

# Kyrie (Aly) Baumgartner, Ph.D.

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## EDUCATION

- 2015–2020 Ph.D. Baylor University Department of Geosciences  
Dissertation: *Filling the Gaps in the African Floral Record: Developing New Paleobotanical Paleoclimate Models for Tropical Africa*  
Advisor: Dr. Daniel Peppe
- 2012–2014 M.S. East Tennessee State University Department of Biology  
Thesis: *Neogene Climate Change in Eastern North America: A Quantitative Reconstruction*  
Advisor: Dr. Yu-Sheng (Christopher) Liu
- 2008–2012 B.S. University of Michigan Program in the Environment  
Minor in Biological Anthropology

## PROFESSIONAL EXPERIENCE

- 2023-present **Collection Manager of Vascular Plants** University of Michigan Herbarium  
2022–2023 **Associate Curator of Paleobotany** Fort Hays State University Sternberg Museum  
2020–2023 **Paleontology Collections Manager** Fort Hays State University Sternberg Museum  
2017–2020 **Social Media Co-Manager** Baylor University Department of Geosciences  
2015–2020 **Graduate Teaching Assistant** Baylor University Department of Geosciences  
2014–2015 **Substitute Teacher** Hanover-Horton School District, Horton, MI  
2014 **Paleontology/Museum Assistant (GeoCorps)** Florissant Fossil Beds NM  
Mentor: Dr. Herb Meyer
- 2012–2014 **Graduate Research Assistant** East Tennessee State University  
2011, 2012 **Paleontology Intern** The Mammoth Site of Hot Springs, SD  
2010–2012 **Fossil Preparator** University of Michigan Museum of Paleontology  
2010–2012 **Docent** University of Michigan Museum of Natural History  
2010–2011 **Science for Tomorrow and Family Science & Reading Program Outreach Facilitator** University of Michigan Museum of Natural History

## PUBLICATIONS and PRESENTATIONS

(underline student)

### Peer-Reviewed

- [5] Reichgelt, T., **Baumgartner, A.**, Feng, R. and Willard, D.A. 2023. Poleward amplification, seasonal rainfall and forest heterogeneity in the Miocene of the eastern USA. *Global and Planetary Change*, 222: 104073.
- [4] **Baumgartner, A.**, and Peppe, D. 2021. Paleoenvironmental changes in the Hiwegi Formation (lower Miocene) of Rusinga Island, Lake Victoria, Kenya. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 574: 110458.
- [3] **Baumgartner, A.**, Donahoo, M., Chitwood, D., and Peppe, D. 2020. The influences of environmental change and development on leaf shape in *Vitis*. *American Journal of Botany* 107: 4, 1-13.
- [2] Peppe, D.J., **Baumgartner, A.**, Flynn, A. G., and Blonder, B. 2018. Reconstructing paleoclimate and paleoecology using fossil leaves: In Croft, D. A., Simpson, S. W., Su, D. F. (eds). *Methods in Paleocology: Reconstructing Cenozoic Terrestrial Environments and Ecological Communities: Springer*

(*Vertebrate Paleobiology and Paleoanthropology Series*), Dordrecht.

- [1] Bucksch, A., Atta-Boateng, A., Fortuné Azihou, A., Balduzzi, M., Battogtokh, D., **Baumgartner, A.**, et al. 2017. Morphological Plant Modeling: Unleashing Geometric and Topologic Potential within the Plant Sciences. *Frontiers in Plant Science*, 8: 900.

### **Conference Presentations & Abstracts**

(underline student, \* poster)

