

Kathleen A. Ritterbush, Ph.D.

Assistant Professor

University of Utah, Department of Geology and Geophysics

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Appointments

Assistant Professor, University of Utah Department of Geology & Geophysics.	2015 – Present
NASA Postdoctoral Researcher, University of Chicago	2014 – 2015
Provost's Ph.D. Fellowship, University of Southern California	2008 – 2013
USC Wrigley & Sonosky Family Ph.D. Summer Fellowships	2008 – 2010

Education

University of Southern California, Department of Earth Sciences, Doctor of Philosophy, December 2013

Thesis Title: Benthic and pelagic marine ecology following the Triassic/Jurassic mass extinction

Advisor: David J. Bottjer

California Lutheran University: Bachelor of Science, Environmental Science, 2006

Senior Thesis: Light-dark adaptation in Octopus retina: immunocytochemistry of protein shifts

Advisor: Linda Robles, California State University Dominguez Hills

Peer-Reviewed Publications (students underlined)

1. **Ritterbush, K. A.**, N. Hebdon. (Accepted) Hydrodynamic trade-offs in potential swimming efficiency of planispiral ammonoids. **Paleobiology**.
2. Peterman, D., **K. A. Ritterbush**. Vertical escape tactics and movement potential of orthocone cephalopods. (In Press) **PeerJ**.
3. Peterman, D., **K. A. Ritterbush**, C. N. Ciampaglio, E. H. Johnson, S. Inoue, T. Mikami, and T. J. Linn. 2021. Buoyancy control in ammonoid cephalopods refined by complex internal shell architecture. **Scientific Reports** 11: 8055
4. Peterman, D., Hebdon N, Shell RC, **Ritterbush K. A.** 2021. Twirling torticones: hydrostatics and hydrodynamics of helically-coiled ammonoids. In: Slattery JS, Larson NL, Bingle-Davis M., Graham, FC. eds. Insights into the Cretaceous: Building on the Legacy of William A. Cobban (1916-2015), **American Association of Petroleum Geologists and Wyoming Geological Association Special Volume**, Forthcoming.
5. Hebdon, N., **K. A. Ritterbush**, Y. Choi. 2020. Assessing the morphological impacts of ammonoid shell shape through systematic shape variation (ICB-2020-0091). **Integrative and Comparative Biology**. 60(5):1320-1329. doi: 10.1093/icb/icaa067
6. Hebdon, N., **K.A. Ritterbush**, Y. Choi. 2020. Computational fluid dynamics of ammonoid shells. **Paleontologica Electronica**. 23: 2-20. 23(1):a21, <https://doi.org/10.26879/956>
7. Clement, M.A., L.S. Tackett, **K.A. Ritterbush**, Y. Ibarra. 2020. Formation and stratigraphic facies distribution of early Jurassic iron oolite deposits from west central Nevada, USA. **Sedimentary Geology**, vol 395. <https://doi.org/10.1016/j.sedgeo.2019.105537>

