

Paul V. Ullmann

Department of Geology
Rowan University
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EDUCATION

- 2015 Ph.D. in Biology (subfield: Paleontology), Drexel University
Dissertation: Insights into molecular taphonomy and the evolution of sauropod posture garnered from Late Cretaceous fossils
- 2008 B.S. in Earth Sciences, Paleontology & Geology Concentrations,
Montana State University
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PROFESSIONAL EXPERIENCE

- 2017 - present Assistant Professor, Department of Geology, Rowan University
- 2015 - 2017 Postdoctoral Fellow, Department of Geology, Rowan University
- 2013 - 2015 Teaching Assistant, Biology Department, Drexel University
- 2010 - 2013 National Science Foundation Graduate Research Fellow,
Drexel University
- 2009 - 2010 Teaching Assistant, Biology Department, Drexel University
- 2008 - 2009 Field Crew Chief for Jack Horner, PhD, Museum of the Rockies
- 2007 - 2008 Paleontology Laboratory Assistant, Department of Earth Sciences,
Montana State University
- 2006 Field Survey Paleontologist, Arcadis G&M, Inc., Highlands Ranch CO
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GRANTS, FELLOWSHIPS, & AWARDS

- 2014 Jurassic Foundation Grant: \$2,938
- 2010 - 2013 National Science Foundation Graduate Research Fellowship: \$123,500
- 2009 - 2011 Provost's Fellowship, Drexel University: \$11,250
- 2010, 2011, 2013, 2014 Office of Graduate Studies and Biology Department Travel Awards, Drexel University: \$3,600
- 2008 Top Senior in Geology Award, Department of Earth Sciences,
Montana State University
- 2007 - 2008 Doctor C.C. Bradley Memorial Scholarship, \$600
Montana State University:
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PEER-REVIEWED PUBLICATIONS

Ullmann PV, Shaw A, Nellerhoe R, Lacovara KJ. 2017. Taphonomy of the Standing Rock Hadrosaur Site, Corson County, South Dakota. *PALAIOS* 32(12): 779-796. **(cover feature)**
[dx.doi.org/10.2110/palo.2017.060](https://doi.org/10.2110/palo.2017.060)

- Ullmann PV**, Bonnan MF, and Lacovara KJ. 2017. Characterizing the evolution of wide-gauge features in stylopodial limb elements of titanosauriform sauropods via geometric morphometrics. *The Anatomical Record* 300(9): 1618-1635. [dx.doi.org/10.1002/ar.23607](https://doi.org/10.1002/ar.23607)
- Ullmann PV** and Lacovara KJ. 2016. Appendicular osteology of *Dreadnoughtus schrani*, a giant titanosaurian (Sauropoda, Titanosauria) from the Late Cretaceous of Patagonia, Argentina. *Journal of Vertebrate Paleontology* 36(6): e1225303. [dx.doi.org/10.1080/02724634.2016.1225303](https://doi.org/10.1080/02724634.2016.1225303)
- Lacovara KJ, Lamanna MC, Ibiricu LM, Poole JC, Schroeter ER, **Ullmann PV**, Voegelé KK, Boles ZM, Carter AM, Fowler EK, Egerton VM, Moyer AE, Coughenour CL, Schein JP, Harris JD, Martínez RD, Novas FE. 2014. A gigantic, exceptionally complete titanosaurian dinosaur from southern Patagonia, Argentina. *Nature Scientific Reports* 4: 6196. [dx.doi.org/10.1038/srep06196](https://doi.org/10.1038/srep06196)
- Ullmann PV**, Varricchio DJ, Knell MJ. 2012. Taphonomy and taxonomy of a vertebrate microsite in the mid-Cretaceous (Albian–Cenomanian) Blackleaf Formation, southwest Montana. *Historical Biology* 24(3): 311-328. [dx.doi.org/10.1080/08912963.2011.602405](https://doi.org/10.1080/08912963.2011.602405)
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ABSTRACTS

