

CURRICULUM VITAE
STEPHANIE L. BAUMGART

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Dept. Organismal Biology & Anatomy • University of Chicago
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EDUCATION

- Ph.D. Integrative Biology, University of Chicago, Spring 2020 (expected)
Dissertation: Patterns and constraints in the structural properties of vertebrate wings
Advisor: Paul Sereno
Committee Members: Mark Westneat, Zhe-Xi Luo, Michael Coates
- M.S. Integrative Biology, University of Chicago, Winter 2018
- B.S. Biological Sciences, University of Chicago, Spring 2014
Specialization in Ecology and Evolution, General Honors, Biological Sciences Honors
Advisor: Paul Sereno
- College Teaching Certificate, Spring 2020 (expected)
NAUI 60ft scuba diving certification, Summer 2018

PUBLICATIONS

- In prep **Baumgart, S.L.**, Westneat, M.W., Convergence of avian wing and sternum morphology with respect to foraging strategy and body mass
- In prep **Baumgart, S.L.**, Sereno, P.C., Blackburn, D.C., Early Cretaceous pterosaurs from the Elrhaz Formation (Aptian-Albian) of Niger
- In prep Sereno, P.C., **Baumgart, S.L.**, TaxonSearch 2.0: a review of taxonomy within stem Archosauria

TEACHING EXPERIENCE

University Teaching – University of Chicago

- 2019 From Fossils to Fermi's Paradox: On the Origin and Evolution of Intelligent Life, BPRO 28800/BIOS 13142/BIOS 29142/ASTR 18700/PSYC 28810 (Profs. Paul Sereno, Sarah London, Leslie Rogers)
Teaching Assistant – helped design the course, attended lectures, led weekly discussion sections with three other TAs (duties divided based on expertise needed for the week), helped create a midterm and final exam, graded exams
- 2018 The Human Body, ORGB 30001 (Lecturer/Lab Manager: Dr. Richard Madden)
Peer Educator – Modules: lower limb, upper limb, head and neck
Attend lectures, guide Pritzker medical students through the osteology and cadaver labs, conduct review sessions before exams, helped set up and grade practical exams

- Chordates: Evolution and Comparative Anatomy, BIOS 22250 (Prof. Michael Coates)
Teaching Assistant – Two guest lectures, manage lab sessions, create and grade lab practical exams
- 2016 Mammalian Evolutionary Biology, BIOS 23262 (Profs. Zhe-Xi Luo/Kenneth Angielczyk)
Teaching Assistant – Guest lecture, managed lab sessions/discussion, help set up and grade lab practical exams
- 2015 & 2013 Vertebrate Structure and Function BIOS 22260 (Prof. Paul Sereno)
Teaching Assistant – Guest lectures, managed lab sessions, designed lab quizzes, proctored and graded exams
- 2014 Dinosaur Science, BIOS 23100 (Prof. Paul Sereno)
Teaching Assistant – Guest lectures, designed review sessions, graded exams
- UChicago Core Biology: Neuroscience, BIOS 10130 (Prof. Megan McNulty)
Teaching Assistant – led discussions, feedback/graded written assignments

Mentoring undergraduate and high school students

- 2016-17 Research mentor for Miss Brigit Tronrud, University of Chicago undergraduate, for image analysis of CT scan data of *Spinosaurus* neck in Mimics
- 2016 Research mentor for Miss Samantha Baste, University of Chicago undergraduate, for image analysis of bird CT scan data in Mimics
Research mentor for Miss Shubha Vedula, University of Chicago undergraduate, for image analysis of CT scan data of mammal teeth in Mimics
- 2015 Job shadow host for Mr. Marciano Molzahn, high school student (from France), for fossil preparation and image analysis of CT scan data in Mimics

FIELDWORK AND RESEARCH EXPERIENCE

Fieldwork

- 2018 Field Assistant, Sereno team, Paleontology and archaeology excavation and prospecting; late Jurassic, early Cretaceous, and Holocene beds at multiple sites in Niger
Logged and stored 400+ artifacts found in the Gobero site (Holocene)
Used the RTK GPS system for taking precision GPS coordinates
Entered human artifact information into the Online Cultural and Historical Research Environment (OCHRE) database
- 2013-18 Field Assistant, Sereno team, Dinosaur fieldwork, Jurassic Morrison Formation, Shell, Wyoming
- 2017 Field trip leader, University of Chicago Paleontology Club, Geology and invertebrate survey trip, Devonian and Ordovician formations near Toledo, Ohio
- 2016 Field trip leader, University of Chicago Paleontology Club, Geology and invertebrate survey trip, Ordovician formations near Cincinnati, Ohio

