

**Curriculum Vitae**  
**Kiersten K. Formoso**  
**Presidential Postdoctoral Fellow, Rutgers University**

Dept. of Ecology, Evolution, & Natural Resources  
14 College Farm Road  
New Brunswick, NJ 08901

k.formoso@rutgers.edu | (973) 459-9697  
www.formorphology.com | @Formorphology

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**EDUCATION**

- ❖ University of Southern California, Los Angeles, CA, USA 2018-2023
    - Ph.D., Geological Sciences
  - ❖ Virginia Tech, Blacksburg, VA, USA 2016-2017
    - Graduate studies, Geosciences (no degree obtained)
  - ❖ Rutgers University 2012-2016
    - B.Sc., Ecology, Evolution, and Natural Resources
    - Minor in Music
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**AFFILIATIONS**

- ❖ Research Associate 2024-present
    - American Museum of Natural History, Division of Paleontology
  - ❖ Research Associate 2020-present
    - Natural History Museum of Los Angeles County, Dinosaur Institute
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**EMPLOYMENT HISTORY**

- ❖ Presidential Postdoctoral Fellow 2024-present
    - Rutgers University,  
Department of Ecology, Evolution, and Natural Resources
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**EXTERNAL GRANTS AND FELLOWSHIPS**

***Total amount of funding received: \$150,000***

- ❖ Graduate Research Fellowship (NSF GRFP) 2018-2023
    - National Science Foundation, \$138,000
  - ❖ Fellowship for Graduate Student Travel 2022
    - Society of Integrative and Comparative Biology, \$2500
  - ❖ Graduate Student Research Grant 2021
    - Geological Society of America (GSA), \$2000
  - ❖ Student Research Grant 2020
    - Paleontological Society, \$1000
  - ❖ Student Research Grant 2020
    - Evolving Earth Foundation, \$3500
  - ❖ Student Travel Grant 2019
    - GSA Cordilleran Section, \$500
  - ❖ Graduate Student Research Grant 2017
    - Geological Society of America (GSA) \$2000
  - ❖ Student Travel Grant 2017
    - Jackson School of Geosciences, \$500
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## **PEER-REVIEWED PUBLICATIONS**

**Total Citations: 219; h-index: 4**

- 5) **Formoso, K. K.**, Cribb, A. T., Woolley, C. H., Beech, J., Brophy, S., Byrne, P., Cassady, V.C., Godbold, A.L., Larina, E., Maxeiner, P. P., Wu, Y.H., Corsetti, F. A., & Bottjer, D. J. (2023). Contrasting terrestrial and marine ecospace dynamics after the end-Triassic mass extinction event. *Proceedings of the Royal Society B*, 290(2012), 20232232. <https://doi.org/10.1098/rspb.2023.2232>
- 4) **Formoso, K. K.**, Habib, M. B., & Vélez-Juarbe, J. (2023). The Role of Locomotory Ancestry on Secondarily Aquatic Transitions. *Integrative and Comparative Biology*, 63(6), 1140-1153. <https://doi.org/10.1093/icb/icad112>
- 3) Sereno, P. C., Myhrvold, N., Henderson, D. M., Fish, F. E., Vidal, D., Baumgart, S. L., Keillor, T. M., **Formoso, K. F.**, & Conroy, L. L. (2022). Spinosaurus is not an aquatic dinosaur. *Elife*, 11, e80092. <https://doi.org/10.7554/eLife.80092>
- 2) Griffin, C. T., Stocker, M. R., Colleary, C., Stefanic, C. M., Lessner, E. J., Riegler, M., **Formoso, K.**, Koeller, K., & Nesbitt, S. J. (2021). Assessing ontogenetic maturity in extinct saurian reptiles. *Biological Reviews*, 96(2), 470-525. <https://doi.org/10.1111/brv.12666>
- 1) **Formoso, K.**, Nesbitt, S. J., Pritchard, A. C., Stocker, M. R., & Parker, W. G. (2019). A long-necked tanystropheid from the Middle Triassic Moenkopi Formation (Anisian) provides insights into the ecology and biogeography of tanystropheids. *Palaeontologia Electronica*, 22, 1–15. <https://doi.org/10.26879/988>

## **In Prep**

- 6) **Formoso KK**, Habib MB, Cieri R, Fish FE. Mosasaur caudal variation and burst performance: evolutionary and ecological insights from four reconstructions. Imminently submitting to *Proceedings of the Royal Society B*.
- 7) **Formoso KK**, Lloyd G, Habib MB, Velez-Juarb J, Bottjer D. Constraint and release in axial and appendicular modules of secondarily aquatic amniotes. In prep for *Nature Ecology and Evolution*.
- 8) **Formoso KK**, Giljarhus KET, Flammang B. Surface swimming drag of terrestrial amniotes and insights into secondarily aquatic transformations and lack thereof. In prep for *Journal of Experimental Biology*.
- 9) Ghosh N, Gruska P, Woolley HC, **Formoso KK**. Cribb AT. Comparing ecological signatures of ancient and modern extinction. In prep for *Current Biology*.