- \*Landwehr, A., Wilson, L.E., Davison, S., O'Dell, K., and **Baumgartner, A.** 2023. Of Protocols and Perissodactyls: Building on past experiences for smooth transitions to new projects. Association of Materials and Methods in Paleontology Annual Meeting, Burke Museum, Seattle, Washington.
- Baumgartner, A.**, and Peppe, D. 2020. Paleoclimate and paleoecological reconstructions of the early Miocene Hiwegi Formation, Rusinga Island, Lake Victoria, Kenya. [Virtual] *Midcontinental Paleobotanical Colloquium*, University of Washington, Seattle, Washington.
- Baumgartner, K.A.**, McNulty, K., Michel, L., and Peppe, D. 2019. Paleoclimate and paleoecological reconstructions of the early Miocene Hiwegi Formation, Rusinga Island, Lake Victoria, Kenya. *Geological Society of America Abstracts with Programs* 51:5.
- Baumgartner, A.**, and Peppe, D. 2018. Preliminary Paleobotanical Paleoclimate Estimates from the Early Miocene Rusinga Island, Lake Victoria, Kenya. *2nd Lembersky Conference in Human Evolutionary*, Rutgers University, New Brunswick, New Jersey.
- \***Baumgartner, A.**, Donahoo, M., and Peppe, D. 2018. Assessing the relationship between leaf size and shape in African floras: Implications for paleoclimate proxies. *Green Life Symposium*, University of Michigan, Ann Arbor, Michigan.
- Baumgartner, A.**, Donahoo, M., and Peppe, D. 2018. Testing the applicability of leaf physiognomic proxies for climate on equatorial African floras. *10th European Palaeobotany & Palynology Conference*, Dublin, Ireland.
- Baumgartner, A.**, Donahoo, M., and Peppe, D. 2018. Assessing the relationship between leaf size and shape in African floras. *Ecological Integration Symposium*, Texas A&M University, College Station, Texas.
- \***Baumgartner, A.**, Peppe, D. J., Chitwood, D. H., and Donahoo, M. 2016. Rapid leaf character response to climate variability in *Vitis*: Implications for leaf physiognomic paleoclimate reconstructions. *XIV IPC/X IOPC Salvador, Bahia, Brazil*.
- \***Baumgartner, K. A.**, and Meyer, H. W. 2015. Effects of allochthonous pollen influx on paleoclimate reconstructions: Evidence from the late Eocene Florissant flora, Colorado. *Paleoecology Symposium*, Cleveland Museum of Natural History and Case Western Reserve, Cleveland, Ohio.
- Baumgartner, K. A.**, and Meyer, H. W. 2014. Coexistence Climate Analysis of the Late Eocene Florissant Flora, Colorado. *Geological Society of America Abstracts with Programs* 46:6, p. 490.
- Baumgartner, K. A.** 2013. Paleoclimate Reconstructions of Three Mid-Atlantic Miocene Sites. *Geological Society of America Abstracts with Programs* 45:7, p. 303.

### **Invited Lectures**

- Baumgartner, A.** 2022. Collections Management. *East Tennessee State University Paleocareers Seminar*.
- Baumgartner, A.** 2022. Not Just a Green Background: A Kenyan Flora Story. *Waterfront Botanical Gardens Friday Night Speaker Series*
- Baumgartner, A.** 2022. Not Just a Green Background: A Kenyan Flora Story. *University of Edinburgh Molecular Palaeobotany and Evolution Group*
- Baumgartner, A.** 2022. Not Just the Green Background. *Centre College Intro Plant Biology*.

**Baumgartner, A.** 2021. Miocene Apes and Tree Time Machines. *Phillip J. Curry Dinosaur Museum Fossil Talks.*

**Baumgartner, A.** 2021. Green Time Machines: A Kenyan Plant Story. *Gray Fossil Site Friday Fossil Talks.*

**Baumgartner, A.** 2021. Green Time Machines: A Plant Story. *Western Science Center & Alf Museum of Paleontology Friday Fossil Chats.*

**Baumgartner, A.** 2021. Green Time Machines. *Centre College Department of Biology Senior Seminar.*

**Baumgartner, A.** 2021. Context is Everything: An African Flora Story. *Pittsburgh State University Biology Department Fall Seminar.*

**Baumgartner, A.** 2021. Outreach and Social Media. *Fort Hays State University Museum Studies.*

**Baumgartner, A.** 2021. Not Just the Green Background: The Importance of Paleobotany as Environmental Context. *Fort Hays State University Graduate Paleobiology.*

**Baumgartner, A.** 2020. National Fossil Day Collections Tour. *Alf Museum of Paleontology and Western Science Center.*

**Baumgartner, A.** 2020. I speak for the trees: what plants tell us about their environment. *University of Southern California Department of Earth Sciences Fall Seminar.*

