

Sarah N. Davis
Curriculum Vitae

Jackson School of Geosciences
The University of Texas at Austin

sdavis6@utexas.edu
sarahndavis.weebly.com

EDUCATION

2022	Ph.D.	The University of Texas at Austin, Geological Sciences (Paleontology) “New insights into avian evolution: Evidence from fossils and colorful phenotypes”, <i>advised by Julia Clarke</i>
2016	B.S.	The University of Arizona, Organismal Biology <i>with Honors, Cum Laude</i>
2016	B.A.	The University of Arizona, French Language <i>Cum Laude</i>

POSITIONS HELD

2022 - Present	Research Associate, The University of Texas at Austin Communications Editor, Evolution Letters
2022 - 2023	Collections Assistant, Texas Vertebrate Paleontology Collection
2016 - 2021	Teaching Assistant, The University of Texas at Austin
2015 - 2016	Teaching Assistant, The University of Arizona
2014 - 2016	Undergraduate Research Assistant, The University of Arizona
2014	Fossil Preparator and Scientific Illustrator, GeoDÉcor Fossils and Minerals

GRANTS, SCHOLARSHIPS, AND FELLOWSHIPS (*total awarded: \$179,300*)

2022	University of Texas Graduate School Summer Fellowship (\$7,500)
2021	Whitney Endowed Presidential Scholarship in Paleontology (\$3,500) Dean’s Prestigious Fellowship (\$3,190)
2020	Paleontological Society of Austin Doctoral Research Grant (\$1,000) Lundelius Research Grant (\$1,500)
2019	Whitney Endowed Presidential Scholarship in Paleontology (\$3,500) Heese Research Award, the American Ornithological Society (\$1,230) Dean’s Prestigious Fellowship (\$3,190)
2018	Broquet Charl Memorial Fellowship (\$12,000) Dean’s Prestigious Fellowship (\$3,190)
2017	NSF Graduate Research Fellowship (\$102,000 over three years) Lundelius Research Grant (\$1,500)
2012 - 2016	Regents High Honors Scholarship (\$36,000 over four years)

HONORS AND AWARDS

2021	Outstanding Teaching Assistant, Jackson School of Geosciences
2020	Charlotte Mangum Support Award, Society for Integrative and Comparative Biology
2019	Academic Enrichment Award, The University of Texas <i>Secured funding to support invited speakers for our seminar series</i>
2018	Off Campus Research Award, Jackson School of Geosciences Analytical Research Award, Jackson School of Geosciences
2017	Outstanding Teaching Assistant, Jackson School of Geosciences
2016	Excellence in Undergraduate Research, The University of Arizona
2015	Lucretia B Hamilton Emerging Researcher Award, The University of Arizona Dean’s List: The University of Arizona College of Science

PUBLICATIONS

Number of publications: 6 Total citations: 80 h- index: 5

6. **Davis, S.N.**, Soto-Acuña, S., Fernández, R.A., Amudeo, J., Leppe, M.A., Rubilar-Rogers, D., Vargas, A.O., and Clarke, J.A. 2023. New Records of Theropoda from a Late Cretaceous (Campanian-Maastrichtian) locality, Magallanes-Austral Basin, Patagonia, and insights into end Cretaceous theropod diversity. *Journal of South American Earth Sciences*, 122: 104163.
5. **Davis, S.N.**, and Clarke, J.A. 2022. Estimating the distribution of carotenoid coloration in skin and integumentary structures of birds and extinct dinosaurs. *Evolution*, 76(1): 42–57.
4. Legendre, L.J., Rubilar-Rogers, D., Musser, G.M., **Davis, S.N.**, Otero, R.A., Vargas, A.O., and Clarke, J.A. 2020. A giant, soft-shelled egg from the Late Cretaceous of Antarctica. *Nature*, 583(7816): 411-414.
3. **Davis, S.N.**, Torres, C.R., Musser, G.M., Proffitt, J.V., Crouch, N.M.A., Lundelius, E.L., Lamanna, M.C., and Clarke, J.A. 2020. New mammalian and avian records from the Late Eocene La Meseta and Submeseta Formations of Seymour Island, Antarctica. *PeerJ*, 8: e8268.
2. George, S.W.M., **Davis, S.N.**, Fernández, R.A., Manríquez, L.M.E., Leppe, M.A., Horton, B.K., Clarke, J.A. 2020. Chronology of deposition and unconformity development across the Cretaceous-Paleogene boundary, Magallanes-Austral Basin, Patagonian Andes. *Journal of South American Earth Sciences*, 97: 102237.
1. Higginson, D.M., V. Belloni, **S.N. Davis**, E. S. Morrison, J.E. Andrews, and A.V. Badyaev. 2016. Evolution of long-term coloration trends with biochemically unstable ingredients. *Proceedings of Royal Society, Biological Sciences*. Lond. 283 (1831): 20160403

OTHER PUBLICATIONS

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1. **Davis, S.N.** Origin of novel color phenotypes: Contribution of structural properties of biochemical networks. 2016. *Honors Thesis*, The University of Arizona.

