# Ashley M. Burkett

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# **Summary**

- Interdisciplinary oceanographer specializing in micropaleontology with research interests in biogeochemistry, paleoecology, paleoclimatology, and biostratigraphy.
- Successfully funded through external sources.
  - o Co-authored workshop proposals and postdoctoral proposals
- Experienced in lab and field research.
  - Active scientist on nine research expeditions, including international expeditions.
  - o Experienced on state of the art technical equipment (e.g. LA-ICPMS)
- Presented research at an international symposium and national meetings and workshops.
- Instructor of undergraduates in the classroom, in the field, and in research laboratories
  - o Created and implemented teaching strategies for hands-on learning.
  - o Taught both lectures and laboratories.
  - o Mentored geoscience undergraduate research projects and senior theses.
- Active in community outreach educational activities

### **Education**

- Ph.D. Spatial and Earth Sciences. Indiana State University. May 2015.
- M.S. Earth and Quaternary Systems. Indiana State University. May 2011.
- B.S. Geology and Environmental Science. Minor in Biology. Muskingum University. May 2008.

# **Teaching Courses Experience**

- Lecturer. <u>Eastern Illinois University.</u> GEL/ESC 1300G: Introduction to Environmental Science. Spring 2014.
- Lecturer. Indiana State University. ENVI 270: Historical Geology. Fall 2013.
- **Guest Lecturer**, Indiana State University, ENVI110, Introduction to Environmental Science, Energy Resources, April 4<sup>th</sup>, 2013
- Guest Lecturer, Indiana State University, 2012
  - o ENVI 270: Historical Geology. Fossils. March 7<sup>th</sup>
  - o ENVI 110: Introduction to Environmental Sciences Lecture.
    - Hot spot and Earthquakes. April 4<sup>th</sup>
    - Fresh Water, Oceans, and Coasts. April 6<sup>th</sup>
    - Fresh Water Resources. April 9<sup>th</sup>
    - Fresh Water, Oceans, and Coasts: Pollution. April 11<sup>th</sup>

- *Air Pollution*. April 13<sup>th</sup>
- **Guest Lecturer**: <u>Indiana State University</u>. ENVI110. Intro to Environmental Science. *Research at Sea: The Gulf of California*. October, Fall 2009

# **Laboratory Teaching Experience**

- **Lead Teaching Assistant.** ENVI 110: Introduction to Environmental Sciences. <u>Indiana State University</u>, 2014 2015
- **Laboratory Instructor**. <u>Eastern Illinois University</u>. GEL/ESC 1300G: Introduction to Environmental Science. Spring 2014.
- **Laboratory Instructor**. <u>Indiana State University</u>. ENVI 270: Historical Geology. Fall 2013.
- Lab Instructor. ENVI 270 Historical Geology. <u>Indiana State University.</u> Spring 2011.
- **Lab Instructor**. ENVI 110L Introduction to Earth and Environmental Science. Indiana State University. Spring 2010.
- **Lab Instructor**. ENVI 160L Introduction to Geology. <u>Indiana State University</u>. Fall 2009.
- **Lab Instructor**. ENVI 160L: Introduction to Geology. <u>Indiana State University</u>. Spring 2009.

# **External Funding**

- Costa Rican Benthic Foraminiferal Stable Isotopic Values: A look into the past by comparison with modern analogs. Integrated Ocean Drilling Program. January 2014. \$15,000.
- Costa Rican Benthic Foraminiferal Stable Isotopic Values: A look into the past by comparison with modern analogs. Benthic Foraminiferal Specialist on leg 344.
   Integrated Ocean Drilling Program. April 2012. Funding for travel and participation on IODP Leg 344.
- The ecology and trace element composition of deep-sea benthic foraminifera living on the Australian: Applications for assessments of biodiversity and responses to past and present climate change. Indiana Space Grant Consortium. Graduate Fellowship. February 2012. \$12,000.
- Cushman Foundation Student Travel Award for Forams 2010. Cushman Foundation for Foraminiferal Research. 2010. \$1250.