- Ullmann PV** and Ash Rd. 2018. Characterizing the structure of diagenetically phosphatized K/Pg impact spherules from Edelman Fossil Park, Mantua Township, New Jersey. *Lunar and Planetary Science Conference*: 2767.
- Ullmann PV** and Lacovara KJ. 2017. Actualistic testing of the influence of groundwater chemistry on degradation of collagen I in bone. *Geological Society of America Abstracts with Programs* 49(7): 123-1.
- Voegelé KK, **Ullmann PV**, Heierbacher M, Kibelstis BJ, Putnam I, Lacovara KJ. 2017. Vertical distribution of fossils in the lower Hornerstown and upper Navesink formations at Edelman Fossil Park, NJ. *Geological Society of America Abstracts with Programs* 49(7): 220-12.
- Ullmann PV** and Lacovara KJ. 2017. Appendicular osteology of *Dreadnoughtus schrani*, a giant titanosaurian sauropod from the Late Cretaceous of Patagonia, Argentina. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 206.
- Voegelé KK, **Ullmann PV**, Boles ZM, Schroeter ER, Schweitzer MH, Lacovara KJ. 2017. Preservation of endogenous collagen I in a marine crocodile, *Thoracosaurus neocesariensis*. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 209.
- Voegelé KK, **Ullmann PV**, Lamanna MC, Lacovara KJ. 2016. Myological reconstructions from well-defined appendicular muscle scars in *Dreadnoughtus schrani*, a gigantic titanosaurian sauropod from Patagonia, Argentina. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 245.
- Ullmann PV**, Voegelé KK, Grandstaff DE, Ash RD, Schroeter ER, Schweitzer MH. 2016. Evaluating the utility of rare earth element profiles as a proxy for soft tissue and biomolecular preservation potential in fossil bone. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 241. **(invited talk)**
- Ullmann PV**, Ash R, Grandstaff DE. 2016. Implications from diffusion modeling of trace element uptake by bones from the Standing Rock Hadrosaur Site, Hell Creek Formation, Corson County, SD. *Geological Society of America Abstracts with Programs* 48(7): 272-5.

Ullmann PV and Lacovara KJ. 2015. Evaluating the influence of body size on appendicular anatomy of titanosaurian sauropods. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 228.

Fowler EK, Voegele KK, **Ullmann PV**, Feldman V, Lacovara KJ. 2015. Restoring *Dreadnoughtus*: using lattice deformer in Autodesk Maya to retro-deform fossils from an exceptionally complete titanosaur. *Society of Vertebrate Paleontology Meeting Program & Abstracts*: 126.

Lacovara KJ, Lamanna MC, Ibiricu LM, **Ullmann PV**, Voegele KK, Schroeter ER, Boles ZM. 2014. An exceptionally complete titanosaurian sauropod dinosaur from the Upper Cretaceous of southern Patagonia, Argentina. *Geological Society of America Abstracts with Programs* 46(6): 264-14.

Ullmann PV, Grandstaff DE, Ash R, Lacovara KJ. 2014. Rapid and brief trace element uptake by bone at the Standing Rock *Edmontosaurus* bonebed, Hell Creek Formation, Corson County, SD: an exception to long-term rare earth element uptake. *Geological Society of America Abstracts with Programs* 46(6): 221-10.

Fowler EK, **Ullmann PV**, Voegele KK, Lacovara KJ. 2014. Titanosaur meets NextEngine: coaxing big data from an entry-level 3D laser scanner. *Journal of Vertebrate Paleontology* 34(5, Supp): 132A.

Ullmann PV, Nellerhoe R, Shaw A, Lacovara KJ. 2014. Taphonomy of the Standing Rock *Edmontosaurus* bonebed, Corson County, SD: implications for biomolecular preservation. *Journal of Vertebrate Paleontology* 34(5, Supp): 243A.

Ullmann PV, Bonnan MF, Lacovara KJ. 2013. Morphometric exploration of the evolution of wide gauge features in stylopodial limb elements of titanosauriform sauropods. *Journal of Vertebrate Paleontology* 33(5, Supp): 229A.

Voegele KK, **Ullmann PV**, Patel A, and Lacovara KJ. 2012. Insights from a new specimen of the gavialoid crocodylian *Thoracosaurus neocesariensis* from the Maastrichtian-Danian Hornerstown Formation, Sewell, NJ. *Journal of Vertebrate Paleontology* 32(5, Supp): 190A.

Ullmann PV and Lacovara KJ. 2011. Largest known specimen and first mandible of the Cretaceous side-necked turtle *Taphrosphys sulcatus* (Testudines: Pleurodira). *Journal of Vertebrate Paleontology* 31(6, Supp): 207A-208A.

Ullmann PV, Varricchio DJ, Knell MJ, Lacovara KJ. 2010. Taphonomy and taxonomy of a vertebrate microsite in the Cretaceous Blackleaf Formation in southwest Montana. *Journal of Vertebrate Paleontology* 30(6, Supp): 179A.

INVITED PRESENTATIONS

Ullmann PV, Grandstaff DE, Ash R, Lacovara KJ. "Rapid and brief trace element uptake by bone at the Standing Rock *Edmontosaurus* bonebed, Hell Creek Formation, Corson County, SD: an exception to long-term rare earth element uptake" – Geobiology Symposium at the Smithsonian National Museum of Natural History, April 2017.

Voegele KK and **Ullmann PV**. "Extinction is only the beginning: how to revive fossils" – Gloucester County Library, Mullica Hill NJ, November 2016.

Ullmann PV. "Death of the Dinosaurs, Birth of a Fossil Park" – Age to Perfection, Woolwich NJ, November 2016.