8. **Ritterbush, K. A.** 2019. Sponge meadows and glass ramps: State shifts and regime change. **Palaeogeography, Palaeoclimatology, Palaeoecology**. 513: 116-131.
9. Wistort, Z., **K. A. Ritterbush**, A.A. Ekdale, 2019. Trace fossils of problematic origin: Assessing silicified trace fossils from the Permian of Utah. **Palaios**. 34 (12): 631–638
10. Hoffmann, R. S. Riechelmann, **KA Ritterbush**; J Koelen, N. Luebke, MM Joachimski, A. Immenhauser., 2019. A novel multiproxy approach to reconstruct the paleoecology of extinct ammonoids. **Gondwana Research**. 67: 64-81.
11. Pietsch, C., **K.A. Ritterbush**, J.R. Thompson, E.Petsios, D.J. Bottjer, 2019. Evolutionary Models in the Early Triassic Marine Realm. **Palaeogeography, Palaeoclimatology, Palaeoecology**. 513: 65-85
12. **Ritterbush, K.A.**, Foote, M. 2017. Association between geographic range and initial survival of Mesozoic marine animal genera: circumventing the confounding effects of temporal and taxonomic heterogeneity. **Paleobiology** 43(2):209-223.
13. Adiya, T., C. Johnson, M. Loewen, **K.A. Ritterbush**, K. Constenius, C. Dinter, 2017. Microbial-caddisfly bioherm association from the Lower Cretaceous Shinekhudag Formation, Mongolia: Earliest record of plant armoring in fossil caddisfly cases. **PLOS One**. doi.org/10.1371/journal.pone.0188194
14. **Ritterbush, K.A.**, Ibarra, Y., Tackett, L.S., 2016. Post-extinction biofacies on the first carbonate ramp of the Early Jurassic (Sinemurian) in NE Panthalassa (New York Canyon, Nevada, USA). **Palaios** 31:141-160.
15. Thibodeau, A.M., **Ritterbush, K.A.**, Yager, J.A., West, J., Ibarra, Y., Bottjer, D., Berelson, W., Bergquist, B., Corsetti, F. 2016. Mercury anomalies, volcanism, and timing of biotic recovery following the end-Triassic mass extinction. **Nature Communications** 7:11147, doi:10.1038/ncomms11147
16. Foote, M., **Ritterbush, K.A.**, Miller, I.A., 2016. Geographic ranges of genera and their constituent species: structure, evolutionary dynamics, and extinction resistance. **Paleobiology** 42:269-288.
17. **Ritterbush, K.A.**, 2015. Interpreting drag consequences of ammonoid shells by comparing studies in Westermann Morphospace. **Swiss Journal of Palaeontology**. 1-14. DOI: 10.1007/s13358-015-0096-8
18. **Ritterbush, K.A.** Ibarra, Y., Bottjer, D.J., Corsetti, F.A., Rosas, S., West, J.A., Berelson, W.B., Yager, J.A. (2015). Marine Ecological State Shifts Following the Triassic-Jurassic Mass Extinction, In P.D. Polly, J.J. Head, and D.L. Fox (eds.), Earth-Life Transitions: Paleobiology in the Context of Earth System Evolution. **The Paleontological Society Papers** 21. Yale Press, New Haven, CT.
19. **Ritterbush, K. A.**, Rosas, S., Bottjer, D.J., Corsetti, F. A., West, A. J., 2015. Andean sponges reveal long-term benthic ecosystem shifts following the end-Triassic mass extinction. **Palaeogeography, Palaeoclimatology, Palaeoecology**, 420: 193-209.

20. Corsetti, F.A., **Ritterbush, K.A.**, Bottjer, D.J., Greene, S., Ibarra, Y., Yager, J.A., West, A.J., Berelson, W.M., Rosas, S., Becker, T.W., Levine, N.M., Loyd, S.J., Martindale, R.C., Petryshyn, V.A., Carroll, N.R., Petsios, E., Piazza, O., Pietsch, C., Stellmann, J.L., Thompson, J.R., Washington, K.A., Wilmeth, D.T., 2015. Investigating the Paleocological Consequences of Supercontinent Breakup: Sponges Clean Up in the Early Jurassic. **The Sedimentary Record**, 13: 4-10.
21. Forcino, F., **Ritterbush, K.A.**, Stafford, E., 2015. Evaluating the effectiveness of the Mantel test and Procrustes Randomization test for exploratory ecological similarity among paleocommunities. **Palaeogeography, Palaeoclimatology, Palaeoecology**, 426: 199-208.
22. **Ritterbush, K. A.**, S. Rosas, D.J. Bottjer, F.A. Corsetti, 2014. New evidence on the role of siliceous sponges in ecology and sedimentary facies development in eastern Panthalassa following the Triassic/Jurassic mass extinction. **Palaios**. 29 (12): 652-668.
23. **Ritterbush, K. A.**, R. Hoffmann, and A. Lukeneder, K. De Baets, 2014. Pelagic Paleocology: Recent constraints on ammonoid paleobiology and life history. **Journal of Zoology**, 292: 229-241.
24. **Ritterbush, K. A.**, and D. J. Bottjer, 2012. Westermann Morphospace displays ammonoid shell shape and hypothetical paleoecology. **Paleobiology**, 38 (3): 442-446.
25. Greene, S. E, R. C. Martindale, **K. A. Ritterbush**, D. J. Bottjer, F. A. Corsetti, and W. M. Berelson, 2012. Recognizing ocean acidification in deep time: An evaluation of the evidence for acidification across the Triassic-Jurassic boundary. **Earth Science Reviews**, 113:72-93.