### **Internal Funding**

- Graduate Student Research Fund. Indiana State University. 2009. \$400.
- Department of Earth and Environmental Systems Travel Funding
  - o Annual Geological Society of America. Denver, CO. 2013. \$300.
  - o Participation on SS2011-T01 research expedition. 2011. \$300.
  - o Forams 2010 meeting in Bonn, Germany 2010. \$300.
  - o Participation on GEOFORM research expedition. 2009. \$300.
- Hodges Fund Recipient. Muskingum University. 2007. \$500.

#### **Publications**

- **Burkett, A.M.,** "The Ecology, Biogeochemistry and Phylogeny of Methane Seep and Non-seep Benthic Foraminifera from the Pacific Margin" Ph.D. Dissertation, Indiana State University, Terre Haute, IN, 2015. p. 1-121.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L.A., Cha, H., Rouse, G.W. 2015. Phylogenetic placement of epibenthic foraminifera *Cibicidoides* wuellerstorfi (Schwager, 1886) from methane seeps and non-seeps habitats on the Pacific margin. *Geobiology*. DOI: 10.1111/gbi.12118
- Parsons-Hubbard, K., Hubbard, D., Tems, C., Burkett, A.M. "The Relationship Between Modern Mollusk Assemblages and Their Expression in Subsurface Sediment in a Carbonate Lagoon, St. Croix, US Virgin Islands." Approaches to Understanding Fossil Organisms. Springer Science & Business Media Dordrecht 2014.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L.A., *Submitted*. Evaluating the potential of foraminiferal protoplasm retention at low oxygen environments of Hydrate Ridge, OR. *Journal of Foraminiferal Research*.
- **Burkett, A.M.**, Venturelli, R.A., Rathburn, *Submitted*. Revising paleoceanographic paradigms: Substrate oases in dysoxic deep-sea environments. *Nature Geoscience*.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L. A., *Submitted*. Influences of thermal and fluid characteristics of methane seeps on the stable oxygen isotopes of 

  \*\*Bidgedchemical\*\* | \*\*Independent\*\*

  \*\*Letters\*\*.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L.A., *In Prep*. Colonization of experimental substrate by epibenthic foraminifera in seep and adjacent non-seep locations of Hydrate Ridge, OR. *Marine Ecology Progress Series*.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L.A., *In Prep*. The ecology, coiling direction, and isotopic geochemistry of *Cibicidoides wuellerstorfi* and *Carpenteria monticularis* living on tubeworms at methane seeps on the Pacific margin. *Deep-sea Research*.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M.E., Martin, J., Levin, L. A., *In Prep.* Comparisons of the ecology and vertical distribution patterns of benthic foraminifera living in seep and non-seep habitats on the Costa Rican Margin. *Journal of Foraminiferal Research*
- Burkett, A.M., "Comparisons of distributions and isotopic geochemistry of benthic foraminifera from seep and non-seep environments, offshore of Costa Rica" MS Thesis, Indiana State University, Terre Haute, IN, 2011. p. 1-125. <a href="http://hdl.handle.net/10484/1647">http://hdl.handle.net/10484/1647</a>