Ullmann PV. "Death of the Dinosaurs, Birth of a Fossil Park" – North Rocks Gem, Mineral, Fossil, & Jewelry Show, Lancaster PA, April 2016.

Ullmann PV. "Death of the Dinosaurs, Birth of a Fossil Park" – Jersey Shore Sierra Club and Brookdale Community College, Lincroft NJ, April 2015.

Ullmann PV. "Exploring the evolution of wide gauge features in titanosauriform sauropods via geometric morphometrics" – Delaware Valley Paleontological Society, May 2013.

Ullmann PV. "Evolution of wide gauge posture in titanosauriform sauropods" – Geobiology Symposium at the Smithsonian National Museum of Natural History, February 2013.

Ullmann PV and Lacovara KJ. "Elaboration of the osteology and phylogenetic affinities of the Cretaceous–Paleogene cheloniid sea turtle *Catapleura repanda* (Cope 1868)" – Academy of Natural Sciences Biodiversity Symposium, October 2012.

MANUSCRIPTS IN PREPARATION

Ullmann PV, Voegele KK, Grandstaff DE, Ash RD, Schroeter ER, Schweitzer MH. Evaluating the utility of rare earth element profiles as a proxy for soft tissue and biomolecular preservation potential in fossil bone. *Proceedings of the Royal Society B*.

Ullmann PV and Lacovara KJ. Molecular taphonomy: deciphering interactions between biomolecules and sedimentary environments that lead to biomolecular preservation. *Earth Science Reviews*.

Ullmann PV, Boles ZM, Lacovara KJ. The first lower jaw of *Taphrosphys sulcatus* and evidence of niche partitioning among sea turtles in the Maastrichtian–Danian Hornerstown Formation of New Jersey. *Journal of Vertebrate Paleontology*.

Voegele KK, **Ullmann PV**, Lacovara KJ. Reconstructions from well-defined muscle scars in a super-massive titanosaurian sauropod. *Journal of Anatomy*.

Boles ZM, **Ullmann PV**, Putnam I. Additions to the vertebrate fauna of Edelman Fossil Park, including range extensions. *Palaeogeography, Palaeoclimatology, Palaeoecology*.

TEACHING EXPERIENCE

2017	Dinosaurs and Their World (GEOL 110), Instructor, Rowan University
2014 - 2015	History of Life (GEO 102), Instructor, Drexel University
2014	Advanced Field Methods in Earth Science (GEO 301), Teaching Assistant, Drexel University
2013 - 2014	Evolution (BIO/ENVS 217), Teaching Assistant, Drexel University
2010	Introductory Biology (BIO 151), Teaching Assistant, Drexel University
2009	Physical Geology (GEO 101), Teaching Assistant, Drexel University

FIELD EXPERIENCE

2010 - present	Cretaceous–Paleocene Hornerstown Formation, New Jersey; Field Crew Chief for Dr. Kenneth Lacovara of Rowan University.
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2017	Cretaceous Hell Creek Formation, Montana, Field Crew Chief for Dr. Ron Nellerhoe of Concordia College.
2012	Cretaceous Hell Creek Formation, South Dakota; Field Manager.
2009	Cretaceous Hell Creek Formation, Montana; Field Crew Chief for Dr. Jack Horner of the Museum of the Rockies.
2008	Cretaceous Judith River Formation, Montana; Field Crew Chief for Dr. Jack Horner of the Museum of the Rockies.
2007	Cretaceous Wayan Formation, Idaho; Volunteer for Dr. David Varricchio of Montana State University.
2006	Eocene Bridger Formation, Wyoming; Field Survey Paleontologist for Arcadis G&M Inc.
2006	Cretaceous Blackleaf Formation, Montana; Volunteer for Dr. David Varricchio of Montana State University.
2003	Cretaceous Hell Creek Formation, Montana; Volunteer for Dr. Jack Horner of the Museum of the Rockies.

OUTREACH

2012 - present	Edelman Fossil Park STEM Outreach Coordinator - Lead interactive educational workshops with regional K-12 classes focused on the science behind fossilization and reconstruction of ancient ecosystems.
2012 - present	Coordinator for visitor tours at Edelman Fossil Park - Help plan tours for 2,000 visitors from around the world on our Annual Community Dig Day. - Guide visitor tours by regional boy scout troops, afterschool clubs and summer camps, chambers of commerce, economic development councils, science clubs, the Philadelphia Science Festival, TED council, private company mixers, and county, state, and federal offices. - Interactive discussions about the scientific importance of fossils.
2017	Instructor for inaugural Geo Explorers Camp at Edelman Fossil Park
2015 - 2017	Philadelphia Science Festival's annual Carnival - Co-run a geology-based activity booth for Rowan's School of Earth and Environment.
2013	"Volcanoes!", Our Mother of Sorrows Catholic School, Philadelphia - Presentation and interactive lesson about the science of volcanoes with underrepresented 5th and 6th graders.
2012	Mantua Township Open House - Interactive discussions about Edelman Fossil Park and the ancient history of New Jersey.

