

Curriculum Vitae  
**B. K. Shipps**

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## Education

<b>The University of Washington</b> Department of Biology   Sidor Lab   Doctor of Philosophy Candidate	<b>Seattle, WA</b> <b>2023–</b>
<b>Idaho State University</b> Department of Biological Sciences   Master of Science in Biology	<b>Pocatello, ID</b> 2022
<b>George Mason University</b> College of Science   Bachelor of Science in Earth Science with a Concentration in Geology Honors College <i>College of Science   Minor in Paleontology</i> <i>College of Humanities and Social Sciences   Minor in English</i>	<b>Fairfax, VA</b> 2017

## Appointments

<b>Biological Sciences Guest Researcher (2022)</b> Idaho Museum of Natural History	<b>Pocatello, ID</b>
<b>Paleomammalogy Guest Researcher (2019-2020)</b> Field Museum	<b>Chicago, IL</b>
<b>Makoshika State Park Paleontology Lab Manager (2018)</b> Montana State Parks	<b>Glendive, MT</b>

## Publications (4)

4. **Shipps, B.K.**, C. A. Sidor, K. D. Angielczyk. 2025  
*Dicynodontoides kubwa*, sp. nov. (Synapsida: Anomodontia), a new large emydopoid from the base of the Usili Formation (Ruhuhu Basin, Tanzania). In C. A. Sidor & K. D. Angielczyk (Eds.), Vertebrate Evolution in the Permian Rift Basins of Tanzania and Zambia, Society of Vertebrate Paleontology Memoir 23. *Journal of Vertebrate Paleontology*, 45 (1, supplement).
3. **Shipps, B. K.**, B. R. Peacock, K. D. Angielczyk. 2023.  
[The Topography of Diet: Orientation Patch Count Predicts Diet in Turtles](#). *The Anatomical Record*.
2. **Shipps, B. K.** 2022.  
[The Topography of Diet: Understanding Turtle Triturating Surface Anatomy Orientation Patch Count and Comparative Anatomy](#). M.S., Idaho State University, United States -- Idaho, 100 pp.
1. **Shipps, B. K.**, C. M. Peredo, N. D. Pyenson, 2019. \*  
[Borealodon osedax, a new stem mysticete \(Mammalia, Cetacea\) from the Oligocene of Washington State and its implications for fossil whale-fall communities](#). *Royal Society Open Science* 6, 182168.

\*Subject of PBS Eons: [How Ancient Whales May Have Changed the Deep Ocean](#), YouTube, 2021.

## Conference and Presentation Abstracts (29)

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29. **Shipps, B. K.**; Kapur, P.; Lardent, A.; Zamudio, Z.; Zhan, J. 2026  
Using dental topographic analysis to differentiate diet in extant turtles: in *Society of Integrative and Comparative Biology Annual Meeting*, Portland, OR, USA.
28. Lardent, A.; Zhan, J.; **Shipps, B. K.** 2026  
Using orientation patch count to predict sexual dimorphism in *M. terrapin*: in *Society of Integrative and Comparative Biology Annual Meeting*, Portland, OR, USA.
27. Zhan, J.; Lardent, A.; **Shipps, B. K.** 2026  
Evaluating the role of downsampling in quantitative morphological analysis using *Malaclemys terrapin*: in *Society of Integrative and Comparative Biology Annual Meeting*, Portland, OR, USA.
26. Kapur, P.; Zamudio, Z.; Vandenberg, M. L.; **Shipps, B. K.** 2026  
Evaluating iPhone photogrammetry for assessing oral morphological complexity using extant turtles: in *Society of Integrative and Comparative Biology Annual Meeting*, Portland, OR, USA.
25. **Shipps, B.K.**; Sidor, C. A.; Angielczyk, K. D. 2025  
Tracking changes in tetrapod diversity throughout the upper Permian Usili Formation (Lopingian) of Tanzania: in *Society of Vertebrate Paleontology Annual Meeting*, Birmingham, UK.
24. Zamudio, Z.; **Shipps, B.K.**; Kapur, P.; Vandenberg, M.; Sidor, C. A. 2025  
A comparison of 3D models created using photogrammetry and 3D models created using CT scanning using Orientation Patch Count (OPCr): in *Society of Vertebrate Paleontology Annual Meeting*, Birmingham, UK.
23. Kapur, P.; **Shipps, B.K.**; Zamudio, Z.; Vandenberg, M.; Sidor, C. A. 2025  
3-D modeling through a paleobiological lens: evaluating iPhone photogrammetry for assessing oral morphological complexity (via OPCr) in extant turtle skulls relative to micro-CT and DSLR techniques: in *Society of Vertebrate Paleontology Annual Meeting*, Birmingham, UK.
22. Lardent, A.; **Shipps, B.K.**; Sidor, C. A., 2025  
Orientation patch count of *Malaclemys terrapin* with threshold manipulation: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.
21. Seed, M.; **Shipps, B.K.**; Sidor, C. A., 2025  
Turtle beaks: A methodological analysis of the effects of smoothing and percentage of discarded patches on *Carettochelys insculpta* and *Malaclemys terrapin* meshes made from CT-scans: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.

