

Elizabeth Petsios, Ph.D.**Assistant Professor**

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Department of Geosciences
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Professional Positions

2018 – present	Assistant Professor of Geosciences	Baylor University Geosciences Department
2017 – 2018	NSF-funded Postdoctoral Associate	Florida Museum of Natural History
2016 – 2017	NSF-funded Postdoctoral Associate	University of Southern California
2011 – 2016	Teaching Assistant and Research Fellow	University of Southern California
2010 – 2011	Museum Collections Intern	Paleontological Research Institution

Education

2016	Ph.D. Earth Science	University of Southern California Advisor: David J. Bottjer
2011	B.Sc. Science of Earth Systems Minor: Ecology and Evolution	Cornell University Advisor: Warren D. Allmon

Awards, Grants, Honors

2018 – present	Baylor University Rising Stars Fellowship
2017 – 2018	FLMNH Travel Award
2015 – 2016	USC Sonosky Endowed Fellowship
2014 – 2015	USC Stauffer Endowed Fellowship
2012	Paleontological Society Graduate Research Grant
2011 – 2012	Women in Science and Engineering (WiSE) Graduate Fellowship
2011	USC Graduate Merit Award
2011	Geological Society of America Graduate Research Grant
2011	Society for Sedimentary Geology Graduate Research Grant

Teaching Experience*Teaching Workshops*

2018	Paleontological Society Shortcourse - Pedagogy and Technology in the Modern Paleontology Classroom
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Teaching Assistantships

2012, 2014	USC Introduction to Earth History	Evaluation Score: 4.53/5
2013	USC Crises of a Planet	Evaluation Score: 4.79/5
2013	USC Introduction to Geosystems	Evaluation Score: 4.57/5*

* Awarded the Dept. of Earth Sciences Teaching Assistant Award for major courses (2nd Place).

Outreach and Service Activities

2018 – present	Association for Women Geoscientists Baylor Chapter Faculty Advisor
2018 – present	Graduate Dissertation Committee Member – Don Esker, Ph.D. Candidate
2018	Waco Mammoth National Monument – Mammoth Festival Exhibitor
2018	Mayborn Museum Complex – Fossil Day Exhibitor
2016 – 2017	USC Department of Earth Sciences – Paleo-environmental Seminar Coordinator
2015	University of Southern California – Young Researchers Program Mentor
2014	Geological Society of America – ‘Onto the Future’ Career Mentor
2012 – 2013	STAR Education – ‘Dino Day’ Fundraising Volunteer

Ad hoc Reviewer for: *PALAIOS*; *Palaeogeography Palaeoclimatology Palaeoecology*; *PLOS One*, *Paleoceanography*; *Science Advances*

Invited Presentations

2019 (<i>upcoming</i>)	Geological Society of London – Earth Systems transitions: How resilient is the biosphere? (Keynote Speaker)
2019 (<i>upcoming</i>)	University of Texas Austin – Department of Geological Sciences Brownbag Seminar

Professional Associations

2010 – present	Geological Society of America
2010 – present	Paleontological Society
2018 – present	Dallas Paleontological Society
2018 – present	Association for Women Geoscientists