In Review

- Ritterbush, K. A.** Convergent evolution in the beaks of birds and squid. **Proceedings of the Royal Society B**. (In Review).
- Wistort, Z., **K. A. Ritterbush**. The effect of siliceous sponge deposition on Permian paleoecological structure. **Paleobiology** (In Review)
- Wistort, Z. **K. A. Ritterbush**. S. Hood. Microfacies of a Permian Glass Ramp, Murdock Mountain Formation, western US. **Palaios** (In Review)
- Melstrom, K., K. D. Angielczyk, **K. A. Ritterbush**, R. B. Irmis. The limits of convergence: the roles of phylogeny and dietary ecology in shaping non-avian amniote crania. **Royal Society Open Science**. (In Review)
- Yager, J., J. West, A. M. Thibodeau, F.A. Corsetti, M. Rigo, W.M. Berelson, D.J. Bottjer, S.E. Greene, Y.I. Ibarra, F. Jadoul, **K.A. Ritterbush**, N. Rollins, S. Rosas, P. DiStafano, D. Sulca, S. Todaro, P. Wynn, L. Zimmerman, B. Bergquist. Depositional environment controls the expression of mercury contents and anomalies associated with large igneous province magmatism during the Triassic-Jurassic transition. **Earth-Science Reviews** (In Review)

Technical Reports

- Aronson E.L. et al., 2015, Geoscience 2020: Cyberinfrastructure to reveal the past, comprehend the present, and envision the future, EarthCube Working Paper, ECWP-2015-1, 19 p.
<http://dx.doi.org/10.7269/>

Grants

2021	Pending Review: NSF Collaborative Research: Swimming against the stream: evaluating hydrodynamic trade-offs in the Early Mesozoic diversification of ammonites	(\$173k)
2020	NSF CAREER: Reconstructing ancient ocean ecosystems: ecological consequences of ammonoid shell shape.	\$744k
	Pending: NSF Collaborative Research: Swimming against the stream: evaluating hydrodynamic trade-offs in the Early Mesozoic diversification of ammonites	
	University Teaching Grant: What makes a Bird a Dinosaur (3D model production)	\$6.6k
2016	American Chemical Society Petroleum Research Fund Doctoral New Investigator	\$110k
2013	NSF Earth-Life Transitions: <i>Linked geochemical/biotic response to massive volcanic CO2 injection during the Triassic-Jurassic mass extinction</i>	\$1M*
	PIs: F. Corsetti, D. Bottjer, A. J. West, W. Berelson, T. Becker, N. Lavine	
	*Contributing Author: K. Ritterbush	
2009-2012		\$13k
	Geological Society of America	American Philosophical Society
	Society for Sedimentary Geology (SEPM)	American Museum of Natural History
	American Association of Petroleum Geologists	

Grants to Advisees (2015 through 2020)

NSF Postdoctoral Fellowship (David Peterman, PhD Wright State)	\$ 174k
2x University Teaching Assistant Award (Hebdon, Wistort; stipend & tuition)	\$ 80k
Utah Research Opportunities for Undergraduates (UROP)	\$ 5k
External grants	\$ 10k
Internal grants (Global Change & Sustainability Center)	\$ 3k

