

# Evan Thomas Saitta, Ph.D.

E-Mail: [evansaitta@gmail.com](mailto:evansaitta@gmail.com)

Website: <https://evansaitta.blog/>

Google Scholar: <https://scholar.google.com/citations?user=umU9KBMAAAAJ&hl=en&oi=ao>

ResearchGate: [https://www.researchgate.net/profile/Evan\\_Saitta](https://www.researchgate.net/profile/Evan_Saitta)

## Appointments

### The Field Museum of Natural History

Research, Advising, Outreach, & Fundraising

Research Associate, Negaunee Integrative Research Center, Life Sciences Section

2020-present

Bass Postdoctoral Researcher, Negaunee Integrative Research Center, Earth Sciences Section

June 2018-June 2020

Supervisor: Dr. Peter Makovicky

### The University of Chicago

Research, Teaching, & Outreach

Postdoctoral Scholar, Biological Sciences Division, Dept. of Organismal Biology and Anatomy

Oct. 2021-Dec. 2024

Supervisor: Dr. Paul Sereno

### Benedictine University (Lisle, IL)

Teaching

Adjunct Lecturer, Biological Sciences

Fall 2025

Courses taught: BIOL 4364 Ecology Laboratory; BIOL 1199 Principles of Biology Lab

### The University of Illinois Chicago

Teaching

Adjunct Lecturer, Dept. of Earth and Environmental Sciences

Spring 2022

Course taught: EAES/BIOS 360 Introduction to Paleontology

## Education

### The University of Bristol

School of Earth Sciences

#1 Paleontology research group globally (*Center for World University Rankings* 2017)

#2 UK, #16 globally in Earth Sciences (*Shanghai Global Ranking of Academic Subjects* 2019)

#19 in Earth Sciences globally (*QS World University Rankings by Subject* 2016)

Russell Group

Ph.D. in Geology

2015-April 2018 (*viva*), Jan. 2019 (graduation ceremony)

Advisor: Dr. Jakob Vinther

Thesis: "The taphonomy of soft tissues and the evolution of feathers"

M.Sc. (*Distinction*) in Palaeobiology

2014-2015 (submission), Jan. 2016 (graduation ceremony)

Advisor: Dr. Jakob Vinther

Thesis: "The taphonomy of keratin in archosaurs"

### Princeton University

#1 U.S. university (*U.S. News & World Report* 2010, 2012-2015, etc.)

Ivy League

B.A. (*Magna Cum Laude*) in Ecology and Evolutionary Biology

2010-2014

Advisor: Dr. James Gould

Thesis: "Paleobiology of North American stegosaurs: Evidence for sexual dimorphism"

## Publications

*h*-index = 17; *i10*-index = 17

(Year indicates date of initial online publication)

25) Sereno, PC, Vidal, D, Myhrvold, NP, Johnson-Ransom, E, Ciudad Real, M, Baumgart, SL, Sánchez Fontela, N, Green, TL, Saitta, ET, Adamou, B, Bop, LL, Keillor, TM, Fitzgerald, EC, Dutheil, DB, Laroche, RAS, Demers-Potvin, AV, Simarro, Á, Gascó-Lluna, F, Lázaro, A, Gamonal, A, Beightol, CV, Reneleau, V, Vautrin, R, Bertozzo, F, Granados, A, Kinney-Broderick, G, Mallon, JC, Lindoso, RM, and Ramezani, J (2026) Scimitar-crested *Spinosaurus* species from the Sahara caps stepwise spinosaurid radiation. *Science*. 391. DOI:10.1126/science.adx5486

Altmetric score: 1,855

24) Sereno, PC, Saitta, ET, Vidal, D, Myhrvold, N, Ciudad Real, M, Baumgart, SL, Bop, LL, Keillor, TM, Erickson, M, and Derstler, K (2025) Duck-billed dinosaur fleshy midline and hooves reveal terrestrial clay-template "mummification". *Science* 391(6780), 1–15. DOI:10.1126/science.adw3536