# **Scientific Meeting Abstracts**

- **Burkett, A. M.,** Rathburn, A E, Venturelli, R.A., Perez, E M,. Levin, L.A., Spendal, N. 2014. From ecology to geochemisty to DNA: New information about *Cibicidoides wuellerstorfi*. *Annual Fall meeting of the American Geophysical Union*. San Francisco, CA. December 2014.
- Rathburn, A.E., Willingham, J., Corliss, B., **Burkett, A. M.**, Ziebis, W. 2014. A new approach to reconstruction of ancient bottom water oxygen levels. *Annual Fall meeting of the American Geophysical Union*. San Francisco, CA. December 2014.
- Burkett, A. M., Rathburn, A E, Perez, E M,. Levin, L.A., Spendal, N. 2014.
   Foraminiferal colonization and protoplasm degradation experiments at active and inactive locations of Hydrate Ridge, OR. *Annual Geological Society of America Meeting*. Vancouver, BC Canada. (19–22 October 2014); Geological Society of America Annual Meeting Program with Abstracts, Vol. 46, No. 6, p. 619.
- Venturelli, R.A., Rathburn, A E, Burkett, A. M., Paddack, B.D., Ziebis, W., S. 2014.
   Epifaunal taxa in an infaunal world. *Annual Geological Society of America Meeting*.
   Vancouver, BC Canada. (19–22 October 2014); Geological Society of America Annual Meeting Program with Abstracts, Vol. 46, No. 6, p.124.
- Rathburn, A.E., Willingham, J., Corliss, B., Burkett, A. M., Ziebis, W. 2014.
   Calibration of a new benthic foraminiferal proxy to assess bottom water oxygen levels. *Annual Geological Society of America Meeting*. Vancouver, BC Canada. (19–22 October 2014); Geological Society of America Annual Meeting Program with Abstracts, Vol. 46, no. 6, p. 580.
- **Burkett, A. M.**, Rathburn, A E, Perez, E M, Martin, J.B., Levin, L.A., 2013. Colonization of raised substrate by epibenthic foraminifera in seep and adjacent non-seep locations of Hydrate Ridge, OR. *Annual Geological Society of America Meeting*. Denver, CO.
- Venturelli, R.A., Paddack, B.D., Rathburn, A.E., Bedrava, Ziebis, W., S., Burkett, A. M., Perez, E. M., 2013. The Distribution and Ecology of Living (Stained) Benthic Foraminifera Across an Oxygen Minimum Zone in the Southern California Bight. *Annual Geological Society of America Meeting*. Denver, CO.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M. E., Martin, J.B., Levin, L.A., Stable isotopic variability of *Cibicidoides wuellerstorfi* (elevated epibenthic foraminifera) from Costa Rican seeps. 11<sup>th</sup> International Conference on Paleoceanography. Barcelona, Spain. September 2013.
- **Burkett, A.M.**, Rathburn, A.E., Pérez, M. E., Martin, J.B., Levin, L.A. June 2013 The stable isotopic composition of *Cibicidoides wuellerstorfi* (elevated epibenthic foraminifera) from methane seeps in the Pacific. *WiscSIMS Workshop-High Resolution Proxies of Paleoclimate*. Madison, WI.
- Hardy, James, Burkett, A. M., Rathburn, A E, Perez, E M, Levin, L A., Orphan, V, Rouse, G. 2012. Vertical Distribution Patterns of live (Stained) Benthic Foraminifera Associated with Methane Seeps and Non-Seep Habitats at Hydrate Ridge. *Annual Geological Society of America Meeting*. Charlotte, NC.
- Willingham, J., Rathburn, A.E., **Burkett, A.M.**, Paddack, B.D., Perez, E.M., Schmidt, S., and DeDeckker, P., 2012. The Distribution of Deep-Sea Benthic Foraminifera Living Along the Southern Margin of Australia. *Annual Geological Society of America Meeting*. Charlotte, NC.

### **Abstracts continued**

- Paddack, B.D., Rathburn, A.E., Ziebis, W., Burkett, A.M., Perez, E.M., Willingham, J., and Bedrava, S., 2012. Living (statined) benthic foraminiferal assemblages along a depth transect off the coast of southern California. *Annual Geological Society of America Meeting*. Charlotte, NC.
- Paddack, B., Bedrava, S.M., Rathburn, A.E., Ziebis, W., **Burkett, A.M.**, Perez, M.E., Corliss, B. 2012. Foraminiferal Distribution Patterns across the Oxygen Minimum Zone in the Southern California Bight. *Regional North-Central Geological Society of America Meeting*. Dayton, OH.
- **Burkett, A. M.,** Rathburn, A.E, Perez, M.E., Levin, L.A., Rouse, G.W., Orphan, V.J., Martin, J.B., Wrightsman, B. 2010. Comparisons of vertical distribution patterns of benthic foraminifera at sites of active methane seepage and adjacent non-seep sites off Costa Rica. *FORAMS 2010 International Symposium on Foraminifera Abstracts* with Program. p.66. Bonn, Germany.
- Wrightsman, B., Rathburn, A.E, Perez, M.E., **Burkett, A. M.,** Levin, L.A., Orphan, V.J., Rouse, G.W. 2009. The ecology of benthic foraminifera associated with methane seeps offshore Costa Rica. *AGU Fall Meeting*. San Francisco, CA.
- Parsons-Hubbard, K. Burkett, A M, Chamlee, S, Klinmann, M, Tems, C, Hubbard, D. Evolution of a Holocene Reef-Lagoon System: St. Croix, U.S. Virgin Islands.
   *Joint Meeting of the Geological Society of America, Soil Science Society of America, American Society of Agronomy, Crop Science Society of America, Gulf Coast Association of Geological Societies with the Gulf Coast Section of SEPM.* 2008. Houston, TX.
- **Burkett, A.M.** 2008. Taphonomy of mollusk species found in lagoonal cores of Smuggler's Cove, USVI. *21st Annual Keck Symposium*. 162-165.

