## Curriculum Vitae CHRISTOPHER THOMAS GRIFFIN DEPARTMENT OF EARTH AND PLANETARY SCIENCES

Yale University 210 Whitney Ave. New Haven CT 06511 Phone: +1 (530) 217-9516; E-mail: chris.griffin@yale.edu www.griffinlabpaleo.com

### **Professional Appointments**

Assistant Professor (anticipated start July 2024)
Department of Geosciences, Princeton University
Curatorial Affiliate (December 2022—Present)
Division of Vertebrate Paleontology, Yale Peabody Museum of Natural History
Postdoctoral Fellow (July 2021–June 2024)
Department of Earth and Planetary Sciences, Yale University
Postdoctoral Associate (July 2020–June 2021)
Department of Earth and Planetary Sciences, Yale University

### Education

Virginia Tech, Blacksburg, VA, USA
<u>Ph.D.</u> in Geosciences (2020)
<u>M.S.</u> in Geosciences (2016)
Cedarville University, Cedarville, OH, USA
B.S. in Biology, Geology, and Molecular & Cellular Biology, with highest honor (2014)

## **Peer-Reviewed Publications**

Total citations: 385; h-index: 10 (Google Scholar); † = mentored undergraduate

- 17) Griffin, C. T., P. M. Barrett, D. E. Barta, B. T. Breeden, M. T. Carrano, K. E. J. Chapelle, A. Chinsamy, J. Choiniere, M. D. Ezcurra, R. B. Irmis, A. Marsh, S. N. McDavid, D. Munyikwa, S. Nesbitt, K. Padian, W. G. Parker, T. B. Rowe, N. D. Smith, S. Spiekman, J. Stiegler, R. S. Tykoski, M. Zondo. In Press. *Syntarsus* Raath, 1969 (Dinosauria, Theropoda): proposed conservation of the genus-group name by suppression of *Syntarsus* Fairmaire, 1869 (Insecta, Coleoptera). Bulletin of Zoological Nomenclature.
- 16) Barta, D., C. T. Griffin, M. A. Norell. 2022. Osteohistology of a Triassic dinosaur population reveals highly variable growth trajectories typified early dinosaur ontogeny. Scientific Reports 12: 17321.
- 15) Egawa, S., C. T. Griffin, P. Bishop, R. Pintore, H. P. Tsai, J. F. Botelho, D. Smith-Paredes, S. Kuratani, M. Norell, S. Nesbitt, J. Hutchinson, B.-A. Bhullar. 2022. The dinosaurian femoral experienced a morphogenetic shift from torsion to growth along the avian stem. Proceedings of the Royal Society B: Biological Sciences 289: 20220740.
- 14) Griffin, C. T., B. M. Wynd, D. Munyikwa, T. J. Broderick, M. Zondo, S. Tolan, M. C. Langer, S. J. Nesbitt, H. R. Taruvinga. 2022. Africa's oldest dinosaurs reveal early suppression of dinosaur distribution. Nature 609: 313–319.

- 13) Griffin, C. T., J. F. Botelho, M. Hanson, M. Fabbri, D. Smith-Paredes, R. M. Carney, M. A. Norell, S. Egawa, S. M. Gatesy, T. B. Rowe, R. M. Elsey, S. J. Nesbitt, B.-A. S. Bhullar. 2022. The developing bird pelvis passes through ancestral dinosaurian conditions. Nature 608: 346–352.
- 12) Griffin, C. T., M.R. Stocker, C. Colleary, C. M. Stefanic, E. J. Lessner, M. Riegler, K. Formoso, K. Koeller, S. J. Nesbitt. 2021. Assessing ontogenetic maturity in extinct saurian reptiles. Biological Reviews 96: 470–525.
- Griffin, C. T., and S. J. Nesbitt. 2020. Does the maximum body size of theropods increase across the Triassic–Jurassic boundary? Integrating ontogeny, phylogeny, and body size. The Anatomical Record 303: 1158–1169.
- 10) Griffin, C. T. 2019. Large neotheropods from the Upper Triassic of North America and the early evolution of large theropod body sizes. Journal of Paleontology 93: 1010–1030. Selected by Cambridge University Press for waived open access fee on account of scientific merit and high impact potential.
- 9) Griffin, C. T. and K. D. Angielczyk. 2019. The evolution of the dicynodont sacrum: constraint and innovation in the synapsid axial column. Paleobiology 45: 201–220.
- 8) Griffin, C. T., L. S. Bano<sup>†</sup>, A. H. Turner, N. D. Smith, R. B. Irmis, S. J. Nesbitt. 2019. Integrating gross morphology and bone histology to assess skeletal maturity in early dinosauromorphs: new insights from *Dromomeron* (Archosauria: Dinosauromorpha). PeerJ 7: e6331.
- 7) **Griffin, C. T.** 2018. Pathological bone tissue in a Late Triassic neotheropod fibula, with implications for the interpretation of medullary bone. New Jersey State Museum Investigations 6: 2–10.
- 6) McLain, M., D. Nelsen, K. Snyder, C. T. Griffin, B. Siviero, L. Brand, A. Chadwick. 2018. Tyrannosaur cannibalism: A case of a tooth-traced tyrannosaurid bone in the Lance Formation (Maastrichtian), Wyoming. PALAIOS 33: 164–173.
- 5) Griffin, C. T. 2018. Developmental patterns and variation among early theropods. Journal of Anatomy 232: 604–640.
- 4) Griffin, C. T., C. M. Stefanic, W. G. Parker, A. Hungerbuehler, M. Stocker. 2017. Sacral anatomy of the phytosaur *Smilosuchus adamanensis*, with implications for pelvic girdle evolution among Archosauriformes. Journal of Anatomy 231:886–905.
- Griffin, C. T. and S. J. Nesbitt. 2016. Anomalously high variation in postnatal development is ancestral for dinosaurs but absent in birds. Proceedings of the National Academy of Sciences, USA 113: 14757-14762.
- 2) Kuruvilla, H., B. Schmidt, S. Song, M. Bhajjan, M. Merical, C. Alley, C. Griffin, D. Yoder, J. Hein, D. Kohl, C. Puffenberger, D. Petroff, E. Newcomer, K. Good, G. Heston, A. Hurtubise. 2016. Netrin-1 peptide is a chemorepellent in *Tetrahymena thermophila*. International Journal of Peptides 2016: 7142868.
- Griffin, C. T. and S. J. Nesbitt. 2016. The histology and femoral ontogeny of the Middle Triassic (?late Anisian) dinosauriform *Asilisaurus kongwe* and implications for the growth of early dinosaurs. Journal of Vertebrate Paleontology 36: e1111224. *Winner of Taylor & Francis Award for Best Student Article in the Journal of Vertebrate Paleontology, 2nd Place*

