

Christopher M. Zobek

Curriculum Vitae

Research Interests

Herpetology, comparative and functional anatomy of vertebrates, feeding behavior, biomechanics, macroevolution, computed tomography

Education

Ph.D. University of Missouri – Integrative Anatomy

Current Ph.D. Student – Expected Graduation 2027

Advisor – Dr. Casey M. Holliday

BA. Cornell University – College of Arts and Sciences

Bachelor of Arts in Biological Sciences, Magna Cum Laude

Graduated May 2020, GPA 3.938

Publications

3. **Zobek, C. M.**, Porter, L. M., Verhulst, C., Hostnik, E., Aitken-Palmer, C., & Holliday, C. M. (2025). 3D muscle architecture of the tongue of the White-bellied Pangolin (*Phataginus tricuspidis*) reveals a muscular hydrostat. *Integrative and Comparative Biology*, 2025; icaf049. <https://doi.org/10.1093/icb/icaf049>
2. Gignac, P. M., Aceves, V., Baker, S., ... **Zobek, C. M.** (2024). The role of networks to overcome large-scale challenges in tomography: The non-clinical tomography users research network. *Tomography of Materials and Structures*, 5, 100031. <https://doi.org/10.1016/j.tmater.2024.100031>
1. Blackburn, D. C., Boyer, D. M., Gray, J. A., Winchester, J., Bates, J. M., Baumgart, S. L., Braker, E., Coldren, D., Conway, K. W., Rabosky, A. D., de la Sancha, N., Dillman, C. B., Dunnum, J. L., Early, C. M., Frable, B. W., Gage, M. W., Hanken, J., Maisano, J. A., Marks, B. D., ... **the oVert Project Team**, & Stanley, E. L. (2024). Increasing the impact of vertebrate scientific collections through 3D imaging: The openVertebrate (oVert) Thematic Collections Network. *BioScience*, 74(3), 169–186. <https://doi.org/10.1093/biosci/biad120>*

Invited Talks

Washington University in Saint Louis

Ecology and Evolutionary Biology Seminar Series

11/2024

University of Missouri Columbia

Department of Biological Sciences Seminar Series

10/2024

Oral Presentations and Posters

* = Presenting Author

Oral Presentations

5. **Zobek, C.M.***, Kevin Middleton, and Holliday, C.M. Comparison of DiceCT Muscle Fascicle Tracing Results Between Avizo Xfiber and Goodfibes R Package. *Joint Meeting of Ichthyologists and Herpetologists, 2025.*
4. **Zobek, C.M.***, Wilken, A., and Holliday, C.M. 3D Architecture and Evolution of Snake Palatal Musculature. *Society for the Study of Reptiles and Amphibians Meeting 2024, Society for Comparative and Integrative Biology Annual Meeting 2025.*
3. **Zobek, C.M.***, Verhulst, C.D., Sethi, A., Wilken, A., and Holliday, C.M. Palatal Muscle Diversity in Reptiles and Its Significance for Cranial Kinesis. *Joint Meeting of Ichthyologists and Herpetologists, 2023.*
2. **Zobek, C.M.***, Verhulst, C.D., Sethi, A., Wilken, A., and Holliday, C.M. Protractor Muscle Diversity in Reptiles and Its Significance for Cranial Kinesis. *Society for Integrative and Comparative Biology Annual Meeting, 2023.*
1. **Zobek, C.M.***, D'Amore, D, and Dillman, C.B. Morphological Adaptations for Skink Predation in Kingsnakes (Serpentes: Colubridae). *Society for Integrative and Comparative Biology Virtual Annual Meeting, 2021.*

Posters

6. **Zobek, C.M.***, and Holliday, C.M. Comparison of DiceCT Muscle Fascicle Tracing Results Between Avizo Xfiber and Goodfibes R Package. *University of Missouri Show Me Research Week, 2025, Tomography for Scientific Advancement North American Symposium 2025*
5. **Zobek, C.M.***, and Holliday, C.M. Muscle Architecture and Biomechanics of Snake Palatal Musculature. *Anatomy Connected 2024, University of Missouri Show Me Research Week 2024, University of Missouri Graduate Professional Council Annual Research & Creative Activities Forum 2024, NoCTURN 2024 In-Person Meeting.*

4. George, J.*, **Zobek, C.M.**, Williams, S., O'Brien, H, and Holliday, C.M. Modeling Hyolingual Musculature of Anolis using Avizo Xfiber. *Society for Integrative and Comparative Biology Annual Meeting, 2024.*
3. **Zobek, C.M.***, Verhulst, C.D., Sethi, A., Wilken, A., and Holliday, C.M. Protractor Muscle Diversity in Reptiles and Its Significance for Cranial Kinesis. *Midwest Regional Meeting for the Society for Integrative and Comparative Biology, University of Missouri Graduate Professional Council Annual Research & Creative Activities Forum 2023, University of Missouri Show Me Research Week, 2023, Tomography for Scientific Advancement North American Symposium 2023, Kansas Herpetological Society 50th Anniversary Meeting.*
2. **Zobek, C.M.***, Dillman, C.B., D'Amore, D., and Greene, H. Morphological Adaptations for Skink Predation in Kingsnakes (Serpentes: Colubridae). *Cornell Undergraduate Research Board Spring Symposium, 2019.*
1. **Zobek, C.M.***, Dillman, C.B., and Greene, H. Morphological Adaptations for Skink Predation in Kingsnakes (Serpentes: Colubridae). *Joint Meeting of Ichthyologists and Herpetologists 2018, 43rd Annual Ecology and Evolutionary Biology Graduate Student Symposium, 2018.*

