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

GRANTS AND FELLOWSHIPS

- National Science Foundation Graduate Research Fellowship (NSF GRFP) — 2018-2023
- Society of Integrative and Comparative Biology Fellowship for Graduate Student Travel — 2022
- Geological Society of America (GSA) Graduate Student Research Grant — 2021
- 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

PEER-REVIEWED PUBLICATIONS

Published

Sereno, P.C., Myhrvold, N., Henderson, D.M., Fish, F.E., Vidal, D., Baumgart, S.L., Keillor, T.M., **Formoso, K.K.,** Conroy, L.L. (2022). *Spinosaurus* is not an aquatic dinosaur. *eLife.*

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

Formoso et al. (Accepted) The role of locomotory ancestry on secondarily aquatic transitions. *Journal of Integrative and Comparative Biology.*

Formoso et al. (in prep) Burst performance variables and capabilities in mosasaurs. *Biology.*

Cribb and Formoso et al. (Submitted) Contrasting terrestrial and marine ecospace dynamics after the end-Triassic mass extinction event. *Proceedings B.*

AWARDS, HONORS, AND RECOGNITION

- Paleontological Society Student Poster Competition Winner 2022
- Paleontological Association's Best Lightning Talk Prize 2022
- USC Dornsife Inaugural Communicator of the Year (PhD student category) 2022
- Society of Integrative and Comparative Biology (SICB) Steven Vogel Award 2022
- Society of Integrative and Comparative Biology (SICB) Liem Award for Best Student Poster 2022
- Society of Vertebrate Paleontology (SVP) Wood Award 2021
- 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

MEETING ABSTRACTS AND PRESENTATIONS

Talks

- Formoso, K., Lloyd, G., Bottjer, D. 2022. Appendicular and axial modular change reveals different routes taken by secondarily aquatic reptiles and mammals.
  - Paleontological Association Annual Meeting 2022, Cork, Ireland.
- 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) 9th Annual Meeting, online.
- 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 2021, online.
- 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, online.
- 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, Phoenix, Arizona.
- 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. 2022. Mosasaurs and their relative burst and cruise capabilities.
  - Geological Society Annual Meeting, Denver, Colorado.
- Formoso, K. 2022. A functional matrix approach in comparing secondarily aquatic transitions across clades.
  - Society of Integrative and Comparative Biology Annual Meeting, online.
- 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, Austin, Texas.

- 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

- **Formoso, K.K.,** Cribb, A. Woolley, C.H., Beech, J., Brophy, S.K., Byrne, P.J., Cassady, V.,… 2021. Contemporaneous changes in terrestrial and marine functional ecology during ancient and modern mass extinction events: an ecospace cube approach
  - Geological Society of America 2021 Annual Meeting
- 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) 9th Annual Meeting

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INVITED TALKS AND SEMINARS

- Assessing the role of ancestral terrestrial morphology on the land to sea transition in secondarily aquatic amniotes.
  - Montana State University, Departmental Seminar, April 21st, 2022
- Exploring the locomotor controls of the land to sea transition across marine reptiles and mammals.
  - Burpee Museum's PaleoFest, March 6th, 2021
- Investigating controls of ancestral terrestrial posture and associative locomotor functions on secondarily aquatic transitions in quadrupedal amniotes.
  - University of Washington PaleoLunch Seminar, January 28th, 2021
- Tanystropheids of the Triassic and Archosauromorph Radiation into semi-aquatic environments.
  - University of Edinburgh Paleontology Group Seminar, June 10th, 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.

RESEARCH

- USC Paleosciences Research Consortium (PRC) 2018-Present
  - Exploring degree of appendicular and axial change across secondarily aquatic clades and the role of ancestral terrestrial locomotion. (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 Pangaean 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.

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 & 2023
- ➢ Teaching Assistant, Planet Earth (GEOL 105), University of Southern California. 2018
- ➢ Grader, Conservation Ecology (11:216:317), Rutgers University. 2018
- ➢ Teaching Assistant, Physical Geology Lab (GEOS 1104), Virginia Tech. 2016-2017

SELECTED OUTREACH, SERVICE, AND PUBLICITY

- ➢ NHMLA's DinoFest, featured speaker for Paleo Chats 2022
- ➢ USC Dornsife Dialogues: Dinosaurs 2022
- ➢ Series consultant, BBC and Apple TV+'s Prehistoric Planet 2022
- ➢ Field Museum Black History Month Seminar Series Panelist 2022
- ➢ "How to make a science meme." SICB Science Communication Workshop 2022
- ➢ Spoke to a Cal State San Bernardino vertebrate anatomy class about my story and path to paleontology. Cal State Fullerton is a Hispanic-Serving Institution. 2022
- ➢ Represented USC Paleosciences and shared my research at the Natural History Museum of Los Angeles County's (NHMLA) annual "Dino Fest." 2021
- ➢ Skype a Scientist speaker for the topic of Paleontology 2021
- ➢ The Conversation Article, Godzilla vs. Kong: A functional morphologist uses science to pick a winner. 2021
- ➢ 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. 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 discussed 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, of diverse backgrounds interested in STEM fields. 2019
- ➢ Taught two lessons on geologic time and evolution to mostly Black and brown 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
- ➢ Designed a "Deep Time and Evolution" tour at the Rutgers Geology Museum for visitors of all ages. 2014
