

**DAVID K. MOSS**  
**CURICULUM VITAE**

**Assistant Professor**  
**Sam Houston State University**  
**Department of Environmental and Geosciences**  
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**EDUCATION**

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Ph.D. Syracuse University, Department of Earth Sciences	8/2016
“The evolution of extreme longevity in modern and fossil bivalves”	
Advisor: Linda Ivany	
M.S., University of Oklahoma, Department of Geology	5/2012
“Trilobite faunas and facies of the Upper Ordovician (Sandbian)	
Lebanon Limestone, Nashville Dome Tennessee”	
Advisor: Stephen Westrop	
B.S., Centenary College of Louisiana, Department of Geology	5/2010
Honors Thesis “Pliocene development of great white shark serrations”	
Advisors: Jeffrey Agnew, David Bieler	

**AWARDS**

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Outstanding Dissertation Award, College of Arts and Sciences Syracuse University	2017
Certificate in University Teaching, Syracuse University	2016
3 Minute Thesis (1 <sup>st</sup> Place), Syracuse University	2016
Outstanding Teaching Assistant Award, National Association of Geoscience Teachers	2015
Outstanding Teaching Assistant Award, Syracuse University	2014
Department of Earth Sciences Publication Award, Syracuse University	2014
Outstanding Senior Geology Major, Centenary College	2010

**ACADEMIC POSITIONS**

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*Assistant Professor*

Sam Houston State University

Sep 2018 - present

Historical Geology (GEOL 1404)

Oceanography (GEOL 3330)

Invertebrate Paleontology (GEOL 3415)

Stratigraphy and Sedimentation (GEOL 4400)

Field Methods (GEOL 3301)

*Postdoctoral Researcher*University of North Carolina

July 2017-present

“Biological consequences of environmental change in modern and fossil *Astarte* (bivalvia)”

*Visiting Assistant Professor*

2016-17

Vassar College, Poughkeepsie NY

Sedimentology (ESCI 211)

Extinction Events in Earth’s History (ESCI 383)

Earth, Environment and Humanity (ESCI 151)

*Adjunct Instructor*

Summer 2015

Syracuse University, Syracuse NY

Earth Science (EAR 105)

State University of New York, Oswego NY

Spring 2015

Historical Geology Laboratory (GEO 201)

*Teaching Assistant*Syracuse University, Syracuse NY

2012-2016

Introduction to Paleobiology (EAR 325)\*

Oceanography (EAR 117)\*

Dynamic Earth (EAR 110)\*

Earth Science (EAR 105)\*

Volcanoes and Earthquakes (EAR 225)

\*Served as TA coordinator – duties included developing assignments and prepping for laboratories. For EAR 325 served as the sole TA for four years and developed all lab material. All courses involved teaching either recitation or laboratory sections.

University of Oklahoma, Norman OK

2010-2012

The Dynamic Earth (GEOL 1104)

Physical Geology for Science and Engineering Majors (GEOL 1114)

The History of Earth and Life (GEOL 1024)

PUBLISHED MANUSCRIPTS

**Moss, D.K.**, Surge, D., Zettler, M.L., Orland, I.J., Burnette, A., and Fancher, A. 2021. Age and growth of *Astarte borealis* (Bivalvia) from the southwestern Baltic Sea using secondary ion mass spectrometry. *Marine Biology* 168:133. <https://doi.org/10.1007/s00227-021-03935-7>.

**Moss, D.K.**, Ivany, L.C., and Jones, D.S. 2021. Fossil bivalves and the sclerochronological reawakening. *Paleobiology* <https://doi:10.1017/pab.2021.16>

Palmer, K.L., **Moss, D.K.**, Surge, D., and Turek, S. 2021. Life history patterns of modern and fossil *Mercenaria* spp. From warm vs. cold climates. *Palaeogeography, Palaeoclimatology, Palaeoecology* <https://doi.org/10.1016/j.palaeo.2021.110227>