**Baumgartner, A.** 2020. What fossil leaves tell us about the paleoclimate and paleoenvironment of the early Miocene Hiwegi Formation, Rusinga Island, Kenya. *Dallas Paleontological Society April Meeting.*

**Baumgartner, A.** 2018. I speak for the trees: what plants can tell us about climate. *WISE Lecture Series. Baylor University.*

**Baumgartner, A.** 2016. Paleoclimatic reconstruction of the Miocene on Rusinga Island, Kenya. *Dallas Paleontological Society April Meeting.*

**Baumgartner, A.** 2014. Back to the Future: Paleoclimate, Paleoenvironment and the Gray Fossil Site. *Lunchtime Lecture at the Gray Fossil Site.*

### GRANTS

2022	Institute of Museum and Library Services: Museums for America (co-PI) “Miocene Minium Quarry Fossil Preservation Project”	\$134,274
2017	Leakey Foundation “Paleoclimatic reconstruction of the Miocene on Rusinga Island, Kenya” GSA Graduate Research Grant	\$14,400 \$2,500
2016	Evolving Earth Foundation "Filling the gaps in the African floral record: developing new paleobotanical paleoclimate models for tropical Africa" Dallas Paleontological Society Frank Crane Memorial Scholarship	\$3,000 \$1,000
Total		\$155,174

### RESEARCH PROJECTS

#### Collections Use

##### *Rusinga Island Project*

2019	National Museums of Kenya Department of Palaeontology, Nairobi, Kenya
2018	National Museums of Kenya Department of Palaeontology, Nairobi, Kenya
2017	National Museums of Kenya Department of Palaeontology, Nairobi, Kenya

*Modern Africa Floras Project*

- 2017 The Royal Botanic Gardens at Kew Herbarium, London, UK  
Muséum National d'Histoire Naturelle Herberie, Paris, France  
National Museums of Kenya East Africa Herbarium, Nairobi, Kenya
- 2016 Missouri Botanical Gardens Herbarium, St. Louis, Missouri, USA
- 2015 Missouri Botanical Gardens Herbarium, St. Louis, Missouri, USA

*Florissant Paleoclimate Project*

- 2014 Florissant Fossil Beds National Monument, Colorado, USA

**Field Experience**

- 2018 Hiwegi Formation, Rusinga Island, Kenya, Early Miocene  
Wilcox Group and Claiborne Group, Bastrop, Texas, USA, PETM
- 2016 Ojo Alamo and Nacimiento Formations, San Juan Basin, New Mexico, USA, Early Paleocene
- 2014 Wasatch Formation, Grand Valley, Colorado, USA, Paleocene  
Florissant Formation, Florissant Fossil Beds National Monument, Florissant, Colorado, USA, Eocene
- 2013 Gray Fossil Site, Johnson City, Tennessee, USA, Early Pliocene
- 2012 Mammoth Site of Hot Springs, South Dakota, USA, Pleistocene
- 2011 Mammoth Site of Hot Springs, South Dakota, USA, Pleistocene

**SYNERGISTIC ACTIVITIES**

**Community Engagement**

*Sternberg Museum of Natural History*

- 2022 National Fossil Day, Sternberg Museum of Natural History, Hays, KS
- 2021 National Fossil Day, Sternberg Museum of Natural History, Hays, KS  
Geology and entomology 4-H judge, Pawnee County Fair, Larned, KS  
Virtual job shadow, Belton High School, Belton, KS  
Visiting scientist, Olathe High School Special Education, Olathe, KS  
Darwin Day, Sternberg Museum of Natural History, Hays, KS
- 2020 National Fossil Day, Sternberg Museum of Natural History, Hays, KS

*Baylor University*

- 2019 Present Your PhD, River Valley Intermediate School, Waco, TX  
Visiting scientist, BIOL 1408. McLennan Community College, Waco, TX
- 2018 Fall Fossil Festival, Waco Mammoth National Monument, Waco, TX  
College Fair, DeSoto ISD, DeSoto, TX  
Visiting scientist, Cub Scout meeting, Waco, TX
- 2017 National Fossil Day, Mayborn Museum, Waco, TX  
Sic 'Em Science Day, Mayborn Museum, Waco, TX
- 2016 Central Texas Girl Scout STEM Fair, Texas State Technical College