Research Experience and Training

- 2018 CT scanning avian and herpetological specimens from the Field Museum of Natural History for the openVertebrate (oVert) Thematic Collection Network (TCN) project funded by the National Science Foundation (Chicago CoPIs/references: Zhe-Xi Luo, John Bates)
Trained to use the Electronic Museum (EMu) database (Ref: Kate Webbink)
Trained to use the Online Cultural and Historical Research Environment (OCHRE) database to store and organize information about archaeological artifacts (Ref: Sandra Schloen)
- 2017 Trained in medical human anatomy course in the Pritzker School of Medicine, University of Chicago (Course Director: Prof. Callum Ross)
- 2015-17 Trained and certified for independent operation of UChicago microCT (computed tomography) scanner
Trained and proficient in CT data imaging analysis software packages (VGStudio Max, Mimics, Avizo), University of Chicago
Trained in geometric morphometric analytical methods (R packages), University of Chicago
Trained in phylogenetic methods – parsimony (TNT, PAUP*, R) and Bayesian (MrBayes) analyses, University of Chicago
- 2012-15 Student fossil preparator, Fossil Lab of Prof. Paul Sereno
Prepared fossils using manual and pneumatic tools; assisted in CT scanning large specimens at the UChicago Hospitals; assisted in dinosaur exhibit (National Geographic *Spinosaurus* exhibit); tended the beetle colony for vertebrate skeletal preparation; gave lab tours to school groups, families, and visiting researchers; trained undergraduates to prepare fossils
- 2011-12 Student lab technician, Human Genetics Lab of Prof. Carole Ober
Performed nanodrops, PCR, gel electrophoresis, Taqman genotyping, and Picogreen analyses for postdoctoral researchers studying the genetic basis for asthma

AWARDS AND GRANTS

- 2017-18 Graduate Assistance in Areas of National Need Fellowship (GAANN Program – US Federal Dept. of Education) Integrative and Comparative Neuromechanics (\$106,575: 4 quarters of tuition, stipend, and fees)
- 2016-17 Graduate Assistance in Areas of National Need Fellowship (GAANN Program – US Federal Dept. of Education) Integrative and Comparative Neuromechanics (\$101,937: 4 quarters of tuition, stipend, and fees)
- 2016 Henry Hinds Evolutionary Biology Graduate Student Research Award (\$1,784)
Committee on Evolutionary Biology, University of Chicago
- 2013-14 University of Chicago Dean's List

Student Travel Grants

- 2014 North American Paleontological Convention (\$795)
 student travel grant funded by conference (\$395)
 iDigBio travel grant for North American Paleontological Convention funded by
 National Science Foundation (\$400)

CONFERENCE PRESENTATIONS

2018

- Baumgart, S.L.** Platform Presentation: “Does body mass constrain wing shape or sternum shape?”
Society of Integrative and Comparative Biology (SICB) Annual Meeting, San
Francisco, California

2017

- Baumgart, S.L.** Platform Presentation: “Relating ecology to sternum morphology in ‘water birds.’”
Society of Vertebrate Paleontology (SVP) Annual Meeting, Calgary, Alberta

- Baumgart, S.L.,** Westneat, M.W. Poster: “Geometric morphometrics of the avian wing and
sternum.” Society for Advancement of Chicanos/Hispanics and Native Americans in
Science, Regional Conference, Chicago, Illinois

- Baumgart, S.L.,** Westneat, M.W. Poster: “Geometric morphometrics of the avian wing and
sternum.” Society of Integrative and Comparative Biology (SICB) Annual Meeting, New
Orleans, Louisiana

2015

- Baumgart, S. L.,** Sereno, P.C. Poster: “Pneumaticity in modern birds compared to a large
pterosaur.” Society of Vertebrate Paleontology (SVP) Annual Meeting, Dallas, Texas

2014

- Baumgart, S.L.,** Sereno, P.C., Platform Presentation: “Pneumaticity in a large pterosaur compared
to modern birds.” 10th North American Paleontological Convention (NAPC),
Gainesville, Florida

INVITED TALKS AND LECTURES

Invited Talks

- 2018 Lighting Talk: “Does foraging behavior constrain avian wing shape or sternum shape?”,
 6th Annual Darwin Cluster Retreat, University of Chicago, Chicago, Illinois
- 2017 Oral Presentation: “Convergence in avian sternum morphology and relation to ecology”,
 1st Annual Great Lakes Student Paleoconference, University of Michigan, Ann
 Arbor, Michigan
 Oral Presentation: “Comparing bat wings to bird wings”, Bat Symposium, Field Museum
 of Natural History (FMNH)
 Oral Presentation: “Patterns and constraints in the structural properties of vertebrate
 wings,” University of Chicago Paleontology Club

- 2015 Poster: “Wing pneumaticity in modern birds compared to a Cretaceous pterosaur,”
 Baumgart S.L., Conroy, L.L., US-China Critical Transitions in the History of Life
 workshop (Field Museum of Natural History, sponsored by the National Science
 Foundation)
 Oral Presentation: “Paleontology 101,” University of Chicago Paleontology Club
- 2014 Oral Presentation: University of Chicago Undergraduate Biological Sciences College
 Division Honors Symposium
 Oral Presentation: University of Chicago Undergraduate Research Symposium

