

DENA M. SMITH

Associate Professor of Geological Sciences and Curator of Invertebrate Paleontology

UCB 265, CU Museum of Natural History, University of Colorado, Boulder, CO 80309

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EDUCATION

University of Arizona.

Ph.D. in Geosciences, Minor in Entomology, 2000; Karl W. Flessa, Advisor

Dissertation: The evolution of plant-insect interactions: Insights from the Tertiary fossil record.

University of California at Santa Cruz.

B.A. in Biology and Environmental Studies (combined degree), 1994; Leo F. Laporte and

Deborah Letourneau, Honors Thesis Co-Advisors

Honors Thesis: Plant - Insect Interactions in the Fossil Record.

POSITIONS HELD

National Evolutionary Synthesis Center (NESCent), Sabbatical Fellow: *Evolution of Coleoptera:*

A Paleontological Perspective. July 2011-July 2012.

Associate Professor, Department of Geological Sciences, University of Colorado, Boulder.

April 2009 – present.

Curator of Invertebrate Paleontology, CU Museum, University of Colorado, Boulder.

August 2000 – present.

Assistant Professor, Department of Geological Sciences, University of Colorado, Boulder.

August 2000 – April 2009.

Interim Director, CU Museum of Natural History, University of Colorado, Boulder.

May –August 2004.

Florissant Fossil Beds National Monument: *Research Associate, May 1998 – present.*

Department of Paleobiology, Smithsonian Institution: *Evolution of Terrestrial Ecosystems - Fossil Insect*

Consultant, May 1995- September 1996.

AWARDS AND HONORS

Distinguished Lecturer, Paleontological Society, 2013 to 2015.

PROFESSIONAL MEMBERSHIPS (activity within last five years)

Association of Tropical Biology, Entomological Society of America, Coleopterists Society, Geological Society of America, International Organisation of Palaeobotany, Organization for Tropical Studies, Paleontological Society, Society for the Advancement of Chicanos and Native Americans in the Sciences (Lifetime Member), Society for Sedimentary Geology

RESEARCH AND GRANTS

PUBLICATIONS (*denotes student advisee, ^{UCM} denotes research using CU Museum specimens)

Books Edited:

^{UCM} Meyer, H.M. and **D.M. Smith** (editors) 2008. Paleontology of the Upper Eocene Florissant Formation, Colorado. Geological Society of America Special Paper 435. 177p.

Papers in Refereed Journals and Books:

^{UCM} Benson, M.E.* , Kocielek, J.P., Spaulding, S.A., and **Smith, D.M.** 2012. Pre-Neogene non-marine diatom biochronology with new data from the late Eocene Florissant Formation of Colorado, USA. *Stratigraphy*, 9(2):131-152.

^{UCM} J. Thoene*, **D.M. Smith**, C.R. Nufio, H.W. Meyer. 2012. Depositional Setting and Fossil Insect Preservation: A study of the Late Eocene Florissant Formation. *PALAIOS*, 27(7): 481-488.

^{UCM} **D.M. Smith.** 2012. Exceptional preservation of fossil insects in lacustrine environments. *PALAIOS*, 27(5):346-353 .

- ^{UCM} Plotnick, R.E. and **D.M. Smith**. 2012. Exceptionally preserved fossil insect ears from the Eocene Green River Formation of Colorado. *Journal of Paleontology*, 86(1):19-24.
- D.M. Smith**, J. Pardo*, M. Gorman* and B. Small. 2011. First Fossil Orthoptera from the Jurassic of North America. *Journal of Paleontology*, 85(1):102-105.
- Jahren, H., Norris, R.N., Erwin, D.E., **Smith, D.M.**, and Bottjer, D. 2011. Otherworldly Earths: The Future of Deep Time Research. *Eos*, 92(7): 15.
- ^{UCM} Hollis, K.A., **D.M. Smith**, and Spence, C.* 2010. Conducting Collections Assessments with an Emphasis on Paleontological Collections. *Collection Forum*, 21(1-2).
- ^{UCM} **Smith, D.M.** 2008. A comparison of plant-insect associations in the middle Eocene Green River Formation and the Upper Eocene Florissant Formation and their climatic implications. In H.M. Meyer and D.M. Smith (eds), *Paleontology of the Upper Eocene Florissant Formation, Colorado*. Geological Society of America Special Paper, 435:89-104.
- ^{UCM} A. Kinchloe*, **D.M. Smith**, R.P. Guralnick, P.E. Cushing and J. Krieger. 2008. Quantitative prediction of fossil biodiversity: Eocene Spiders from Florissant, Colorado. In H.M. Meyer and D.M. Smith (eds), *Paleontology of the Upper Eocene Florissant Formation, Colorado*. Geological Society of America Special Paper, 435:105-116.
- ^{UCM} **Smith, D.M.** and A.P. Moe-Hoffman. 2007. Taphonomy of Diptera in Lacustrine Environments: A case study from Florissant Fossil Beds, Colorado. *PALAIOS*, 22:623-629.
- ^{UCM} J. Krieger, R.P. Guralnick, **D.M. Smith**. 2007. Generating empirically determined, continuous measures of leaf shape for climate prediction. *PALAIOS*, 22:212-219.
- D.M. Smith**, A. Cook* and C.R. Nufio. 2006. How Physical Characteristics of Beetles Affect their Fossil Preservation. *PALAIOS* 21(3):305-310.
- ^{UCM} A. Hicks and **D.M. Smith**. 2006. *Athysanella bidentata* n.sp. (Hemiptera: Cicadellidae): a likely endemic leafhopper from the San Luis Valley in Colorado. *Zootaxa* 1164:63-68.
- ^{UCM} A. Moe* and **D.M. Smith**. 2005. Using Fossil Flies to Interpret Paleoenvironment, Florissant Fossil Beds NM, Colorado. *Palaeogeography, Palaeoecology, Palaeoclimatology*, 221:203-214.
- B.C. Ratcliffe, **D.M. Smith** and D.M. Erwin. 2005. The World's Largest Fossil Scarab Beetle: *Oryctoantiquus borealis*, New Genus and Species, from the Eocene of Oregon, U.S.A. (Insecta: Coleoptera). *Coleopterist's Bulletin*, 59(1):127-135.
- ^{UCM} **Smith, D. M.** and C. R. Nufio. 2004. Levels of Herbivory in Two Costa Rican Rainforests: Implications for Studies of Fossil Herbivory. *Biotropica* 36(3):318-326.
- Smith, D.M.** 2001. Taphonomic bias and insect diversity: A lesson from the beetles and flies. *PaleoBios*, 21(2): 117.
- Smith, D.M.** 2000. Beetle taphonomy in a recent ephemeral lake in southeastern Arizona. *PALAIOS*, 15(2):152-160.
- Smith, D.M.** 1999. Comparative Taphonomy and Paleoecology of Insects in Lacustrine Deposits. *Proceedings of the First International Paleontological Conference*, Moscow, Russia. 12 pgs.
- Labandeira, C.C. and **D.M. Smith**. 1999. Thoughts on the First International Paleontological Conference, 30 August to 4 September 1998, The Paleontological Institute, Moscow, Russia, *Paleobiology*, (2)
- Flessa, K.W. and **D.M. Smith**. 1997. Paleontology in Academia: Recent trends and future opportunities. *Priscum*, 8(1):1-4.
- Smith, D.M.** 1994. Plant - Insect Interactions in the Fossil Record. *Phytophaga*, 6: 35-49.