Publication List

Published / In Press / Accepted

1. Thompson, J.R., Mirantsev, G., **Petsios, E.**, Bottjer, D.J. Phylogenetic analysis of the Archaeocidaridae and Palaeozoic Miocidaridae (Echinodermata: Echinoidea) and the origin of crown group echinoids. *Palaeontology*, *Accepted*
2. Pietsch, C., Ritterbush K., Thompson, J.R., **Petsios, E.**, Bottjer, D.J. 2019. Evolutionary models in the Early Triassic marine realm. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 513: 65-85.
3. **Petsios, E.**, Thompson, J.R., Pietsch, C., Bottjer, D. J. 2019. Biotic impact of temperature before, during, and after the end-Permian extinction: a multi-metric and multi-scale approach to modeling extinction and recovery dynamics. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 513: 89-99.
4. Thompson, J.R., Hu, S.X., Zhang, Q.Y., **Petsios, E.**, Cotton, L.J., Huang, J.Y., Zhou, C.Y., Wen, W., Bottjer, D.J. 2018. A new stem group echinoid from the Triassic of China leads to a revised macroevolutionary history of echinoids during the end-Permian mass extinction. *Royal Society Open Science*. 5(1): 171548
5. Thompson, J. R., Erkenbrack, E., Hinman, V., Zheng, M., **Petsios, E.** and Bottjer, D. J. 2017. Paleogenomics of echinoids reveals an ancient origin for the double-negative specification of micromeres in sea urchins. *Proceedings of the National Academy of Sciences of the United States of America*. 114(23): 5870-5877.
6. Erkenbrack, E., **Petsios, E.** 2017. A conserved role for VEGF signaling in specification of homologous mesenchymal cell types positioned at spatially distinct developmental addresses in early development of sea urchins. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution*. DOI: 10.1002/jez.b.22743
7. Thompson, J. R., **Petsios, E.**, Bottjer, D. J. 2017. A diverse assemblage of Permian echinoids (Echinodermata, Echinoidea) and implications for character evolution in early crown group echinoids. *Journal of Paleontology*. 4: 1-14.
8. **Petsios, E.**, and Bottjer, D. J. 2016. Quantitative analysis of the ecological dominance of benthic disaster taxa in the aftermath of the end-Permian mass extinction. *Paleobiology*. 42(3): 380-393.
9. Pietsch, C., **Petsios, E.**, and Bottjer, D.J. 2016. Sudden and extreme hyperthermals, low-oxygen, and sediment influx impact benthic alternative ecological states following the end-Permian mass extinction. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 451:183-196.
10. Thompson, J. R., **Petsios, E.**, Davidson, E. H., Erkenbrack, E., Gao, F., Bottjer, D. J. 2015. Reorganization of sea urchin gene regulatory networks at least 268 million years ago as revealed by oldest fossil cidaroid echinoid. *Scientific Reports*. 5 Article number: 15541
11. Corsetti, F. A., Ritterbush K., Bottjer, D.J., Greene, S.E., Ibarra, Y., Yager, J., Berelson, W., West, J., Rosas, S., Becker, T., Levine, N., Martindale, R., Petryshyn, V., Carroll, N., **Petsios, E.**, Piazza, O., Pietsch, C., Stellmann, J., Thompson, J.R., Washington, K., and Wilmeth, D. 2015. Investigating the Paleocological Consequences of Supercontinent Breakup: Sponges Clean Up in the Early Jurassic. *The Sedimentary Record*. 13(2):4-10.
12. Gao, F., Thompson, J. R., **Petsios, E.**, Erkenbrack, E., Moats, R. A., Bottjer, D. J., and Davidson, E. H. 2015. Juvenile skeletogenesis in anciently diverged sea urchin clades. *Developmental Biology*. 400(1):148-158.

Published Conference Abstracts (last 5 years)

1. **Petsios, E.**, Tyler, C.L., Portell, R.W., Kowalewski, M., 2018. Trends in Drilling and Parasitism on Echinoids during the Mesozoic Marine Revolution. Geological Society of America National Meeting Abstracts with Programs. Vol. 50, No. 6.
2. Thompson, J.R., **Petsios, E.**, Godbold, A.G., Bottjer, D.J. 2018. The Permian-Triassic Macroevolutionary History of Echinoids. Geological Society of America National Meeting Abstracts with Programs. Vol. 50, No. 6.