Altmetric score: 2,146

- 23) Prado, GMEM, Salvato, RCJPS, Becker-Kerber, B, Silva, EP, Pinheiro, FL, Osés, GL, Galante, D, Rodrigues, F, Dias, JJ, de Souza Carvalho, I, [Saitta, ET](#), Lino, LM, and Anelli, LE (2025) Fossil fish provide evidence of geomelanin preservation with implications on the visual accuracy of an extinct fish species. *Lethaia* 58(3), 1–17. DOI:10.18261/let.58.3.7
- 22) [Saitta, ET](#), and Kaye, TG (2025) Experimental maturation of pine resin in sediment to investigate the formation of synthetic copal and amber. *Scientific Reports* 15, 7627. DOI:10.1038/s41598-025-89448-5  
Altmetric score: 44
- 21) [Saitta, ET](#), Balaji, L, Mitchell, JS, and Makovicky, PJ (2025) Feather evolution following flight loss in crown group birds: relaxed selection and developmental constraints. *Evolution* 79(5), 737–751. DOI:10.1093/evolut/qpaf020  
Altmetric score: 126
- 20) Myhrvold, NP, Baumgart, SL, Vidal, D, Fish, FE, Henderson, DM, [Saitta, ET](#), and Sereno, PC (2024) Diving dinosaurs? Caveats on the use of bone compactness and pFDA for inferring lifestyle. *PLoS ONE* 19(3), e0298957. DOI:10.1371/journal.pone.0298957  
Altmetric score: 725
- 19) Longrich, NR, and [Saitta, ET](#) (2024) Taxonomic status of *Nanotyrannus lancensis* (Dinosauria: Tyrannosauroida) – a distinct taxon of small-bodied tyrannosaur. *Fossil Studies* 2(1), 1–65. DOI:10.3390/fossils2010001  
Altmetric score: 830
- 18) [Saitta, ET](#), Vinther, J, Crisp, MK, Abbott, GD, Wheeler, L, Presslee, S, Kaye, TG, Bull, I, Fletcher, I, Chen, X, Vidal, D, Sanguino, F, Buscalioni, AD, Calvo, J, Sereno, PC, Baumgart, SL, Pittman, M, Collins, MJ, Sakalauskaite, J, Mackie, M, Dal Bello, F, Dickinson, MR, Stevenson, MA, Donohoe, P, Heck, PR, Demarchi, B, and Penkman, KEH (2023) Non-avian dinosaur eggshell calcite can contain ancient, endogenous amino acids. *Geochimica et Cosmochimica Acta* 365, 1–20. DOI:10.1016/j.gca.2023.11.016  
Altmetric score: 141
- 17) Roy, A, Pittman, M, Kaye, TG, and [Saitta, ET](#) (2023) Sediment-encased pressure-temperature maturation experiments elucidate the impact of diagenesis on melanin-based fossil color and its paleobiological implications. *Paleobiology* 49(4), 712–732. DOI:10.1017/pab.2023.11
- 16) Mayr, G, Kaye, TG, Pittman, M, [Saitta, ET](#), and Pott, C (2020) Reanalysis of putative ovarian follicles suggests that Early Cretaceous birds were feeding not breeding. *Scientific Reports* 10, 19035. DOI:10.1038/s41598-020-76078-2  
Altmetric score: 44
- 15) [Saitta, ET](#), Stockdale, MT, Longrich, NR, Bonhomme, V, Benton, MJ, Cuthill, IC, and Makovicky, PJ (2020) **Invited Review:** An effect size statistical framework for investigating sexual dimorphism in non-avian dinosaurs and other extinct taxa. *Biological Journal of the Linnean Society* 131(2), 231–273. DOI:10.1093/biolinnean/blaa105  
Altmetric score: 296
- 14) Liang, R, Lau, MCY, [Saitta, ET](#), Garvin, ZK, and Onstott, TC (2020) Genome-centric resolution of novel microbial lineages in an excavated *Centrosaurus* dinosaur fossil bone from the Late Cretaceous of North America. *Environmental Microbiome* 15, 8. DOI:10.1186/s40793-020-00355-w  
Altmetric score: 200
- 13) [Saitta, ET](#), and Vinther, J (2019) A perspective on the evidence for keratin protein preservation in fossils: an issue of replication versus validation. *Palaeontologia Electronica* 22.3.2E, 1–30. DOI:10.26879/1017
- 12) Roy, A, Pittman, M, [Saitta, ET](#), Kaye, TG, and Xu, X (2019) Recent advances in amniote palaeocolour reconstruction and a framework for future research. *Biological Reviews* 95(1), 22–50. DOI:10.1111/brv.12552  
Altmetric score: 70
- 11) [Saitta, ET](#), Liang, R, Lau, MCY, Brown, CM, Longrich, NR, Kaye, TG, Novak, BJ, Salzberg, SL, Norell, MA, Abbott, GD, Dickinson, MR, Vinther, J, Bull, ID, Brooker, RA, Martin, P, Donohoe, P, Knowles, TDJ, Penkman, KEH, and Onstott, T (2019) Cretaceous dinosaur bone contains recent organic material and provides an environment conducive to microbial communities. *eLife* 8, e46205. DOI:10.7554/eLife.46205.001  
Altmetric score: 404

