

# BENJAMIN JOHN BURGER

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## Education

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### **Doctor of Philosophy (PhD) - 2009**

Geological Science  
University of Colorado, Boulder, CO

### **Masters of Science (MS) - 1999**

Anatomical Science  
State University of New York, Stony Brook, NY

### **Bachelor of Arts (*Magna Cum Laude*) (BA) - 1997**

Geological Science  
University of Colorado, Boulder, CO

## Professional Experience

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### **2011 – Present: Utah State University, Uintah Basin, Vernal Utah**

Assistant Professor of Geology

### **2010-2011: Utah State University, Uintah Basin, Vernal Utah**

Adjunct instructor

### **2009-2011: SWCA Environmental Consultants Vernal, Utah**

Paleontology/Geology Consultant

### **2004-2008: Department of Geological Sciences University of Colorado at Boulder**

Lead Graduate Teacher

### **1999-2004: Division of Paleontology American Museum of Natural History, NYC.**

Director of Databases and Network Systems

## Courses Taught

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### **GEO 6400 Invertebrate Paleontology (Utah State University)**

-An advance graduate level course on marine invertebrate paleontology and terrestrial paleobotany. (Fall 2012, Fall 2013)

### **GEO 6400 Vertebrate Paleontology (Utah State University)**

-An advance graduate level course on the fossil record of fossil vertebrates. (Spring 2013, Spring 2014)

### **GEO 3200 Earth Through Time (Utah State University-Eastern in Price)**

-An in depth class that explores the history of planet earth, including its geological and paleontological history. (Spring 2012)

### **USU 1360 Integrative Science— Online Course (Utah State University)**

-An full online introductory general education science course for non-major undergraduate students. (Fall 2013)

**USU 1360 Integrative Science— Planet Earth (Utah State University)**

-An introductory science course that fulfills undergraduate breadth credit for non-major undergraduate students. (Fall 2011, Spring 2012, Fall 2012, Spring 2013)

**GEO 6400 Advance Stratigraphy (Utah State University)**

-Advanced graduate level stratigraphic geology course that covers concepts of sequence stratigraphic models, and application of facies analysis in petroleum exploration. (Fall 2011, Fall 2013)

**GEO 1110 The Dynamic Earth (Utah State University)**

-An introductory physical geology course taught as an adjunct instructor at the Vernal campus. (Fall 2010)

**GEOL 1060 Global Change (University of Colorado at Boulder)**

- A course utilizing an earth systems approach, with an emphasis on global climate change throughout time. (Spring 2008)

**GEOL 1030 Introduction to Geology Laboratory (University of Colorado)**

- A field based geology course that introduced students to the geologic history of the Front Range of Colorado. (Fall 2004, Spring/Fall 2005, Fall 2008)

**DPA Human Anatomy (State University of New York at Stony Brook)**

- Laboratory portion of a course on human anatomy directed toward pre-med and pre-dentistry students. (Fall 1998)

### Paleontology Field Experience

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**Morrison Formation, Utah (2012)**

Screen washing for Jurassic mammals along the Split Mountain Anticline  
Repository: Utah Field House Museum of Natural History

**Rock Springs Uplift, Wyoming (2009-2010)**

Collection of fossils in the Paleogene rocks exposed along the margins of the Washakie Basin.  
Repository: University of Colorado Museum.

**Piceance Creek Basin, Colorado (2005-2011)**

Collection of fossil mammals across the Paleocene-Eocene boundary in western Colorado.  
Corroborators: Jaelyn Eberle and James Honey (UCM)  
Repository: University of Colorado Museum.

**Uinta Basin, Utah (2007-2013)**

Collection of vertebrate fossils primarily in the Uinta and Duchesne River Formations.  
Corroborators: Beth K.E. Townsend (Midwestern), Paul Murphey (SDNHM) and Alex Dutchak (UCM)  
Repository: San Diego Museum of Natural History and Utah Field House Museum of Natural History

**San Juan Basin, Colorado (2003)**

Collection of vertebrate fossils in the Animas and San Jose Formations in southwestern Colorado.  
Corroborators: Matthew Tornow (St. Cloud) and Jin Meng (AMNH)  
Repository: American Museum of Natural History.

