, J., McNeal, K.S. 2009. A diurnal study of the sediment biogeochemistry of Weeks Bay during bottom water hypoxic and normoxic events. GSA Annual Meeting 2009, Oct. 19, 2009

Informal Talks and Guest Lectures:

Dissolution rates of phreatic caves in the Floridian aquifer. Ezell, J. E. Guest Lecture for Physical Geology University of Florida 2014

Groundwater hydrology. Ezell, J. E. Guest Lecture for Introduction to Earth Sciences 2013 and 2014

Dissolution in Florida's Caves. Ezell, J. E. UF Geology Brown Bag Seminars 2012

Vadose limestone dissolution in the Floridian aquifer. Ezell, J. E. UF Geology Brown Bag Seminars 2013

Morphologic evolution of Inkwell Bluehole, San Salvador, Bahamas. Ezell, J. E. UF Geology Brown Bag Seminars 2015

SUCCESSFUL FUNDING/GRANT APPLICATIONS

Ezell, J. E. Grant-in-Aid to support research efforts ($10,000). BASF. 2022

Ezell, J. E. Supplemental retention scholarship. Office of Graduate minority programs University of Florida. 2015

Ezell, J. E. The effect of flood magnitude on carbonate dissolution rates during spring reversals. Geological Society of America Student Research Grant. 2012

Ezell, J. E. Bottom water and sediment responses to hypoxic and normoxic events in Weeks Bay, AL. Geological Society of America Student Research Grant. 2008

McNeal, K. S., **Ezell, J. E.** The sediment biogeochemisty of Weeks Bay during bottom water hypoxic and normoxic events. NOAA NEERS Fellowship. 2008

RESEARCH

Mississippi State University Department of Geosciences
Collaborators: Self, B. Ezell, A.
Project(s): Various tests of herbicide applications on vegetation
Dates: 2018 - Present

In this research, different herbicides were tested to study unwanted vegetation suppression and damage to desired tree species. These tests have been carried out at multiple field sites and the chemicals involved vary from study to study. In these projects, I assisted with/oversaw laying out of test plots, vegetative stem counts, herbicide application, and final results analyses. Each study is designed around the question asked/research contracted. The individual studies were primarily carried out in the Summer months with final results marked in the Fall.

University of Florida Department of Geological Sciences
Collaborators: Martin, J. B., Screaton, E., Brown, A., Kruz, M., Khadka, M., Gulley, J., Spellman, P.
Doctoral Research
Projects: (1) Dissolution in phreatic cave systems during spring reversals. (2) Dissolution of a limestone aquifer along a river reach during flooding. (3) Tidal influence on blue hole morphology through dissolution.
Dates: 2010-2016

These projects evaluated removal rates of limestone under varying conditions and locations through the collection and processing of physical and chemical field samples, gauge data, and logger data. I was responsible for outlining the research projects, data collection, processing, and analysis, writing reports and papers, and coordinating these activities with other researchers on the grant. These projects included the operation of field and laboratory equipment as well as several presentations and a defense in fulfillment of degree requirements.

Mississippi State University Department of Geosciences
Collaborators: McNeal, K.S., Guthrie, C.
Project: Water column chemistry of the Louisiana Bight (Gulf of Mexico) under hypoxic conditions
Dates: 2009 and 2010

For these projects, I was part of two research cruises into the Gulf of Mexico. I was responsible for measuring oxygen and sulfide concentrations in the sediments and water column just overlying the sediments using microelectrodes. I also extracted porewaters for iron, nitrate/nitrite, and major ion concentrations. This work was part of larger research project trying to better understand the biogeochemistry of the portion of the Gulf most strongly affected by the discharge of the Mississippi River.

Mississippi State University Department of Geosciences
Collaborators: McNeal, K.S., Phipps, S., Rodgers, J.
Masters Research
Project: Water column and sediment responses to hypoxic conditions in Weeks Bay, Al
Dates: 2008 and 2009

This research was conducted during summer months in an attempt to capture geochemical changes associated with hypoxic conditions. Samples were collected just prior to sunrise and at peak solar insulation. At ten sites around the bay, I took sonde readings through the water column, collected top and bottom waters for analysis, and took two sediment cores for analysis. At the lab, one of the cores was frozen for future analysis and the other was profiled for hydrogen sulfide and oxygen concentrations through a range of depths. The core was then vertically sectioned and porewater was extracted from each portion of the sediment column. Porewaters were also analyzed for iron concentrations. This work was all conducted in an attempt to fit a hypoxia likelihood model to a smaller estuary system where it had not previously been tested.