10) **Saitta, ET**, Fletcher, I, Martin, P, Pittman, M, Kaye, TG, True, LD, Norell, MA, Abbott, GD, Summons, RE, Penkman, K, and Vinther, J (2018) Preservation of feather fibers from the Late Cretaceous dinosaur *Shuvuuia deserti* raises concern about immunohistochemical analyses on fossils. *Organic Geochemistry* 125, 142–151. DOI:10.1016/j.orggeochem.2018.09.008

9) **Saitta, ET**, Kaye, TG, and Vinther, J (2018) Sediment-encased maturation: a novel method for simulating diagenesis in organic fossil preservation. *Palaeontology* 62(1), 135–150. DOI:10.1111/pala.12386

Altmetric score: 209

8) **Saitta, ET**, Clapham, C, and Vinther, J (2018) Experimental subaqueous burial of a bird carcass and compaction of plumage. *Paläontologische Zeitschrift* 92(4), 727–732. DOI:10.1007/s12542-018-0411-y

Altmetric score: 29

7) Parry, LA, Smithwick, F, Norden, K, **Saitta, ET**, Lozano-Fernandez, J, Tanner, A, Bernard Caron, J, Edgecombe, GD, Briggs, DEG, and Vinther, J (2017) Soft-bodied fossils are not simply rotten carcasses – towards a holistic understanding of exceptional fossil preservation. *BioEssays* 40(1), 1700167. DOI:10.1002/bies.201700167

Altmetric score: 252

6) **Saitta, ET**, Gelernter, R, and Vinther, J (2017) Additional information on the primitive contour and wing feathering of paravian dinosaurs. *Palaeontology* 61(2), 273–288. DOI:10.1111/pala.12342

Altmetric score: 129

5) **Saitta, ET**, Rogers, CS, Brooker, RA, and Vinther, J (2017) Experimental taphonomy of keratin: a structural analysis of early taphonomic changes. *Palaios* 32(10), 647–657. DOI:10.2110/palo.2017.051

Altmetric score: 36

4) **Saitta, ET**, Rogers, C, Brooker, RA, Abbott, GD, Kumar, S, O'Reilly, SS, Donohoe, P, Dutta, S, Summons, RE, and Vinther, J (2017) Low fossilization potential of keratin protein revealed by experimental taphonomy. *Palaeontology* 60(4), 547–556. DOI:10.1111/pala.12299

Altmetric score: 69

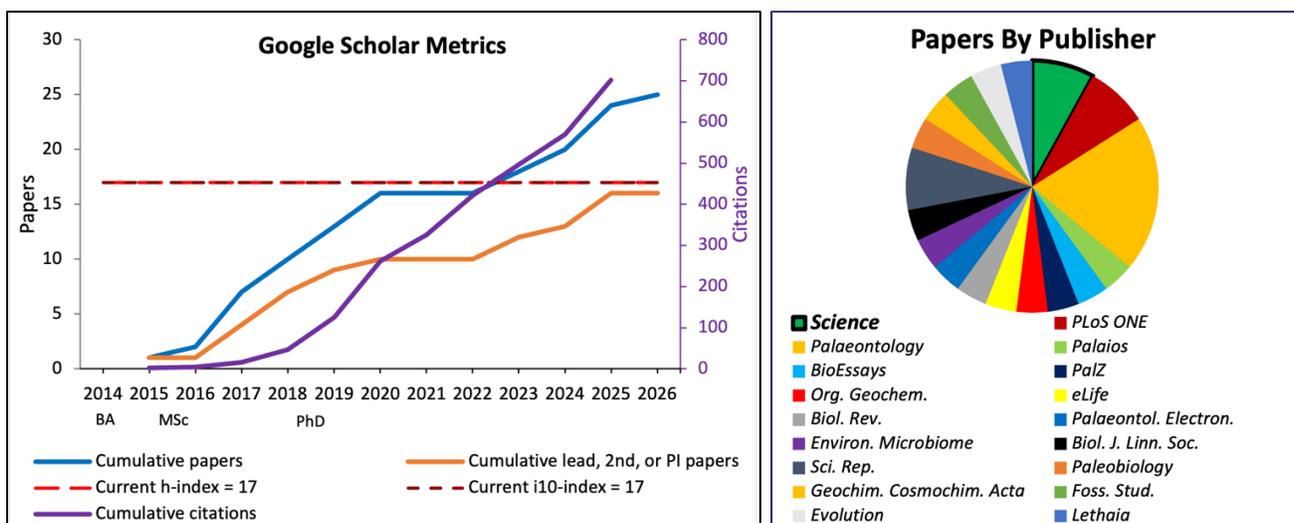
3) Smithwick, F, Mayr, G, **Saitta, ET**, Benton, M, and Vinther, J (2017) On the purported presence of fossilised collagen fibres in an ichthyosaur and a theropod dinosaur. *Palaeontology* 60(3), 409–422. DOI:10.1111/pala.12292