**Fayum Depression, Egypt (2001 & 2002)**

Collection of fossils in the Birket Qarun and Qasr el-Sagha Formations.  
Led by: Elwyn Simons, Prithijit Chatrath (Duke) and Erik Seiffert (SUNY)  
Repository: Duke University Lemur Center and Cairo Geological Museum

**Bridger Basin, Wyoming (1995-1999)**

Collection of fossil vertebrates in the Eocene Bridger Formation, southwestern Wyoming.  
Led by: Paul Murphey (UCM) and John Alexander (AMNH)  
Repository: University of Colorado and American Museum of Natural History.

**Piñon Canyon, Southeastern Colorado (1997)**

Recording Mesozoic fossils, including dinosaur sites in the Morrison Formation.  
Led by: Emmett Evanoff (UNC)

#### Grants and Awards

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GAANN fellowship recipient - \$93,992 (2005-2007) (U.S. Department of Education, Graduate Assistance in Areas of National Need)  
Jeff Deen Memorial Fund, University of Colorado -\$1,000 (2007)  
Visiting Scientist Fellowship, Field Museum of Natural History, Chicago -\$1,200 (2007)  
Shell Research Grant - \$1,200 (2007)  
Ogden Tweto Award, Colorado Scientific Society - \$800 (2006)  
Geological Society of America - \$1,500 (2006)  
William Burt Grant, University of Colorado - \$2,500 (1996 & 2005)  
Estwing Award, University of Colorado (1997)

#### Professional Society Memberships

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Society of Vertebrate Paleontology  
Paleontology Society  
Geological Society of America  
Society for the Preservation of Natural History Collections  
Utah Friends of Paleontology

#### Publications

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##### Peer-reviewed Articles

- Burger, B.J.** 2013: A new species of the archaic primate *Zanycteris* from the late Paleocene of western Colorado and the phylogenetic position of the family Picrodontidae. PeerJ 1:e191;DOI 10.7717/peerj.19
- Burger, B.J.** and Tackett, L. submitted in 2012: The Stratigraphic Importance of the Brontothere (cf. *Diplacodon elatus*) in the Brennan Basin Member of the Duchesne River Formation of Utah. *PalArch's Journal of Vertebrate Palaeontology*
- Burger, B.J.** 2012: Northward range extension of a diminutive-sized mammal (*Ectocion parvus*) and the implication of body size change during the Paleocene-Eocene Thermal Maximum. *Palaeogeography, Palaeoclimatology, Palaeoecology* 363-364:144-150.
- Burger, B.J.** 2010: The skull of the Eocene Primate *Omomys carteri* from western North America. *Paleontological Contributions*, vol. 2 p. 1-19.
- Burger, B.J.** and Honey, J. 2008: Plesiadapidae (Mammalia, Primates) from the Late Paleocene Fort Union Formation of the Piceance Creek Basin, Colorado. *Journal of Vertebrate Paleontology* 28(3):816-825.
- Burger, B.J.** 2007: A new late Paleocene vertebrate fauna from the Ohio Creek Formation of western Colorado. *The Mountain Geologist*, vol 44, No. 3 pp. 41-51.
- Alexander, J.P. and **Burger, B.J.** 2001: Stratigraphy and Taphonomy of Grizzly Buttes, Bridger Formation, Middle Eocene of Wyoming in G. F. Gunnell (ed.) *Eocene Biodiversity*. Kluwer Academic/Plenum Publishing, New York. pp. 165-196.

## Dissertation and Thesis

- Burger, B.J.** 2009. Mammalian faunal change across the Paleocene-Eocene boundary in the Piceance Creek Basin, western Colorado. Unpublished PhD dissertation, University of Colorado, Boulder. pp. 834.
- Burger, B.J.** 1999: The systematics and phylogeny of the fossil Hyopsodontidae (Mammalia, "Condylarthra"). Unpublished masters thesis, State University of New York, Stony Brook, New York. pp. 66.