## **External Grants and Fellowships**

**Total amount of competitive funding offered:** \$687,382.74 (USD) **Total amount of competitive funding received:** \$433,442 (USD)

2020	COVID-19 Grant Support
	National Geographic Society, \$3,350 (co-principal investigator)
	Postdoctoral Research Fellowship in Biology (NSF PRFB)
	National Science Foundation, \$207,000.
	Endowed Postdoctoral Fellowship in the Biological Sciences
	Yale University, \$50,004.
	Marie Skłodowska-Curie Actions Individual Fellowship
	European Commission Research Executive Agency, 212,933.76 €. Review score
	98.20/100. Declined.
2019	Arthur J. Boucot Student Research Award
	Paleontological Society, \$1,200
	Jackson School of Geosciences Student Travel Grant
	Society of Vertebrate Paleontology, \$600
	Young Researcher Travel Grant for Evolutionary Developmental Biology
	Developmental Dynamics, \$500
2018	Exploration Grant
	National Geographic Society, \$27,390 (co-principal investigator)
2017	Graduate Student Research Grant
	Geological Society of America, \$1,755
	Early Career Grant
	National Geographic Society, \$4,980
2015	Graduate Research Fellowship Program (NSF GRFP)
	National Science Foundation, \$132,000
	Graduate Student Research Grant
	Geological Society of America, \$1,607
2014	Research Grant
	Jurassic Foundation, \$2,356

## **Internal Competitive Research Grants**

2018	Graduate Research Development Program Grant
	Virginia Tech Graduate Student Assembly, \$1,000
2017	Graduate Research Development Program Grant
	Virginia Tech Graduate Student Assembly, \$1,000
2015	Graduate Research Development Program Grant
	Virginia Tech Graduate Student Assembly, \$500

### Awards, Scholarships, and Honors

2022	Albert Edward Phaup Award
	Geological Society of Zimbabwe
	Postdoctoral Platform Presentation Award for best postdoctoral presentation
	American Association of Anatomy Annual Meeting
2020	College of Science Outstanding Doctoral Student
	Virginia Tech

	Best Talk in Session—Graduate Student Research Symposium
	Virginia Tech Department of Geosciences
	Graduate School Doctoral Assistantship
	VT Department of Geosciences, VT Gradate School (declined)
2019	Charles J. Gose Jr. Summer Scholarship
	VT Department of Geosciences
	Petroleum Industry Research Scholarshin
	VT Department of Geosciences
	Rest Un-Coar Five Telk_ Graduate Student Research Symposium
	Virginia Tach Department of Geosciences
	Post Tolly in Session – Craduate Student Descende Symposium
	Dest Taik in Session—Graduate Student Research Symposium
	virginia Tech Department of Geosciences
	Charlotte Mangum Student Support Program
	Society for Integrative and Comparative Biology
	Graduate Student Assembly Travel Fund
	VT Graduate Student Assembly
2018	Charlotte Mangum Student Support Program
	Society for Integrative and Comparative Biology
2017	Colbert Prize for Outstanding Student Poster Presentation
	Society of Vertebrate Paleontology Annual Meeting
	Taylor & Francis Award for Best Student Article in the <i>Journal of Vertebrate</i>
	Paleontology, 2 <sup>nd</sup> Place
	Society of Vertebrate Paleontology
	Travel Crant
	International Symposium on Dalachistology
	Trovial Cront
	I ravel Grant
	Last Days of Pangea Symposium
2016	Department Outstanding Master's Student
	VT Department of Geosciences
	College of Science Outstanding Master's Student
	Virginia Tech
	Graduate Student Assembly Travel Fund
	Virginia Tech
2015	Graduate Student Assembly Travel Fund
	VT Graduate Student Assembly
	Charles E. and Frances P. Sears Research Scholarship
	VT Department of Geosciences
	Charles F and Frances P Sears Summer Scholarshin
	VT Department of Geosciences
2014	Craduate Student Assembly Travel Fund
2014	Virginia Tash
	CCCU Tuition Waison
	CCCU Fultion waiver
	2010-2014, Cedarville University
	Transfer Academic Excellence Award
	2010-2014, Cedarville University
	Transfer Academic Grant
	2010-2014, Cedarville University
	Dean's List
	2010-2014, Cedarville University
2013	BIO-OCE REU Travel Scholarship
	National Science Foundation