# **Presentations**

- **Burkett, A. M.** Comparisons of Benthic Foraminifera from Methane Seep and Nonseep Environments of the Pacific Margin. *Invited Speaker*. University of Wisconsin, Stephens Point. April 22<sup>nd</sup>
- **Burkett, A. M.** Geochemistry of Benthic Foraminifera from Pacific Methane Seeps. *Spring Seminar Series. Indiana State University. April* 9<sup>th</sup>
- **Burkett, A. M.,** Rathburn, A E, Venturelli, R.A., Perez, E M,. Levin, L.A., Spendal, N. 2015. From ecology to geochemisty to DNA: New information about *Cibicidoides wuellerstorfi*. *Exposium: A Celebration of Student Research and Creativity*. Indiana State University.
- **Burkett, A. M.**, Rathburn, A E, Perez, E M,. Levin, L.A., Spendal, N. 2014. Foraminiferal colonization and protoplasm degradation experiments at active and inactive locations of Hydrate Ridge, OR. *Annual Geological Society of America Meeting*. Vancouver, BC Canada.
- **Burkett, A. M.**, Rathburn, A E, Perez, E M,. Levin, L.A., Rouse, G.W., Orphan, V.J., Martin, J.B., Writghtsman, B. 2010. Comparisons of vertical distribution patterns of benthic foraminifera at sites of active methane seepage and adjacent non-seep sites off Costa Rica. International Symposium on Foraminifera. University of Bonn, Germany.

### **Presentations continued**

- Annual Spring Research Event. Indiana State University. Poster title: *GEOFORM* 2009.
- James Bradford Colloquium, Muskingum University. Talk Title: *Taphonomy of mollusk species found in lagoonal cores of Smuggler's Cove, USVI. 2008.*

# **Research Experience**

- Analyses at Australian National University. Time was spent at the ANU to analyze specimens on the Laser Ablation ICPMS, SEM imaging, and collaborate with Dr. Patrick DeDeckker and Dr. Steven Eggins. May 2013.
- IODP Leg 344. CRISP 2. Costa Rica Seismogenesis Project, Program A Stage 2 (CRISP-A2). *Joides Resolution*. Co-Chief Scientists: Dr Robert Harris (Oregon State University) & Dr Arito Sakaguchi (Institute for Research on Marine-Earth Science and Technology. IFREE). October-December 2012. Micropaleontologist specializing in benthic foraminifera.
- **SS2011-T04 Southern Australia.** Research expedition off the southern coast of Australia. Chief Scientist: Dr. Patrick DeDeckker (Australia National University). *R/V Southern Surveyor*. November 2011. Prepared, deployed, recovered CTD, and multicore. Processed and preserved multicore samples. Primary responsibilities involved to running multicore operations.
- AT18-10 Hydrate Ridge II. Research expedition off the coast of Oregon. Chief Scientist: Dr. Lisa Levin (Scripps Institution of Oceanography). *R/V Atlantis*. August-September 2011. Documented progress of recovery of samples and areas surveyed by the ROV JASON. Also examined and preserved samples collected.
- NH1108 San Diego. Research expedition off the coast of San Diego, CA. Chief Scientist: Dr. Anthony Rathburn (Indiana State University). *R/V New Horizon*. July 2011. Assisted in site selection and deployment and recovery operations. Prepared, deployed, and recovered CTD and multicore. Processed and preserved samples from multicore and CTD.
- **SS2011-T01 Tasman Sea**. Research expedition off the southeastern coast of Australia. Chief Scientist: Dr. Patrick DeDeckker (Australia National University). *R/V Southern Surveyor*. May 2011. Prepared, deployed, and recovered CTD, and multicore. Processed and preserved multicore samples.
- AT15-68 Hydrate Ridge. Research expedition off the Pacific cost of Oregon. Chief Scientist: Dr. Lisa Levin (Scripps Institution of Oceanography). *R/V Atlantis*. July 2010. Prepared, deployed, and recovered CTD, and muticorer. Processed and preserved samples from the multicore and Alvin. Participated as the starboard observer on an Alvin dive AD4632. www.isuatsea.blogspot.com
- AT 15-54. CROCKS II. Research expedition off the Pacific coast of Costa Rica, Chief Scientist: Dr. Lisa Levin (Scripps Institution of Oceanography). *R/V Atlantis*. January 2010. Prepared, deployed, and recovered CTD, and muticorer. Processed and preserved samples from the multicore and *Alvin*.
- **GEOFORM 2009.** Research expedition off Baja, California. Chief Scientist: Jared Kleusner (Scripps Institution of Oceanography), *R/V New Horizon*. September 2009.