Publications in Review:

- D.M. Smith**. Introduction to Wolfe, J.A. and G.R. Upchurch (1987). In *Foundations of Paleoecology: Classic Papers with Commentaries*, Lyons, Smith and Punyasena (eds). University of Chicago Press. *Submitted January 2012*.

Publications in Preparation:

- D.M. Smith** and J.D. Marcot. Evolution of the Coleoptera: A fossil perspective. *To be submitted to Proceedings of the National Academy of Sciences, January 2013*
- ^{UCM} Leckey, E.H.* , **Smith, D.M.** Host fidelity over geologic time: Restricted use of oak species by oak gallwasps. *In revision for Resubmission to Journal of Paleontology, January 2013*.
- ^{UCM} Leckey, E.H.* , **Smith, D.M.** and Nufio C.R. Insect Herbivory on oak (*Quercus*) leaves along an elevational gradient. *To be submitted to Oecologia, January 2013*.

^{UCM} **D.M. Smith**, J. Thoene* and A.P. Moe-Hoffman. Apples and Oranges, Beetles and Flies: Comparative taphonomy of Florissant Coleoptera and Diptera. *To be submitted to Palaeogeography, Palaeoecology, Palaeoclimatology, February 2013.*

Other Publications

- Badgley, C., Bottjer, D., Clapham, M., Erwin, D., Gingerich, P., Kelley, P., Koch, P., Olszewski, T., Raymond, A., and **Smith, D.** 2011. Deep Time Earth-Life Observatory Network (DETELON) Science Plan. Sponsored by NSF funded workshops.
- Smith, D.M.** 2011. Presentation of the 2009 Harrel L. Strimple Award of the Paleontological Society to David Kohls. *Journal of Paleontology*, 85(3):607.
- Smith, D.M.** and S. Nufio. 2008. Book Review: "We Sing and Learn Dinosaurs". *Palaeontologia Electronica* 11(2): http://palaeo-electronica.org/2008_2/books/wee.htm
- Smith, D. M.** 2004. Book Review: "The Fossils of Florissant, Herbert W. Meyer, 2003, Smithsonian Institution Press, Washington D.C., 258p. (Hardcover, \$ 39.99) ISBN:1-58834-107-0". *Palaios* 19(1): 106-107.

Recently Published Original Artwork

Dena M. Smith. 2011. "Peltoceras (Jurassic)" in Exhibit "Art and Displacement", curated by George Rivera, Al-Kahf Gallery, The International Center of Bethlehem, Dar Annadwa Arts & Craft Center, Paul VI Str., Madbassa Square, Bethlehem, Palestine. ISBN: 9781-4507-5168-1

Published abstracts since arrival at CU-Boulder

- DM Smith** and JD Marcot, 2012, The fossil record and macroevolution of the Coleoptera: A quantitative analysis of fossil occurrences. Geological Society of America Annual Meeting, Abstracts with Programs, 44(7).
- ^{UCM} Evan P. Anderson* and **DM Smith**, 2012, Insect Taphonomy in the Green River Formation of Colorado: Preservation as Carbonaceous Compressions and Iron Oxides.. Geological Society of America Annual Meeting, Abstracts with Programs, 44(7).
- T Rothfus, MK Kowalewski, **DM Smith** and ZL Rothfus, 2012, Taphonomy of scaphopod assemblages from shallow-water, carbonate environments of San Salvador, Bahamas, Geological Society of America Annual Meeting, Abstracts with Programs, 44(7).
- ^{UCM} Meyer, H.W., E.B. Leopold, **D.M. Smith**, and M.A. Barton, 2012, Paleobotanical and pollen evidence from the Antero Formation (Colorado, USA) for climate and floral change during the Eocene-Oligocene transition. In: Abstracts, 13th International Palynological Conference and 9th International of Organisation of Palaeobotany Conference, Japanese Journal of Palynology, Special Issue 58, p. 150-151.
- ^{UCM} Leckey, E.* and **D.M. Smith.** 2011. Do warm climates always have high leaf herbivory? A study of insect damage on leaves of western Oaks. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} Thoene, J.*, **Smith, D.M.**, Nufio, C.R. and H.W. Meyer. 2011. How important is lithology in the preservation of fossil insects? A study of late Eocene insects from the Florissant Formation of Colorado. Geological Society of America Annual Meeting, Abstracts with Programs.
- Meyer, H.W., **D.M. Smith**, K. Johnson, I. Miller, E. Leopold, E. Nesbitt. 2011. Full disclosure of paleontological locality data: An integral component of credible science. 9th conference on fossil resources, Wyoming.
- ^{UCM} Plotnick, R.E. and **D.M. Smith.** 2011. The sound of crickets in the Eocene night: Fossil insect ears from the Green River Formation. Geological Society of America Annual Meeting, Abstracts with Programs, 43(1): 52.
- ^{UCM} **D.M. Smith.** 2010. Exceptional preservation of fossil insects in lacustrine environments. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} Leckey, E.* and **D.M. Smith.** 2010. Using the fossil record to examine long-term patterns in the evolution of insects and their host plants. Do gall wasps maintain host-fidelity over geologic time? Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} **D.M. Smith** and J. Thoene*. 2009. Taphonomy of fossil Coleoptera in the Florissant Formation (Late Eocene), Colorado. Geological Society of America Annual Meeting, Abstracts with Programs.