# Alumni Honor Scholarship for Science and Mathematics

Cedarville University

### 2012 L. Bert Frye Geology Award Cedarville University Academic Excellence Geology Award Cedarville University

### **Research Interests**

- The relationship between evolution and development
- Intraspecific variation
- Evolutionary radiations and post-extinction ecological recovery
- Homology and mechanisms of convergent evolution

## **Invited Talks**

2024 Anatomy Connected symposium, Visualizing the #BirdAgenda: Integrating novel imaging modalities into avian functional morphology. Toronto, Ontario. 2023 Association of Materials and Methods in Paleontology annual meeting symposium, Fieldwork Challenges and Global Perspectives: Diversity, Equity, Access, Inclusion (DEAI) and Decolonization in Paleontology, Seattle, Washington. Departmental seminar series, Department of Geosciences, Princeton University, Princeton, 2022 New Jersey. Tri-Beta Society seminar series, Biology Department, Truman State University, Kirksville, Missouri. 2021 DeFord Lecture Seminar Series, Jackson School of Geosciences, University of Texas at Austin, Austin, Texas. Postdoctoral Seminar Series, Department of Earth & Planetary Sciences, Yale University, New Haven, Connecticut. 2019 Seminar series, Field Museum of Natural History, Chicago, Illinois. International Congress of Vertebrate Morphology symposium, The axial skeleton: diversity, patterning, and function. Prague, Czech Republic. St. John's College, Harare, Zimbabwe. Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe. 2017 Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe. American Emu Association Annual Meeting, Springfield, Missouri. 2015 Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe.

# **Conference Presentations**

\* = podium presentation,  $^{\circ}$  = poster presentation,  $^{\dagger}$  = mentored undergraduate

- 47) Gordon, C. M., C. T. Griffin, J. A. Gauthier, B.-A. S. Bhullar. 2024. Aquatic tetrapod limbs converge on a common morphology, predicting both full and partial commitments to life in the sea. Society of Integrative and Comparative Biology Annual Meeting, Seattle, Washington.
- 46) Gordon, C. M., C. T. Griffin, J. A. Gauthier, B.-A. S. Bhullar. 2023. Limb proportions predict aquatic habits in extinct tetrapods: A case study for assessing predictive model accuracy in paleontology. Geological Society of America Connects, Pittsburgh, Pennsylvania.

- 45) †McKinney, I. T., C. T. Griffin, S. J. Nesbitt. 2023. What is the ontogenetic age of early dinosaurs and their close relatives? A survey of ontogenetic ages through histological data. Society of Vertebrate Paleontology Annual Meeting, Cincinnati, Ohio.
- 44) \*Griffin, C. T., Z. S. Morris, B.-A. S. Bhullar. 2023. The developmental mechanisms underlying the evolution of the avian pelvis from the ancestral archosaurian condition. Society of Vertebrate Paleontology Annual Meeting, Cincinnati, Ohio.
- 43) †Trinidad, V., D. Munyikwa, M. Zondo, T. J. Broderick, S. J. Nesbitt., C. T. Griffin. 2023. Testing Triassic climate variability and vertebrate distribution across southern Pangea with comparative histological analysis. Society of Vertebrate Paleontology Annual Meeting, Cincinnati, Ohio.
- 42) \*Griffin, C. T., Z. S. Morris, B.-A. S. Bhullar. 2023. The developmental mechanisms underlying the evolution of the avian pelvis. International Congress of Vertebrate Morphology, Cairns, Australia.
- 41) \*Griffin, C. T. 2023. Collaborative fieldwork in the global south: building relationships, avoiding 'parachute science', and preserving natural history resources. Association of Materials and Methods in Paleontology annual meeting, Seattle, Washington. *Invited as part of the symposium "Fieldwork Challenges and Global Perspectives: Diversity, Equity, Access, Inclusion (DEAI) and Decolonization in Paleontology"*.
- 40) Barta, D. E., C. T. Griffin, D. J. Simon. 2023. First evidence of paleopathology among the "little dinosaurs of Ghost Ranch": a potential ossified periosteal hematoma on a tibia of the Triassic theropod dinosaur *Coelophysis bauri*. Anatomy Connected, Washington, D.C.
- 39) \*Griffin, C. T., N. G. Pezzoni, R. Pintore, R. B. Irmis, N. D. Smith, A. H. Turner, A. D. Marsh, S. J. Nesbitt. 2023. Early theropod hindlimb morphology evolved via shifts in ontogenetic timing. Society of Integrative and Comparative Biology Annual Meeting, Austin, Texas.
- 38) \*Griffin, C. T., N. G. Pezzoni, R. Pintore, R. B. Irmis, N. D. Smith, A. H. Turner, A. D. Marsh, S. J. Nesbitt. 2022. Femoral ontogeny of the Triassic saurischian *Tawa hallae* suggests that neotheropod hindlimbs evolved via shifts in ontogenetic timing. Society of Vertebrate Paleontology Annual Meeting, Toronto, Ontario.
- 37) Tsai, H. P., C. T. Griffin. 2022. Quantitative reconstruction of the cartilaginous components of the sauropod hindlimb module: Evolutionary transitions and functional significance. Society of Vertebrate Paleontology Annual Meeting, Toronto, Ontario.
- 36) Barta, D., C. Griffin, D. J. Simon. 2022. First histological evidence of a bony abnormality from the Ghost Ranch *Coelophysis* quarry, New Mexico: an externally cryptic exostosis in a *Coelophysis bauri* (Dinosauria: Theropoda) tibia. Society of Vertebrate Paleontology Annual Meeting, Toronto, Ontario.
- 35) †Trinidad, V., D. Munyikwa, M. Zondo, T. J. Broderick, S. J. Nesbitt., C. T. Griffin. 2022. Testing Triassic climate variability and vertebrate distribution across southern Pangea with comparative histological analysis. Geological Society of America Connects Annual Meeting, Denver, Colorado. Winner of the Paleontological Society Award for Best Undergraduate Student Poster.
- 34) \*Griffin, C. T., J. F. Botelho, M. Hanson, M. Fabbri, D. Smith-Paredes, R. M. Carney, M. A. Norell, Shiro Egawa, S. M. Gatesy, T. B. Rowe, R. M. Elsey, S. J. Nesbitt, B.-A. S. Bhullar. 2022. The