- Prepared, deployed, and recovered dredge. Prepared, cut, and packed rock samples. Exposed to 3.5 kHz profiles and SeaBeam software. www.geoform2009.com
- The University of San Diego Student Research Expedition. Chief Scientist: Dr. Sarah Gray (U. of San Diego), *R/V Robert Gordon Sproul*. August 2009. Prepared, deployed, and recovered CTD, muticorer, and plankton tow, preserved samples, and conducted water filtrations.
- **Rain Garden** in Toledo, Oh. Low impact design for storm water management including the selection and installation of native wetland plant species. 2008.
- Coastal Wetland Restoration in Marblehead, Ohio. Volunteered with Hull & Associates Inc. completing a wetland restoration project on a coastal wetland on Bay Point in Marblehead, Ohio. The restoration involved planting over 9,000 shrub species as a measure to prohibit the proliferation of Phragmites in the area. 2008.
- **Ground Water Well Monitoring** in Wapakoneta, Oh. Volunteered with Hull & Associates Inc. collecting ground water samples from seventeen ground water wells within the Wapakoneta sanitary landfill using a bailer system. 2008.
- **Geology Field Camp** in New Mexico and Colorado with Bowling Green State University. GPS navigation, digital mapping GSI projects, and data analysis of sedimentary, metamorphic, and igneous rocks, structural analysis of folds and faults, slope stability analysis, and environmental assessments.
- **Keck Geology Consortium Internship** in St. Croix, U.S.V.I. Multiple projects were performed on molluscs from core samples taken from a lagoonal system. 2007.
- Marine Ecology and Environmental Geology in the Bahamas. Student participants used SCUBA certification to study hurricane impacts, participate in a *Diadema* ecology project, and learn GPS navigation technologies. 2006.
- Hull & Associates Inc. in Toledo, Oh. Field observations and animal identifications were documented at three wetland mitigation sites. Results were part of a report submitted to the U.S. Army Corps of Engineers and the Ohio EPA. 2004.

# **Professional Development**

- WiscSIMS High Resolution Proxies of Paleoclimate workshop. I participated in this workshop exploring new developments of high-resolution in situ studies for proxies of paleoclimate. Madison, WI. June 2013.
- **IODP Short Course on Shipboard Sedimentology.** College Station, TX. In preparation for sailing on IODP leg 344 I participated in this short course to learn and understand core flow and scientific responsibilities on board. October 1-4, 2012.
- 40 hr HAZWOPER certified, 2008.

# **Students Mentored in Research**

- **Ryan Venturelli**, Preliminary Investigations into Geochemical Changes of Benthic Foraminiferal Calcite Offshore Costa Rica.
- **Matt Bly**, Foraminiferal protoplasm degradation experiments at active and inactive locations of Hydrate Ridge, OR.
- **James Hardy**, Vertical Distribution Patterns of live (Stained) Benthic Foraminifera Associated with Methane Seeps and Non-Seep Habitats at Hydrate Ridge.
- **Nick Spendel**, Foraminiferal colonization and protoplasm degradation experiments at active and inactive locations of Hydrate Ridge, OR.