University of Chicago class lectures

- 2018 Lecture, “Bones/cartilage”, Chordates: Evolution and Comparative Anatomy class
 (BIOS 22250)
 Lecture, “Amniote Diversity II: Dinosaurs/Birds/Mammals”, Chordates: Evolution and
 Comparative Anatomy class (BIOS 22250)
- 2016 Lecture, “Ecological adaptations,” Mammalian Evolutionary Biology class (BIOS 23262)
 Lecture, “Early theropod dinosaurs,” Dinosaur Science class (BIOS 23100)
 Lecture, “Editing Wikipedia articles,” Dinosaur Science class (BIOS 23100)
- 2015 Lecture, “Gliding and flying,” Vertebrate Structure and Function class (BIOS 22260)
- 2014 Lecture, “Digging and climbing,” Vertebrate Structure and Function class (BIOS 22260)
 Lecture, “Marginocephalian dinosaurs,” Dinosaur Science class (BIOS 23100)
- 2013 Lecture, “Gliding and flying,” Vertebrate Structure and Function class (BIOS 22260)

OUTREACH AND SERVICE

- 2016-19 Science showcase staff, *Dozin’ with the Dinos* (8-10 events/year), Field Museum of Natural
 History
- 2018 Oral Presentation: “Reptiles in the Air,” Agitator Gallery (Art and Science series,
 Director: Yoav Kashiv)
 Pterosaur showcase, Field Museum of Natural History (Science Hub’s Meet a Scientist,
 Director: Marcy Krause)
 Oral Presentation: “Bones of Air,” Harbor Point (Life Long Learning Series program for
 senior citizens, Director: Andrew Long)
- 2017 Showcase staff for the Paleontology table at “Science Works,” hosted by the Museum of
 Science and Industry, Chicago, Illinois
 Held a Skype session about paleontology with two 6th grade classes at Little Chute
 Middle School in Little Chute, Wisconsin (Teacher: Lauren Muenster)
 Workshop and tour for homeschooled junior high and high school students (Teacher:
 Monta Hernon)
 Attended “How to Share your Science Story” webinar hosted by Space Time Labs
 Oral Presentations: “Seeing by hearing: echolocation throughout the animal kingdom,” 2
 events: Sulzer Public Library, Renaissance Court Senior Center (Life Long Learning
 program for senior citizens, Director: Randy Landsberg)
 Workshop and lab tour, Expanding Your Horizons outreach program for underserved
 middle school girls in the Chicago area

- 2016 Oral Presentations: “Bones of Air,” 4 events: Conrad Sulzer Library, Woodson Public Library, Renaissance Court Senior Center, Montgomery Place. (Life Long Learning program for senior citizens, Directors: Daniel Grin, Randy Landsberg)
Meet a Scientist: Birds workshop (1 event), Field Museum of Natural History
Oral Presentations: “Dinosaurs and prehistoric food webs,” two 5th grade classes at Andrew Jackson Language Academy in the Chicago Public School system (Teacher: Victoria Halevy)
Oral Presentations: “Paleomicrobiology” (4/5th grade), “Paleogeology” (6th grade), “Paleoecology” (7th grade), Hamilton Elementary School in the Chicago Public School system (Teachers: Kerrie Rovito, Jane Grannis)
- 2014 Workshop and lab tour, “Dinosaurs: Back from the Grave,” Splash! Chicago high school program for underserved high school students in the Chicago area
Oral Presentations: “Paleontology and prehistoric food webs,” two 5th grade classes at Andrew Jackson Language Academy in the Chicago Public School system (Teacher: Victoria Halevy)
- 2012-14 Pre-K tutor, Friend of Washington Park after-school tutoring program for underserved students in the Chicago area (Director: Audtrie Mobley)

PROFESSIONAL SERVICE

- 2018 Assembled and led an organization committee to host 2nd Annual Great Lakes Student Paleoconference at the University of Chicago, Chicago, Illinois
- 2017 Co-organized 1st Annual Great Lakes Student Paleoconference held at the University of Michigan, Ann Arbor, Michigan
Session Moderator, Technical Session III: Neornithes, Society of Vertebrate Paleontology 2017 Annual Meeting, Calgary, Alberta
- 2013 Organizer, Biological Sciences College Division Research Honors Retreat

PROFESSIONAL AFFILIATIONS

Society of Vertebrate Paleontology
Society of Integrative and Comparative Biology
Association for Women in Science
Palaeontological Society

REFERENCES

- Paul Sereno, Ph.D. Professor, Dept. Organismal Biology and Anatomy, University of Chicago, dinosaur@uchicago.edu, 773-702-8115
- Zhe-Xi Luo, Ph.D. Professor, Dept. Organismal Biology and Anatomy, Committee on Evolutionary Biology, University of Chicago, zxluo@uchicago.edu, 773-702-7816
- Mark Westneat, Ph.D. Professor, Dept. of Organismal Biology and Anatomy, Committee on Evolutionary Biology, University of Chicago & Integrative Research Center, Field Museum of Natural History, mwestneat@uchicago.edu, 773-702-2412
- Michael Coates, Ph.D. Professor, Dept. of Organismal Biology and Anatomy, Committee on Evolutionary Biology University of Chicago, mcoates@uchicago.edu, 773-834-8417