developing bird pelvis passes through ancestral archosaurian and dinosaurian conditions. Experimental Biology 2022, Philadelphia, PA. *Winner of the Postdoctoral Platform Presentation Award for best postdoctoral presentation.* 

- 33) °Griffin, C. T., and C. Colleary. 2021. The osteohistology of hyoid elements preserves a record of growth in archosaurs. Society of Vertebrate Paleontology Annual Meeting, remote virtual meeting.
- 32) Wynd, B. M., **Griffin, C. T.**, and Nesbitt, S. J. 2021. Testing the presence of abiotic biogeographic drivers using only phylogeny: subtropical aridity as a barrier for early dinosaur dispersal. Society of Vertebrate Paleontology Annual Meeting, remote virtual meeting.
- 31) Egawa, S., P.J. Bishop, R. Pintore, H.P. Tsai, C.T. Griffin, J.F. Botelho, D. Smith-Paredes, S.J. Nesbitt, J.R. Hutchinson, B.A.S. Bhullar. 2021. The dinosaurian femoral head experienced a cryptic evolutionary shift in morphogenetic process. The 2<sup>nd</sup> AsiaEvo Conference, remote virtual meeting.
- 30) Wynd, B. M, C. T. Griffin, S. J. Nesbitt. 2021. Testing the presence of abiotic biogeographic drivers using only phylogeny: subtropical aridity as a barrier for early dinosaur dispersal. Evolution Annual Meeting, remote virtual meeting.
- 29) \*Griffin, C. T. 2021. Africa's oldest dinosaurs reveal early climatic suppression of dinosaurian biogeographic distribution (part 1). Triassic Vertebrate Paleontology Meetup, remote virtual meeting.
- 28) Egawa, S., P.J. Bishop, R. Pintore, C.T. Griffin, H.P. Tsai, J.F. Botelho, D. Smith-Paredes, S. Kuratani, M.A. Norell, S.J. Nesbitt, J.R. Hutchinson, B.A.S. Bhullar. 2021. The evolutionary change of morphogenesis of dinosaur-type femoral head. Society for Integrative and Comparative Biology Annual Meeting, remote virtual meeting.
- 27) \*Griffin, C. T. 2020. 'Recapitulation' of ancestral states across the early ontogeny in the avian pelvis is driven by persistent modularity in the archosaurian hindlimb. Society of Vertebrate Paleontology Annual Meeting, remote virtual meeting. *Selected for the Romer Prize Session for best student oral presentation.*
- 26) Tsai, H. P., and C. T. Griffin. 2020. The cartilaginous hips of Diplodocoidea: functional implications for highly specialized locomotor behaviors among sauropods. Society of Vertebrate Paleontology Annual Meeting, remote virtual meeting.
- 25) **°Griffin, C. T.,** and M. S. Stocker. 2020. "How do you know where to dig?": Using a student-driven experiential learning activity to reach hypothesis-based fieldwork in a large general education university course. Society of Vertebrate Paleontology Annual Meeting, remote virtual meeting.
- 24) Tsai, H. P., and C. T. Griffin. 2019. The cartilaginous hips of Diplodocoidea: functional implications for highly specialized locomotor behaviors among sauropods. Society for Integrative and Comparative Biology Annual Meeting, Austin, TX.
- 23) \*Griffin, C. T., J. Botelho, M. Hanson, M. Fabbri, S. J. Nesbitt, B.-A. Bhullar. 2019. The avian pelvis possesses ancestral dinosaurian and archosaurian character states early in ontogeny. Society of Vertebrate Paleontology Annual Meeting, Brisbane, Australia.