### **Educational Outreach and Service**

### • 2015

- Science Camp at the Terre Haute Children's Museum. Talk Title: Diving Deep to Explore the Ocean. July 29<sup>th</sup>
- o Science Camp at Indiana State University. Talk Title: Diving Deep. July 22<sup>nd</sup>
- Assisted in curating Mammoth Fossils donated to the Terre Haute Children's Museum. July.
- DeVaney Elementary Kindergarten presentation: <u>Oceans and Ocean Creatures</u>. May 27<sup>th</sup>
- o North-Central Section Undergraduate Research Grant reviewer. April 15<sup>th</sup>
- Riverine Evolution: Hand-on Activities with Stream Tables. College Challenge Program at Indiana State University. Advanced placement courses for Rockville High School Students. March 9<sup>th</sup>
- Assessing Water Quality Laboratory. College Challenge Program at Indiana State University. Advanced placement courses for Turkey Run High School Students. February 22<sup>nd</sup>
- o Science Fair Judge. Woodrow Wilson Middle School. February 18.

#### • 2014

- o Collecting soil cores in <u>Brouilletts Creek</u> using a Giddings soil-sampling machine.
- Stream Table and Wave Erosion Laboratory. College Challenge Program at Indiana State University. Advanced placement courses for Turkey Run High School Students. November 10<sup>th</sup>
- Seminar Series at Eastern Illinois University. Foraminifera at Pacific methane seeps: Colonization, Geochemistry, and Implications on future studies. September 30, 2014.
- o <u>Science Camp</u> at Indiana State University. Talk Title: *Oceanography and Paleoceanography*. August 6<sup>th</sup>
- o PLOS ONE (Public Library of Science) journal reviewer.
- o <u>Career Day Presentation</u>: *Paleontology and Paleoceanography*. Sugar Grove Elementary. West Terre Haute, IN May 21<sup>st</sup>
- Earth day Mini Talk presentation. Talk title: Earth's previous tenants. Eastern Illinois University. April 22<sup>nd</sup> 2014
- o North-Central Section Undergraduate Research Grant reviewer. February 20<sup>th</sup>

### • 2013

- Science Camp at Indiana State University. Talk Title: Exploring the Oceans. July 26<sup>th</sup>
- Sapphire Coast Marine Discovery Centre. Eden, Australia. Talk Title: Exploring Oases in the Deep-Sea with ALVIN and JASON. May 31<sup>st</sup>
- o Indiana Master Naturalists. Talk title: *Mass Extinctions*. January 1<sup>st</sup>

### • 2012

- o Collected soil samples for lead testing at the <u>ISU Community Gardens</u>.
- O Assisting in 175 lab renovation design and movement.

# • 2011

o St. Patrick Elementary. Terre Haute, IN. Science Fair Judge. February.

- Coordinated room 175 lab relocation logistics, and assisted in lab renovation design and the movement of equipment and supplies.
- o Organized research sample storage, and sample maintenance.
- o Developed lab data storage protocol and lab safety manual.

# **Field Experiences Leading Students**

- 2015
  - o **ENVI270. Historical Geology Field Trip.** Madison, Indiana- My primary responsibilities included assisting Dr. Tony Rathburn with a group of undergraduates in the collection and identification of marine fossils from the Early to Late Ordovician Period. April.
  - o **ENVI110 Field Trip.** Vigo County Riverscape Wetlands Reserve. My primary responsibilities included leading a group of undergraduate students in the collection soil samples to conduct geochemical analysis for environmental impacts. March-April.
  - o **ENVI385 Structural Geology. Field Trip.** Arches National Park, UT. This trip is the culminating experience for undergraduate students to utilize the training they received in Structural Geology. This excursion is also designed to prepare students for participation in Geology Field Camp as required for graduation. Students are asked to create geologic maps, cross sections, make rock identifications and measurements with Brunton compasses. As a teaching assistant on this trip I mentored students in completing all of these tasks.

### • 2014

- ENVI110 Field Trip. Vigo County Riverscape Wetlands Reserve. My primary responsibilities included leading a group of undergraduate students in the collection soil samples to conduct geochemical analysis for environmental impacts. October.
- ESC/GEL 1300G Field Trip. My primary responsibilities included group of undergraduate students in the examination and collection of rock samples as a complimentary aspect to Introduction to Earth Sciences lectures and laboratory. March and April.