2) Mayr, G, Pittman, M, **Saitta, E**, Kaye, T, and Vinther, J (2016) Structure and homology of *Psittacosaurus* tail bristles. *Palaeontology* 59(6), 793–802. DOI:10.1111/pala.12257

Altmetric score: 279

1) **Saitta, ET** (2015) Evidence for sexual dimorphism in the plated dinosaur *Stegosaurus mjosi* (Ornithischia, Stegosauria) from the Morrison Formation (Upper Jurassic) of western USA. *PLoS ONE* 10(4), e0123503. DOI:10.1371/journal.pone.0123503

Altmetric score: 668



## Unpublished Preprints

Saitta, ET (2025) **Museums should curate beyond the natural: domestic breeds offer unique insight into evolutionary processes & human culture.** *EcoEvoRxiv*. DOI:10.32942/X2VK88

Saitta, ET, Bonhomme, V, Lukens, M, Vidal, D, Longrich, NR, Richmond, DR, and Stockdale, MT (2025) **The function and evolution of stegosaur osteoderms and hypothesized sexual dimorphism in *Hesperosaurus*.** *bioRxiv*. DOI:10.1101/2025.04.10.648273

Saitta, ET (2020) **The Society of Vertebrate Paleontology's publication policy is inconsistent with scientific epistemology.** *PaleorXiv*. DOI:10.31233/osf.io/xmkhb

---

## Manuscripts Under Review

Roy, A, Saitta, ET, Musa, M, Al-Kindi, S, Kaye, TG, and Pittman, M. **A multi-spectroscopic investigation into the diagenesis of avian polyene pigments: simulated maturation, chemical pathways and palaeontological implications.**

Saitta, ET (Under review) **Distributions of sexual size dimorphism: significance thresholds, systematic errors, & scaling.**

Saitta, ET (Under review) **Are we underfitting dinosaur growth models? Methodologies reflect interpretations of paleobiology.**

Longrich, NR, Makovicky, PJ, Tokaryk, T, Cooper, DML, Saitta, ET, Erickson, GM, Szekeley, T and Snively, E (Under review) **Hatchlings of *Tyrannosaurus rex* and the evolution of dinosaur reproductive strategies.**

---

## Achievements†, Funding\*, & Accepted Proposals

<b>CNPEM Proposal - Brazilian Center for Research in Energy and Materials (Campinas, Brazil)</b> PI: Kerber, BB. Co-Proposers: <u>Saitta, ET</u> , Prado, GMEM, Silva, EP "Can Raman spectroscopy really reveal biosignatures in fossil dinosaurs?"	2024
<b>Paleontological Society Norman Newell Early Career Grant*</b> "Characterizing the diagenesis of sex hormones"	2023
<b>The Palaeontological Association Research Grant*</b> "Characterizing the diagenesis of sex hormones"	2022
<b>Honoring Our Professors' Excellence (HOPE) Award†</b> University of Illinois Chicago Office of Campus Housing award as nominated by students	2022
<b>University of Chicago Fossil Lab Postdoctoral Funding*</b> Postdoctoral salary & research funds through the Sereno Fossil Lab, University of Chicago	2021-2024
<b>Bass Postdoctoral Fellowship*</b> Postdoctoral salary & research funds through the Negaunee Integrative Research Center, Field Museum of Natural History	2018-2020
<b>Paleontological Society Stephen Jay Gould Award*</b> Paleontological Society Student Research Grant: "Material properties of keratinous structures"	2017
<b>The Daniel Pidgeon Fund*</b> The Geological Society research grant: "Creating fossils in the lab: sediment-based maturation experiments"	2017
<b>Bob Savage Memorial Fund*</b> University of Bristol palaeobiology graduate student award	Received four times - 2016-2017
<b>Jackson Student Travel Grant*</b> Society of Vertebrate Paleontology award to support student travel to their annual meeting	2016