MEDIA

- Jul. 2017 J. Decker, South Jersey Times: *"Here's what goes on behind the scenes at Rowan University's paleontology lab"*. http://www.nj.com/gloucester-county/index.ssf/2017/07/heres_what_goes_on_behind_the_scenes_at_rowan_univ_1.html
- Jul. 2017 C. Romalino, Courier-Post: *"Little paleontologists dig for fossils"*. <http://www.courierpostonline.com/story/news/2017/07/17/rowan-kids-paleontologists-dig-fossils-dinosaurs/476056001/>
- Nov. 2016 M. Hill, NJTV News: *"Rowan University buys fossil park to further education"*. <https://www.njtvonline.org/news/video/rowan-university-buys-fossil-park-education/>
- Aug. 2016 D. O'Reilly, Philadelphia Inquirer: *"Bone by bone, fossil found in a Rowan dig takes shape on a lab floor"*. <http://www.philly.com/philly/education/20160829.html>
- Sep. 2015 G. Mulvihill, App.com/USA Today and The Morning Call: *"Rowan University buying quarry for dinosaur research"*. <http://www.app.com/story/news/education/college-news/2015/09/23/rowan-buying-quarry-dinosaur-research/72699882/>
- Nov. 2014 M. Walsh, Yahoo News: *"Paleontologists dig up prehistoric fossils behind New Jersey shopping center"*. <https://www.yahoo.com/news/165632314.html?ref=gs>
- Sep. 2011 T. Avril, Philadelphia Inquirer: *"Researchers trying to piece together a 65 million-year-old turtle"*. <http://articles.philly.com/2011-09-21/news/30184889>
- Jun. 2011 T. Avril, Philadelphia Inquirer: *"Heavy lifting in N.J.: a 65 million-year-old sea turtle"*. <http://articles.philly.com/2011-06-09/news/29638874>

COLLECTIONS & CURATION EXPERIENCE

- 2015 - present Paleontology Collection Manager, Rowan University
 - Identify, prepare, catalog, and manage fossil collection and its records
 - Advised an undergraduate student in construction of a database website (cretaceousmantua.com) presenting fossil taxa from Edelman Fossil Park
- 2015 - present Paleontology Laboratory Manager, Rowan University
 - Designed efficient layout of laboratory to facilitate work and visitor tours
 - Train volunteers in fossil preparation techniques, microscopy, 3D laser scanning
 - Manage resources and supplies
 - Coordinate and run visitor tours
- 2011 - 2015 Paleontology Collection Manager, Drexel University
 - Implemented a cataloging and labeling system
 - Identified, organized, and prepared fossil specimens
 - Trained volunteers in fossil preparation techniques, 3D laser scanning
 - Guided visitor tours of the Paleo Lab

- 2009 Volunteer Fossil Preparator, Academy of Natural Sciences of Drexel University
- 2007 - 2008 Paleontology Laboratory Assistant, Department of Earth Sciences, Montana State University
- Prepared and cataloged fossils
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PROFESSIONAL SERVICE

Journal Reviewer: *PeerJ*

- 2017 - present Faculty Senate Alternate for Department of Geology, Rowan University
- 2017 - present Department of Geology Liaison to Cooper Medical School and the School of Osteopathic Medicine, Rowan University
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ADVISING & MENTORING EXPERIENCE

- 2015 - present Boy Scouts of America Liaison, Edelman Fossil Park
- Supervise local boy scouts in accomplishing their Eagle Scout Projects.
- Scouts advised to date: Ryan Smith, Alex Glackin, Brenden Wood
- 2013 - 2017 Co-advisor for Drexel University Coop students
-Paleontology Research position: Joshua Yan, Kevin Meredith, Anthony Papaccio, Aaron Dimick, Heidi Mills, Sandra Pizarro
-Digital Animation position: Emma Fowler, Brendan Brown, William Ruoff, Brandon Percia
- 2016 - 2017 Clifford Pierce and Jalen Merchant, Deptford High School, Apprenticeship Program Advisor
- 2015 Francesca Mundrik, Rowan University, Research Internship Advisor
- 2015 Keith Thompson, Masuk High School, Senior Capstone Project Advisor
- 2012 Emma Fowler, Drexel University STAR Scholar, Co-advisor
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PROFESSIONAL AFFILIATIONS

Geological Society of America
Society of Vertebrate Paleontology
Boy Scouts of America
National Eagle Scout Association
National Society of Collegiate Scholars