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## **STUDENT ADVISING AND MENTORING**

- ❖ **Maia Klarin**, 4+1 Master's Student, Earth and Planetary Sciences—co-advising
  - ❖ **Leah Kapps**, Undergraduate, George H. Cook Scholar—Honors Thesis reader
  - ❖ Provided comprehensive paleontology career guidance to numerous undergraduates in Ecology, Evolution, and Natural Resources (SEBS), and Earth and Planetary Sciences (SAS)
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## **AWARDS, HONORS, AND RECOGNITION**

- ❖ Forbes 30 Under 30 2023
  - ❖ Best Student Poster 2022
    - Paleontological Society, Geological Society of America Annual Meeting
  - ❖ Best Lightning Talk 2022
    - Palaeontological Association Annual Meeting
  - ❖ Inaugural Communicator of the Year (PhD student category) 2022
    - University of Southern California,  
Dornsife College of Letters, Arts & Sciences
  - ❖ Steven Vogel Award 2022
    - Society of Integrative and Comparative Biology (SICB) Annual Meeting
  - ❖ Liem Award for Best Student Poster 2022
    - Society of Integrative and Comparative Biology (SICB) Annual Meeting
  - ❖ Albert E. Wood Award 2021
    - Society of Vertebrate Paleontology (SVP)
  - ❖ Winnifred Goldring Award 2020
    - Association for Women Geoscientists (AWG)
  - ❖ Student Research Prize 2019
    - USC Paleosciences Research Consortium (PRC)
  - ❖ P. Smouse Award for Outstanding Student in Evolution 2016
    - Rutgers University, Department of Ecology, Evolution, and Natural Resources
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## **SELECT CONFERENCE PRESENTATIONS**

† = poster

- 14) **Formoso, K.** Correlations between degree of axial and appendicular change, derived swimming style, and ancestral terrestrial state in secondarily aquatic amniotes.
  - SECAD (Secondary Adaptation of Tetrapods to Life in Water), **2024**, Liège, Belgium
- 13) **Formoso, K.** Axial morphology may drive swimming style in secondarily aquatic tetrapods.
  - Society of Integrative and Comparative Biology Annual Meeting, **2023**, Austin, Texas
- 12) **Formoso, K.** Correlations between degree of axial and appendicular change, derived swimming style, and ancestral terrestrial state in secondarily aquatic amniotes.
  - Society of Vertebrate Paleontology 83<sup>rd</sup> Annual Meeting, **2023**, Cincinnati, Ohio
  - ***Selected for the Romer Prize Session for best student oral presentation.***
- 11) **Formoso, K., Lloyd, G., Bottjer, D.** Appendicular and axial modular change reveals different routes taken by secondarily aquatic reptiles and mammals.
  - Paleontological Association Annual Meeting, **2022**, Cork, Ireland.
  - ***Won best Lightning Talk***
- 10) †**Formoso, K.** Mosasaurs and Their Relative Burst and Cruise Capabilities.
  - Geological Society of America Annual Meeting, **2022**, Boulder, Colorado
  - ***Won Best Student Poster***
- 9) †**Formoso, K.** A functional matrix approach in comparing secondarily aquatic transitions across clades.
  - Society of Integrative and Comparative Biology Annual Meeting, **2022**, online.
  - ***Won Liem Award for Best Student Poster***