- 22) Colbert, M. W. and C. T. Griffin. Sample size artifacts in paleontological analyses of ontogenetic sequences. Society of Vertebrate Paleontology Annual Meeting, Brisbane, Australia.
- 21) \*Griffin, C. T., J. Botelho, M. Hanson, M. Fabbri, S. J. Nesbitt, B.-A. Bhullar. 2019. The evolution of the avian sacrum, and the transition from tail- to hip-centered locomotion during the evolution of birds. International Congress of Vertebrate Morphology, Prague, Czech Republic. *Invited as part of the symposium "The axial skeleton: diversity, patterning, and function".*
- 20) Nesbitt S.J., C. T. Griffin, R. T. Muller, C. Pacheco, F. Preto, D. E. Barta, A. Marsh, B. M. Wynd, M. Langer, K. Chapelle. 2019. Dinosaurs inherited highly variable and extended ontogenetic pathways from their closest relatives and subsequently lost this pattern. International Congress of Vertebrate Morphology, Prague, Czech Republic.
- 19) °Griffin, C., J. Botelho, M. Hanson, M. Fabbri, B.-A. Bhullar. 2019. The avian pelvis possesses ancestral dinosaurian character states early in development. Society of Integrative and Comparative Biology Annual Meeting, Tampa, FL.
- 18) °Taruvinga<sup>†</sup>, H., B. Wynd, S. Tolan, C. T. Griffin. 2018. A *Luangwa*-like cynodont from Northern Zimbabwe and endemism across the Carnian of Southern Africa. Society of Vertebrate Paleontology Annual Meeting, Albuquerque, NM. *Winner of the Scientists from Economically Developing Nations Award.*
- 17) \*Griffin, C. T., D. Munyikwa, T. J. Broderick, S. Tolan, M. Zondo, S. J. Nesbitt, H. Taruvinga. 2018. An exceptional new Late Triassic (Carnian) fossil assemblage from Zimbabwe and the biogeography of the earliest dinosaurs across Pangea. Society of Vertebrate Paleontology Annual Meeting, Albuquerque, NM.
- 16) Nesbitt, S. J., C. T. Griffin, E. Evans, R. T. Mueller, C. Pacheco, F. Preto, S. Cabreira, A. Marsh, B. M. Wynd, M. Langer. 2018. Prevalent ontogenetic changes characterize early dinosaurs and their closest relatives: implications for species identification, phylogeny, and the loss of these changes in later dinosaurs. Society of Vertebrate Paleontology Annual Meeting, Albuquerque, NM.
- 15) Evans, E. L.<sup>†</sup>, C. T. Griffin, N. Smith, A. H. Turner, R. B. Irmis, S. J. Nesbitt. 2018. Ontogenetic changes in the femur of *Tawa hallae* and implications for species diversity of Late Triassic dinosaurs. Society of Vertebrate Paleontology Annual Meeting, Albuquerque, NM.
- 14) \*Griffin, C. and K. Angielczyk. 2018. The evolution of the dicynodont sacrum, and constraint on the axial column in crown Mammalia. Society of Integrative and Comparative Biology Annual Meeting, San Francisco, CA.
- 13) °Griffin, C. T. and K. D. Angielczyk. 2017. The evolution of the dicynodont sacrum, with implications for evolutionary constraint in the vertebral column of Mammalia. Society of Vertebrate Paleontology Annual Meeting, Calgary, Alberta. Winner of the Colbert Prize for Outstanding Student Poster Presentation.
- 12) °Griffin, C. T. 2017. Pathological bone tissue in a Late Triassic theropod fibula, with implications for the interpretation of medullary bone. 4<sup>th</sup> International Symposium on Paleohistology, Trenton, NJ.
- 11) \*Griffin, C. T. and S. J. Nesbitt. 2017. Does the maximum body size of theropod dinosaurs increase across the Triassic-Jurassic boundary? Integrating ontogeny, phylogeny, and body size. Last Days of Pangea Triassic-Jurassic Research Symposium, Greenwich, CT.

