

## Jacob Gardner

Department of Earth Sciences  
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### Appointments

- Lab Technician, Whitlock Paleocology Laboratory, Montana State University (2012-2013)
- Lab Technician, Horner Paleohistology Laboratory, Museum of the Rockies (2014-Current)

### Teaching & Student Engagement

- Teaching Assistant, Advanced Placement Chemistry, Nipomo High School, CA (2011-2012)
- Student Teaching Assistant, Comparative Vertebrate Anatomy, Montana State University (Fall 2015)

### Education & Training

#### Degrees

- B.S. Montana State University, Earth Sciences: Paleontology Option (2012-In Progress)

*Senior Thesis 1: Taphonomy and Paleocology of a Lacustrine Insect Lagerstätte of the Canyon Ferry Reservoir, Montana*

*Advisor: James Schmitt*

*Resulted in: Publication 1*

*Senior Thesis 2: The Evolutionary Dynamics of Dinosaur Biomechanics*

*Advisor: Chris Organ*

*Resulted in: Publication 4 and 5*

*Paleontology Field School: Montana State University, GEO 419*

*Geology Field School: Indiana University Judson Mead Geologic Field Station, G429: Subsurface Stratigraphy Concentration*

#### Short Courses/Workshops

- Fluvial-Dominated Deltaic Cretaceous Ferron Sandstone, San Rafael Swell and Eolian Jurassic Navajo Sandstone and Temple Cap Formation, Covenant Field, Central Utah Thrust Belt: Depositional Environments from Subsurface Cores, Logs, and Thin Sections (2015)  
By Thomas Chidsey and David Eby
- Carbonate Platform Sediments, Fabrics, Facies, and Diagenesis in the Pennsylvanian Paradox Formation, Greater Aneth Field and Satellite Fields, Southeastern Utah, from Subsurface Cores, Logs, and Thin Sections (2015)  
By Thomas Chidsey and David Eby
- Structurally Focused Diagenesis and Hydrothermal Dolomite in the Mississippian Leadville Limestone, Lisbon Field, Paradox Basin, Southeastern Utah, from Subsurface Cores, Logs, and Thin Sections (2015)  
By Thomas Chidsey and David Eby

### Publications - Conferences

1. **Gardner, Jacob D.**, Schmitt, James G. 2015. Mineralogic Evidence of Preservational Conditions in the Oligocene Canyon Ferry Insect Lagerstätte, Southwest, Montana. *Geological Society of America Abstracts with Programs* 47: 7.
2. **Gardner, Jacob D.**, Woodruff, D. Cary, Wilson, John P., Flora, Holley M., and Horner, John R., and Organ, Chris L. 2015. Biomechanical Adaptations to Increased Body Size in the Neural Spines of Theropod Dinosaurs. *Program and Abstracts, Journal of Vertebrate Paleontology*, 35:sup2, p. 130.
3. Flora, Holley M., Wilson, John P., **Gardner, Jacob D.**, Fowler, and Denver W. 2015. A Probable Oviraptorosaur from the Hell Creek Formation of Montana. *Program and Abstracts, Journal of Vertebrate Paleontology*, 35:sup2, p. 124.
4. **Gardner, Jacob D.**, Wilson, John P., Flora, Holley M., and Organ, Chris L. 2014. Dinosaur Running Evolved in Episodic Bursts. *Geological Society of America Abstracts with Programs* 46: 6.

5. **Gardner, Jacob D.**, Wilson, John P., Flora, Holley M., and Organ, Chris L. 2014. Accelerated Biomechanical Evolution Precedes Shifts in Locomotion. *Geological Society of America Abstracts with Programs* 46: 5.

