

## Scott A. Hartman

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Associate Lecturer, UW-Madison (608) 620-4030 sahartman@wisc.edu

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### EDUCATION

PhD in Paleobiology, Department of Geoscience, University of Wisconsin-Madison Summer 2020

Bachelors of Science, Zoology, University of Wyoming, June, 2013  
Concentrations: Evolutionary Biology, Paleontology

### PROFESSIONAL EXPERIENCE

#### Teaching Experience

Lecturer (SA) for Department of Integrative Biology, University of Wisconsin-Madison 2016-Present

Fall: Comparative Vertebrate Anatomy (ZOO 340)

Spring: Comparative & Evolutionary Physiology (ZOO 611)

Graduate Teaching Assistant, University of Wisconsin-Madison, 2013-2018  
Introductory Biology 151/152

Visualarium, Los Angeles, CA 2012  
Advanced Creature Design – Anatomy for Artists

#### Museum Work

Science Director, Wyoming Dinosaur Center, Thermopolis, WY 2005-2010

- Managed research program, collaborated with national and international institutions
- Oversaw excavation of multiple dig sites in two states
- Developed and expanded public outreach program
- Responsible for specimen curation, specified & implemented new specimen database
- Regular public presentations on diverse paleontological and general science topics
- Designed, budgeted and executed an overhaul 15,000 square feet of displays
- Mounted/remounted 17 skeletons for display

Illustration and Design, University of Wyoming Geological Museum, Laramie, WY 2004-2005

- Crafted new signs to maximize current displays

- Developed consistent design language to better convey information

Museum Technician, Wyoming Dinosaur Center, Thermopolis, WY 2003-2004

- Installed new field mapping and data collection protocols
- Graphic design work for displays
- Developed outreach curricula to improve quarry and museum tours

## Scientific/Anatomical Illustration

Select Commissioned Anatomical Diagram Projects:

- Smithsonian Fossil Hall, with Reich+Petch, Ontario, Canada 2017-2018
- Dinosaurs: The Textbook 6th Edition, Cambridge University Press 2015-2016
- Royal Ontario Museum, Toronto, Canada 2011-2012
- New UMNH Display Hall, with Ralph Appelbaum Associates, New York, NY 2010-2011
- Oregon Museum Of Science and Industry, Portland, OR 2007

## Select Media Science Consulting

Cretaceous Films LLC 2010-2011  
Anatomy, Design, & Locomotion for *Walking with Dinosaurs: The Movie*

Creative Differences, Los Angeles, CA 2009-2011  
Anatomy, Locomotion, Paleobiology Fact Checking for *Dinosaur Revolution*

## Science Communication/Social Media Outreach

Experience with web design, branding and science outreach on multiple CMS platforms, as well as using Facebook pages, Twitter, Tumblr, Google+ Groups, and Instagram

## SCIENTIFIC PUBLICATIONS

**Hartman, S.** Modeling thoracic cavity volume in extinct archosaurs. Manuscript in preparation as part of PhD dissertation

**Hartman, S.** Thermal ecology and differential survivorship during the End Triassic Extinction. Manuscript in prep as part of PhD dissertation.

- Lovelace, D., **Hartman**, S., Mathewson, P., Linzmeier, B., Porter, W. 2020. Modeling Dragons: an exploration of the impacts of environmental, physiological, and morphological constraints on the early evolution of dinosaurs. In press: PLOS One
- Hartman**, S., Mortimer M., Wahl W., Lomax D., Lippincott J., Lovelace D. 2019. A new paravian dinosaur from the Late Jurassic of North America supports a late acquisition of avian flight. PeerJ 7:e7247
- Snively, E., O'Brien, H., Henderson, D.M., Mallison, H., Surring, L.A., Burns, M.E., Holtz Jr, T.R., Russell, A.P., Witmer, L.M., Currie, P.J. and **Hartman**, S.A., 2019. Lower rotational inertia and larger leg muscles indicate more rapid turns in tyrannosaurids than in other large theropods. PeerJ, 7, p.e6432.
- Wang, X., Pittman, M., Zheng, X., Kaye, T. G., Falk, A. R., **Hartman**, S. A., & Xu, X. 2017. Basal paravian functional anatomy illuminated by high-detail body outline. Nature Communications, 8, 14576.
- Hendrickx, C., **Hartman**, S.A. and Mateus, O., 2015. An overview of non-avian theropod discoveries and classification. PalArch's Journal of Vertebrate Palaeontology, 12(1).
- Ryan, M. J.; Russell, A. P., and **Hartman**, S. 2010. A New Chasmosaurine Ceratopsid from the Judith River Formation, Montana, In *New Perspectives on Horned Dinosaurs: The Royal Tyrrell Museum Ceratopsian Symposium* (Ryan, Chinnery-Allgeier, & Eberth eds), Indiana University Press, 656 pp
- Mayr, G., Pohl, B., **Hartman**, S., & Peters, S. 2007. The tenth skeletal specimen of Archaeopteryx, *Zoological Journal of the Linnean Society* V. 149, pp. 97-116
- Lovelace, D. M., **Hartman**, S. A. & Wahl, W. R. 2007. Morphology of a specimen of *Supersaurus* (Dinosauria, Sauropoda) from the Morrison Formation of Wyoming, and a re-evaluation of diplodocid phylogeny. *Arquivos do Museu Nacional*, Rio de Janeiro 65, 527-544
- Wegweiser, M. D., **Hartman**, S. A., and Lovelace, D. M. 2006. Duckbill dinosaur chin skin scales: Ups, downs, and arounds of surficial morphology of Upper Cretaceous Lance Formation dinosaur skin. Late Cretaceous vertebrates from the Western Interior (Lucas & Sullivan eds). NMMNH Bulletin 35. pp. 119-125