- ^{UCM} Leckey, E.* and **D.M. Smith**. 2009. Museum collections are better than expected: Minimal effects of collection bias in detecting insect herbivory on fossilized leaves. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} Barton, M.A.* and **D.M. Smith**. 2009. Floral diversity and climate change in central Colorado during the Eocene and Oligocene. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} Webster, K.D.* and **D.M. Smith**. 2009. Preservation of fossil arthropods in the middle Miocene Barstow Formation, Southern California. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} Leckey, E.* and **D.M. Smith**. 2009. The effects of elevation and climate on oak leaf herbivory: Implications for fossil studies. Geological Society of America, Abstracts with Programs.
- ^{UCM} Hollis, KA*, KD Webster* and **D.M. Smith**. 2008. Using Taphonomic Disparity to Understand Preservation Biases in the Western Interior Seaway: An Example from the Pierre Shale (Upper Cretaceous). Geological Society of America Annual Meeting, Abstracts with Programs.
- Small, B.J., M.A. Gorman*, J. Pardo* and **D.M. Smith**. 2007. A Late Jurassic lacustrine biota from the Morrison Formation of Colorado. Geological Society of America Annual Meeting, Abstracts with Programs 39(6).
- Leckey, E* and **D.M. Smith**. 2007. Plant-Insect Interactions and Climate from the Miocene of Nevada. Geological Society of America Annual Meeting, Abstracts with Programs.
- ^{UCM} **D.M. Smith** and A.P. Moe-Hoffman. 2006. Taphonomy of Diptera in the lacustrine deposits of the Florissant Formation (Late Eocene), Colorado. Geological Society of America Annual Meeting, Abstracts with Programs 38(7).
- ^{UCM} Benson, M.E.*, **D.M. Smith** and S. Spaulding 2006. Exceptional diversity in Late Eocene Freshwater Diatoms from the Florissant Formation, Teller County, Co. Geological Society of America Annual Meeting, Abstracts with Programs, 38(7).
- ^{UCM} Leckey, E.* and **D.M. Smith**. 2006. Plant-insect interactions in the Middle Miocene of Nevada. Geological Society of America Annual Meeting, Abstracts with Programs, 38(7).
- D.M. Smith**. 2004. Florissant is better than amber: A comparison of beetle preservation, diversity and ecological representation. Geological Society of America Annual Meeting, Abstracts with Programs, 36(5): 40.
- D.M. Smith**. 2004. Using insect herbivory as a proxy for insect diversity: cautions from a modern tropical forest assemblage. Geological Society of America Annual Meeting, Abstracts with Programs, 36(5):381.
- ^{UCM} Forbis, J.* and **D.M. Smith**. 2004. Sampling methods and measures of diversity and paleoclimate in fossil floras. Geological Society of America Annual Meeting, Abstracts with Programs, 36(5):63.
- ^{UCM} Kinchloe, A.E.*, **D.M. Smith**, P.E. Cushing, and R.P. Guralnick, 2004. A morphometric study of the Eocene spiders of Florissant, Colorado. Geological Society of America Annual Meeting, Abstracts with Programs, 36(5): 40.
- ^{UCM} Moe, A.P.*, **D.M. Smith** and A. Cook*. 2003. Near shore or off shore? Reconstructing the depositional setting of an ancient lake assemblage in Stewart Valley (Miocene), Nevada. Geological Society of America Annual Meeting, Abstracts with Programs, 35(6): 537.
- ^{UCM} Cook, A.* and **D.M. Smith**. 2003. They bend but they don't break: Testing the Physical Robustness of Beetle Cuticle. Geological Society of America Annual Meeting, Abstracts with Programs, 35(6): 538.
- Smith, D.M.** 2002. Patterns of diversity and preservation in the fossil record of Coleoptera. *In* "Insect Extinction: Historical and Ecological Patterns", Entomological Society of America Annual Meeting, Ft. Lauderdale, Florida. (*Invited Speaker*)
- ^{UCM} Hodgkins, J.* and **D.M. Smith**. 2002. Climate and Ecology of an Eocene Plant-Herbivore Assemblage. Geological Society of America Annual Meeting, Abstracts with Programs, 34(6):425.
- ^{UCM} Moe, A.P.* and **D.M. Smith**. 2002. Using fossilized Diptera from the Florissant Formation as Paleoenvironmental Indicators. Geological Society of America Annual Meeting, Abstracts with Programs, 34(6):102.
- ^{UCM} **D.M. Smith**. 2002. Exceptional diversity and preservation: Insects and plants of the Middle Miocene Stewart Valley Assemblage. Geological Society of America Annual Meeting, Abstracts with Programs, 34(6):102.

- Smith, D.M** and A. Cook* 2001. Beetle Bias: How sedimentary environment influences patterns of Coleopteran Diversity in the fossil record. Geological Society of America Annual Meeting, Abstracts with Programs, 33(6), 267.
- Smith, D.M.** 2001. Taphonomic bias and insect diversity: A lesson from the beetles and flies. North American Paleontological Convention 2001, Abstracts with Programs, Paleobios, 21(2): 117.