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20. Zhan, J.; **Shipps, B.K.**; Sidor, C. A., 2025  
Using CT-scans of *Malaclemys terrapin* to analyze the impact of quadric edge collapse decimation on surface complexity of 3D models: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.
  19. Kapur, P.; **Shipps, B.K.**; Sidor, C. A., 2025  
Analyzing triturating surface complexity in forest hinge-back tortoises: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.
  18. Liu, A.; **Shipps, B.K.**; Sidor, C. A., 2025  
Analyzing occlusal surface complexity and its relation to the diet of *Caretta caretta* using orientation patch count rotated: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.
  17. Zamudio, Z.; **Shipps, B.K.**; Sidor, C. A., 2025.  
Comparison of 3D models created using photogrammetry and 3D models created using CT scanning via orientation patch count: in *the University of Washington Undergraduate Research Symposium*, Seattle, WA, USA.
  16. **Shipps, B. K.**; Sidor, C. A; Angielczyk, K. D., 2024  
A new, large-bodied species of *Dicynodontoides* (Synapsida: Anomodontia: Emydopoidea) from the base of the Usili Formation (Ruhuhu Basin, Tanzania) with comments on tetrapod biozonation in the formation: in *Society of Vertebrate Paleontology Annual Meeting*, Minneapolis, MN, USA.
  15. **Shipps, B. K.**; Peacock, B. R.; Angielczyk, K. D., 2022  
No teeth, no problem: Using Orientation Patch Count to predict diet in turtles: in *Society of Vertebrate Paleontology Annual Meeting*, Toronto, ON, CA.
  14. Huang, F. S.; **Shipps, B. K.**; Peacock B. R., 2022  
A method for separating the rhamphotheca from the skull in turtles that keeps both bone and keratin intact: in *Society of Vertebrate Paleontology Annual Meeting*, Toronto, ON, CA.
  13. **Shipps, B. K.**; Peacock, B. R.; Angielczyk, K. D., 2022  
The Topography of Diet: Using molaR to Predict Feeding Habits in Turtles: in *Society for Integrative and Comparative Biology Annual Meeting*, virtual.
  12. **Shipps, B. K.**; Peacock, B. R.; Angielczyk, K. D., 2021  
The Topography of Diet: Using molaR to predict turtle feeding habits: in *Turtle Evolution Symposium*, virtual.
  11. **Shipps, B. K.**; Peacock, B. R.; Angielczyk, K. D., 2021  
The Topography of Diet: Using molaR to predict feeding habits in turtles: in *Society of Vertebrate Paleontology Conference*, virtual.
  10. **Shipps, B. K.**; Peacock, B. R.; Angielczyk, K. D., 2021

The Topography of Diet: Using molaR to examine the relationship between turtle beak morphology and diet: in *Virtual Evolution Conference 2021*.

9. **Shipps, B. K.**, 2021.  
The Topography of Diet-- Using molaR to predict Testudines feeding habits: in *Graduate Student Research Symposium*, Idaho State University, Pocatello, ID, USA.
8. **Shipps, B. K.**, 2019.  
*Maiasaura*, the State Fossil of Montana: in *National Fossil Day at Lone Pine State Park*, Kalispell, MT, USA.
7. **Shipps, B. K.**, W. Freimuth, 2019.  
Peculiar Dinosaurs: in *Yellowstone Club OP Kids Dinosaur Night*, Big Sky, MT, USA.
6. **Shipps, B. K.**; Peredo, C. M.; N. D. Pyenson, 2018.  
An unexpected northerner with burrowed bones: a new mammalodontid (mysticeti) from the Pacific Northwest with *Osedax* bores provides insight into Oligocene marine taphonomy and mysticete evolution: in *Society of Vertebrate Paleontology Conference*, Albuquerque, NM, USA.
5. **Shipps, B. K.**, 2018.  
Big concepts, small students: conveying complex paleontological ideas to students ages 4–12: in *Society of Vertebrate Paleontology Conference*, Albuquerque, NM, USA.
4. **Shipps, B. K.**; Peredo, C. M.; M. D. Uhen, 2017.  
Analysis of fossil environments reveals biases in the fossil record of mysticete preservation: in *Society of Vertebrate Paleontology Conference*, Calgary, AB, CA.
3. **Shipps, B. K.**, 2017.  
The end of the world with *Lystrosaurus*: the story of the end-Permian extinction and how this stocky therapsid managed to survive it: in *GMU Science Slam*, George Mason University, Fairfax, VA, USA
2. **Shipps, B. K.**; M. Uhen, Peredo, C.M., 2016.  
Updating the Paleobiology Database: Where did ancient mysticetes live?: in *College of Science Undergraduate Research Conference*, George Mason University, Fairfax, VA, USA.
1. **Shipps, B.K.**; 2014.  
“There are some things you just don’t do.” The Effects of Actual Violence on a Film’s Morality and Message: in *Honors College Research Conference*, George Mason University, Fairfax, VA, USA.

