

# Evan Thomas Saitta

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## Employment

**The Field Museum of Natural History** 2018-present  
Postdoctoral researcher  
Integrative Research Center, Section of Earth Sciences  
Supervisor: Dr. Peter Makovicky

## Education

**University of Bristol** 2015-2018  
Ph.D. in Geology  
Advisor: Dr. Jakob Vinther  
Thesis: The taphonomy of soft tissues and the evolution of feathers

M.Sc. in Palaeobiology (Distinction) 2014-2015  
Advisor: Dr. Jakob Vinther  
Thesis: The taphonomy of keratin in archosaurs

**Princeton University** 2010-2014  
B.A. in Ecology and Evolutionary Biology (Magna Cum Laude)  
Advisor: Dr. James Gould  
Thesis: Paleobiology of North American stegosaurs: Evidence for sexual dimorphism  
Overall GPA: 3.68  
EEB GPA: 3.88  
Biology GPA (EEB & Molecular Biology): 3.87

## Publications

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. <https://doi.org/10.1016/j.orggeochem.2018.09.008>

Saitta, ET, Liang, R, Lau, CY, Brown, CM, Longrich, NR, Kaye, TG, Novak, BJ, Salzberg, S, Donohoe, P, Dickinson, M, Vinther, J, Bull, ID, Brooker, RA, Martin, P, Abbott, GD, Knowles, TDJ, Penkman, K, and Onstott, TC (2018) Life inside a dinosaur bone: a thriving microbiome. *bioRxiv* preprint. doi: <https://doi.org/10.1101/400176>

Saitta, ET, Kaye, TG, and Vinther, J (2018) Sediment-encased maturation: a novel method for simulating diagenesis in organic fossil preservation. *Palaeontology*. doi: <https://doi.org/10.1111/pala.12386>

Saitta, ET, Clapham, C, and Vinther, J (2018) Experimental subaqueous burial of a bird carcass and compaction of plumage. *Paläontologische Zeitschrift*, 1-6. doi: <https://doi.org/10.1007/s12542-018-0411-y>

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](https://doi.org/10.1002/bies.201700167)

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](https://doi.org/10.1111/pala.12342)

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](https://doi.org/10.2110/palo.2017.051)

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

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

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

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

## R Packages

'Momocs'. Authors: Vincent Bonhomme, Sandrine Picq, Julien Claude with suggestions and contributions from Cedric Gaucherel, Sarah Ivorra, Ricardo Kriebel, Neus Martinez, Marcelo Reginato, Evan Saitta, Norbert Telmon, Asher Wishkerman. 2015.

## Achievements and Grants

Paleontological Society Stephen Jay Gould Award	2017
The Daniel Pidgeon Fund	2017
■ The Geological Society research grant	
<b>Bob Savage Memorial Fund</b>	Won four times – 2016-2017
■ University of Bristol palaeobiology graduate student award	
<b>Jackson Student Travel Grant</b>	2016
■ Society of Vertebrate Paleontology award to support student travel to their annual meeting	
<b>M.Sc. Award: Distinction (University of Bristol)</b>	2015
<b>University of Bristol Alumni Foundation Travel Grant</b>	Won twice - 2015
■ University of Bristol student award to support conference attendance costs	
<b>Magna Cum Laude (Princeton University)</b>	2014
Elected to the Society of Sigma Xi	2014
<b>Senior Thesis Poster Award in Behavior</b>	2014
■ Granted by Princeton University's Department of Ecology and Evolutionary Biology	
<b>Office of the Dean of the College Senior Thesis Research Funding</b>	2013
■ Princeton University academic research grant	
<b>Fred Fox Fund</b>	2012
■ Princeton academic research award and grant through the Office of Religious Life at Princeton University	

## Teaching Assistance

<b>Geobiology</b>	Spring 2017
■ Professor: Phillip Donoghue	
<b>Geology 1: Evolution of Earth and Life</b>	Spring 2017
■ Professor: Phillip Donoghue & Emily Rayfield	
<b>Evolution of the Biosphere</b>	Fall 2015
■ Professor: Michael Benton	
<b>Environmental Geoscience: Climate and Ecology</b>	Fall 2015
■ Professor: Pru Foster	