<b>M.Sc. Award: Distinction (University of Bristol)†</b>	2015
<b>University of Bristol Alumni Foundation Travel Grant*</b> University of Bristol student award to support conference attendance costs	Received twice – 2015
<b>Magna Cum Laude (Princeton University)†</b>	2014
<b>Elected to the Society of Sigma Xi†</b>	2014
<b>Senior Thesis Poster Award in Behavior†</b> Granted by Princeton University’s Department of Ecology and Evolutionary Biology	2014
<b>Office of the Dean of the College Senior Thesis Research Funding*</b> Princeton University academic research grant	2013
<b>Fred Fox Fund*</b> Academic research award and grant through the Office of Religious Life at Princeton University	2012

### Pending Funds & Proposals

National Science Foundation - Life and Environments Through Time Institution: Field Museum of Natural History PI: Herrera, FA Co-PI: <u>Saitta, ET</u> “Experimental & Molecular Study of Plant Fossilization from Fossil Lake Lagerstätte” Requested Amount: \$794,906	Status: Pending 2026
--	----------------------

## R Packages

Bonhomme, V., Picq, S., Gaucherel, C., & Claude, J. (2014). **Momocs: Outline Analysis Using R**. *Journal of Statistical Software*, 56(13), 1–24. DOI:10.18637/jss.v056.i13. **Acknowledgement:** “We are very grateful to (in alphabetical order): Sean Asselin, Laurent Bouby, Matt Bulbert, Simon Cramer, Julia Cooke, April Dinwiddie, Carl Lipo, Cedric Gaucherel, Catherine Girard, QGouil (GitHub), Christian Steven Hoggard, Sarah Ivorra, Glynis Jones, Nathalie Keller, Ricardo Kriebel, Remi Laffont, Fabien Lafuma, Matthias Mace, Stas Malavin, Neus Martinez, Ben Marwick, Sabrina Renaud, Marcelo Reginato, Evan Saitta, Bill Sellers, David Siddons, Eleanor Stillman, Theodore Stammer, Tom Stubbs, Norbert Telmon, Jean-Frederic Terral, Bill Venables, Daniele Ventura, Michael Wallace, Asher Wishkerman, John Wood for their helpful ideas and bug reports”. <https://cran.r-project.org/web/packages/Momocs/refman/Momocs.html>

## Teaching

<b>Adjunct Lecturer, <span style="color: red;">Benedictine University (Lisle, IL)</span></b> Lead, sole course instructor: Ecology Laboratory BIOL 4364 (2 sections) Section instructor: Principles of Biology Lab BIOL 1199 (1 section)	<b>Fall 2025</b> <b>Fall 2025</b>
--	--------------------------------------

<b>Adjunct Lecturer, University of Illinois Chicago</b> Lead, sole course instructor: Introduction to Paleontology EAES/BIOS 360	<b>Spring 2022</b>
<b>Guest Lecturer, University of Chicago</b> Dinosaur Science BIOS 23100: "Taphonomy & Footprints" lecture	<b>Spring 2023</b>
<b>Postdoctoral Field Teaching Assistant, University of Chicago</b> Dinosaur Science BIOS 23100: Week-long dinosaur excavation in Wyoming	<b>Summer 2023</b>
<b>Graduate Teaching Assistant / Demonstrator, University of Bristol</b> Geobiology EASC20024 Geology 1: Evolution of Earth and Life EASC10001 Evolution of the Biosphere EASC30008 ( <i>Master's level course</i> ) Environmental Geoscience: Climate and Ecology EASC10002	<b>Spring 2017</b> <b>Spring 2017</b> <b>Fall 2015</b> <b>Fall 2015</b>