## Book Reviews

- Burger, B.J.** 2012. A review of Prothero, D.R. 2009. *Greenhouse of the Dinosaurs: Evolution, Extinction and the Future of our Planet*. Columbia University Press, New York, NY. 288 pp. Priscum Summer edition, p. 31.

## Meeting Abstracts

- Burger, B.J.** 2011: Diversity, Extinction, and Gaps: An overview of the mammalian record during the late Paleocene and Eocene in the Rocky Mountain Region of North America. *Journal of Vertebrate Paleontology* November meeting abstracts.
- Burger, B.J.** 2011: Fossil mammals from the late Eocene Brennan Basin Member of the Duchesne River Formation in Utah. Rocky Mountain 63rd Annual and Cordilleran 107<sup>th</sup> joint meeting, *Geological Society of America* Abstracts 43:78
- Burger, B.J.** and Murphey, P.C. 2010: Is there a mammalian faunal turnover associated with the MECO global warming event in the Duchesne River Formation in northeastern Utah? Evaluation of new fossil discoveries from the Brennan Basin Member. *Journal of Vertebrate Paleontology* October meeting abstracts 67A.
- Burger, B.J.** 2010: Fossil primates of the early Cenozoic in North America: A piece of our family tree preserved in the badlands of our backyards. *Presented at the Utah Friends of Paleontology annual meeting in Vernal, Utah*.
- Burger, B.J.** 2008: Extinction, migration, and the effects of global warming on fossil mammals across the Paleocene-Eocene boundary in western Colorado, U.S.A. *Journal of Vertebrate Paleontology* 28(3) supplement 58A.
- Burger, B.J.** 2008: Evolution's tempo and mode during the Eocene Epoch: comparison of two long contemporaneous records of the fossil mammal *Hyopsodus* in the American West; pp. 41-58, in M. Connely (ed.) *The Eocene Epic- Life, Death and Conquest in the Early Tertiary* the 14<sup>th</sup> Annual Symposium on Paleontology and Geology at the Tate Museum, Casper College, Casper Wyoming p. 101.
- Burger, B.J.** 2007: Discovery of the carbon isotope excursion (CIE) at the Paleocene-Eocene boundary in the Piceance Creek Basin, western Colorado. *Geological Society of America*. Paper No. 70-2
- Burger, B.J.** 2006: A new late Paleocene vertebrate fauna from the Ohio Creek Conglomerate of western Colorado. *Journal of Vertebrate Paleontology* 26(3) supplement.
- Burger, B.J.**, Eberle, J., and Honey, J. 2005: Mammalian faunal change in the Paleocene-Eocene boundary spanning DeBeque Formation, Northern Piceance Creek Basin, western Colorado: Preliminary study of fossil ungulates. *Journal of Vertebrate Paleontology* 25(3) supplement: 41A.

- Burger, B.J.** 2004: New fossil vertebrates from the Tiffany Member of the Late Paleocene Animas Formation of Southwestern Colorado, and the P/E boundary on the margin of the San Juan Basin. *Journal of Vertebrate Paleontology* 24(3) supplement: 42A.
- Burger, B.J.** 2003: Stacking cladograms: a new method to model temporal and sister-group relationships of fossils. *Journal of Vertebrate Paleontology*. 23(3) supplement.
- Burger, B.J.** 2001: The humeral morphology of the "Condylarthra" and its implications for the evolution of cursorial mammals. *Journal of Vertebrate Paleontology* 21(3) supplement: 37A.
- Burger, B.J.** 2000: The next generation collection database at the American Museum of Natural History. *Journal of Vertebrate Paleontology* 20(3) supplement.
- Burger, B.J.** 1999: The skeletal anatomy of *Hyopsodus* and its bearing on the origin of modern ungulate mammals. *Journal of Vertebrate Paleontology*. 19(3) supplement 34A.
- Burger, B.J.** and Alexander, J.P. 1997: A new skeleton of *Hyopsodus* from the Eocene of Wyoming *Journal of Vertebrate Paleontology* 18(3) supplement: 30A.
- Burger, B.J.** 1997: Detailed Stratigraphy of the Bridger B fossil beds of East Grizzly Buttes. *Geological Society of America* 29(2) p.5.