- 8) Cribb, A., **Formoso, K.**, Woolley, C., Beech, J., Brophy, S., Byrne, P.J., Cassady, V., Godbold, A., Larina, E., Maxeiner, P., Wu, Y., Corsetti, F., Bottjer, D. Decoupled Terrestrial and Marine Ecological Recovery after the End-Triassic Mass Extinction
  - Geological Society of America Annual Meeting, **2022**, Boulder, Colorado
- 7) †**Formoso, K.** 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.
- 6) †Foffa, D., Johnson, M.M., Schwab, J. A., **Formoso, K.K.**, Young, M.T. Changes in limb and body proportions and major habitat shifts in crocodylomorpha.
  - SECAD (Secondary Adaptation of Tetrapods to Life in Water), **2021**, Online
- 5) **Formoso, K.** Terrestrial posture and its controls on secondarily aquatic amniote evolution: forelimb changes in land-to-sea lineages.
  - Society of Vertebrate Paleontology 79<sup>th</sup> Annual Meeting, **2020**, Online
- 4) **Formoso, K.**, Habib, M.B., Bottjer, D.J. Reassessment of the Mosasaur Pectoral Girdle and its Role in Aquatic Locomotion
  - Geological Society of America Annual Meeting, **2019**
- 3) **Formoso, K.**, Habib, MB., Bottjer, DJ. Reassessing the mosasaur pectoral girdle and its role in swimming function: not entirely whale-like after all
  - Society of Vertebrate Paleontology 79<sup>th</sup> Annual Meeting, **2019**, Brisbane, Australia
- 2) **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 (NERVES), **2018**, NYIT
- 1) †**Formoso, K.**, Nesbitt, S. J., Stocker, M. R., Pritchard, A. C., Parker, W. 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, **2017**, Calgary, Alberta.
  - *Selected for the Colbert Prize Session for best student poster.*

### **SELECT INVITED PUBLIC TALKS AND SEMINARS**

† = public talk

- ❖ †**Keynote Talk:** Science, Art, and the Fake Barrier in Between
  - Nevada Museum of Art, STEAM Conference, **April 2025**
- ❖ †Inspiring the Impossible: Paleontology's Influence on Sci-Fi and Fantasy
  - Nevada Museum of Art, Public Talk, **April 2025**
- ❖ †Going for a Swim: Influences of Terrestrial Ancestry on Land-to-Sea Transformations
  - Royal Tyrrell Museum, Speaker Series, **April 2025**
- ❖ †Land Before Sea: Terrestrial Ancestry and Aquatic Morphology
  - Natural History Museum of Utah, DinoFest, **January 2025**
- ❖ †The Way of Water: Functional controls of land-to-sea transformations
  - Museum of the Rockies, Dinosaurs and MOR, **March 2024**
- ❖ Assessing the role of ancestral terrestrial morphology on the land-to-sea transition in secondarily aquatic amniotes.
  - Montana State University, Departmental Seminar, **March 2022**

- ❖ †Exploring the locomotor controls of the land-to-sea transition across marine reptiles and mammals.
  - Burpee Museum’s PaleoFest, **February 2021**
- ❖ Investigating controls of ancestral terrestrial posture and associative locomotor functions on secondarily aquatic transitions in quadrupedal amniotes.
  - University of Washington PaleoLunch Seminar, **January 2021**
- ❖ Tanystropheids of the Triassic and Archosauromorph Radiation into semi-aquatic environments
  - University of Edinburgh Paleontology Group Seminar, **June 2020**

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**SELECT PUBLIC OUTREACH**

- ❖ Panelist, New York Comic Con 2025
    - Natural History of Monster Hunter
  - ❖ Nerd Nite LA featured speaker 2023
    - Talk title: The Way of Water, The Evolution of Marine Tetrapods
  - ❖ Featured speaker for Paleo Chats 2022
    - NHMLA’s DinoFest
  - ❖ Series Panelist 2022
    - Field Museum Black History Month Seminar
  - ❖ “How to make a science meme” 2022
    - SICB Science Communication Workshop
  - ❖ Spoke to a Cal State San Bernardino biology class, a Hispanic-Serving Institution about my career path. 2022
  - ❖ Table and specimen-based outreach 2021
    - Dino Fest, Natural History Museum of Los Angeles County’s (NHMLA)
  - ❖ Speaker, Mosasaurs 2020
    - Rutgers Geology Museum’s “Ask a Geologist”
  - ❖ 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 2019 & 2020 at the Raymond M. Alf Museum of Paleontology’s annual “Fossil Fest.”
  - ❖ Featured panelist at Long Beach Comic Expo for the session “Pop Paleo” 2020 which discussed how paleontology influences popular culture.
  - ❖ Presented my talk titled “Land was just a phase! I’m not that tetrapod anymore.” at Nerd Nite LA, 2019, where speakers share various “nerdy” topics with the public in a stand-up setting.
  - ❖ Gave a talk about my research and personal journey for “Project Scientist,” 2019 a program that aims to get young girls, ages 4-12, interested in STEM fields.
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## **MEDIA AND PUBLICITY**