---

## Advising, Training, & Mentoring

<b>Mentoring</b> My sediment-encased maturation method has been used in collaboration with Ph.D. students from: <b>University of Hong Kong</b> - 2 thesis chapters <b>University of California Davis</b> <b>University of Chicago</b>	<b>2018-present</b>
<b>Advising</b> Undergraduate students: summer intern* & volunteer supervising, <b>Field Museum</b> *Supported by University of Chicago's Jeff Metcalf Internship Program; became study coauthor & later pursued science in graduate school	<b>2018-2020</b>
<b>Training</b> Graduate teaching assistant training, <b>University of Illinois Chicago</b>	<b>Spring 2022</b>

---

## Academic Presentations

(Lead presenter only)

<b>Society of Vertebrate Paleontology annual meeting</b> Minneapolis, Minnesota, USA: Talk & Poster Talk - Exceptional preservation of integumental structures in hadrosaur 'mummies' via clay templating Poster - 'Synthetic fossils': experiments make taphonomy a better science	<b>10/2024</b>
Cincinnati, Ohio, USA: Poster Sexing dinosaurs: Possible detection of trace sex hormones in fossils as old as the Jurassic and the thermal stability of estrogen	<b>10/2023</b>
*Virtual Conference: Poster - *abstract accepted but later withdrawn due to registration cost Relaxing selective pressures on complex structures: feather evolution after flight loss in recent birds	<b>11/2021</b>
Virtual Conference: Poster Non-avian dinosaur eggshell calcite contains ancient, endogenous amino acids	<b>10/2020</b>
Brisbane, Australia: Talk Sexual dimorphism in non-avian dinosaurs and other extinct taxa: the importance of effect size statistics in paleontology	<b>10/2019</b>
Albuquerque, New Mexico, USA: Talk ( <i>Romer Prize Session</i> ) Molecular stability and mobility: Protein diagenesis in open and closed taphonomic systems	<b>10/2018</b>
Calgary, Alberta, Canada: Talk ( <i>Romer Prize Session</i> ) Creating fossils in the lab: replicating fossilization using sediment-based maturation	<b>8/2017</b>
Salt Lake City, Utah, USA: Talk The taphonomy of keratin in archosaurs	<b>10/2016</b>

<b>Palaeoproteomics and Archaeology, Society for Techniques and Advances (affiliate of The International Society for Biomolecular Archaeology)</b>	
PAASTA Talk Series: Virtual Talk	7/2024
Eggshell Time Capsules: Ancient Amino Acids	
<b>Weizmann Institute of Science</b>	
Kimmel Center for Archaeological Science Seminar: Virtual Talk	4/2024
Eggshell Time Capsules: Ancient Amino Acids	
<b>The University of Chicago</b>	
Darwinian Sciences Cluster Retreat: Poster	9/2023
Sexing dinosaurs: Possible detection of trace sex hormones in fossils as old as the Jurassic and the thermal stability of estrogen	
Evolutionary Morphology Seminar Series: Talk	10/2021
Molecular fossil hunting: analytical and experimental taphonomy	
<b>The University of Copenhagen (Denmark)</b>	
Globe Institute: Talk	7/2022
Molecular fossil hunting: analytical and experimental taphonomy	
<b>The University of Illinois Chicago</b>	
EAES Departmental Seminar: Talk	3/2022
Molecular fossil hunting: analytical and experimental taphonomy	
<b>Field Museum of Natural History</b>	
A. Watson Armour Seminar Series: Talk	9/2019
Mesozoic molecules: revealing information from fossils through taphonomy	
<b>Argonne National Laboratory</b>	
Advanced Photon Source: Coffee Talk	8/2019
Exceptional fossils: feathers, soft tissues, and ancient molecules	
<b>Palaeontological Association annual meeting</b>	
London, UK	12/2017
Talk - Approaching sexual dimorphism in non-avian dinosaurs and other extinct taxa	
Poster - Life inside a dinosaur bone: a thriving microbiome	
Lyon, France	12/2016
Poster - Primitive contour feathers in paravian dinosaurs and the evolution of avian plumage	
Informal talk ('Friends of the Rotten' discussion meeting) - Taphonomy 2.0: Experimental P/T maturation using sediment as a taphonomic filter to investigate soft tissue preservation	
Cardiff, UK	12/2015
Poster - The taphonomy of keratin in archosaurs	
Talk - Evidence for sexual dimorphism in the plated dinosaur <i>Stegosaurus mjosi</i> (Ornithischia, Stegosauria) from the Morrison Formation (Upper Jurassic) of western USA	
<b>International Workshop on Konservat-Lagerstätten</b>	
Cork, Ireland: Talk	7/2017
Dinosaur eggshell calcite as a closed system: 'molecular Konservat-Lagerstätten'	