Teaching and Outreach Experience

Herpetology 3360 Lecture: "Feeding in Snakes"	02/20/2025
Anatomy Teaching Practicum (Lecture)	08/2024 – 05/2025
Anatomy Teaching Practicum (Lab)	08/2023 – 05/2024
Substitute Teacher, David Brearley Middle/High School (Kenilworth, NJ, 07033)	01/2021 – 06/2022
Cornell University Teaching Assistant: BIOEE 2740: The Vertebrates: Comparative Anatomy, Function, and Evolution	2019/2020
Engaged Cornell Peer Mentor (2 undergraduate mentees)	2018-2019

Grants and Awards

External

Total External Grants: \$1900

Herpetologist's League E.E. Williams Grant (\$1000)	2024
Roger Conant Grant in Herpetology (awarded by SSAR) (\$500)	2024
Anatomy Connected Conference Travel Award (\$400)	2024

Internal

Graduate Professional Council Conference Presentation Travel Award (\$600)	2024
Graduate Professional Council Conference Presentation Travel Award (\$600)	2024
Graduate Professional Council Conference Presentation Travel Award (\$500)	2023
Life Sciences Fellowship First Year Travel Award (\$750)	2023
Life Sciences Fellowship at University of Missouri (\$27000 per year for 48 months)	2021
Cornell Arts and Sciences Einhorn Grant (\$1000)	2020
Cornell Arts and Sciences Summer Experience Grant (\$1871)	2019
Cornell Arts and Sciences Undergraduate Research Funding Grant (\$300)	2018

Awards

ToscaNA Best Student Lightning Talk	2025
Outstanding Graduate Student Research Award	2024
NSF Graduate Research Fellowship Honorable Mention	2024

Broader Impact Activities

CT Outreach Kit Contributor: “Introduction to Morphosource & 3D Anatomy”	2024
“Introduction to Research, Scholarship and Discovery” Graduate Student Panelist	10/2024

Professional Service Activities

Member, Nocturn “Education and Outreach” Committee	2022-Present
Cornell Herpetological Society President	2019
Cornell Herpetological Society Outreach Coordinator	2018

Field Research Experience

Amazon Field Research Assistant - Los Amigos Biological Station, Peru	Summer 2018
Investigative Marine Biology Laboratory Shoals Marine Lab, Appledore Island, Maine	Summer 2017

Workshops and Professional Development

ToScaNA 2025 Afternoon Workshop – 3D Slicer/SlicerMorph workshop: Collecting quantitative data and characterization, Dr. Jaimi Gray, American Museum of Natural History, 2025.

ToScaNA 2025 Morning Workshop - Ask the Expert: Unleashing the power of Avizo Software, Arsalan Zolfaghari and Mark McClendon, American Museum of Natural History, 2025.

PaleoPixels: 3D Visualization and Segmentation Workshop. Department of Geological Sciences, University of Missouri, 2024.

ToScaNA 2023 Afternoon Workshop – Masterclass: Deep Learning with Avizo Software, Arsalan Zolfaghari, University of Texas at Austin, 2023

ToScaNA 2023 Morning Workshop – Introduction to Digital Morphology with SlicerMorph, Dr. Murat Maga, University of Texas at Austin, 2023

University of Texas High-Resolution X-ray CT Facility Short Course on HRXCT, Dr. Jesse Maisano et al., University of Texas at Austin, 2022

Spring 2022 SlicerMorph 3D Morphometrics Online Short Course, Dr. Murat Maga et al., University of Washington, 2022

A Natural Historian's Guide to the CT Galaxy: Step-by-Step Instructions for Preparing and Analyzing Computed Tomographic (CT) Data Using Cross-Platform, Open Access Software, Society for Integrative and Comparative Biology Virtual Annual Meeting, 2021.

Carl Gans Workshop on Careers and Best Practices in Natural History Collections, Joint Meeting of Ichthyologists and Herpetologists, 2018.

Professional Experience

Curatorial Assistant, Cornell Museum of Vertebrates September 2019 – June 2020

Herpetology Intern, National Aquarium Summer 2019

Society Memberships

American Association of Anatomists

American Society of Ichthyologists and Herpetologists

Herpetologist's League

Nocturn (Non-Clinical Tomography User's Research Network)

Society for Integrative and Comparative Biology

Society for the Study of Amphibians and Reptiles

Society for the Study of Evolution

Media Attention

[“Columbia Youth Discover New Science Paths”](#)

2025

Nocturn Blog [“Member Spotlight – Chris Zobek”](#)

2024