Honors

2020	Outstanding Teaching Award, Dept. Geology & Geophysics, University of Utah Outstanding Teaching Award, College of Mines & Earth Sciences, U of Utah
2012	USC Earth Sciences Department Teaching Award (General Education Classes)
2011	USC Earth Sciences Department Teaching Award (General Education Classes) USC Senator of the Month Award: April, Graduate and Professional Student Senate (GSSP) USC Outstanding Committee Award: Finance Committee, GSSP
2010	Honorable Mention, National Science Foundation (NSF) Graduate Student Research Fellowship Best Figure, Geobiology Symposium, California Polytechnic University

Products

- Coordinates and analyses of beak shape in cephalopods and birds (260 specimens)
 - Beak traces: <https://www.doi.org/10.5281/zenodo.3872276>
 - Shape analyses: <https://www.doi.org/10.5281/zenodo.3872377>
- Dinosaur illustrations, timeline posters, and 3D specimen models for teaching
 - Published under CC-BY-NC: <https://www.doi.org/10.5281/zenodo.3884322>
- Founded UUDinoWiki
 - <https://uudino.fandom.com>

Invited Lectures (n=27)

- 2021 Los Angeles Underwater: NSF Teacher Training Workshop (via Zoom)
Geological Society of Peru (via Zoom)
Utah State University (via Zoom)
- 2020 Jackson Hole Geological Society (in person pre-COVID; x2)
Westminster College, Salt Lake City, UT (in person pre-COVID)
- 2019 Yale Departmental Seminar (March 2019)
- 2018 Geological Society of America: 2 Invited Oral Presentations for Annual Meeting (Nov 2018)
DinoFest Los Angeles, LA Museum of Natural History, CA (Sept 2018)
University of Wisconsin, Madison, Department of Geoscience, Madison, WI (Sept 2018)
DinoFest Salt Lake City, Natural History Museum of Utah
Keynote Speaker, Ensign Elementary STEM Night
- 2017 DinoFest Los Angeles, LA Museum of Natural History, CA
Invited Plenary Speaker at 1st Conference of the Geobiology Society, Banff, Alberta, Canada
Utah Geological Association, Department of Natural Resources, Salt Lake City, UT
- 2016 Utah Friends of Paleontology, Salt Lake City, UT
Science Seminar, Weber State University, Ogden, UT
- 2015 University of Washington, Department of Earth and Space Sciences, Seattle, WA
University of Wisconsin Milwaukee, Department of Geosciences, Milwaukee, WI
University of Utah, Department of Geology and Geophysics, Salt Lake City, UT
- 2014 Miami University, Department of Geology and Environmental Earth Science, Oxford, OH
University of California, Riverside, Department of Earth Sciences, Riverside, CA
Pontifical Catholic University of Peru, Department of Engineering Geology, Lima
University of New Mexico, Department of Earth and Planetary Science, Albuquerque, NM
- 2013 Volcan Mining Company, Department of Exploration Geology, San Christobal, Peru
Pontifical Catholic University of Peru, Department of Mining Engineering, Lima
University of Texas at Austin, Department of Geological Sciences, Austin, TX
- 2012 Geological Society of Peru, Lima

Teaching Positions

<i>University of Utah</i> : Assistant Professor	
PaleoEcology (5180/6180)	2018, 2021
Paleobiology (3180)	Sp '18, '19, '20
World of Dinosaurs (1040)	Fa '17, '19, '20
Mass Extinctions (5920/6920)	Fall 2016
Paleobiology (3180; team taught w/Ekdale)	Spring 2016
Biomineralization & the Birth of Carbonates (6920)	Fall 2015
<i>Pontifical Catholic University of Peru</i> : Lecturer, 2-week Earth History Short Course	March 2014
<i>University of Southern California</i> : Six Teaching Assistantships	2008-2013
<i>USC Wrigley Institute for Environmental Studies (CA)</i> : Education Assistant	2007-2008
<i>Sea Education Association (CA)</i> : Teaching Assistant	2006-2007
<i>Wilderness Outdoor Leadership Foundation (CA)</i> : Educator	2006
<i>Rapture Marine Expeditions (CA, HI)</i> : Educator	2002-2006