## Other Presentations

1. **Gardner, Jacob D.**, Woodruff, D. Cary, Wilson, John P., Flora, Holley M., Horner, John R., and Organ, Chris L. 2015. Extreme Rugosities in the Neural Spines of Theropod Dinosaurs Were Biomechanical Responses to an Increased Body Size. *Montana State University Tenth Annual Earth Sciences Colloquium*.
2. **Gardner, Jacob** and Dailey, Helen. 2015. Smithsonian Paleobiology Internships: Fossil Insects and Fish from the Kishenehn Formation, Montana. *Montana State University Undergraduate Scholars Program Research Celebration*.
3. **Gardner, Jacob D.**, Wilson, John P., Flora, Holley M., and Organ, Chris L. 2015. Dinosaur Running Evolved in Episodic Bursts. *National Conference for Undergraduate Research*.
4. **Gardner, Jacob D.**, Wilson, John P., Flora, Holley M., and Organ, Chris L. 2014. Rates of Biomechanical Evolution Preceding Transitions in Dinosaur Locomotion. *Montana State University Undergraduate Scholars Program Research Celebration*.
5. **Gardner, Jacob D.**, Wilson, John P., Flora, Holley M., and Organ, Chris L. 2014. Rates of Biomechanical Evolution Preceding Transitions in Dinosaur Locomotion. *Montana State University Ninth Annual Earth Sciences Colloquium*.

## Honors and Awards

- Paleontological Society Student Ambassador (\$1,000) (2015-Current)
- ConocoPhillips Indiana University Field Camp Scholarship (\$1,500) (2015)
- Geological Society of America – Rocky Mountain Section Undergraduate Research Grant:
  - Deposition and Fossilization of the Cenozoic Insect Lagerstätten of North America (\$750) (2015)
- Undergraduate Scholars Program Research Grant:
  - Comparative Deposition and Fossilization of the Cenozoic Insect Lagerstätten of North America (\$616.17) (Summer 2015) – Advisor: James Schmitt
  - Taphonomy and Paleoecology of an Oligocene Lacustrine Insect Lagerstätte, Canyon Ferry Reservoir, Montana (\$1,360) (Summer 2014) – Advisor: James Schmitt
- Undergraduate Scholars Program Travel Grant:
  - Annual Geological Society of America Conference (\$500) (Fall 2014)
- Smithsonian Institution Field Research Internship (\$2500) (Summer 2014/Spring 2015)
- Geological Society of America On To the Future Travel Grant (\$375) (Fall 2014)
- Geological Society of America Travel Grant (\$150) (Fall 2014)
- College of Letters and Science Student Research Travel Grant (\$500) (Fall 2014)
- Montana State University Letters and Science Dean’s List (Spring, Fall 2013; Spring, Fall 2014)

## Skills/Expertise

- R (<http://www.r-project.org/>)
- BayesTraits (<http://www.evolution.rdg.ac.uk/BayesTraits.html>)
- ArcGIS (<http://www.esri.com/software/arcgis>)
- Mesquite (<http://mesquiteproject.org>)
- MrBayes (<http://mrbayes.sourceforge.net/>)
- Fossil Preparation/Molding/Casting
- Paleohistology
- Phylogenetic Comparative Methods

## Service

Memberships: Geological Society of America, Paleontological Society (student ambassador), and Society of Vertebrate Paleontology. Current University Affiliations: Montana State University Dead Lizards Society (2012-Current; Vice President 2014-2015; Co-President 2015-Current), Montana State University Honors College (2012-Current)

### **Volunteer/Outreach/Public Service**

- Preparation, Field Work, and Exhibits (1,300+ hours) Museum of the Rockies, MT (2012-Current)
- Redding Hadrosaur Exhibit Design, Ruyard Depot Museum (2013-in progress)
- Montana State Renne Library Paleontology Exhibit (2015)
- SCOPE (Student Community Outreach ProjEcts)
  - Preparation, Field Work, Exhibits, and Curation (200+ hours) Carter County Museum, MT (2013-2014)
- Big Sky Breaks Away student volunteer assistant leader (Spring 2014)
- Destination Imagination volunteer official, Manhattan Elementary School, MT (2014)
- Volunteer program assistant (8 hours) Geological Society of America Rocky Mountain/Cordilleran Section (2014)
- Galapagos Islands/Ecuador Travel Website for Montana Elementary Schools (2013)
  - <http://msugalapagos.wordpress.com/>