Saulsbury, J.; **Moss, D.K.**; Ivany, L.C.; Kowalewski, M.; Lindberg, D.R.; Gillooly, J.F.; Heim, N. A.; McClain, C.R.; Payne, J.L.; Roopnarine, P.D.; Schoene, B.; Goodwin, D.; Finnegan, S. 2019. Idiographic and nomothetic approaches to heterogeneity are complementary: Response to comments on "Evaluating the influences of temperature, primary production, and evolutionary history on bivalve growth rates." *Paleobiology*, v. 46, no. 2, p. 275-277. <https://doi.org/10.1017/pab.2020.20>

Saulsbury, James, **Moss, David K.**, Ivany, Linda C., Kowalewski, Michal., Lindberg, David R., Gillooly, James F., Heim, Noel A., McClain, Craig R., Payne, Jonathan L., Roopnarine, Peter D., Schone, Bernd R., Goodwin, David, Finnegan, Seth. 2019. Evaluating the influences of temperature, primary production, and evolutionary history on bivalve growth rates. *Paleobiology*, v. 45, no. 3, p. 405-420. DOI: 10.1017/pab.2019.20

**Moss, David K.**, Surge, Donna, Khaitov, Vadim. Lifespan and growth of *Astarte borealis* (Bivalvia) from Kandalaksha Gulf, White Sea, Russia. *Polar Biology*, v. 41, no. 7, p. 1359-1369. <https://doi.org/10.1007/s00300-018-2290-9>.

**Moss, David K.**, Ivany, Linda C., Silver, Robert B., Schue, John, and Artruc, Emily G. High latitude settings promote extreme longevity in fossil bivalves. 2017. *Paleobiology*, v. 43, p.365-382.

**Moss, David K.**, Ivany, Linda C., Judd, Emily J., Cummings, Partrick W., Bearden, Claire E., Kim, Woo-Jun, Artruc, Emily G., and Driscoll, Jeremy R. 2016. Latitudinal patterns in lifespan and growth rate across modern marine bivalves with implications for Phanerozoic evolution. *Proceedings of the Royal Society B*, v. 238.

**Moss, David K.** and Westrop, Stephen R. 2014. Systematics of some Late Ordovician encrinurine trilobites from Laurentian North America. *Journal of Paleontology*, v. 88, p. 1095-1119.

#### MEETING ABSTRACTS

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Casper, Stephen and **Moss, David K.**, 2020. Growth rates and lifespans of *Glycymeris americana* from North Carolina, USA during the Pliocene and Pleistocene. South Central Geological Society of America Meeting.

Palmer, Kylie L., Surge, Donna., **Moss, David K.** 2020. Seasonal timing of growth cessation in fossil *Mercenaria* spp. shells from warm vs. cold climates, Mid-Atlantic Coastal and Gulf Coastal Plains. Ocean Sciences Meeting 2020.

Palmer, Kylie L., Surge, Donna, **Moss, David K.** 2019. Life history patterns and conservation paleobiology of marine bivalves from warm vs. cold climates. Geological Society of America Abstracts with Programs, v. 51.

Fancher, Abigail, Surge, Donna, **Moss, David K.**, Orland, Ian J., and Zettler, Michael L. 2019. Using QGIS and oxygen isotope ratios to assess seasonal to multi-decadal variation in the bivalve, *Astarte borealis*, from the Baltic Sea. Geological Society of America Annual Meeting, Phoenix, Arizona, v. 51.

**Moss, David K.**, Ivany, Linda C., Jones, Douglas S. 2019. Sclerochronology meets paleobiology (again): using growth increments in bivalves to answer evolutionary questions. 11<sup>th</sup> North American Paleontological Conference Program with Abstracts.

Palmer, Kylie L., Surge, Donna, **Moss, David K.** 2019. Life history patterns of modern and fossil *Mercenaria* from the US Mid Atlantic Coastal Plain during cold vs. warm climate conditions: International Sclerochronology Conference, Split, Croatia.

Surge, D., **Moss, D.K.**, Orland, I.J., Zettler, M.L. 2019. Assessing seasonality and life history of Baltic Sea *Astarte borealis* (Bivalvia) using oxygen isotope ratios measured by high-precision SIMS. International Sclerochronology Conference, Split, Croatia.