*East Tennessee State University*

- 2014 Darwin Day, Gray Fossil Site, Johnson City, TN
- 2013 GIS Day, Gray Fossil Site, Johnson City, TN  
National Fossil Day, Gray Fossil Site, Johnson City, TN

**PROFESSIONAL SERVICE**  
**Chaired Conference Sessions**

2019 Geological Society of America Annual Meeting, Phoenix, AZ. *Paleontology: Paleobotany and Terrestrial Ecosystems*, Flynn, A.G., and **Baumgartner, K.A.**

**Scientific Consulting**

2022 BBC and PBS “*Ancient Earth*”

**Media Appearances**

2023 BBC and PBS “*Ancient Earth*” (shot in May/June 2022)  
Smoky Hills PBS “*Cottonwood Connections*” (shot in January 2023)  
2022 High Plains Public Radio: “*Eighty million years ago, western Kansas was ‘hell’s aquarium’. Here’s what it can teach us today.*”  
2021 Belmont Media Center Community TV Science for the Public: “*Ancient Environmental Shifts and Evolution*”

**Digital Scholarship**

*Podcasts and Video*

2022 The Backpacker’s Guide to Prehistory: The Neogene  
2021 Evolution Soup: Plant Time Traveler  
Plants and Pipettes Podcast: I am kind of a time traveller  
2021-2023 Sternberg Museum of Natural History: A New Way to Museum videos  
2018-2023 Common Descent Podcast guest host  
2013 Palaeocast: Geological Society of America Day 2

*Written*

2022 NaturEvolve: Fossil leaf as a map to past climate  
2019 Time Scavengers: Meet the Scientist (interview)

**Graduate Committees**

*Fort Hays State University Department of Geosciences*

2021-2023 Shyla Davison, Non-thesis Master’s  
2020-2022 Matthew Eads, Non-thesis Master’s

**Undergraduate Thesis Assistance**

*Baylor University Department of Geosciences*

Michaela Donahoo, 2017. “Applying paleobotanical paleoclimate proxies: A case study of tropical African floras”.

**Student Assistant Supervision**

*Fort Hays State University*

2022-2023 Kaiden O’Dell, B.S. student, curatorial assistant, Department of Geosciences  
2022-2023 Alex Landwehr, B.A. student, curatorial assistant, Department of Geosciences  
2021-2022 Shyla Davison, M.S. student, curatorial assistant, Department of Geosciences

*Baylor University*

2017-2019 Gilliane Del Rosario, B.S. student, research assistant, Department of Geosciences  
2017-2019 Sam Chun, B.S. student, research assistant, Department of Biology

- 2017-2019 Samantha Flores, B.S. student, research assistant, Department of Biology  
 2017-2019 Austin Hubbert, B.S. student, research assistant, Department of Biology  
 2017-2019 Taylor Horn, B.S. student, research assistant, Department of Biology  
 2017-2019 Delany Baum, B.S. student, research assistant, Department of Environmental Science  
 2017-2018 Carson Steinmann, B.S. student, research assistant, Department of Geosciences  
 2017 Ryley Collins, B.S. student, research assistant, Department of Geosciences  
 2015-2018 Michaela Donahoo, B.S. student, research assistant, Department of Geosciences

### **Mentoring**

#### **Graduate students**

##### *Fort Hays State University*

- 2023 Jenna Bures, non-thesis M.S. student, Department of Geosciences  
 2022-2023 Charles Davis II, M.S. student, Department of Geosciences  
 2022-2023 Harrison Miller, M.S. student, Department of Geosciences  
 2021-2023 Shyla Davison, non-thesis M.S. student, Department of Geosciences  
 2021-2023 Christopher Kingwill, M.S. student, Department of Geosciences  
 2021-2023 Alec Zaborniak, M.S. student, Department of Geosciences  
 2020-2022 Mitchell Lukens, M.S. student, Department of Geosciences