CONFERENCE PRESENTATIONS

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| 2023 | <i>The distribution of carotenoid consistent coloration across integumentary structures in birds and implications for studying carotenoids in extinct taxa.</i>
Society of Avian Paleontology and Evolution. Málaga, Spain. |
| 2021 | <i>Estimating the distribution of carotenoid coloration in skin and integumentary structures of birds and extinct dinosaurs.</i>
Evolution Annual Meeting. Virtual.
<i>Carotenoid coloration in non-passerine birds and expectations of carotenoid expression in extinct Dinosauria</i>
Society for Integrative and Comparative Biology Annual Meeting. Virtual. |
| 2019 | <i>Chronology of deposition, unconformity development, and paleontology across the Cretaceous-Paleogene boundary, Magallanes-Austral Basin, Patagonian Andes.</i>
Geological Society of America Annual Meeting. Phoenix, Arizona |
| 2018 | <i>Trends in carotenoid-consistent coloration across non-passerine birds</i>
American Ornithological Society Annual Meeting. Tucson, Arizona
<i>Trends in carotenoid-consistent coloration across non-passerine birds</i>
Evolution Joint Congress, Montpellier, France (poster) |
| 2017 | <i>New fossils from the La Meseta Formation of Seymour Island, Antarctica expand our understanding of middle-late Eocene Antarctica Fauna</i> |

Society of Vertebrate Paleontology Annual Meeting. Calgary, Canada (poster)

INVITED TALKS

- 2022 *Estimating the distribution of carotenoid coloration in birds*
Behavioral Ecology Lab, Museum of Natural History Berlin, Germany (virtual)
Colorful Beasts: Expectations of bright coloration in extinct dinosaurs
DinoFest 2022, Natural History Museum of Utah. [Event Page](#).
- 2021 *Estimating the distribution of carotenoid coloration in birds*
Oregon State University, Bird Research Group (virtual)
Estimating the distribution of carotenoid coloration in skin and integumentary structures of birds and extinct dinosaurs
University of Birmingham, Palaeontology Group (virtual)

OTHER PRESENTATIONS

- 2022 *New insights into avian evolution: Evidence from fossils and colorful phenotypes*
Jackson School of Geosciences Paleontology Seminar. Austin, Texas
- 2021 *Carotenoid coloration in non-passerine birds and expectations of carotenoid expression in extinct Dinosauria*
Jackson School of Geosciences Paleontology Seminar. Austin, Texas
- 2020 *Geology and paleontology of a Cretaceous–Paleogene boundary site, Magallanes–Austral Basin, Patagonia*
Jackson School of Geosciences Paleontology Seminar. Austin, Texas
- 2016 *Evolution of long-term coloration trends with biochemically unstable ingredients*
Jackson School of Geosciences Paleontology Seminar. Austin, Texas
- 2016 *Origin of novel color phenotypes: Contribution of structural properties of biochemical networks.*
EEB Research Program 27th Annual Conference. Tucson, Arizona (poster)
- 2015 *Do differences in pigment degradation drive the evolution of molt strategies in colorful birds?*
EEB Research Program 26th Annual Conference. Tucson, Arizona (poster)

TEACHING EXPERIENCE

- 2016-2021 The University of Texas at Austin
Teaching Assistant: Life Through Time (Historic Geology)
Teaching Assistant: Introduction to Geology
Continuing Education Classes: Dinosaurs (guest lecturer)
- 2015-2016 The University of Arizona
Preceptor: Intro to Paleontology

SELECT INSTRUCTIONAL MATERIAL

A selection of workshop and teaching activities I helped to develop. Materials available upon request.

Reconstructing Dinosaurs- how art and science inform each other

Activity for 4-7th grade students that introduces them to the methods that paleontologists and paleoartists use to reconstruct the appearances of extinct dinosaurs. Students are challenged to reference living animals and their environments to reconstruct the appearances of extinct dinosaurs, and to think about how they may have behaved when alive.

Investigating prehistoric Texas

Collaboration with Dr. Lisa Boucher (Director: Non-vertebrate Paleontology Collections, Jackson School of Geosciences). Students use geologic and paleontological data to reconstruct what their own backyards may have looked like 66 million years ago. Event page [here](#).