## Field Work

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### *Craddock Bone Bed and adjacent sites (Arroyo Formation)*

Early Permian

Texas, USA

With **The University of Washington** and **The Whiteside Museum of Natural History**, Summer 2025

Contact: Christian Sidor, [casidor@uw.edu](mailto:casidor@uw.edu)

### *Luangwa Valley (Madumabisa Mudstone Formation)*

Late Permian – Early Triassic

North Luangwa National Park, Zambia

With **The University of Washington**, Summer 2025

Contact: Christian Sidor, [casidor@uw.edu](mailto:casidor@uw.edu)

### *Petrified Forest National Park (Chinle Formation)*

215 Ma

Late Triassic

Petrified Forest National Park, Arizona, USA

With **The University of Washington**, Summer 2023, 2024

Contact: Christian Sidor, [casidor@uw.edu](mailto:casidor@uw.edu)

### *Crystal Geyser Quarry (Cedar Mountain Formation)*

129.4 - 125 Ma

Early/Lower Cretaceous

Utah, USA

With **North Carolina State University**, Summer 2022

Contact: Lisa Herzog, [lisa.herzog@naturalsciences.org](mailto:lisa.herzog@naturalsciences.org)

### *American Falls Reservoir (American Falls Lake Bed E)*

0.13 - 0.01 Ma

Pleistocene

Idaho, USA

With **Idaho Museum of Natural History**, Fall 2021

Contact: Brandon R. Peacock, [brandonpeacock@isu.edu](mailto:brandonpeacock@isu.edu)

### *Geology Field Camp, multiple formations*

Italy

With **George Mason University**, Summer 2017

Contact: Giuseppina Mattietti, [gkysar@gmu.edu](mailto:gkysar@gmu.edu)

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## Funding and Awards

2026	Field Museum Visiting Science Scholars Fund	<b>\$1019</b>
2025	UW Biology WRF Hall Supplemental Funds	<b>\$5179</b>
2025	UW Biology Hoag Award	<b>\$2375</b>
2024	UW Biology WRF Hall Fellowship	<b>\$2750</b>
2024	SVP Cohen Award	<b>\$5500</b>
2024	UW Biology Iuvo Award	<b>\$880</b>
2024	Stephen and Ruth Wainwright Endowed Fellowship	<b>\$410</b>
2022	SVP Jackson School of Geosciences Student Travel Grant	<b>\$400</b>
2021	ISU Summer Thesis Writing Workshop	<b>\$1500</b>
2018	Montana State Parks AmeriCorps	<b>\$5815</b>
2017	OSCAR Undergraduate Student Travel Fund	<b>\$800</b>
2017	GMU Excellence scholarship	<b>\$4000</b>
2016–2017	GMU Excellence scholarship	<b>\$8000</b>
2017	Learning Assistant–Geology 102	<b>\$1500</b>
2015–2016	GMU Excellence scholarship	<b>\$8000</b>
2016	Learning Assistant–Geology 101	<b>\$1500</b>
2016	OSCAR Undergraduate Research Scholars Program	<b>\$1000</b>
2015	Learning Assistant–Geology 101	<b>\$1500</b>
2014	Patricia A. Hoyt Scholarship	<b>\$1000</b>
2014	Inducted into George Mason Honors College	
2014	English Achievement Award	
2013	Rotary Youth Leadership Award	