- 10) \*Griffin, C. T. and S. J. Nesbitt. 2016. Anomalously high intraspecific variation in ontogeny is the ancestral dinosaurian growth condition. Society of Vertebrate Paleontology Annual Meeting, Salt Lake City, UT.
- 9) \*Griffin, C. T. and S. J. Nesbitt. 2016. Intraspecific variation and the evolution of the ancestral dinosaurian growth condition. 11<sup>th</sup> International Congress of Vertebrate Morphology, Washington, D.C.
- 8) °Bano<sup>†</sup>, L. and C. T. Griffin. 2016. Integration of histology and morphology to assess the skeletal maturity of early-diverging dinosauromorphs. 11<sup>th</sup> International Congress of Vertebrate Morphology, Washington, D.C.
- 7) \*Griffin, C. T. and S. J. Nesbitt. 2016. The evolution of intraspecific variation in growth patterns among early dinosaurs and their relatives. Southeastern Association of Vertebrate Paleontology annual meeting, Martinsville, VA.
- 6) \*Griffin, C. T. and S. J. Nesbitt. 2015. Does the maximum body size of theropod dinosaurs increase across the Triassic-Jurassic boundary? Integrating phylogeny, growth, and body size. Society of Vertebrate Paleontology Annual Meeting, Dallas, TX.
- 5) \*Griffin, C. T. and S. J. Nesbitt. 2015. Does the maximum body size of theropod dinosaurs increase across the Triassic-Jurassic boundary? Using ontogeny and phylogeny to understand transitions in Earth history. Geological Society of America Annual Meeting, Baltimore, MD.
- <sup>o</sup>Bano<sup>†</sup>, L. and C. T. Griffin. 2015. Integrating histology and morphology to assess the skeletal maturity of early-diverging dinosauromorphs. Geological Society of America Annual Meeting, Baltimore, MD.
- 3) °Griffin, C. T. and S. J. Nesbitt. 2014. The histology and femoral ontogeny of the Middle Triassic (?late Anisian) dinosauriform *Asilisaurus kongwe* and implications for the growth of early dinosaurs. Society of Vertebrate Paleontology Annual Meeting, Berlin, Germany.
- 2) \*Griffin, C. T. and S. J. Nesbitt. 2013. How to grow a dinosaur: the histology and femoral ontogeny of the Middle Triassic (?late Anisian) dinosauriform *Asilisaurus kongwe* and implications for the growth of early dinosaurs. Geological Society of America Abstracts with Programs 45:474.
- McKevitt, D. J., C.T. Griffin, R. T. Gustafson, and J. H. Whitmore. 2013. Glacial outflow origin of Massie Creek Gorge, Greene County Ohio. Geological Society of America Abstracts with Programs 45:378

## **Field Experience**

#### **Principal investigator:**

- 2025 Nunavut, Canada (anticipated)
- **2024** Potter County, Texas, USA (anticipated)
- Mashonaland Central, Zimbabwe (anticipated)
- 2021 Newark Supergroup, New Jersey and Pennsylvania, USA
- 2019 Mashonaland Central, Zimbabwe
- 2017 Mashonaland West and Mashonaland Central, Zimbabwe

#### Participant:

2021 Garza County, Texas, USA

2018	Apache County and Petrified Forest National Park, Arizona
2015	Fremont County, Wyoming, USA
	Ghost Ranch, New Mexico, USA
	Apache County, Arizona, USA
	Anton Chico, New Mexico, USA
2014	Ghost Ranch, New Mexico, USA
	Geology Field Course, Southern Utah University, USA

# **Teaching Experience**

**Teaching Philosophy:** I use evidence-based pedagogy strategies to teach students how to think scientifically. I seek to create an open and accepting learning environment where students of all backgrounds can grow their critical thinking skills and integrate new knowledge into a problem-solving mindset.

Teaching evaluations available on request

### Yale University

Instructor of Record:

• EPS 630 Writing Science (Spring 2022)

Guest Teaching:

• EPS 125 History of Life (Spring 2022)

#### Virginia Tech

Graduate Teaching Assistant:

- GEOS-4244/5244 Morphology of the Vertebrates/Advanced Vertebrate Morphology (Spring 2020; Student Perception of Teaching score: 5.9/6)
- BIOL-1115 Principles of Biology (Fall 2019; Student Perception of Teaching score: 5.8/6)
- GEOS-1104 Physical Geology (Fall 2015; Student Perception of Teaching score: 5.8/6)
- GEOS-1014 The Earth and Life Through Time (Fall 2014; Student Perception of Teaching scores: 5.5/6; 5.6/6)

Presented guest lectures:

• GEOS-1054 Age of Dinosaurs (Fall 2019; Fall 2020)

Graduate student mentor

• BIOL-5174 NSF GRFP Preparation (Fall 2018; 2019; 2020)

### **Cedarville University**

Presented guest lectures:

- GSCI 1010 Principles of Earth Science
- GEOL 1120 Historical Geology
- GEOL 3200 Invertebrate Paleontology
- GEOL 4200 Sedimentology and Stratigraphy

Teaching assistant/tutor:

- GSCI 1010 Principles of Earth Science
- GEOL 3300 Petrology
- CHEM 3510 Organic Chemistry

### **Undergraduate Mentoring**

- Valerie Trinidad Menéndez—University of Puerto Rico Mayagüez (B.S. Geology, Class of 2023)
- Hazel Taruvinga—Great Zimbabwe University, Masvingo, Zimbabwe (B.S. Geography, Class of 2022)

- Kayla Blatman—Virginia Tech (B.S. Animal and Poultry Science, Class of 2020), continued to veterinary program at the Virginia-Maryland College of Veterinary Medicine, Virginia Tech
- Lauren Bano—Virginia Tech (B.S. Biology, Class of 2019), continued to physician assistant program at Stony Brook University, Stony Brook, New York

