

## Curriculum Vitae

### **Kiersten K. Formoso**

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#### **EDUCATION**

- University of Southern California 2018-present
    - Ph.D. (expected 2023), Earth Sciences | GPA: 3.85
      - Graduate Student-in-Residence, Dinosaur Institute, Natural History Museum of Los Angeles County
  - Virginia Polytechnic Institute and State University 2016-2017
    - Graduate studies (no degree earned), Geosciences | GPA: 3.85
  - Rutgers University 2012-2016
    - B.Sc., Ecology, Evolution, and Natural Resources | Minor, Music | GPA: 3.36
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#### **GRANTS AND FELLOWSHIPS**

- National Science Foundation Graduate Research Fellowship (NSF GRFP) 2018-2023
  - Paleontological Society Student Research Grant 2020
  - Evolving Earth Foundation Student Research Grant 2020
  - GSA Cordilleran Section Student Travel Grant 2019
  - Geological Society of America (GSA) Graduate Student Research Grant 2017
  - Jackson School of Geosciences Student Travel Grant 2017
  - Rutgers Aresty Undergraduate Research Fellowship 2015-2016
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#### **RESEARCH**

- USC Paleosciences Research Consortium (PRC) 2018-Present
    - ❖ Analyzing exaptation and evolvability across secondarily aquatic amniotes based on ancestral terrestrial locomotor functions from a functional morphology perspective. (PhD major proposal)
    - ❖ Mosasaur functional morphology and swimming mechanics. (PhD minor proposal)
    - ❖ Marine crocodylomorph functional ecology
    - ❖ Spinosaurus functional morphology and aquatic ecology
  - Virginia Tech Paleobiology and Geobiology Research Group 2016-2017
    - ❖ Patterns of evolution and morphological convergence in Triassic archosauromorphs after the end-Permian mass extinction.
    - ❖ Biogeography and ecology of western Pangaeian tanystropheids.
    - ❖ Ontogeny of saurian reptiles.
  - Rutgers University Paleoenvironmental Research Laboratory 2015-2016
    - ❖ Determining spatial distribution and taxonomic organization of fossil data from the Lothagam geological formation, Kenya. Performed aerial scan analyses and spatial statistics.
  - Rutgers University Insect Phylogenetics Laboratory 2013-2015
    - ❖ DNA gathering, PCR, and gel electrophoresis of Trichoptera (caddisflies).
    - ❖ Built phylogenetic trees based on DNA.
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## **PEER-REVIEWED PUBLICATIONS**

### **Published**

Griffin, C.T., Stocker, M.R., Colleary, C., Stefanic, C.M., Lessner, E.J., Riegler, M., **Formoso, K.**, Koeller, K. and Nesbitt, S.J. (2021). Assessing ontogenetic maturity in extinct saurian reptiles. *Biol Rev.*

**Formoso, K.K.**, Nesbitt, S. J., Stocker, M. R., Pritchard, A. C., and Parker, W. G. (2019). A long-necked tanystropheid from the Middle Triassic Moenkopi Formation (Anisian) provides insights into the ecology of and biogeography tanystropheids. *Paleontologica Electronica*.

### **In Preparation**

Sereno et al. (in prep). Spinosaurus and its aquatic affinities. Submitting to *Science* within the coming weeks.

Foffa et al. (in prep). Changes in limb and body proportions and major habitat shifts in Thalattosuchia.