Paleontology Technical Reports (abbreviated list)

- Burger, B.J.**, Murphey, P.C., Strauss, J.J., and Temme, T. 2010: Paleontology resources mitigation monitoring report for Berry Petroleum Oil and Gas infrastructure construction on Ashley National Forest. Prepared for the Ashley National Forest United States Department of Agriculture. SWCA #UT10-14635-31 p. 1-31.
- Burger, B.J.** and Murphey, P.C. 2010: Paleontological assessment for State Bridge Lodge Eagle County, Colorado. Prepared for the Bureau of Land Management Kremmling Field Office. SWCA #CO10-16841-03.
- Burger, B.J.**, Strauss, J.J. and Murphey, P.C. 2010: Paleontological Assessment for the Questar Main Line 103 Pipeline Upgrade, Uinta County. Prepared for Uintah County, Bureau of Land Management, and State of Utah School and Institutional Trust Lands Administration. SWCA #UT09-16018-97 p. 1-39.
- Murphey, P.C., Strauss, J., **Burger, B.J.**, Imhof, M. and Knauss, G. 2009: Final Report: Paleontological Block Surveys of Ute Tribal lands for Newfield Production Company. Prepared for the Ute and Ouray Indian Tribe. SWCA #UT09-14273-85 p. 1-29, Appendix A, B, & C.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for The Alternate Truck Route Study, Uintah County, Utah. Prepared for Uintah County, Bureau of Land Management, and State of Utah School and Institutional Trust Lands Administration. SWCA #UT09-14870-84 p. 1-52.
- Burger, B.J.**, Murphey, P.C., Strauss, J., and Imhof, M. 2009: Paleontological Resources Monitoring and Mitigation Report for Utah Department of Transportation US-6, MP200 Bridge Replacement. Prepared for the Utah Department of Transportation. SWCA #UT09-14501-83 p. 1-71.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for Questar Gas/Pipeline Company Clay Basin Water Storage Tank. Prepared for Bureau of Land Management, Vernal Field Office. SWCA # UT09-15881-81 p. 1-9.

- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for Summit Gas Gathering, LLC. Riverbend Dehydration facility at RBU 6-15E. Prepared for Bureau of Land Management, Vernal Field Office. SWCA #UT09-15814-79 p. 1-12.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for XTO Energy's Tap #5 Booster Site. Prepared for Bureau of Land Management, Vernal Field Office. SWCA #UT09-15669-78 p. 1-13.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for Newfield Production Company Sand Wash Water Injection Pipeline. Prepared for Bureau of Land Management, Vernal Field Office. SWCA # UT09-14273-73 p. 1-10.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Assessment for Newfield Production Company Boundary Pipeline. Prepared for Bureau of Land Management, Vernal Field Office. SWCA # UT09-14273-70 p. 1-36.
- Burger, B.J.**, and Murphey, P.C. 2009: Paleontological Monitoring Report for Construction of Newfield Pipeline in the Gilsonite and Blackjack Units. Prepared for Bureau of Land Management, Vernal Field Office. SWCA # UT09- 14273-69 p. 1-11.
- Burger, B.J.**, Strauss, J. and Murphey, P.C. 2009: Paleontological Assessment for PacifiCorp / Rocky Mountain Power Line UTU 84810/ Myton Oil. Prepared for Bureau of Land Management, Vernal Field Office. SWCA # UT09-15481-68 p.1-21.
- Burger, B.J.** 2008: Paleontological Technical Report: Interstate 76 improvements between the towns of Fort Morgan and Brush, Morgan County, Colorado. Prepared for Smith Environmental and Engineering. p. 1-11.