### • 2013

 ENVI110 Field Trip. Vigo County Riverscape Wetlands Reserve. My primary responsibilities included leading a group of undergraduate students in the collection soil samples to conduct geochemical analysis for environmental impacts. October.

### • 2012

- o **ENVI270. Historical Geology Field Trip.** Madison, Indiana- My primary responsibilities included assisting Dr. Tony Rathburn with a group of undergraduates in the collection and identification of marine fossils from the Early to Late Ordovician Period. April.
- ENVI110 Field Trip. Vigo County Riverscape Wetlands Reserve. My primary responsibilities included leading a group of undergraduate students in the collection soil samples to conduct geochemical analysis for environmental impacts. March.

#### • 2011

- o **ENVI270. Historical Geology Field Trip.** Madison, Indiana- My primary responsibilities included assisting Dr. Tony Rathburn with a group of undergraduates in the collection and identification of marine fossils from the Early to Late Ordovician Period. April.
- ENVI110 Field Trip. Vigo County Riverscape Wetlands Reserve. My primary responsibilities included leading a group of undergraduate students in the collection soil samples to conduct geochemical analysis for environmental impacts. March.
- o **SS2011-T04.** Trained and mentored students in multicore deployment and core processing for microfossils.
- o **AT18-10 Hydrate Ridge II**. Trained and mentored students in multicore deployment, core processing for microfossils, and shipboard microscope use.
- NH1108 San Diego. Trained and mentored students in nautical map reading, sample site selection, multicore deployment, and core processing for microfossils.
- SS2011-T01. Trained and mentored students in multicore deployment and core processing for microfossils.

### • 2010

- ENVI 571 Quaternary Environments Field Trip. Terre Haute, Indiana-Conducted data collection on Lichens to develop a proxy record of the local area.
- ENVI 518 Soil Genesis and Classification Field Trip. Terre Haute, Indiana-Conducted core sampling and obtained soil samples for geochemical analysis at the development site of the future Vigo County Riverscape Wetlands Reserve. March
- AT15-58 Hydrate Ridge. Trained and mentored students in multicore deployment, core processing for microfossils, and shipboard microscope use. I also oversaw the construction and deployment of experimental substrates.

# • 2009

o **ENVI 270 Historical Geology Field Trip**. Madison, Indiana- Collected marine fossils from the Early to Late Ordovician Period. April.

### Awards

- Outstanding Graduate Assistant. Department of Earth and Environmental Systems. Indiana State University, 2015.
- Research and Creativity Award. College of Graduate & Professional Studies. Indiana State University, 2015.
- Outstanding Graduate Assistant. Department of Earth and Environmental Systems.
   Indiana State University, 2013.
- Greg Rigger Dedication to Sport Award, Muskingum University. 2008
- Keck Geology Consortium Internship Recipient. 2007.

# **Professional Memberships**

- Association for Women Geoscientists. Member 2014-Present.
- American Geophysical Union. Member 2012-Present
- Geological Society of America. Member 2011-Present.
- Cushman Foundation for Foraminiferal Research. Member. 2010-Present.

# **Synergistic Activities**

- PADI Open Water SCUBA Certified. 2006-Present.
- Tri Beta Member, Muskingum University Chapter. 2004-2008.
- Chi Alpha Nu Club of Muskingum University. Member 2004-2008. Rush Chair 2006-2008.
- Muskingum University Softball 2004-2008, Captain 2008.

### References

- Dr. Anthony Rathburn. Indiana State University. <u>trathburn@gmail.com</u>. 812-237-2269
- Dr. Jennifer Latimer. Indiana State University. Jen.Latimer@indstate.edu. 812-237-2254
- Dr. Elena Maria Perez. Natural History Museum in London. E.Perez@nhm.ac.uk
- Dr. Diane Burns. Eastern Illinois University. dmburns@eiu.edu. 217-581-2626
- Dr. Sandra Brake. Indiana State University. Sandra.Brake@indstate.edu. 812-237-2270