Mississippi State University College of Forest Resources

Collaborators: Barron, J., Herndon, J.
Capstone Research
Project: Calculation of stand value, description, and recommendations for owner's goals
Dates: 2007

This project was a portion of a capstone course for my Forest Management degree. I, along with two others, inventoried over 400 acres, calculated present values for timber, developed a harvest plan, generated a re-planting schedule, calculated estimated future timber yields, and advised on the best management plan to meet the owner's goals. This was all accomplished while accounting for variations in soil type, slope/terrain, wildlife habitat, and requirements of the various tree species present on the land. This work generated several timber maps, management plans, and inventories all allowing the landowner to make the best decision with regards to financial expenditures, future goals for the land, and return on investment.

COMMUNITY OUTREACH AND SERVICE

Mississippi State University 2021-Present
Helped set up/present at a local elementary school career day
Served as a judge for the Earth Day Competition
Served as a coach and judge for State STEM Competition
Assisted neighbors with clearing downed trees following a storm
Built Power Points for local high school science teachers
Volunteered to help coach local high school track team

University of Florida 2010-2016
Rebuilding North Florida
World of Minerals presentation to school group
Can You Dig It? (Departmental Outreach Day)
- -Tools of a Geologist Table
- -Mysteries of Sand
- -Minerals all Around Us
- -Time Tunnel
- -Augmented Reality Sand Box/Interactive Topographic Display
- -Hydrology/Aquifer Table

Judged local middle school science fairs (2012-2015)
Helped organize department awards day
Helped organize department alumni reunion

Mississippi State University 2003-2010
Served as a College of Forest Resources Ambassador
Project Learning Tree (outreach to school group)
Adopt a Highway (part of Forestry Club Activities)
Habitat for Humanity (part of Forestry Club Activities)
Organized Forestry Field Days (hands-on education outreach)

ADDITIONAL EXPERIENCE AND TRAINING

GIS Certified

Field/Large Scale Equipment
- Tractor
- ATV
- Boats

Multiple Coring Devices
GPS/Tremble Unit
Jacob Staff
Compass
Chain
Loggers Tape
DBH Tape
Densiometer
Refractometer
Sonde
CO_2 sensors
Multiple Water Parameter Loggers
Peristaltic Pumps

Lab Equipment/Instruments

Ion Chromatograph
Spectrophotometer
Core Squeezer Rack
Microelectrodes
Alkalinity Titration Set Ups
Various Lab Water Probes
Magnetic Stirring Core Tanks
Glove Bags
Sieves
Numerous Chemistry Techniques for measuring nutrients

MEMBERSHIPS AND AFFILIATIONS

2008 – Present	Geological Society of America
2009 – Present	Geochemical Society
2003 – 2012	Society of American Foresters
2011 – 2015	Geology Club
2006 – Present	Zi Sigma Pi (Forestry Honor Society)
2004 – 2009	Phi Kappa Phi
2005 - 2009	Gamma Sigma Delta
2007 – Present	Registered Forester (Mississippi)
2003 – 2008	Society of American Foresters MSU Student Chapter
	Freshman/Sophomore Representative 2003 - 2005
	Sargent at Arms 2006 – 2007
	President 2007 - 2008

PROFESSIONAL LICENSURE AND CERTIFICATES

Mississippi Board of Registered Foresters – Certified Forester (2007 – 2020)
Boat Operator (Alabama) 2009-2010
Hazardous Waste Certified 2008-2016
CPR Certified 2005-2007, 2017-2019
Society of America Foresters Leadership Academy 2005

HONORS AND AWARDS

Graduate School:

UF OGMP Supplemental Retention Scholarship 2015
Awarded GSA funding 2012

Member of lab group receiving a Science Award from the National Speleological Society Cave Diving Section 2012
Awarded NOAA NEERS Fellowship 2009
Awarded GSA funding 2009

Academic Awards:

Outstanding Undergraduate Dept. of Forestry 2007-2008
Senior Academic Achievement Dept. of Forestry 2007- 2008
Mississippi Society of American Forestry Award for Outstanding Student Chapter Leadership 2007
Larry Aycock Memorial Scholarship 2007
Starr Scholarship 2005-2007
J.S. Therrell Scholarship 2006
Sharp Scholarship 2003-2007
Hugo A Wahlstab Scholarship 2004-2005