Palmer, Kylie L., Surge, D., **Moss, D.K.** 2018. Impacts of warm vs. cold climate conditions on the life history of modern and fossil *Mercenaria* from the US Mid Atlantic Coastal Plain of North Carolina. Geological Society of America Abstracts with Programs, v. 50.

Fancher, A., **Moss, D.K.**, and Surge, D. 2018. Latitudinal patterns in lifespan and growth rate of Pliocene *Glycymeris subovata*. Geological Society of America Abstracts with Programs, v. 50.

**Moss, David K.**, Ivany, Linda C., Thomas, Roger D.K., and Surge, Donna. 2018. Latitudinal life-history gradients in fossil bivalves. Geological Society of America Abstracts with Programs, v. 50.

Surge, Donna, **Moss, David K.**, Orland, Ian J., and Zettler, Michael L. 2018. Oxygen isotope ratios measured by high-precision SIMS to assess seasonality and life history of Baltic Sea *Astarte borealis* (Bivalvia). Geological Society of America Abstracts with Programs, v. 50.

**Moss, David K.**, Ivany, Linda C., Thomas, Roger D.K., Surge, Donna. 2017. Latitudinal gradients in lifespan and growth rate for two species of *Glycymeris* (Bivalvia) from the Mid-Pliocene of the Atlantic Coastal Plain. Geological Society of America Abstracts with Programs, v. 49.

Saulsbury, James, Finnegan, S., Lindberg, David R., **Moss, David K.**, Ivany, Linda C., Gilooly, James F., Goodwin, David, Heim, Noel A., Kowalewski, Michal, Roopnarine, Peter D., Schone, Bernd R. 2017. Evaluating the influences of temperature, productivity, and phylogenetic constraint on bivalve growth rates. Geological Society of America Abstracts with Programs, v. 49.

**Moss, David K., and Ivany, Linda C. 2016.** Latitudinal patterns of growth rate and lifespan in modern bivalves. 4<sup>th</sup> International Sclerochronology Conference, Portland ME.

**Moss, David K., Ivany, Linda C., Judd, Emily J., Cummings, Partrick W., Bearden, Claire E., Kim, Woo-Jun, Artruc, Emily G., and Driscoll, Jeremy R. 2015.** Latitudinal patterns in lifespan and growth rate across modern marine bivalves. Geological Society of America Abstracts with Programs. v. 47, p. 668.

**Moss, David K. and Ivany, Linda C. 2014.** Environmental controls on extreme longevity in modern and fossil bivalves. North American Paleontological Convention. The Paleontological Society Special Publications, v. 13, p.26.

**Moss, David K. and Ivany, Linda, C. 2013.** The role of the environment in the evolution of extreme longevity in bivalves. Geological Society of America Abstracts with Programs, v. 45, no. 7, p.320.

**Moss, David K. and Westrop, Stephen R. 2012.** Sorting through a paraphyletic garbage can: A phylogenetic analysis of Middle and Upper Ordovician "*Encrinuoides*" (Trilobita) species from Laurentian North America. Geological Society of America, Abstracts with Programs, v. 44, no. 7, p. 233.

**Moss, David K. and Westrop, Stephen R. 2011.** Trilobite Biofacies and Lithofacies of the Upper Ordovician (Sandbian) Lebanon Limestone, Nashville Dome, Tennessee. Geological Society of America Abstracts with Programs, v. 43, no. 5, p.83.

**Moss, David K. and Agnew, Jeffrey G. 2008.** Patterns of serrations on the teeth of fossil great white and megatoothed sharks. Geological Society of America Abstracts with Programs, v. 40, no. 6, p. 177.

#### UNDERGRADUATE STUDENTS SUPERVISED

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Sam Houston State University

Stephen Casper – Lifespans of *Glycymeris americana* Pliocene and Pleistocene of North Carolina

Elyssa Rivera – general preparation techniques for sclerochronology of fossil bivalves

University of North Carolina

Abby Fancher – Lifespan and growth rate of *Glycymeris subovata* from the Pliocene of the Atlantic Coastal Plain

Alex Burnett -Lifespan and growth rate of *Astarte borealis* from two populations in the Baltic Sea