INVITED COLLOQUIA, LECTURES< SEMINARS and SPEAKING ENGAGEMENTS

- Invited Lecturer, “Exceptional Preservation of Insects” in “Extraordinary Glimpses of Past Life”, Yale University, New Haven CN, 10/12
- Invited Keynote Speaker, 25th Multicultural Career Conference, University of California at Santa Cruz, Santa Cruz, CA, 3/12
- “Evolution and Ecology of Insects: What we can learn from the fossil record”, University of Illinois, Urbana-Champaign, IL, 12/11
- “What we can learn about evolution and ecology from the fossil record of insects”, University of North Carolina, Wilmington, NC, 11/11
- “Applying for Academic Positions”, Panelist, National Evolutionary Synthesis Center, Post-Doc Professional Development Workshop, Durham, NC, 10/11
- “Mentoring Students”, Panelist, National Evolutionary Synthesis Center, Post-Doc Professional Development Workshop, Durham, NC, 9/11
- “Fossil Insects: Preservation, Ecology and Evolution”, National Evolutionary Synthesis Center (NESCent), Durham, NC, 9/11
- “Academic Couples”, Panelist, National Evolutionary Synthesis Center, Post-Doc Professional Development Workshop, Durham, NC, 8/11
- “Preservation and Diversity of Cenozoic Insects”, Department of Geological Sciences, University of Kansas, Lawrence, KS, 2/11
- “Fossil Insects: Exceptional Preservation and Incredible Diversification”, Department of Geosciences, Virginia Polytechnic Institute and State University, Blacksburg, VA, 10/08.
- “Ancient Insects: Diversification, Preservation and Paleoecology”, Department of Geological Sciences, University of Colorado, Boulder, CO. 9/08.
- “The Evolution of Insects: What we can learn from the fossil record”, Department of Geosciences, University of Iowa, Iowa City, IA, 4/06.
- “The Evolution of Fossil Insects: What we can learn from the fossil record” Department of Geological Sciences, University of Colorado, Boulder, CO. 9/05.
- “Fossil Insects: Little Extinction, Lots of Diversification”, Western Interior Paleontological Society Founders Symposium 2005, Extinctions: Punctuations in Time, Colorado School of Mines, Golden, CO. 3/05.
- “Insect Diversity Revisited: How Preservation Impacts our Perceptions”. Department of Ecology, Population and Organismic Biology - Colloquium, University of Colorado, Boulder, CO. 4/03.
- “Fossil Insects: Their preservation and interactions with plants”. University of Colorado at Boulder Natural History Museum. 12/98.

GRANT ACTIVITY

External Grants – Pending

NSF-Advancing Digitization of Biological Collections

PIs Dena Smith and Talia Karim (CU Boulder – Lead); David Grimaldi (AMNH), Michael Engel (KU), Sam Heads (Illinois Natural History Survey), Brian Farrell (MCZ-Harvard), Susan Butts and Chris Norris (Yale-Peabody Museum), Alton Dooley (VMNH).

Collaborative Research: FOSSIL INSECT COLLABORATIVE: A Deep-Time Approach to Studying Diversification and Response to Environmental Change. Dates: 07/15/13-07/14/17.

Amount: \$867,109 (to CU-Boulder), \$2.61 million (overall)

NSF-Doctoral Dissertation Improvement Grant

PI – Dena Smith, CoPI – Evan P. Anderson

DISSERTATION RESEARCH: A Taphonomic Model for Soft-bodied Fossils Tested through Study of Eocene and Modern Insects. Dates: 08/01/2013-05/31/2015.

Amount: \$19,792

NSF-Geobiology and Low Temperature Geochemistry

PI – Dena Smith

The Preservation of Insects and their Implications for a United Taphonomic Model for Soft Bodied Fossils in Marine and Lacustrine Settings. Dates: 2/1/13-1/31/15.

Amount: \$143,000

External Grants - Funded

NSF-Sedimentary Geology and Paleobiology (NSF-EAR 1123802)

PI – Dena Smith, CoPI – César R. Nufío

The response of insects to climate change in the Eocene through Oligocene of Colorado.

Dates: 10/1/11-9/30/14.

Amount: \$158,688.

National Evolutionary Synthesis Center (NESCent) – K-12 Evolution Education for Underrepresented Minorities

CoPIs- Peg Yacobucci, Dena Smith, Roy Plotnick, Pedro Marengo

Learning Evolution from the Fossil Record: K-12 Explorations in Deep Time

Dates: 5/15/12-5/13/14

National Ecological Observatory Network (NEON)

PI- Dena Smith

Collections Survey Project

Dates: 1/1/12-12/31/12

Amount: \$76,669

National Park Service – Rocky Mountain Cooperative Ecosystem Studies Unit

Co PIs– Dena Smith and Herbert Meyer, Florissant Fossil Beds.

Excavate and Research Fossil Plants from the Antero Formation. Dates: 5/15/07 -5/14/12.

Amount: \$10,000 (total amount funded to CU).

National Park Service – Rocky Mountain Cooperative Ecosystem Studies Unit

Co PIs– Dena Smith and Herbert Meyer, Florissant Fossil Beds.

Develop Mirror Website of FLFO Paleontological Database. Dates: 9/30/07 –5/14/12.

Amount: \$20,000 (total amount funded to CU).

National Park Service – Rocky Mountain Cooperative Ecosystem Studies Unit

Co PIs– Dena Smith and Herbert Meyer

Excavation of Fossils from the Florissant Formation to Investigate the Response of Insects to Climate Change during the Eocene-Oligocene Transition. Dates:5/15/09-12/31/11.

Amount: \$20,000 (total amount funded to CU).

National Ecological Observatory Network (NEON)

PI- Dena Smith

NEON Project

Dates: 7/25/11-12/31/11

Amount: \$7,818

Evolving Earth Foundation

PI - Dena Smith, Co PI – Erin H. Leckey, PhD Candidate, Geological Sciences

The evolution of Neogene plant-insect interactions: Does climate drive herbivory?