# Mentorship

<i>Project</i>	<i>Student/s</i>
<b>The University of Washington (UW) (Seattle, WA)</b>	
<p>Analyzing the orientation patch count (OPC) of the occlusal surface of the skull of every extant turtle species in order to determine the relationship between OPC and diet of edentulous taxa using CT scanned specimens of turtle skulls</p>	<ul style="list-style-type: none"> <li>• Zariel Zamudio, Oceanography (Spring 2024 – )</li> <li>• Jessica Hart, Biology (Spring 2024)</li> <li>• Pernille Peterson, Biology (Fall 2024 – )</li> <li>• Jenny Zhan, Physiology (Fall 2024 – Fall 2025)</li> <li>• Alex Lardent, Biology (Fall 2024 – )</li> <li>• Megan Seed, Biology (Fall 2024 – Spring 2025)</li> <li>• Ziva Huang, Biology (Fall 2024 – Winter 2025)</li> <li>• Kendall Mather, Environmental Science (Spring 2024 – Winter 2025)</li> <li>• Nikolas Moore, Biology (Winter 2025)</li> <li>• Priyank Kapur, Biology (Winter 2025 – )</li> <li>• Caleb Tidwell, Earth and Space Sciences (Winter 2025)</li> <li>• Amelie Liu, Biology (Winter 2025 – Spring 2025)</li> <li>• Bronwyn Davis, Post-baccalaureate (Central Washington University) (Winter 2025)</li> <li>• Sebeom Jang, Biology (Spring 2025 – )</li> <li>• Elena Royal, Environmental Science (Fall 2025)</li> <li>• Tiffany Dang, Biology (Winter 2026 – )</li> <li>• Luna Smith-Fisher, Biology (Winter 2026 – )</li> <li>• Madeline Ashe, Biology (Winter 2026 – )</li> <li>• Nathan Kong, Biology (Winter 2026 – )</li> <li>• Mindy Trinh, Biology (Winter 2026 – )</li> <li>• Slaiman Hadi, Biology (Winter 2026 – )</li> <li>• Jordan Dearing, Biology (Winter 2026 – )</li> </ul>
<p>Examining differences in skull occlusal surface OPC between turtle specimens digitized using CT scanning vs photogrammetry and the Abound app for iPhone</p>	<ul style="list-style-type: none"> <li>• Zariel Zamudio, Oceanography (UW) (Winter 2025 – )</li> <li>• Priyank Kapur, Undeclared (UW) (Winter 2025 – )</li> </ul>
<b>Idaho State University (ISU) (Pocatello, ID)</b>	
<p>A method for separating the rhamphotheca from the skull in turtles that keeps both bone and keratin intact</p>	<ul style="list-style-type: none"> <li>• Ferrania Huang, Biology (ISU) (2021 – 2022)</li> </ul>

## Teaching

2026	Teaching Assistant: Biol 427 – Biomechanics	The University of Washington (Seattle, WA)
2025	Teaching Assistant: Biol 413 – Survey of Human Anatomy	The University of Washington (Seattle, WA)
2025	Teaching Assistant: Biol 200 – Introductory Biology II	The University of Washington (Seattle, WA)
2025	Teaching Assistant: Biol 453 – Comparative Vertebrate Anatomy	The University of Washington (Seattle, WA)
2024	Teaching Assistant: Biol 443 – The Evolution of Mammals and their Ancestors	The University of Washington (Seattle, WA)
2024	Teaching Assistant: Biol 310 – Survey of Human Anatomy	The University of Washington (Seattle, WA)
2024	Teaching Assistant: Biol 453 – Comparative Vertebrate Anatomy	The University of Washington (Seattle, WA)
2023	Teaching Assistant: Biol 180 – Introductory Biology I	The University of Washington (Seattle, WA)
2021	Teaching Assistant: Biol 2227L – Intro Human Anatomy and Physiology Lab	Idaho State University (Pocatello, ID)
2020	Teaching Assistant: Biol 3301 – Advanced Human Anatomy and Physiology Lab	Idaho State University (Pocatello, ID)
2017	Learning Assistant: Geology 102 – Historical Geology	George Mason University (Fairfax, VA)
2016	Learning Assistant: Geology 101 – Physical Geology	George Mason University (Fairfax, VA)
2016, 2017	Youth Educational Program Instructor	Friends of the Middlesex Fells (Melrose, MA)
2015	Learning Assistant: Geology 101 – Physical Geology	George Mason University (Fairfax, VA)