## Popular Science Articles

<b><i>The Conversation</i></b>	
"Fossilized dinosaur eggshells can preserve amino acids, the building blocks of proteins, over millions of years"	4/2024
"Did male and female dinosaurs differ? A new statistical technique is helping answer the question"	1/2022
"How some dinosaur discoveries might be wishful scientific thinking"	11/2017
Contributor to Longrich, NR "Dinosaur bones: hidden life revealed inside them"	7/2019
<b><i>TheScienceBreaker (partner with Université de Genève)</i></b>	11/2019
"Long-dead dinosaurs support new life"	

## Radio & Podcast Appearances

<i>The Primal Biology Show</i> Interview discussing my career and insights	7/2025
<i>The Best of our Knowledge</i> Interview with WMAC Northeast Public Radio discussing Saitta & Kaye (2025, <i>Scientific Reports</i> )	6/2025
<i>The Skeptics Guide to the Universe</i> Twenty-minute interview on the podcast discussing Saitta <i>et al.</i> (2019, <i>eLife</i> )	6/2019
<i>Palaeocast</i> Hour-long interview on the podcast discussing Saitta <i>et al.</i> (2019, <i>eLife</i> )	6/2019
<i>These Vibes Are Too Cosmic</i> Hour-long interview with Princeton, New Jersey, radio show on my research in general	5/2018
<b>BBC Radio: National and Bristol</b> Interviews discussing Saitta (2015, <i>PLoS ONE</i> )	4/2015

---

## Institutional Advancement & Fundraising

<b>Field Museum Giving Day Ambassador</b> Helped with grassroots fundraising for “Nurturing Future Scientists”	10/2019
<b>Field Museum Private Collections Tour</b> Showcased oversized fossil collections to Chairman’s Circle member	8/2019
<b>Field Museum Donor Private Meeting</b> Talk given to museum donors at a small breakfast meeting	6/2019
<b>Field Museum Pop-up</b> Informal meet and greet with Field Museum board members at downtown ‘dig site’ pop-up	6/2019
<b>Field Museum Members’ Night</b> Discussed my work with Field Museum members	5/2019
<b>Sue Celebration</b> Presented my work to Field Museum members and donors	1/2019
<b>Field Encounters</b> Talk given to Field Museum donors entitled “Creating synthetic fossils in the lab”	11/2018

---

## Public Outreach

<b>Fossil Crates Live!</b> Expert guest on members-only Zoom call series hosted by Dr. Brian Curtice	3/2025
<b>Sereno Fossil Lab Open Houses</b> Engaged southside community in monthly open houses for the newly opened Fossil Lab at the University of Chicago	2024
<b>Southside Science Festival</b> Presenter at a booth for a University of Chicago science communication event for local community	9/2023
<b>Dinosaurs of the Sahara</b> Assisted Sereno Lab in preparing displays and specimens for public exhibit at the Cleveland Great Lakes Science Center	5/2023
<b>Gloucester Museum “Dinosaurs” Talks and Workshops</b> Feathers and colour in dinosaurs	9/2017

<b>Bristol Dinosaur Project</b> Educational outreach program directed at children	2015
<b>Jurassic Quest</b> Educational day directed at young children involving fossil displays	7/2014
<b>The Billings Clinic</b> Presented to TV/print media and the public about use of CT scanner for undergraduate thesis	7/2013
<b>Princeton Undergraduate Research and Public Service Symposium</b> Alumni Day showcase of independent research	2013

---

### Peer Reviewer

<i>Nature Ecology &amp; Evolution</i>	<i>Royal Society Open Science</i>
<i>BMC Evolutionary Biology</i>	<i>Paleobiology</i>
<i>Journal of Proteomics</i>	<i>Neues Jahrbuch für Geologie und Paläontologie</i>
<i>Biology Letters</i>	<i>PeerJ; PeerJ Life &amp; Environment</i>
<i>Cretaceous Research</i>	<i>Princeton University Press: Remnants of Ancient Life</i>

---

### Editorial Roles

<b>Associate Editor</b> , <i>Frontiers in Ecology &amp; Evolution</i> , Paleocology section	2025-present
---	--------------