Historical Geology (Life Through Time) Online Lab Curriculum

Modified and redesigned course material traditionally meant for in person class meetings to work entirely online. This included digitizing fossil material, incorporating digital databases into lab activities, and restructuring assignments to work over Zoom.

SCIENCE COMMUNICATION AND OUTREACH

Events and Activities

Q&A with a Paleontologist Series: Alamo Draft House Cinema (2018 – 2022)

Invited by the Alamo Draft House Cinema to speak to movie audiences about paleontology and fossils. Film events: Jurassic World Series (3 films), Godzilla: King of the Monsters.

Earth Science Zoomerama (2021)

Co-presented on fossil preservation with Dr. Lisa Boucher and lead a virtual educational activity for elementary school students. Event page and material [here](#).

Fossil Fest Invited Speaker (2020, 2022) and Booth Presenter (2016 – 2022)

Presented my research to the public and answered questions about paleontology and discussed Texas fossils with visitors.

UT Paleontology Seminar Series (2019 – 2020)

Invited speakers to visit UT Austin, organized speaker schedules and ran the weekly seminar.

Reconstructing dinosaurs: teaching paleo art (2018 – 2020)

Taught a class for local Texas STEAM education day

Dinosaur Park Tour (spring 2019)

Led educational tours for 1st graders at the Dinosaur Park in Bastrop, Texas.

Earth Science Career Day (2017 – 2019)

Organized presentations and activities highlighting different career opportunities in the Geosciences for Austin area high school students

Media

Social Media Coordinator: Clarke Lab (2020-2023)

Curated the Clarke Lab's social media posts on Twitter to communicate the group's research to the public. Twitter page [here](#).

“Searching for Fossils in Patagonia”, Jackson School of Geosciences Newsletter

Article that highlights my field work in Patagonian Chile and the Clarke Lab's ongoing work on dinosaurs from the region. Article [here](#).

STEM Outreach Video Series: Paleontologists Discuss their Research

Invited by Dr. Esther Odek to participate in a YouTube series aimed to introduce the public to different scientific fields. Video [here](#).

Texas OnRamps Geology Course: featured geoscientist

Featured in a high school course discussing careers in geosciences. Video [here](#).

SERVICE

Peer Review

Evolution, Journal of Vertebrate Paleontology, Nature Communications

Professional Service

2021 Assistant Session Chair: SICB Virtual Conference

Undergraduate Mentorship Program: Evolution Virtual Conference

2017 JSG Master's Saturday: Session Moderator

Moderated a technical session featuring masters students

Students Supervised [names omitted for online version]

1 graduate student at UT, 6 undergraduate students at UT

1 undergraduate at U of A

MEMBERSHIP

American Ornithological Society	Society for the Study of Evolution
Geological Society of America	Society of Systematic Biologists
Paleontological Society	Society of Vertebrate Paleontology
Society for Integrative and Comparative Biology	

FIELD WORK

2017 - present	Chile: Magallanes Basin <i>Field work focusing on the geology and paleontology of a Late Cretaceous-Early Paleogene site in Patagonia</i>
2018	People's Republic of China: Yunnan and Gansu Province <i>Paleontological field work in Oligocene and Miocene sites</i>
2015 - 2016	United States: Bisbee, Arizona <i>Mapping a Cretaceous patch reef (Paul Spur)</i>

TECHNICAL TRAINING

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| - Molding and casting specimens | - Scanning Electron Microscopy (SEM) |
| - Spread Wing and Study Skin Preparation (birds) | - Spectrophotometry |
| - Dissection techniques (vertebrates) | - Programing in R |
| - Fossil Preparation | - AvaSoft |

OTHER EDUCATION

2021	URGE: Unlearning Racism in Geoscience
2020	Becoming an Inclusive Geoscientist Leader <i>Workshop hosted by the National Association of Geoscience Teachers</i>
2014	French Language Program <i>Université Paris Diderot: Paris, France</i>
2011	Digital Art Methods <i>University of Southern California: Los Angeles, CA</i>

SELECT MEDIA COVERAGE (see [website](#) for complete list)

2023	UT News: Fossils Reveal Dinosaurs of Prehistoric Patagonia NSF News: MEGARAPTOR: New Fossils Discovered CNN Tiempo (Chile): Hallan fósiles carnívoros en la Patagonia
2021	UT News: Dinosaur Faces and Feet May Have Popped with Color
2020	Nature News and Views: Hard evidence from soft fossil eggs
2019	Live Science: Why This Enormous, Scaly Foot Looks Like it's from a Dinosaur Como Será TV: Paleontólogos buscam a vértebra da cauda de um enorme dinossauro