Dates: Summer 2009-Summer 2010

Amount: \$2,841

Evolving Earth Foundation

PI - Dena Smith, Co PI – MaryEllen Benson, PhD Candidate, Geological Sciences
Exceptional diversity in late Eocene freshwater diatoms from the Florissant Formation, Teller County, Colorado.

Dates: Summer 2007-Summer 2008

Amount: \$3,000

National Park Service – Rocky Mountain Cooperative Ecosystem Studies Unit

Co PIs– Dena Smith and Herbert Meyer, Florissant Fossil Beds.

Taxonomy & Paleoenvironmental Indications of Fossil Diatoms. Dates:5/15/05 - 9/30/08

Amount: \$21,150 (total amount funded to CU).

NSF - Biological Research Collections (NSF-DBI 0345875)

PI – Dena Smith

Computerization and Reorganization of the Invertebrate Paleontology Collections. Dates: 8/15/04 - 7/31/07.

Amount: \$432,000.

Internal Grants - Funded**CU Boulder-Instructional Grant Proposal**

PI – Dena Smith

Funds to develop Paleontology Field Methods Course for Maymester 2013.

Amount: \$7000

Faculty Grant for Course Development in Information, Communication, Journalism, Media and Technology (ICJMT)

CO-PIs – Deane Bowers, Claire Farago, Katie Lage and Dena Smith

Funding to develop a jointly-taught course in Collections Management for the Museum and Field Studies Program, the Libraries and the Department of Art and Art History. Dates: Fall 2012 – Spring 2014

Amount: \$7,000

CU-Boulder Outreach Committee Grant

PI - Dena Smith, Co PI – Cathy Regan, Education Coordinator, CU Museum

Fossils and the Natural World: Museum Training and Support for 3rd Grade Teachers. Dates: Summer 2008-Summer 2009.

Amount: \$5,000

CU-Boulder Outreach Committee Grant

PI - Dena Smith, Co PI – Cathy Regan, Education Coordinator, CU Museum

Girls At the Museum Exploring Science (GAMES), Dates: Summer 2009-Summer 2010.

Amount: \$5,000

CU-Boulder Outreach Committee Grant

PI - Dena Smith, Co PI - James Hakala, Assistant Director, CU Museum

Museum Outreach Science Training (MOST). Dates: Summer 2006-Summer 2007.

Amount: \$4,980

Council on Research and Creative Work – Grant in Aid, University of Colorado.

PI – Dena Smith

Fossil Insects and Plants from Stewart Valley (Miocene), Nevada. Dates: 05/15/02 – 05/15/03.

Amount: \$7000.

Council on Research and Creative Work – Junior Faculty Development Award, University of Colorado.

PI – Dena Smith

Fossil Insects and Plants from Stewart Valley (Miocene), Nevada. Dates: 05/15/02 – 05/15/03.

Amount: \$5000.

TEACHING

CU Courses Taught (*indicates new course development, ^Rindicates major course revision)

MUSM 5150, Collections Management: Spring 09^R, 11 and 13

GEOL 5700, Seminar: Paleontology Reading Group: Spring 04.

GEOL 3410, Paleobiology: Fall 01*, 03, 07 and 09^R.

MUSM 5061, Scientific Illustration: Fall 02*, Spring 05, 07, 10 and 13

MUSM 5914, Paleontology Collections: Co-Taught, Fall 02*.

GEOL 4700/5700, Seminar: Taphonomic Processes: Spring 02*, Spring 06.

MUSM 5051, Entomology Practicum: Co-Taught Fall 01*.

Other Teaching

Taphonomic and Ecological Processes in Tropical Environments, Summer 2012. Gerace Research Centre, San Salvador, The Bahamas.

-Taught 5-week graduate-level course focused on research in taphonomy and ecology of late Quaternary to Recent environments of the San Salvador Island (The Bahamas), including both marine and terrestrial settings.

Seminar Instructor, Fossil Insects of the Florissant Formation. 7/07. Florissant Fossil Beds National Monument seminar series on Paleontology of the Florissant Fossil Beds. Florissant, CO.

-Taught insect preservation, diversity and covered current research being conducted at Florissant fossil beds. Visited and discussed field sites and examined specimens (both body fossil and insect feeding traces).

Resource Instructor, OTS: Tropical Biology: An Ecological Approach. 2/99, 6/99, 2/00, 3/01, 1/02, 1/03, 2/04. Organization for Tropical Studies, University of Costa Rica, San Jose, Costa Rica.

-Taught insect systematics & evolution, experimental design and field techniques, geology and climate of Costa Rica and paleobiology.

Guest Lectures in Classes at the University of Colorado-Boulder.

“Curators Panel”. In MUSM 5011, Intro. to Museums. 9/10, 9/12.

“Sampling Fossil Invertebrate Assemblages”. In MUSM 5795, Mus. Field Methods: Zoo/Bot. 12/08, 12/10.

“Fossil Insects: Preservation and Diversification”. In EBIO 3080, Evolution. 11/08

“Insects and the Fossil Record”. In EEB 4660, Insect Biology. 3/05, 2/06, 3/07, 11/08, 10/09, 11/10, 10/12.

“Fossil Insect Research Program”. In GEOL 5700, Topics: Intro. to Geol. Sci. Faculty, 11/05, 10/07, 10/08, 11/09, 9/10, 9/12.

“What we can learn about evolution from the fossil record”. In EBIO 3080, Evolution. 9/06, 9/07.

“Taphonomy and Paleontological Collections” In MUSM 5914, Practicum in Geology. 11/04, 11/06.

“Fossil Insects as Paleoenvironmental Indicators”. In GEOL 5700-004, Topics: Paleoenvironmental Evidence. 4/06.

“The fossil record of insects”. In GEOL 3410, Paleobiology, 10/05.

“Co-evolution and the Fossil Record”. In EPOB 5320-002, Current Topics in Evolutionary Biology: Coevolution. 4/04.