## Presentations and Outreach

### Society of Vertebrate Paleontology annual meeting

- Albuquerque, New Mexico, USA 10/2018
  - Talk (Romer Session): Molecular stability and mobility: Protein diagenesis in open and closed taphonomic systems
- Calgary, Alberta, Canada 8/2017
  - Talk (Romer Session): Creating fossils in the lab: replicating fossilization using sediment-based maturation
- Salt Lake City, Utah, USA 10/2016
  - Talk: The taphonomy of keratin in archosaurs

### Palaeontological Association annual meeting

- 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
  - Informal talk: Taphonomy 2.0: Experimental P/T maturation using sediment as a taphonomic filter to investigate soft tissue preservation
  - Poster: Primitive contour feathers in paravian dinosaurs and the evolution of avian plumage
- Cardiff, UK 12/2015
  - Talk: Evidence for sexual dimorphism in the plated dinosaur *Stegosaurus mjosi* (Ornithischia, Stegosauria) from the Morrison Formation (Upper Jurassic) of western USA
  - Poster: The taphonomy of keratin in archosaurs

### International Workshop on Konservat-Lagerstätten

- Cork, Ireland 7/2017
  - Talk: Dinosaur eggshell calcite as a closed system: 'molecular Konservat-Lagerstätten'

### The Conversation

- "How some dinosaur discoveries might be wishful scientific thinking" 11/2017

### These Vibes Are Too Cosmic

- Hour-long interview with Princeton, New Jersey, radio show on my research 5/2018

### Gloucester Museum "Dinosaurs" Talks and Workshops

- Feathers and colour in dinosaurs 9/2017

### Bristol Dinosaur Project

- Educational outreach program directed at children 2015

### Jurassic Quest

- Educational day directed at young children involving fossil displays. 7/2014

### Princeton Senior Thesis Poster Presentation

- 2014

### Princeton Undergraduate Research and Public Service Symposium

- 2013

### The Billings Clinic

- Presented to TV/print media and the public regarding my use of the hospital's CT scanner for my undergraduate thesis research 7/2013

## Societies and Groups

- The Society of Vertebrate Paleontology 2013-present
- The Palaeontological Association 2015-present
- The Paleontological Society 2010-present
- Bristol University Geology and Geoscience Society 2014-2017
- Princeton Undergraduate Geosciences Society 2012-2014
- DinoSoc - University of Bristol student paleontology society 2014-2017
- myFOSSIL.org 2015-present
  - Beta tester
- Princeton University Varsity Track and Field 2010-2014
- University of Bristol Athletics and Cross Country Club 2014-2018
- University of Bristol Snowsports Club 2015-2018
- Cannon Dial Elm Club - Princeton University eating club 2011-2014

## Skills

Experience in:

- Museum collections research
- R-based morphometrics, statistics, and data analysis
- Histology
- CT scanning
- Decay and maturation experiments
- Scanning electron microscopy
- Energy-dispersive X-ray spectroscopy
- Pyrolysis-gas chromatography-mass spectrometry
- Laser stimulated fluorescence imaging
- Amino acid racemization analysis
- DNA and protein extraction
- Time-of-flight secondary ion mass spectrometry
- Radiocarbon analysis
- Attenuated total reflectance Fourier-transform infrared spectroscopy

Paleontological prospecting and quarrying experience with the Field Museum in Montana, Utah, and Missouri and the Royal Tyrell Museum in Dinosaur Provincial Park in Alberta, Canada. Seven years of independent paleontological field and preparatory lab experience in Montana. Field experience through Princeton University in geology (Spain, France, Utah, New Mexico, Catskills, Kentucky, Delaware Water Gap, and Yellowstone National Park) and biology (Bermuda and Yellowstone National Park). Further fossil prospecting experience in the UK with Dinosoc.