Service

Meeting Organization

- 2024 *Host*: 11th International Symposium on Cephalopods Present and Past (ISCPP), Salt Lake City, UT [bid accepted by vote at 9th Symposium, 4/2018]
- 2022 *Science Committee Member*: 10th ISCPP, London Museum of Natural History, England
- 2020 NSF Panelist for Postdoctoral Fellowships, NSF Headquarters DC, January 2020
- 2019 *Session Co-organizer*: Scales of Ecological Development in the Mesozoic, NAPC
Session Co-organize: New insights into Functional Morphology. NAPC, Riverside, CA
- 2017 *Planner & Convener*: From Bacteria to Dinosaurs: Geobiology on a Dynamic Planet. Research Symposium during National Conference of the Society for the Advancement of Chicanos and Native Americans in Science, Salt Lake City, UT
- 2011 *Planning Committee Member*: Geobiology Symposium, University of Southern California

Institutional Service

Utah Department of Geology and Geophysics

Initiatives: **GeoSlice** Co-founder, Co-Funder (Ritterbush/Allam)
 ChalkTalk Founder & host of summer seminar series
 New Graduate Field Trip Instigator of series
 BigPaleo Monthly meeting incl. GG, NHMU & Anthro

Committees: Curriculum, Distinguished Lecture Series; GeoClub; Graduate Affairs, Space; Curriculum Revamp (Evolving Earth core member, Reactive Earth planning-stage member)

University of Utah

Initiatives: **Tech Taco Tuesday** Co-Founder, Co-Funder (Ritterbush/Ferril)
 Fall Fossil Fest Founder & Science Chair for 2021

Executive Board Member, Global Change and Sustainability Center, CMES Representative
Transformative Excellence “Sustaining Biodiversity” Hiring Committee (Museum + GG)

University of Chicago

Grad Ed Seminar (Ritterbush & Sora Kim): “Strategies for landing a post-doc or faculty job”

University of Southern California

Senator for Earth Sciences, Finance Committee; USC Graduate Student Government

Outside Organizations

Faculty Advisory Board, NSF GeoPaths program supporting SLCC transfer students
Paleontological Society Nominations Committee
NSF EarthCube Science and Technology Meeting, Berkeley, CA
NSF EarthCube Scope and Vision Workshop, Berkeley, CA
NSF Workshop on Paleo-Ocean Acidification, Catalina Island, California
NSF EarthCube Sedimentology Workshop, University of Utah, Salt Lake City

Peer-Review

Guest Associate Editor, Swiss Journal of Palaeontology, Proceedings of the 9th ISCPP
Reviewer for *Science*; *Nature Communications*; *Scientific Reports*; *Geology*; *Sea Research*; *Peer-J*;
Swiss Journal of Paleontology; *Proceedings of the Royal Society B*

Public Engagement (2015-2020 only)

- 2020 Post-Earthquake seismometer install/retrieve: quarantine-oriented public outreach (PPE, distance)
2019 Geologist, Colorado River Trips (x2), Splore
2018 DinoFest Fossil Booth & “Paleo Chats” Series; at the Los Angeles (Sept 2018)
Geologist, Colorado River Raft Trip (Horsetheif & Ruby Canyons), Splore
Workshop Leader, STEM Best Practices Conference, STEM Action Center of Utah
DinoFest Natural History Museum of Utah
Keynote Speaker, Ensign Elementary STEM Night
2017 DinoFest Los Angeles: Featured Paleontologist at weekend event with 12k visitors
Science Day at the University of Utah: 3D Printing Fossil Workshop for teens
Geology hike w/ at-risk youth; STEM Ambassador for Splore (adaptive recreation NGO)
2016 School Visits: Ensign Elementary 1st Grade Class; Madeline Choir School 1st & 3rd Grades
Science Day at the University of Utah: 3D Printing Fossil Workshop for teens
2015 Girl Scouts Science Speaker, Chicago, IL