Students (^{UCM} denotes research projects that used CU Museum specimens)

Graduate Student Advisees

Current:

^{UCM} **Erin Leckey**, PhD candidate, Geological Sciences, expected May 2013.
Evolution of oak-herbivore interactions.

^{UCM} **Richard Levy**, co-advised MS candidate, Museum and Field Studies, expected May 2013.
Plants, grasshoppers and climate change along an elevational gradient.

^{UCM} **Evan Anderson**, PhD candidate, Geological Sciences, expected May 2014.

Exceptional preservation and the fossil record of arthropods.
UCM **Jered Karr**, PhD candidate, Geological Sciences, expected May 2016.
Diversity and taphonomy of Eocene insects of Colorado.

Graduated:

UCM **Jenell Thoene**, MS candidate, Museum and Field Studies Program, Spring 2011.
Diversity and Taphonomy of the 34 million year old Florissant Formation Insects.
UCM **Mary Ellen Benson**, PhD candidate, Geological Sciences, Spring 2011.
Florissant Diatoms: Stratigraphy, Ecology and Systematics.
UCM **John Hankla**, MS candidate, Museum and Field Studies Program, expected December 2010.
Collecting fossils from the nests of Harvester Ants (*Pogonomyrmex occidentalis*):
Illustrated Field Guide, Wilderness Course and Exhibit.
UCM **Melissa Barton**, MS, Museum and Field Studies Program, expected Summer 2009.
Thesis: "Floral Diversity and Climate Change in Central Colorado during the Eocene and Oligocene."
UCM **Kathy Hollis**, MS, Museum and Field Studies Program, Summer 2008.
Thesis: "Using Taphonomic Disparity to Understand Preservation Biases in the Western Interior Seaway: An Example from the Pierre Shale (Upper Cretaceous)"
UCM **Amanda Cook**, MS, Department of Geological Sciences, Summer 2004.
Thesis: "Actualistic taphonomy of fossil beetles in lake environments".
UCM **April Kinchloe**, MS, Department of Geological Sciences, Summer 2004,
Thesis: "Morphometric techniques and the systematics of spiders from Florissant Fossil Beds".
UCM **Amy Moe**, MS, Museum and Field Studies Program, Spring 2003.
Thesis: "Using fossil flies as indicators of pre-Quaternary climate".

Undergraduate and High School Student Advisees (Honors, UROP, Interns and Independent Projects)

Current:

UCM **Rose Seltzer**, New Vista High School, Boulder, CO – Taphonomy of Hymenoptera and Heteroptera from the late Eocene Florissant Formation.
UCM **Matthew Sharples**, EBIO, University of Colorado – Curation, Identification of Green River Formation plant fossils (UROP funding).

Graduated:

Melissa Nielsen, Anthropology, University of Colorado – An investigation of neotropical cave taphonomy through a study of owl pellets.
UCM **Kevin Webster**, Ecology and Evolutionary Biology and Geological Sciences, University of Colorado – 3D preserved insects from the Barstow Formation (Miocene), California, and Pierre Shale Mollusks database project (Geo Mentor Program 08 and UROP funded 07-09, Honors Thesis Advisor).
Andrea Jaszlics, Ecology and Evolutionary Biology, University of Colorado – Early evolution of the Crocodylomorpha (Independent Project, UROP & Burt Grant funded 09).
UCM **Ariel Demarest**, Ecology and Evolutionary Biology, University of Colorado – Curation of Fossil Insects from the Florissant Formation.
UCM **Sage Davis**, Ecology and Evolutionary Biology and Geological Sciences, University of Colorado – Curation of Fossil Insects from the Florissant Formation.
UCM **Gregory Walth**, Ecology and Evolutionary Biology and Neurobiology, University of Colorado – Systematics of the Stalk-Eyed Flies from the middle Eocene Green River Formation, Colorado.
UCM **Carter Casad**, Environmental Studies, University of Colorado – Taphonomy of insects from the Green River Formation (UROP-Grant 08, 09).
UCM **Jenell Thoene**, Geological Sciences, University of Colorado – Taphonomy of beetles from the Florissant Formations (BURST Internship Program 08).
UCM **Chelsea Corson**, Ecology and Evolutionary Biology, University of Colorado – Plant Insect interactions in the Miocene Clarkia Formation (UROP 2008).