#### **Undergraduate students**

##### *Fort Hays State University*

- 2022-2023 Zachary Zahner, B.S. student, Department of Geosciences  
 2022-2023 Katie Gatlin, B.S. student, Department of Geosciences  
 2022-2023 Kale Link, B.S. student, Department of Geosciences  
 2022-2023 Brynn Wooten, B.S. student, Department of Geosciences  
 2022 Teilee Brunson-Williams, B.S. student, Department of Geosciences  
 2020-2023 Alex Landwehr, B.A. student, Department of Geosciences  
 2020-2023 Audrey Nightingale, B.A. student, Department of Geosciences  
 2020-2023 Kaiden O'Dell, B.S. student, Department of Geosciences  
 2020-2022 Riley Sanford, B.S. student, Department of Geosciences  
 2020-2022 Jerrad Watts, B.S. student, Department of Geosciences

### **Professional Development**

- 2023 Webinar & Discussion on the Need for a Specimen Management Plan Requirement (Virtual). Feb. 7.  
 2022 Strategic Planning for Biodiversity Collections Course: iDigBio, Fall 2022.  
 BioDigiCon (Virtual): Sep. 27-29.  
 Introduction to Photogrammetry for Biodiversity Specimen Collectors and Curators (Virtual): Florida State University, May 6.  
 2021 Funding Opportunities for Scientific Collections at NSF (Virtual): Oct. 4.  
 Association for Materials and Methods in Paleontology (Virtual) Conference: Apr. 14-16.  
 2020 Engaging Public Participation in Collections Digitization (Virtual): iDigBio, Nov. 18.  
 Midcontinental Paleobotany Colloquium: Online Database Solutions for Paleobotany Workshop: May 29.  
 2018 Advances in Paleoecology: 2nd Lembersky Conference in Human Evolutionary Studies: Rutgers University, New Brunswick, NJ, Nov. 14-16.  
 Women in the Academy Conference: Navigating the Journey to Success: Baylor University,

- Waco, TX, Apr. 7.  
 Research on East African Catarrhine and Hominoid Evolution (REACHE) Conference:  
 Nairobi, Kenya, Aug. 6-10.  
 rstudio::conf 2<sup>nd</sup> Annual Meeting Workshop: San Diego, CA, Jan. 31-Feb. 3.
- 2016 Portal to the Public Network (PoPNet) Workshop: Mayborn Museum, Waco, TX, Nov. 7 & 14.
- 2015 Paleocology Symposium Research Workshop: Cleveland Museum of Natural History, Cleveland, OH, Sep. 10-13.  
 Morphological Plant Modeling: Unleashing geometric and topologic potential within the plant sciences: NIMBioS Investigative Workshop, University of Tennessee, Knoxville, TN, Sep. 2-4.

## **TEACHING EXPERIENCE**

### **Baylor University**

#### *Graduate Teaching Assistant*

- 2020 GEO 3442: Stratigraphy and Sedimentology
- 2019 GEO 1406: Historical Geology  
 GEO 3435: Invertebrate Paleontology
- 2018 GEO 3442: Stratigraphy and Sedimentology  
 GEO 1403: Environmental Geology
- 2017 GEO 1402: World Oceans  
 GEO 3435: Invertebrate Paleontology
- 2016 GEO 1403: Environmental Geology  
 GEO 1402: World Oceans
- 2015 GEO 1402: World Oceans

## **HONORS & FELLOWSHIPS**

- 2019 Baylor University Graduate School Summer Dissertation Fellowship
- 2018 Baylor University Department of Geosciences Outstanding Teaching Assistant  
 Nominated for Baylor University Graduate School Outstanding Graduate School Instructor Award for Fall 2018
- 2017 Baylor University Department of Geosciences Outstanding Teaching Assistant  
 Nominated for Baylor University Graduate School Outstanding Graduate School Instructor Award for Fall 2017

## **PROFESSIONAL MEMBERSHIPS**

### Current

- Association for Women Geoscientists (AWG)  
 Botanical Society of America (BSA)

### Previous

- American Association for the Advancement of Science (AAAS)  
 Earth Science Women's Network (ESWN)  
 Geological Society of America (GSA)  
 Paleontological Society (PS)