# Promoting Diversity, Equity, and Inclusion

- Strong emphasis on mentoring students from underrepresented groups (see above, Undergraduate Mentoring)
- Committee member, Jon C. Graff International Paleontology Award (Society of Vertebrate Paleontology)
  - This award permits travel to SVP annual meeting for scientists from developing economies
  - I was instrumental in pushing reforms to award process, making travel and financial burdens easier on scientists from countries with developing economies
- Committee member, IDEA (Inclusion, Diversity, Equity, and Anti-racism/anti-discrimination) Committee, Department of Earth & Planetary Sciences, Yale University (2022-2023)
- Tying international research with outreach
  - Financial support to local museums/institutions
  - Support international student travel to conferences
  - Co-teaching paleontology module in Zimbabwean school (St. John's College)
- Continual learning how to better promote diversity, inclusion, and equity in academia
  - Participant, ComSciCom Virginia Tech: Inclusion, Diversity, and Accessibility in Science Communication
  - Participant, Mentoring Undergraduates Workshop
  - o Participant, DEI study group, Department of Earth & Planetary Sciences, Yale University

## Outreach

- Remote dinosaur fossil presentation, Every Child Can Read, Inc. Reading Academy, Indiana University East (June 2023)
- Public fossil preparation demonstration (weeklong 'living exhibit'), Natural History Museum of Zimbabwe, Bulawayo, Zimbabwe (May 2022)
- Science outreach to 7<sup>th</sup> grade science class, Central Preston Middle School, Kingwood, WV (April 2021)
- Co-taught Palaeontology Module, St. John's College, Harare, Zimbabwe (February–March 2021).
- Virginia Science Festival–Department of Geosciences Paleontology Lab (September 2014–2016, 2019; 6,000 attendees from >6 school systems)
- Virginia Tech Paleo Public Unwrapping Party (August 2015; August 2017; September 2018; October 2019)
- Science outreach to kindergarten classes, St. Anne's Day School, Salem VA (2019)
- This & That Educational Summer Camp outreach, Lyric Theatre, Blacksburg VA (2018)
- Jurassic World II opening night education display, Frank's Cinebowl, Blacksburg VA (2018)
- Kindergarten 2 College (5<sup>th</sup> grade) paleontology lab tour (2017)
- Virginia Tech Museum of Geoscience GeoFair (2016)
- Living Library science outreach volunteer, Blacksburg Public Library (2016)
- Public Lecture, "When did the carnivorous dinosaurs first become giants?", VT Museum of Geosciences (2015)
- Virginia Tech Museum of Geoscience display design (Fall 2015)

- Science outreach talks to middle school and junior high school students, Redding, CA (2012-2014)
- Volunteer tutor for high school and college students in Algebra, Biology, and Geology (2010-2012)
- Volunteer, 7<sup>th</sup> Grade Ecology Camp, Redding CA (May 2014)

# **Media Experience**

### Media Coverage (selected)

- Featured in "The 22 Most Amazing Discoveries of 2022." National Geographic, 11/30/2022. https://www.nationalgeographic.com/science/article/most-amazing-discoveries-2022
- "International team finds oldest known dinosaur fossil in Africa." NSF Science Matters, 9/15/2022. <u>https://beta.nsf.gov/science-matters/international-team-finds-oldest-known-dinosaur-fossil-africa</u>
- "Africa's oldest dinosaur found in Zimbabwe." BBC News, 9/1/2022. https://www.bbc.com/news/science-environment-62751974
- "Two-legged dinosaur from Zimbabwe is the oldest ever found in Africa." New Scientist, 8/31/2022. <u>https://www.newscientist.com/article/2335385-two-legged-dinosaur-from-zimbabwe-is-the-oldest-ever-found-in-africa/</u>
- "New dinosaur species is oldest ever found in Africa." Scientific American, 8/31/2022. https://www.scientificamerican.com/article/new-dinosaur-species-is-oldest-ever-found-in-africa/
- "'I've got a dinosaur!' African find illuminates dawn of dinos." Science, 8/31/2022. https://www.science.org/content/article/i-ve-got-dinosaur-african-find-illuminates-dawn-dinos
- "Fabulous 230-million-year-old fossil is Africa's oldest known dinosaur." National Geographic, 8/31/2022. <u>https://www.nationalgeographic.com/magazine/article/fabulous-230-million-year-old-fossil-is-africas-oldest-known-dinosaur</u>
- Ksepka, D. 2022. Dispatches: "Developmental Biology: A dinosaur in a quail egg." Current Biology 32: PR964-R967.
- "3D analysis reveals a key similarity between dinosaur and bird embryos." Inverse, 8/4/2022. https://www.inverse.com/science/bird-dinosaur-hips
- "How scientists found there's still some 'dinosaur' inside bird eggs." Hartford Courant, 7/31/2022. <u>https://www.courant.com/news/connecticut/hc-news-dinosaurs-turn-into-birds-in-the-egg-20220731-nibcj7qrbrevvhhodgzrocssra-story.html</u>
- "Birds and dinosaurs joined at the hip." Yale News, 7/27/2022. https://news.yale.edu/2022/07/27/birds-and-dinosaurs-joined-hip
- "The Rise of Meat-Eating Dinosaurs Is More Complicated Than We Thought." Smithsonian Magazine, 5/11/2020. <u>https://www.smithsonianmag.com/science-nature/meat-eating-dinosaurs-carnivorous-180974525/</u>
- "Printing the Past." Documentary short, A Million Bones of Stone, Horse Archer Productions, 2/26/2020. <u>https://www.youtube.com/watch?v=AA\_CZUI3vew&t=34s</u>
- "Making prehistoric discoveries globally available one bone at a time." VT News, 1/13/2020. https://vtnews.vt.edu/articles/2020/01/univlib-3Dscans-dinosaurbones.html
- "Bringing Fossils Back to Life." 3D film, Moss Arts Center, Virginia Tech, 10/2018.
- "Virginia Tech geoscientists size-up early dinosaurs, find surprising variation." VT News, 12/7/2016. <u>https://vtnews.vt.edu/articles/2016/12/120616-fralin-dinosaursize.html</u>
- Featured in *NSF Science Now* episode 43, 5/13/2016. <u>https://science360.gov/obj/video/97a7696e-afd1-48c4-9254-32b79b3a85d4/nsf-science-now-episode-43</u>
- "Bone scars' reveal varied growth in dinosaur cousins." Fox News, 4/6/2016. <u>http://www.foxnews.com/science/2016/04/06/bone-scars-reveal-varied-growth-dinosaur-cousins.html</u>