## Teaching – Guest Lectures

2026	<i>The Origin(s) of Flight in Birds – Biomechanics edition</i>	Biol 427: Biomechanics The University of Washington (Seattle, WA)
2025	<i>Reptile Diversity</i> <i>The Origin(s) of Flight in Birds</i>	Biol 453: Comparative Vertebrate Anatomy The University of Washington (Seattle, WA)
2024	<i>The Origin(s) of Flight in Birds</i>	Biol 453: Comparative Vertebrate Anatomy The University of Washington (Seattle, WA)
2021	<i>Turtle Phylogeny and Evolution</i>	Biol 4417: Organic Evolution Idaho State University (Pocatello, ID)
2021	<i>Research and Proposal Overview</i>	Biol 3314: Comparative Vertebrate Anatomy Idaho State University (Pocatello, ID)
2020	<i>A Circuitous Route to Dicyonodons: How and why I am a grad student here at ISU</i>	Biol 5527: Ichthyology Idaho State University (Pocatello, ID)

## Outreach

2024 –	Burke Museum Outreach Volunteer	Burke Museum of Natural History (Seattle, WA)
2023	REI Co-Op Experiences Facilitator	REI Co-Op (Cary, NC)
2021	Fall Fossil Fest Presenter	Idaho Museum of Natural History (Pocatello, ID)
2021	Field Trip Volunteer Presenter	Idaho Museum of Natural History (Pocatello, ID)
2020	Dozin' with the Dinos Presenter	Field Museum (Chicago, IL)
2015– 2017	Peer Health Educator	Student Support & Advocacy Center (Fairfax, VA)
2015	Summer Interpretive Intern	MA Dept. of Conservation & Recreation (Melrose, MA)

## Service

2025– 2026	Senator, Graduate and Professional Student Senate	The University of Washington (Seattle, WA)
2024–	UAW 4121 Department Steward (Biology)	The University of Washington (Seattle, WA)
2024– 2025	Undergraduate Programming Committee, Biology Department	The University of Washington (Seattle, WA)
2022	Exhibits Volunteer - Paleontology	North Carolina Museum of Natural Sciences (Raleigh, NC)
2020	Paleontology Collections Intern	Idaho Museum of Natural History (Pocatello, ID)
2018	Montana State Parks AmeriCorps	Montana Fish, Wildlife, and Parks (Glendive, MT)
2017	National Museum of Natural History Intern	Smithsonian Institute (Washington, DC)
2017	OSCAR Fellow	George Mason OSCAR (Fairfax, VA)
2017	Alternative Spring Break Coordinator	Social Action & Integrative Learning Office (Fairfax, VA)
2016	Alternative Spring Break Participant	Social Action & Integrative Learning Office (Fairfax, VA)
2015	Summer Interpretive Intern	MA Dept. of Conservation & Recreation (Melrose, MA)

## Popular Media

Interviewed in *Dino Destination* by Peggy O'Neill for Montana Outdoors (September-October 2020)

## Other Employment

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- 2022 – 2024 REI Sales Specialist and Experiences Facilitator (Cary, NC and Bellevue, WA)  
Help REI customers identify the best outdoor/camping equipment and footwear for a wide range of activities as well as facilitate REI Experiences classes on camping and backpacking
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- 2020 – 2022 ACE Hardware and Element Outfitters Sales Associate (Pocatello, ID)  
Managed visuals for shoes, apparel, and sporting goods including creating appealing product displays, as well as selling Idaho Fish and Game licenses and permits and providing general customer service
- 
- 2020 REI Sales Specialist (Chicago, IL)  
Helped REI customers identify the best outdoor/camping equipment for a wide range of activities and worked to create an ideal customer experience by merchandising and properly displaying product
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- 2019 Brush Lake State Park Ranger (Dagmar, MT)  
Managed campground and park operations as well as all interpretive programming at Brush Lake State Park
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- 2017 Skyward English Tutor (Fairfax, VA)  
Taught basic English lessons to students aged 6-8 in China via Zoom software
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- 2016 – 2017 Desk Assistant: George Mason University Housing (Fairfax, VA)  
Managed everyday housing situations and acted as liaison between student residents and housing office
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## References

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- Dr. Christian Sidor      Professor of Biology, University of Washington  
Curator of Vertebrate Paleontology, Burke Museum  
casidor@uw.edu | Seattle, WA
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- Dr. Brandon Peecook      Assistant Curator, Idaho Museum of Natural History  
brandonpeecook@isu.edu | 208.282.2749 | Pocatello, ID
- 
- Dr. Kenneth Angielczyk      Associate Curator of Paleomammalogy, Field Museum  
kangielczyk@fieldmuseum.org | 312.665.7639 | Chicago, IL
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- Dr. Nicholas Pyenson      Curator of Fossil Marine Mammals, National Museum of Natural History  
pyensonn@si.edu | Washington, DC
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