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## **MEETING ABSTRACTS AND PRESENTATIONS**

### **Talks**

- ❖ Formoso, K., Habib, M. 2021. Morphological comparisons of the arm bones across secondarily aquatic clades: ancestral terrestrial anatomy and control on transitions
  - Secondary Adaptation of Tetrapods to Life in Water (SECAD) 9<sup>th</sup> Annual Meeting.
- ❖ Formoso, K. 2021. Potential constraint and release driven by ancestral terrestrial posture in land-to-sea transitions: Insights from forelimbs across four land-to-sea amniote clades
  - Society of Integrative and Comparative Biology Annual Meeting 2020.
- ❖ Formoso, K. 2020. Terrestrial posture and its controls on secondarily aquatic amniote evolution: Forelimb changes in land-to-sea lineages.
  - Society of Vertebrate Paleontology's 80th Annual Meeting.
- ❖ Formoso, K., Habib, M., Bottjer, D. 2019. Reassessing the mosasaur pectoral girdle and its role in swimming function: Not entirely whale-like after all.
  - Society of Vertebrate Paleontology's 79th Annual Meeting, Brisbane, Australia.
- ❖ Formoso, K., Habib, M., Bottjer, D. 2019. Reassessment of the mosasaur pectoral girdle and its role in aquatic locomotion.
  - Geological Society of America 2019 Annual Meeting.
- ❖ Formoso, K.K., Nesbitt, S. J., Stocker, M. R., Pritchard, A. C., Parker, W. 2018. A long-necked tanystropheid from the Middle Triassic southwest United States and its implications for the evolution and ecomorphology of archosauromorphs.
  - Northeast Regional Vertebrate Evolution Symposium, NYIT College of Osteopathic Medicine.

### **Posters**

- ❖ Formoso, K., Habib, M., Bottjer, D. 2020. Assessing the mosasaur pectoral girdle and its controls on chest width: Implications for mosasaur swimming function.
  - Society of Integrative and Comparative Biology Annual Meeting 2020.
- ❖ Formoso, K.K., Nesbitt, S. J., Stocker, M. R., Pritchard, A. C., Parker, W. 2017. A Long-necked Tanystropheid from the Middle Triassic Moenkopi Formation gives Insights into the Biogeography and Ecology of Tanystropheids.
  - Society of Vertebrate Paleontology's 77th Annual Meeting, Calgary, Alberta.

- ❖ Formoso, K.K., Feibel, C.S. 2016. Organizing and Spatially Comparing Fossil Locations in the Lothagam Paleontological Formation of Kenya.
  - Rutgers University Aresty Research Center's Annual Undergraduate Research Symposium.

### Collaborations

- ❖ Foffa, D., Johnson, M.M., Schwab, J. A., **Formoso, K.K.**, Young, M.T. 2021. Changes in limb and body proportions and major habitat shifts in crocodylomorpha.
  - Secondary Adaptation of Tetrapods to Life in Water (SECAD) 9<sup>th</sup> Annual Meeting

### INVITED TALKS AND SEMINARS

- ❖ Investigating controls of ancestral terrestrial posture and associative locomotor functions on secondarily aquatic transitions in quadrupedal amniotes.
  - University of Washington PaleoLunch Seminar, January 28<sup>th</sup>, 2021
- ❖ Tanystropheids of the Triassic and Archosauromorph Radiation into semi-aquatic environments.
  - University of Edinburgh Paleontology Group Seminar, June 10<sup>th</sup>, 2020
- ❖ Examining Terrestrial Locomotor Functions and their role in Exaptation and Evolvability in Secondarily Aquatic Transitions.
  - USC Paleosciences Research Consortium Annual Retreat.
- ❖ A long-necked tanystropheid from the Middle Triassic Moenkopi Formation provides insights into the ecology and biogeography of tanystropheids, a unique group of archosauromorphs.
  - USC Department of Earth Sciences Paleo/Environmental Seminar.