Callum Reid – preparation of bivalve specimens for lifespan/growth rate analysis

Syracuse University

Steve Harris -Lifespan and growth rate of Pliocene *Glycymeris subovata* from the Atlantic Coastal Plain

Lauren Williamson -Latitude and growth rate in Pliocene *Glycymeris americana*

Emily Artruc -Lifespans of Eocene Antarctic bivalves; literature search of lifespans and growth rates in modern bivalves

#### FUNDED RESEARCH GRANTS

National Science Foundation GEOPATHs Informal Networks	2020
PI: <b>Moss, David K.</b> ; co-PIs: Christa Spears (Lone Star College – University Park), Bryn Benford (Lone Star College – University Park), Ross Guida (Sam Houston State University)	
“ <i>Geoscience Exposure and Training in Texas (GET TX): High school through undergrad</i> ” (\$345,773)	
EURECA (Enhancing Undergraduate Research Experiences and Creative Activities)	2020
Sam Houston State University, “ <i>Life histories of fossil Glycymeris (bivalvia) from the Oligocene of Mississippi</i> ” Funded Stephen Casper and myself for Summer 2020 (\$5800)	
College of Science and Engineering Technology, Sam Houston State University	2019
“ <i>The role of lifespan and growth rate in body size trends of Glycymeris americana (bivalvia) across the Pliocene/Pleistocene boundary</i> ” Funded Stephen Casper for Summer of 2019 (\$2000)	
Paleontological Society Allison R. "Pete" Palmer Award	2014
“ <i>The role of phylogeny in the evolution of extreme longevity in bivalves</i> ” (\$800)	
Graduate Student Organization Research Grant, Syracuse University	2014
“ <i>The role of phylogeny in the evolution of extreme longevity in bivalves</i> ” (\$500)	
Geological Society of America Graduate Student Research Grant	2014
“ <i>The role of phylogeny in the evolution of extreme longevity in bivalves</i> ” (\$900)	
“ <i>The evolution of extreme longevity in bivalves</i> ” (\$2125)	
	2013

TRAVEL GRANTS

Syracuse University Graduate Student Organization (\$900)	2012, 13, 15, 16
Geological Society of America Northeastern section (\$400 total)	2012, 13, 15
Syracuse University Earth Sciences Department (\$1500) Travel funding to Fossilworks Workshop	2014
Syracuse University Prucha Research Fund (\$300)	2013
Geological Society of America Central section (\$250)	2011

INVITED PRESENTATIONS

Kona Lecture Series, Kona Hawaii	December 2019
Biology Department, Sam Houston State University	February 2019
Central NY Paleontology Group	October 2015
Rochester Academy of Science, Fossil Division	December 2014
Syracuse University Project Advance	April 2014
Central NY Paleontology Group	February 2014

WORKSHOPS

Fossilworks Intensive Workshop in Analytical Paleobiology Macqaurie University, Sydney, Australia Analytical methods in paleoecology, diversity, morphometrics, and phylogenetics using R	Summer 2014
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OUTREACH ACTIVITIES

Skype a scientist – 4 <sup>th</sup> grade class from Ohio	Spring 2018
Syracuse University Frontiers of Science Program Instructor for Earth Sciences day, activities have included “Fossils of New York”, “Sediments of Hyde Park Mammoth Site”, “Reconstructing human ancestry”, “Evolution of great white sharks”	Fall 2012-2015
National Fossil Day Jamesville-Dewitt Middle School Visited four classrooms, “what can fossils tell us?”	Fall 2012-2014
Liverpool High School department visit day Research topics in geosciences for 9 <sup>th</sup> grade students, helped organize and presented	Fall 2012, 2014
Little Luke’s Preschool Dewitt, NY Visited four classrooms, “what is a fossil?”	Spring 2014, 15
Syracuse University Orange Scholars Summer Program Assisted lead instructor with activities and ran evolution of great white	Summer 2013

sharks exercise

#### TEACHER DEVELOPMENT

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Teaching Controversial Issues-Climate & Energy (GSA)	2015
Teaching Controversial Issues-Evolution of Life & Earth (GSA)	2015
Syracuse University Project Advance (SUPA)	2014

#### PROFESSIONAL MEMBERSHIPS

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Geological Society of America  
Paleontological Society