Graduate Research Committees

<u>PhD</u>	<u>Completed</u>	
Nicholas Hebdon	<i>Hydrodynamic efficiency of ammonoid shells</i>	K. Ritterbush
Keegan Melstrom	<i>Mesozoic saurian teeth and diet</i>	R. Irmis
Courtney Weaver	<i>Magnetotactic bacteria and the PETM</i>	P. Lippert

<u>MS</u>	<u>Completed</u>	
Peter Maxeiner	<i>Strontium chemostratigraphy of Peru’s Triassic/Jurassic boundary</i>	Ritterbush/Cerling
K. Schwehr , 2018	<i>Cretaceous biostratigraphy & geochemistry of the N. Atlantic</i>	Ritterbush/Kunungo
R. Fults, 2020,	<i>Diagenetic sequence of the Agrio Formation</i>	L. Birgenheier
S. Moore, 2018	<i>Provenance and Value of Argentine Mudstones</i>	L. Birgenheier
Z. Wistort , 2017	<i>Silicified Trace Fossils in Permian of Northwest</i>	A. Ekdale
T. Adiya, 2017	<i>Caddisfly bioherms of the Lower Cretaceous of Mongolia</i>	C. Johnson
J. Walkowicz, 2015,	<i>Ammonoid extinction selectivity across the Frasnian/Famennian</i>	M. Foote

<u>MS, Secondary School Teachers (MSSST)</u>	<u>Completed</u>	
Mark Barret	<i>Sensitivity Analyses of Hydrodynamics Simulations</i>	K. Ritterbush
J. Watson, 2017	<i>Genetics of Retroviruses in Bats</i>	E. Pritham
S. Ripple, 2017	<i>Rodent communities and parasite infoection in the Great Basin</i>	S. Bush
W. Reynolds, 2017	<i>Parasite coinfection in North American deer mice in the Great Basin.</i>	S. Bush

<u>PhD</u>	<u>Ongoing</u>	<u>Adviser</u>
Zackary Wistort	<i>Paleoecological Influence of Permian Glass Ramps</i>	K. Ritterbush
Benjamin Breeden	<i>Earliest Triassic Ornithischians and Geochronology</i>	R. Irmis
Raul Ochoa	Basin dynamics of a mixed carbonate/siliciclastic shelf	L. Birgenheier
Kaeden O’Brien	Pleistocene paleoecology of the pre-Serengeti region	T. Faith

Undergraduate Research Supervision (¹UROP-funded; *Senior Thesis)

- Benton Franklin (Carleton College)*
Stratigraphy of Permian glass ramp facies across Utah: Uintas, Wasatch, West Desert
Jane Baer (Geo)¹ * *Microscopy and microfacies determination of spiculite and carbonate surveys*
Olivia Jenkins (EAE)¹ *3D Modeling of Fossil and Idealized Ammonoid Geometry and Ornament*
Zachary Case (Geo)¹ *Fossil preparation and intraspecies variation in Cretaceous Anascaphites*
Hayden Strickwerda (Bio)¹ *Morphology and 3D scanning of ammonoid conch geometry*

Affiliations

Paleontological Society, GSA, SEPM, AGU, AAPG, SACNAS, Utah Friends of Paleontology, Friends of the Cephalopods, Society for Integrative & Comparative Biology

Professional Development

NSF F.I.E.L.D. Workshop for inclusive field course planning, Colorado, 2018

Workshop on Cephalopod Hard Parts, Cephalopod International Advisory Council Meeting, 2017