- UCM* **Nina Xiong**, Ecology and Evolutionary Biology, University of Colorado – Climate variables that correlate with insect damage levels in modern Oak forests (NIH/HHMI Scholar Program, Fall 2007 and Spring 2008).
- Jason Pardo**, BS Fall 2007, Department of Ecology and Evolutionary Biology, University of Colorado- Jurassic Fish and Insects of the Canon City region. (UROP/Mentorship funded 2004)
- UCM* **Olivia Woodruff**, Geological Sciences, University of Colorado – Taphonomy of insects from the Green River Formation (UROP-Team Grant).
- UCM* **Mark Gorman**, Undergraduate, Geological Sciences and Ecology and Evolutionary Biology Actualistic Taphonomy of Plants and Insects in lacustrine settings. (Independent Project).
- UCM* **Katherine Fornash**, Geology and Geophysics, Yale University – Plant-insect interactions and climate change in the Cenozoic of Western North America. (RECESS Program).
- UCM* **Kristen Hill**, Undergraduate, Ecology and Evolutionary Biology, Curation of the Columbian amber and taphonomic studies. (UROP funded)
- UCM* **William Dowling**, Undergraduate, Ecology and Evolutionary Biology - Curatorial Techniques (UROP funded)
- UCM* **Shannon Madore**, UROP (Spring 2006) - Curatorial Techniques and Fossils of the Green River Formation (continued as paid hourly worker in Summer 06).
- UCM* **Kelley Pruckler**, UROP (Spring 2006) - Curatorial Techniques and Fossils of the Green River Formation.
- UCM* **Elizabeth Hutson**, UROP (Spring 2006) - Curatorial Techniques and Fossils of the Green River Formation.
- UCM* **Clare Murray**, Department of Geological Sciences (Volunteer, Fall 2003-Spring 2004) – Fossils insects and plants from Rio Puerto Viejo, La Selva Biological Station, Costa Rica.
- UCM* **Meghann Toner**, Department of Ecology and Evolutionary Biology (Volunteer, Spring 2004)– Invertebrate Paleontology Museum Techniques.
- Gianna Hernandez**, Summer Minority Access to Research Training (SMART: Summer 2004) – The role of climate in plant-insect interactions: A study of Costa Rican Lifezones.
- Leah Katz**, SURE Program (Summer 2004) - The role of climate in plant-insect interactions: A study of Costa Rican Lifezones.
- UCM* **Vanessa Rosario Lopez**, Summer Minority Access to Research Training (SMART: Summer 2003)– Plant-Insect Interactions in Stewart Valley (Miocene), NV.
- UCM* **Matthew Westerby**, Department of Geological Sciences (UROP & Mentorship: Summer 2003)– Invertebrate Paleontology Curation Techniques & Online Database of the CU Museum Fossil Holotype Collection.
- UCM* **Adam Clark**, SURE Program (Summer 2003) – Small mammal fossils of the Cueva del Tigre, Guanacaste, Costa Rica.
- UCM* **Janice Forbis**, BS Fall 2003, Department of EPO Biology - How sampling affects paleoenvironmental interpretations and measures of diversity in fossil floras. (Honors Thesis – Advisor)
- UCM* **Jamie Hodgkins**, BS Spring 2003, Department of Anthropology – Long-term study of fossil insect herbivory at Douglas Pass, CO. (UROP funds to work on this project) & The occurrence of Brucellosis in ancient Middle eastern populations (Honors Thesis – Co Advisor).
- UCM* **Maria Ruiz Yantin**, Summer Minority Access to Research Training (SMART: Summer 2001) – An analysis of the paleoclimate of the Douglas Pass plant locality, (Middle Eocene) Green River Formation, CO.

Student Committee Membership

PhD Defense Exam Committees

Amy Trowbridge, EBIO (2012), Mary Ellen Benson, Geology (2011), Carolina Quintera, EBIO (2011), Heidi Schutz, EBIO (2008), Jonathan Krieger, EBIO (2006), Kathleen Weaver (Sims), EBIO (2006), Shannon Fehlberg (Kuschel), EBIO (2006), Antoinette Piaggio, EPOB (2004), Chadwick Tillberg, EPOB (2003)

Masters Defense Exam Committees

Jenell Thoene, Museum and Field Studies (2011), Audrey Gayou, Museum and Field Studies (2010), Jonathan Hankla, Museum and Field Studies (2010), Melissa Barton, Museum and Field Studies (2010), Kristina Horton, Museum and Field Studies (2009), Kathy Hollis, Museum and Field Studies (2008), Bethany Lewis, Museum and Field Studies (2008), Eric Chapman, Museum and Field Studies (2007), Monique McHenry, Museum and Field Studies (2005), Marie Worley, Museum and Field Studies (2004), Joseph Daniel, Museum and Field Studies (2003), Eric Heydelweide, Geological Sciences (2002)

PhD Qualifying Exam Committees

Amy Trowbridge, EBIO (2010), Carolina Quintera, EBIO (2009), Heidi Shutz, EPOB (2004), Jonathan Krieger, EPOB (2002), Shannon Kuschel, EPOB (2003), Kathleen Sims, EPOB (2002), Kathleen Prudic, EPOB (2001), Jeffrey Oliver, EPOB (2001), Antoinette Piaggio, EPOB (2001), Chadwick Tillberg, EPOB (2000)

3rd Semester Review Committees

Heidi Shutz, EPOB (2003), Kathleen Prudic, EPOB (2000), Jeffrey Oliver, EPOB (2000)

Masters Comprehensive Exam Committees

Jenell Thoene, Museum and Field Studies (2011), Jonathan Hankla, Museum and Field Studies (2010), Audrey Gayou, Museum and Field Studies (2009), Melissa Barton, Museum and Field Studies (2009), Kathy Hollis, Museum and Field Studies (2008), Bethany Lewis, Museum and Field Studies (2007), Eric S. Chapman, Museum and Field Studies (2006), Monique McHenry, Museum and Field Studies (2004), Marie Worley, Museum and Field Studies (2003), Joseph Daniel, Museum and Field Studies (2002)

Undergraduate Honors Thesis Committees

Kevin Webster, Geological Sciences (2010), Elizabeth Studer, EBIO (2010), Justine Smith, EBIO (2010), Francis Gorlan, EBIO (2010), Janice Forbis, EPOB (2003), Jamie Hodgkins, Anthropology (2003), Kandice Fero, EPOB (2002)

Research, Teaching and Professional Development Workshops

SACNAS Summer Leadership Institute – Washington DC (July 2009)

Teaching Assessment 101- University of Colorado

Faculty Teaching Excellence Program (FTEP) – Performance in a Nutshell, Creativity in Large Classes, Teaching Portfolios, Early Career Faculty Program – University of Colorado

Leadership Education for Advancement and Promotion – Leadership Development Workshop, Time Management – University of Colorado

CURATION

- 2012** Supervision of Invertebrate Paleontology Collection Manager (Karim)
Submission of Fossil Insect Collaborative grant to NSF-ADBC program.
Accession of approximately 3,000 fossil insects, arachnids and plants from Green River Formation, CO., gifted by Mr. David Kohls.
Collaboration on the Specify database interface with museum webpage.
- 2011** Supervision of Invertebrate Paleontology Collection Manager (Karim)
Accession of approximately 5,000 fossil insects, arachnids and plants from Claudia's, Dena's, Denson, Donnell, Old Mtn., Mahaffey Trail, Anvil Points and Paleoburn localities, Green River Formation, CO., gifted by Mr. David Kohls.
Accession of approximately 200 fossil insects from the Green River Formation of Utah and Colorado, gifted by Ms. Barbara Bateman.
Collaborate on the Specify database interface with museum webpage and pushing data to portal.
- 2010** Supervision of Invertebrate Paleontology Collection Managers (Hollis, Leckey and Karim) and student collections staff (Barton, Davis and Thoene).
Training of new Invertebrate Paleontology Collection Manager (Karim, starting Sept 2010).
Accession of approximately 5,400 fossil insects, arachnids and plants from Claudia's, Dena's, Denson, Donnell, Old Mtn., Mahaffey Trail, Anvil Points and Paleoburn localities, Green River Formation, CO., gifted by Mr. David Kohls.