---

### Societies & Groups

<b>The Society for the Study of Evolution</b>	2025-present
<b>The Society of Vertebrate Paleontology</b>	2013-Feb 2026
<b>The Palaeontological Association</b>	2015-present
<b>The Paleontological Society</b>	2010-present
<b>DinoSoc</b> University of Bristol student paleontology society	2014-2017
<b>Bristol University Geology and Geoscience Society</b>	2014-2017
<b>myFOSSIL.org</b> Beta tester	2015
<b>Princeton Undergraduate Geosciences Society</b>	2012-2014
<b>University of Bristol Snowsports Club</b> Snowboard race team	2015-2018
<b>University of Bristol Athletics and Cross Country Club</b> Cross country	2014-2018
<b>Princeton University Cannon Dial Elm Club</b>	2012-2014

---

## Newly Described Taxa

### *Spinosaurus mirabilis*

Cretaceous, Niger (Serenó *et al.* 2026, *Science*)

### Novel microbial community within buried dinosaur bone

Modern, Canada: 46 genomes from six bacterial phyla (Actinobacteria, Proteobacteria, Nitrospira, Acidobacteria, Gemmatimonadetes, Chloroflexi) and one archaeal phylum (Thaumarchaeota), the majority of which represented uncultivated, novel microbial lineages from class to species levels (Liang *et al.* 2020, *Environmental Microbiome*)

---

## Experience & Networks

### International collaborative research network:

- USA
- Germany
- China
- United Kingdom
- Ireland
- India
- Canada
- Spain
- Argentina
- Denmark
- Italy
- Brazil
- Niger
- France
- Belgium

### Paleontological (prospecting, quarrying, preparation), geological, & biological field experience:

- University of Chicago: Wyoming
- Field Museum: Montana, Utah, Missouri, & Argentina
- Royal Tyrell Museum: Dinosaur Provincial Park, Alberta (Canada)
- Royal Tyrell Museum Field Station (preparatory lab): Dinosaur Provincial Park, Alberta (Canada)
- Independent paleontological field & preparatory lab experience over seven summers: Montana
- Princeton University: geology (Spain, France, Utah, New Mexico, the Catskills, Kentucky, Delaware Water Gap, & Yellowstone National Park) & biology (Bermuda & Yellowstone National Park)
- Dinosoc: UK

### Laboratory experience:

- Princeton University
- University of Bristol (UK)
- University of York (UK)
- University of Newcastle (UK)
- University of Copenhagen (Denmark)
- Foundation for Scientific Advancement
- Field Museum
- Northwestern University
- Argonne National Laboratory
- University of Chicago

### Analytical experience:

- Specimen-based research (fossil & modern reptiles, birds, fish, invertebrates, plants)
- R-based morphometrics, statistics, & data analysis
- Fossil bone histology & thin sectioning
- Hospital & micro-CT scanning
- Decay & maturation experiments
- Light microscopy
- Electron microscopy
- Energy-dispersive X-ray spectroscopy
- Pyrolysis-gas chromatography-mass spectrometry
- Laser stimulated fluorescence imaging
- Amino acid racemization analysis
- DNA, protein, & lipid extraction
- Time-of-flight secondary ion mass spectrometry
- Radiocarbon analysis
- Attenuated total reflectance Fourier-transform infrared spectroscopy
- Synchrotron X-ray fluorescence
- Raman spectroscopy
- Portable X-ray fluorescence
- X-ray diffraction
- White light scanning
- Laser ablation-inductively coupled plasma-mass spectrometry

- Magnetic resonance imaging

**Museum collections experience & research visits:**

- Field Museum of Natural History
- American Museum of Natural History
- Senckenberg Naturmuseum Frankfurt (Germany)
- Paläontologische Museum München (Germany)
- Smithsonian National Museum of Natural History
- Yale Peabody Museum
- Carnegie Museum of Natural History
- Dinosaur National Monument
- Denver Museum of Nature and Science
- Sauriermuseum Aathal (Switzerland)
- Laser diffraction particle size analysis
- Natural History Museum of Utah
- Wyoming Dinosaur Center
- Brigham Young University Museum of Paleontology
- Museum of Western Colorado
- Virginia Museum of Natural History
- Black Hills Institute of Geologic Research
- Utah Field House of Natural History State Park Museum
- Houston Museum of Natural Science
- Natural History Museum, London (UK)