3. Tennakoon, S., Portell, R.W., Kowalewski, M., **Petsios, E.**, Tyler, C.L., 2018. Morphometric Analysis of Cenozoic Cassids (Mollusca: Gastropoda). Geological Society of America National Meeting Abstracts with Programs. Vol. 50, No. 6.
4. Farrar, L., Graves, E., **Petsios, E.**, Portell, R.W., Tyler, C.L., Kowalewski, M., 2018. Tracking traces of Predation and Parasitism on Fossil Echinoids through Geologic Time. Geological Society of America National Meeting Abstracts with Programs. Vol. 50, No. 6.
5. Farrar, L., Graves, E., **Petsios, E.**, Portell, R.W., Tyler, C.L., Kowalewski, M., 2018. Characterizing Traces of Predation and Parasitism on Fossil Echinoids. 5th International Palaeontological Congress.
6. **Petsios, E.**, Tyler, C.L., Portell, R.W., Kowalewski, M., 2018. Trends in Drilling Predation and Parasitism on Echinoids During the Mesozoic Marine Revolution. 5th International Palaeontological Congress.
7. Tennakoon, S., Portell, R.W., Kowalewski, M., **Petsios, E.**, Tyler, C.L., 2018. Morphometric Analysis of Cenozoic Cassid Snails (Mollusca: Gastropods) from Florida. 5th International Palaeontological Congress.
8. Farrar, L., Graves, E., **Petsios, E.**, Portell, R.W., Tyler, C.L., Kowalewski, M., 2018. Characterizing Traces of Predation and Parasitism on Fossil Echinoids. 16th International Echinoderm Conference.
9. Tyler, C.L., **Petsios, E.**, Portell, R.W., Kowalewski, M., 2018. Applications of the Echinoids-Associated Traces Database: Cretaceous to Modern Drilling Predation and Parasitism. 16th International Echinoderm Conference.
10. Graves, E., Farrar, L., **Petsios, E.**, Tyler, C.L., Portell, R.W., Kowalewski, M., 2018. Characterizing Traces of Biotic Interactions on Fossil Echinoids. Undergraduate Research Forum, Miami University.
11. Tennakoon, S., Portell, R.W., Kowalewski, M., **Petsios, E.**, Tyler, C.L., 2018. Carnivorous Cassids (Mollusca: Gastropoda) from the Upper Eocene Ocala Limestone of Florida. Geological Society of America Southeast Regional Meeting Abstracts with Programs Vol. 50 No. 3.
12. **Petsios, E.**, Tyler, C.L., Portell, R.W., Kowalewski, M., 2018. Cretaceous to Modern Trends in Drilling Predation and Parasitism on Echinoids. Geological Society of America Southeast Regional Meeting Abstracts with Programs Vol. 50 No. 3.
13. **Petsios, E.**, Tyler, C.L., Portell, R.W., Kowalewski, M. 2017. Trends in Predation and Parasitism Recorded by Drill Holes in Paleogene Echinoids. Geological Society of America National Meeting Abstracts with Programs. Vol. 49, No. 6.
14. **Petsios, E.**, Thompson, J.R., Pietsch, C., Bottjer, D. J. Biotic impact of temperature before, during, and after the end-Permian extinction: a multi-metric and multi-scale approach to modeling extinction and recovery dynamics. Geological Society of America National Meeting Abstracts with Programs. Vol. 49, No. 6
15. **Petsios, E.**, and Bottjer, D. J. 2016. Complex Patterns of Community Recovery Following the Permian-Triassic Mass Extinction: Perception of Recovery is Scale-dependent. Geological Society of America National Meeting Abstracts with Programs. Vol. 48, No. 7.
16. Thompson, J.R., **Petsios, E.**, Bottjer, D.J. 2016. Phylogenetic Analysis of the Miocidaridae and Triadotiaridae with Implications for the Evolution of Early post-Paleozoic Echinoids. Geological Society of America National Meeting Abstracts with Programs. Vol. 48, No. 7.
17. Thompson, J. R., Erkenbrack, **Petsios, E.** and Bottjer, D. J. 2016. Paleogenomics of Echinoids and the Evolution of Echinoid Gene Regulatory Networks. Geological Society of America National Meeting Abstracts with Programs. Vol. 48, No. 7.
18. **Petsios, E.**, and Bottjer, D.J. 2015. Tracking Recovery and Geochemical Correlation from the Lower Triassic Dinwoody Formation at Blacktail Creek, Montana. Geological Society of America National Meeting Abstracts with Programs. Vol. 47, No. 7, p.700
19. Thompson, J.R., **Petsios, E.**, Bottjer, D.J. 2015. Using Fossils and Phylogenies to Date the Timing of Key Gene Regulatory Network Innovations: An Example using Echinoids. Geological Society of America National Meeting Abstracts with Programs. Vol. 47, No. 7, p.854

20. **Petsios, E.**, and Bottjer, D.J. 2014. Redox Conditions and Community Evenness Following the End-Permian Mass Extinction. Geological Society of America National Meeting Abstracts with Programs. Vol. 46, No. 6, p.419
21. **Petsios, E.**, Thompson, J.R., Bottjer, D.J. 2014. Hidden Triassic Echinoid Diversity; Exploring Lineages with No Fossil Record. Geological Society of America National Meeting Abstracts with Programs. Vol. 46, No. 6, p.79
22. Bottjer, T.J., Ritterbush, K. A., Pietsch, C., **Petsios, E.** 2014. Evolution in the Early Triassic. Geological Society of America National Meeting Abstracts with Programs. Vol. 46, No. 6, p.419
23. Pietsch, C., **Petsios, E.**, Bottjer, D.J. 2014. Low Oxygen and Extreme Temperatures Disturb the Ecological Recovery of the Tethyan Benthic Fauna Following the End-Permian Mass Extinction. Geological Society of America National Meeting Abstracts with Programs. Vol. 46, No. 6, p.419
24. Thompson, J.R., **Petsios, E.**, Bottjer, D.J. 2014. Phylogenetic Analysis of the Archaeocidaridae (Echinoidea) and Implications for the Evolution of Crown Group Echinoids. Geological Society of America National Meeting Abstracts with Programs. Vol. 46, No. 6, p.79