## CONFERENCE PRESENTATIONS

- Hartman**, S., Mortimer, M., Lovelace, D. 2018. A testable macroevolutionary framework for character acquisition in the origin of avian flight, SVP 2018.
- Hartman**, S., Mortimer, M., Wahl, W., Lomax, D., & Lovelace, D. 2017. New information on a paravian theropod from the Morrison Formation, SVP 2017.
- Hartman**, S. 2016. Mechanistic physiological modelling predicts geographic distribution of Late Triassic tetrapods. In Annual Meeting of the Society of Vertebrate Paleontology, SVP 2016.
- Hartman**, S., Lovelace, D., & Linzmeier, B. J. 2015. Using ecological modelling to quantify thermal constraints on two Late Triassic dinosaurs. Journal of Vertebrate Paleontology. Vol. 35, online supplement.

- Hartman, S.** 2012. Investigating the impact of competing interpretations of pectoral girdle placement and appendicular function on sauropod head height. *Journal of Vertebrate Paleontology*. Vol. 32, Online supplement.
- Hartman, S.** 2007. Re-evaluating wing shape in *Archaeopteryx*: Information from the Thermopolis specimen. *Journal of Vertebrate Paleontology*, Vol. 27, Supplement to No. 3.
- Hartman, S., & Shinkle, L.** 2006. Estimating osteological neutral position in sauropod axial skeletons: Comparing two-dimensional and three-dimensional methods of analysis. *Journal of Vertebrate Paleontology*, Vol. 26, Supplement to No. 3.
- Shinkle, L. & **Hartman, S.** 2006. Utilizing 3d laser scans and commercially available software to create and analyze virtual morphological data sets. *Journal of Vertebrate Paleontology*, Vol. 26, Supplement to No. 3.
- Hartman, S.** 2005. Estimating Ancestral Habitat and Selective Pressures Leading to the Origin of Avian Flight. II Latin American Congress of Vertebrate Paleontology.
- Hartman, S., Lovelace, D., & Wahl, W.** 2005. Phylogenetic assessment of a maniraptoran from the Morrison Formation. *Journal of Vertebrate Paleontology*, Vol. 25, Supplement to No. 3.
- Hartman, S.** 2004. Stance and carriage in *Brachylophosaurus*: Evidence from articulated specimens. *Journal of Vertebrate Paleontology*, Vol. 24, Supplement to No. 3. pp. 68A
- Hartman, S.** 2002. Estimating nuchal ligament depth in hadrosaurid dinosaurs: The return of the pencil-necked hadrosaurs? Tate 2002 Field Conference Guide.
- Hartman, S.** 2000. Primary and caudal feathers as locomotory adaptations in maniraptoran theropods. *Journal of Vertebrate Paleontology*, Vol. 20, Supplement to No. 3. pp. 47A

## **GRANTS & AWARDS (Total \$38,500)**

C.F. Schiesser Outstanding Student Research Paper Award, Geoscience, UW-Madison	2020
Awarded for Hartman, et al., 2019	
George J. Verville Award in Geology and Geophysics, UW-Madison	2018
Awarded for excellence as a graduate student in paleontology	
L&S Teaching Fellow, College of Letters & Sciences, UW-Madison	2017
Awarded for excellence in teaching	
Experiment.com funding for "Describing a Jurassic maniraptoran dinosaur from the Morrison Formation of North America"	2016
Communication-B Teaching Assistant Fellow, University of Wisconsin-Madison	2015
Awarded for sustained success in teaching undergraduates scientific writing in their majors	
Jurassic Foundation	2004
Awarded for CT scanning a new Jurassic coelurosaur	
B.O.C.E.S.	2001 & 2002
Development of human evolution display & reverse classroom human origins course	
Wyoming Geological Association	2000
Student support grant to present findings at SVP conference in Mexico City	
EPSCOR	1998
Investigation of Orellan stratigraphy with Kent Sundell (PI)	

## **RESEARCH SKILLS**

- Dissection & gross anatomy
- Statistical analysis in R Studio and SPSS
- Phylogenetic analysis (morphological & molecular) in TNT, PAUP\*, MrBayes, others
- Thermodynamic niche modeling in Niche Mapper
- Volumetric, CT, and physics-based 3D modeling (Dragonfly, FIJI, Adobe Photoshop, Rhino 3D, Polyworks)
- Functional and descriptive morphology
- Database creation and entry
- Field mapping & excavation