 "240-million-year-old fossils provide new insight into how dinosaurs grew from hatchling to adult." VT News, 4/4/2016. <u>https://vtnews.vt.edu/articles/2016/04/science-</u><u>AsilisauruskongweGriffin.html</u>

#### **Media Outreach**

- Paleontological consultant, "The Last Raptor," 2021. Short film, dir. Michael Asmus.
- "First of their kind baby tyrannosaur fossils unearthed." LiveScience, 10/16/2020. https://www.livescience.com/baby-embryonic-tyrannosaur-fossils.html

### **Professional Service**

- Journal Peer Reviewer (n = 27)
  - Acta Palaeontologica Polonica (2)
  - Ameghiniana (1)
  - Anais da Academia Brasileira de Ciências (2)
  - Anatomical Record (2)
  - $\circ$  BMC Biology (1)
  - Frontiers in Earth Science (1)
  - *Geological Magazine* (1)
  - Journal of Anatomy (1)
  - Journal of Systematic Palaeontology (1)
  - Journal of Vertebrate Paleontology (3)
  - Palaeontology (2)
  - Paleobiology (2)
  - Papers in Palaeontology (1)
  - $\circ$  *PeerJ*(3)
  - *Royal Society Open Science* (1)
  - Scientific Reports (2)
  - Scottish Journal of Geology (1)
- Grant Peer Reviewer
  - o National Science Centre [Narodowe Centrum Nauki], Poland (4)
  - National Geographic Society, Early Career Grant (Fall 2019, 2020 cycles), Level I Grant (Spring 2022, Fall 2022, Spring 2023 cycles)
- <u>Session Chair</u>
  - "Technical Session I: Dinosaurs", Society of Vertebrate Paleontology Annual Meeting, Albuquerque, New Mexico (2018)
  - "Technical Session XV: Sauropods, etc.", Society of Vertebrate Paleontology Annual Meeting, Salt Lake City, Utah (2016)
  - "Paleontology 3", International Congress of Vertebrate Morphology, Washington, D.C. (2016)
  - "Paleo-Evo-Devo", International Congress of Vertebrate Morphology, Cairns, Queensland, Australia (2023)
- <u>Departmental Service</u>
  - IDEA (Inclusion, Diversity, Equity, and Anti-racism/anti-discrimination) Committee, Department of Earth & Planetary Sciences, Yale University (2022-2023)
  - Graduate student representative, VT Department of Geosciences faculty meetings (2019-2020)
  - Liaison Committee, VT Paleobiology Research Group representative (2018-2019)

- <u>Professional Society Service</u>
  - Jon C. Graff International Paleontology Award committee, Society of Vertebrate Paleontology (2020–2023)
  - Edwin H. and Margaret M. Colbert Prize committee, Society of Vertebrate Paleontology (2021–2023)
- <u>Professional Consultation</u>
  - *Vertebrate Life 11<sup>th</sup> edition*, William E. Bemis (author), Oxford University Press, in preparation
  - Exhibit design consultation, Peabody Museum of Natural History, New Haven, CT (2022–2023)
  - Dandaro Remamepu Nemifananidzo: An Atlas of Zimbabwe for Children, Seth Mberego (author), Chikugo Printers, Fukuoka, Japan (2023)
- Book Reviews
  - Griffin, C. T. 2022. Review of *Dinosaurs: New Visions of a Lost World*, Michael J. Benton (author). Quarterly Review of Biology 97:160.

# **Professional Training**

- <u>Wilderness First Aid Certification</u>, 2022, AdventureMed LLC.
- <u>Certificate of College Teaching Preparation</u>, in progress, Yale University Center for Teaching and Learning
- <u>ComSciCon Virginia Tech: Inclusion, Diversity, and Accessibility in Science Communication</u>: 2020, Virginia Tech Center for Communicating Science
- <u>Pedagogy in the Sciences (FIW 6004)</u>: 2018, Virginia Tech Department of Fish and Wildlife Conservation
- <u>Mentoring Undergraduates Workshop</u>: 2016, Virginia Tech Office of Undergraduate Research
- <u>REU Phylogenetics Workshop Series</u>: 2013, The Field Museum of Natural History, Chicago