### TEACHING

- Completed USC's CET (Center for Excellence in Teaching) Future Faculty Teaching Institute's 14-week course. 2020
- Teaching Assistant, History of Life: A View from the Museum, LAB (GEOL 126), University of Southern California. 2019
- Teaching Assistant, Planet Earth (GEOL 105), University of Southern California. 2018
- Grader, Conservation Ecology (11:216:317), Rutgers University. 2018  
(In addition to grading, I gave a science writing workshop)
- Teaching Assistant, Physical Geology Lab (GEOS 1104), Virginia Tech. 2016-2017

### SCHOLARSHIPS, AWARDS, AND HONORS

- Association for Women Geoscientists (AWG) Winnifred Goldring Award 2020
- USC Paleosciences Research Consortium (PRC) Student Research Prize 2019
- SVP Poster selected for Colbert Prize Session which recognizes outstanding student posters 2017
- Received Departmental Senior Award for Outstanding Student in Evolution 2016
- Louis Stokes Alliances for Minority Participation (LSAMP) Scholar 2014-2016
- Elizabeth and Arthur Reich Scholarship for underrepresented students 2012-2016
- Karen Smoyak-Hoffman Student Award 2014

### OUTREACH

- Featured presenter for the Rutgers Geology Museum's "Ask a Geologist" event where I spoke about Mosasaurs and Paleontology to an all-ages audience. 2020
- USC STEMbytes seminar speaker where I shared my research in an accessible way For undergraduate students who are interested in research and graduate school. 2020
- Guest speaker for the Mote Marine Laboratory and Aquarium STEMventure Online Summer Camp Program where I spoke about Ancient Marine Reptiles for a young audience. 2020

- Represented USC Paleosciences and shared my research with the public at the Raymond M. Alf Museum of Paleontology's annual "Fossil Fest." 2019 & 2020
- Featured panelist at Long Beach Comic Expo for the session "Pop Paleo" which discusses with attendees how paleontology influences popular culture. 2020
- Presented my talk titled "Land was just a phase! I'm not that tetrapod anymore." at *Nerd Nite LA*, where speakers share various "nerdy" topics with the public in a stand-up setting. 2019
- Gave a talk about my research and personal journey for "Project Scientist," a program that aims to get young girls, ages 4-12, interested in STEM fields. 2019
  
- Represented USC Paleosciences and shared my research at the Natural History Museum of Los Angeles County's (NHMLA) annual "Dino Fest." 2019
- Nutshell Games: Presenting your graduate research in 90 seconds or less. 2018  
Virginia Tech Center for Communicating Science Opening Celebration, Blacksburg, VA.
- "Up-Goer Five." Humorously presenting your research using only the top "ten hundred" English words. Talk titled *How Cold-blooded, Dry-skinned, Four-legged Animals with Long Necks Can Tell Us How Animals Change Through Time*. 2017  
Virginia Tech Department of Geosciences Student Research Symposium, Blacksburg, VA.
- Taught two lessons on geologic time and evolution to JROTC students from the Franklin Military Academy of Richmond, VA. 2017
- Represented the Society of Vertebrate Paleontology and shared paleontology topics with the public for National Fossil Day at the National Mall in Washington DC. 2017
- Shared my research with the public at the Virginia Tech Geofair and Mineral Show. 2017
- Participated in the Virginia Tech Science Festival and taught spectators about paleobiology. 2016
- Designed a tour on "Deep Time and Evolution" for the Rutgers Geology Museum. 2015  
The tour is for up to twenty visitors of all ages.

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### **OTHER LEADERSHIP, SERVICE, AND EMPLOYMENT EXPERIENCE**

- Social Sub-Chair of the Rutgers Alumni Club of Southern California 2018-2020
  - Member at Large for the Rutgers University Bands Alumni Association 2017-2019
  - Server, Cheesecake Factory & Applebee's 2018
  - Advisory board member for the Virginia Tech Center of Communicating Science 2017
  - Coordinator of Media, Branding, and Apparel for the Rutgers Marching Band 2015-2016
  - Student Unit Manager for Rutgers Dining Services where I hired and supervised staff of 60 student workers 2013-2016
  - Orientation Leader for Rutgers New Student Orientation and Family Programs 2014
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### **AFFILIATIONS**

- Society of Vertebrate Paleontology (SVP), student member
- Paleontological Society, student member
- Geological Society of America (GSA), student member
- Sigma Xi, student member