NSF Stem Ambassador Program: completed workshops & year-long public engagement training/events

Workshop for Early Career Geoscience Faculty, NAGT and NSF, 2016

NSF EarthCube iSamples Early Career User Workshop, Baltimore, MD 2015

NSF EarthCube Summer Institute for Technology Exploration, San Diego Supercomputing Center 2013

6th International Analytical Paleobiology Workshop, Macquarie University, Australia, 2010

Selected Published Abstracts (** = grad advisee; *=undergraduate advisee)

- Hebdon, N.* and **Ritterbush, K.A.** 2020. Seeing Spirals: Evaluating the Hydrodynamic Effect of Changes in Spiraling Morphology of Ammonoids, p. 176. The Society for Integrative and Comparative Biology Abstract Book
- Hebdon, N.*, **Ritterbush, K.**, and Choi, Y. 2019. CFD Time Machine: Using CFD to Understand the History of Long Extinct Swimmers, p. M03. 022. APS Division of Fluid Dynamics Meeting Abstracts, 2019.
- Hebdon, N.* **K.A. Ritterbush.** Breaking down the spiral: Evaluating hydrodynamic effects of isolated Westermann Morphospace parameters in ammonoids. Geological Society of America Annual Meeting Abstracts
- Wistort, Z.* & **K.A. Ritterbush.** You got chert in my carbonate! You got carbonate in my chert! Interpreting the weird desimentary structures associated with shallow-water, mixed-chert-carbonate marine systems of the Permian. Geological Society of America Annual Meeting Abstracts
- Wistort, Z.* & **K.A. Ritterbush.** 2019. Multivariate community analysis of the Mid to Late Permian Phosphoria Basin. Geological Society of America Annual Meeting Abstracts
- Maxeiner, PP*, J Baer*, **KA Ritterbush**, S. Rosas, J. Yager, F. Corsetti, D. Bottjer. Microfacies of Panthalassan benthic communities before and after the end-Triassic extinction from the Peruvian Pucara Group. Geological Society of America Annual Meeting Abstracts
- Ritterbush, K.A.**, 2019. Squid or falcon? Evaluating convergent evolution in beaks of cephalopods and birds. N. American Paleontological Conference UC Riverside, CA
- Hebdon, N*, **K.A. Ritterbush.** 2019. Spiraling Consequences: Characterizing hydrodynamic impact of single parameter shape change in Ammonoids. N. American Paleontological Conference, UC Riverside, CA
- Wistort, Z.* & **K.A. Ritterbush.** 2019. Community analysis of the Gerster Limestone: reevaluation of the late Permian marine fauna in the western USA. N. American Paleontological Conference, UC Riverside, CA
- Maxeiner, PP*, J Baer*, **KA Ritterbush**, S. Rosas, J. Yager, F. Corsetti, D. Bottjer. 2019. Early Jurassic Spiculites: Glass ramp deposits of Peru in the micro and macro scale. N. American Paleontological Conference, UC Riverside, CA
- Ritterbush, K.A.**, N. Hebdon,*, 2018. New hydrodynamic data suggest low metabolisms for post-extinction serpenticones of the Early Jurassic. Cephalopods Present and Past, Fez, Morocco.
- Hebdon, N.*, **K.A. Ritterbush**, O. Jenkins*. Understanding hydrodynamics through 3D modeling and simulation. Cephalopods Present and Past, Fez, Morocco.
- Ritterbush, K. A.**, N. Hebdon, O. Jenkins, 2018. Lighting Talk: The Quick and the Dead: Measuring the hydrodynamic cost of extinct ammonite shells. Cephalopod International Advisory Council Conference 2018, St. Petersburg, FL
- Ritterbush, K.A.**, N. Hebdon,* O. Jenkins*, 2017. Ammonites were successful slackers after the Triassic/Jurassic mass extinction. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 6
- Hebdon, N.*, **K.A. Ritterbush**, O. Jenkins*, 2017. 3D modeling of Ammonite hydrodynamics. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 6
- Hood, S.* & **K.A. Ritterbush**, 2017. Paleocology of glass ramps: Non-actualistic shallow marine spiculites from the Permian of Northwestern Utah. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 6
- Wistort, Z.*, A.A. Ekdale, **K.A. Ritterbush**, 2017. Silicified trace fossils and ichnofabrics in the Permian of northwest Utah. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 6
- Corsetti, F.A., J. Yager, **K.A. Ritterbush**, Y. Ibarra, A.M. Thibodeau, B.A. Bergquist, J.A. West, D.J. Bottjer, W.M. Berelson, S. Rosas, 2017. Timing and alternate ecosystem states following the end-Triassic mass extinction (Nevada, Peru, England): Insights from Hg anomalies and their relationship to the Central Atlantic Magmatic Province. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 6