### ***Television and Film***

- ❖ Series consultant and featured scientist 2026
  - Upcoming BBC program. To be featured in 2 episodes.
- ❖ Featured scientist and premier panelist 2024
  - *Why Dinosaurs?* Pinto Productions, upcoming PBS broadcast
- ❖ Episode consultant and featured scientist 2024
  - Lost Beasts, Season 2, Windfall Films
- ❖ Series consultant and featured scientist 2023
  - BBC and Apple TV+'s Prehistoric Planet Season 2
- ❖ Series consultant and featured scientist 2023
  - PBS NOVA's Ancient Earth
- ❖ Series consultant 2022
  - BBC and Apple TV+'s Prehistoric Planet Season 1

### ***Public Writing***

- ❖ Prehistoric Planet Discovering Dinosaurs program contributor, Lightroom, London. **2025.**  
Wrote a piece on mosasaurs for the physical program that accompanies the Lightroom show.
- ❖ "Godzilla vs. Kong: A functional morphologist uses science to pick a winner." **2021.**  
<https://theconversation.com/godzilla-vs-kong-a-functional-morphologist-uses-science-to-pick-a-winner-157101>

### ***Media Coverage***

- ❖ "Forbes 30 Under 30." 2023. <https://www.forbes.com/profile/kiersten-formoso/?sh=4fb8e5c11250>
- ❖ "These Prehistoric Sea Monsters Had a Mean Breast Stroke." Smithsonian Magazine. 2019.

### ***Books***

- ❖ Featured in the interactive Amazon Alexa children's book "Discover: Dinosaurs," by Weldon Owen and John Long. **Published 2025, Simon & Schuster.**
- ❖ Featured in the children's book "Everything You Know About Dinosaurs is Wrong" by Dr. Nick Crumpton. **Published 2021, Nosy Crow.**

### ***Article Contributions***

- ❖ "Barney's makeover has dinosaur experts scratching their heads: 'I don't even know where to start with it.'" **2023.** <https://www.yahoo.com/entertainment/barney-makeover-dinosaur-experts-paleontologists-redesign-purple-t-rex-010536431.html>
- ❖ "Spinosaurus had penguin-like bones, a sign of hunting underwater." **2022.**  
<https://www.nationalgeographic.com/science/article/spinosaurus-had-penguin-like-bones-a-sign-of-hunting-underwater>
- ❖ "Could dinosaurs swim? A new Fossil reveals an age-old debate." **2022.**  
<https://www.nationalgeographic.com/magazine/article/swimming-dinosaur-new-fossil-natovenator>
- ❖ "When Coronavirus Closes Your Lab, Can Science Go On?" **2020.**  
<https://www.nytimes.com/2020/03/23/science/coronavirus-closed-labs.html>

## ***Podcasts***

- ❖ See Jurassic Right, Back to School Series, **2025**
  - ❖ Terrible Lizards, Marine Reptiles, **2021**
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## **TEACHING**

### **Postdoctoral Teaching**

- ❖ Instructor 2025
  - Vertebrate Zoology (11:216:325), 4 credits
- ❖ Instructor 2024
  - Topics in Ecology, Evolution, and Natural Resources (11:216:104), 1 credit

### **Graduate Teaching and Development**

- ❖ Completed USC's CET (Center for Excellence in Teaching) Future Faculty Teaching Institute's 14-week course. 2020
  - ❖ Teaching Assistant 2019, 2023
    - History of Life: A View from the Museum, LAB (GEOL 126)
  - ❖ Teaching Assistant 2018
    - Planet Earth (GEOL 105), University of Southern California
  - ❖ Teaching Assistant 2016-2017
    - Physical Geology Lab (GEOS 1104), Virginia Tech
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## **FIELD EXPERIENCE**

### **Participant**

- ❖ Ghost Ranch (Triassic), New Mexico 2021, 2022, 2024
  - ❖ Bears Ears National Monument (Jurassic, Triassic), Utah 2022
  - ❖ Bisti De-Na-Zin Wilderness (Late Cretaceous), New Mexico 2021
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## **PROFESSIONAL SERVICE**

- ❖ Journal Peer Reviewer
  - PeerJ*
  - Paleobiology*
  - Scientific Reports*
- ❖ Session Chair, Technical Session 157 D20. Paleontology: Vertebrate Paleobiology I
  - Geological Society of America Meeting, 2019
- ❖ Session Chair, Technical Session X: Paleontological Practices
  - Society of Vertebrate Paleontology 85<sup>th</sup> Annual Meeting, 2025
- ❖ Lanzendorf-National Geographic Paleoart Prize Committee Member and Judge