- Ritterbush, K.A.**, S. Hood*, Z. Wistort,* 2017. Investigating cherts of Utah at the leading edge of the Permian Spiculite Belt. Geological Society of America *Abstracts with Programs* 49, Paper 8-3.
- Hood, S.* and **K.A. Ritterbush**, 2017. Paleocology of siliceous sponges in coastal marine settings along eastern Pangea using depositional models from Permian cherts of northwestern Utah. Geological Society of America *Abstracts with Programs* 49, paper 4-1.
- Baer, J.* and **Ritterbush, K.A.**, 2016. Deposition and preservation of spicules within biosiliceous glass ramps. Geological Society of America *Abstracts with Programs*. (Paper 162-80).
- Rosas, S., **Ritterbush, K.A.**, Bottjer, D., Corsetti, F., West, J., Berelson, W., and Yager, J. 2016. Profundización sedimentaria solo en parte de la Cuenca Pucará (Peru Central) durante el Hettangiano- Sinemurio. XVIII Congreso Peruano de Geología (August 2016).
- Wistort, Z*., Ekdale, A.A., and **Ritterbush, K.A.**, 2016. Recognition and interpretation of silicified trace fossils in Permian strata of Northern Utah. Geological Society of America *Abstracts with Programs*. (Paper 82-19).
- Tsolmon, T., Johnson, C., Loewen, M., and **Ritterbush, K.A.**, and Constenius, K. 2016. Microbial-caddisfly bioherm association from the Lower Cretaceous Shinehudag Formation, Mongolia: Earliest Record of plant armoring in fossil caddisfly cases. Geological Society of America *Abstracts with Programs*. (Paper 262-44).
- Ritterbush, K.A.**, Foote, M. 2015. Initial survival of Mesozoic marine genera: A role for geographic range beyond temporal and taxonomic heterogeneity. Geological Society of America *Abstracts with Programs*. (Paper 265-2).
- Ritterbush, K.A.**, Loyd, S., Corsetti, F.A., Bottjer, D.J., Berelson, W. 2015. Examining early-diagenetic processes as a chief sink for carbonate in the aftermath of the Triassic-Jurassic crisis: Hettangian concretions of Muller Canyon, NV, USA. American Geophysicists Union.
- Foote, M., **Ritterbush, K.A.**, Miller, A. 2015. Hierarchical decomposition of geographic range and its implications for understanding extinction resistance in marine animal genera. Geological Society of America *Abstracts with Programs*. (Paper 78-8).
- Thibodeau, A.M., Corsetti, F.A., **Ritterbush, K.A.**, Yager, J.A., West, A.J., Ibarra, Y., Bottjer, D.J., Berelson, W., and Bergquist, B.A. 2015. Mercury concentrations and isotopes as tracers of CAMP in Triassic-Jurassic strata from Muller Canyon, Nevada. Geological Society of America *Abstracts with Programs*. (Paper 19-11).
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