- Accession of approximately 350 fossil insects in amber from Colombia and Madagascar, gifted by Roy Young.
Assist with exhibit for changing gallery. Pulled fossil orthopteran material and helped with label text.
- 2009** Supervision of Invertebrate Paleontology Collection Manager (Hollis) and student collections staff (Leckey and Thoene).
Accession of approximately 7,000 fossil insects, arachnids and plants from Claudia's, Dena's, Denson, Donnell, Old Mtn., Mahaffey Trail, Anvil Points and Paleoburn localities, Green River Formation, CO., gifted by Mr. David Kohls.
Development of Burgess Shale Web Project in collaboration with D. Brown and T. Hess.
Maintenance of "From the Field Blog" during fieldwork conducted in Florissant, CO (June and July)
Fieldwork in the Florissant Formation, CO: Cenozoic Insect Fossils (June and July)
Fieldwork in North Carolina and Virginia: Cenozoic Marine Invertebrates and Triassic Insect Fossils (September)
- 2008** Supervision of Invertebrate Paleontology Collection Manager (Hollis – starting 9/08) and student collections staff (Leckey, Padilla and Barton).
Curation of 3,000 Green River Insects (supervised and trained a team of five undergraduates to assist with processing of materials)
Curation of 450 Burgess Shale Fossils (trained and collaborated with volunteer Dr. Diane Brown)
Supervised corrections to taxonomy, reorganization and inventory of plant and aquatic invertebrate holotypes, Kudia River fossils, Antero and Pitch Pinnacle formation specimens.
Accession of approximately 7,400 fossil insects, arachnids and plants from Denson, Donnell, Old Mtn., Mahaffey Trail, Anvil Points and Paleoburn localities, Green River Formation, CO., gifted by Mr. David Kohls.
Field work in the Florissant Formation (Sept 08)
- 2007** Supervision of Invertebrate Paleontology Collection Manager (Marcot) and student collections team (Leckey, Padilla and Barton)
Continued work on NSF-Collections Improvement Grant: Development of Invertebrate Paleontology Webpage, Online Database and DiGIR interface (in collaboration with Marcot and Hess), continued fossil inventory and updates to taxonomy (supervision of Marcot and student workers).
Accession of approximately 6,000 fossil insects and arachnids from Denson, Donnell and Old Mtn. Localities, Green River Formation, CO., gifted by Mr. David Kohls.
Supervised corrections to taxonomy, reorganization and inventory of Florissant plant collections (non-holotypes) and Pierre Formation specimens.
Field work in Piceance Creek Basin, Green River Formation, CO. (Aug 07).
- 2006** Served as point-person of Paleontology Section (Spring and Summer)
Supervision of Paleontology Collection Manager (Culver, Spring and Summer)
Supervision of Invertebrate Paleontology Collection Managers (Moe and Marcot)
Accession of approximately 6,000 fossil insects and arachnids from the Paleoburn, Denson and Donnell localities, Green River Formation, CO., gifted by Mr. David Kohls.
Led fieldtrip as part of GEOL 5700 seminar to visit Paleoburn Locality, Green River Formation, CO., and taught students about paleoecological sampling in lacustrine deposits (collected and accessioned approximately 300 insect specimens).
- 2005** Curator of Exhibit, Stone Lace: The Fossils of Florissant, CU Museum
Served as point-person of Paleontology Section (Fall 2005).
Supervision of Paleontology Collection Manager (Culver) starting Fall 2005.
Supervision of Invertebrate Paleontology Collection Manager (Moe)
Accession of approximately 7,500 fossil insects and arachnids from the Anvil Points Locality, Green River Formation, CO., gifted by Mr. David Kohls.

- 2004** Curator of Exhibit, Stone Lace: The Fossils of Florissant, CU Museum
 Supervision and training of new Paleobiology Collection manager (in collaboration with curators Chin and Eberle).
 Hire, Train and Supervise new Invertebrate Paleontology Collection manager (NSF funded).
 Supervision and training: three graduate assistants on invertebrate curation projects (database formation, accession and curation of Florissant macrofloral material, holotype database and research of relevant literature, curation of green river insects, amber insect inventory).
 Housing and organization of amber/copal collection for possible future gift to Museum (400 pieces from Colombia and Madagascar).
- 2003** Served as point-person of Paleontology Section (Spring and Summer 2003).
 Collection management duties with other curators, during the eight months that we were without a collection manager.
 Handled all Invertebrate and Plant fossil loans and inquiries.
 Helped oversee repairs to the basement floor (due to flooding in building).
 Worked with undergraduate student on digital imaging of the holotype collection (Matt Westerby).
 Worked with Museum Informatics Coordinator (Tara Hess) on development of Holotype Database.
 Supervision: two collection managers (Murphey and Hall in Spring).
 Supervision and training: two graduate assistants on invertebrate curation projects (database work, accession and curation of Green River material, Holotype database and research of relevant literature, paleobiology database work).
 Field work – Douglas Pass region of the Green River Formation, Western Colorado (collected over 200 insects, seeds and leaf compression fossils)
- 2002** Served as point-person of Paleontology Section.
 Worked on revision of section policy and procedure and oversaw building repairs
 Began Holotype project – identify, locate and rehouse all holotype collections (over 700 specimens)
 Oversaw acquisition of fossil material for CU Museum Invertebrate Paleontology – rare Silurian soft-bodied organisms and an excellent collection of Cretaceous Foraminifera.
 Supervision: two collection managers (Murphey and Hall)
 Supervision and training: two graduate assistants and two undergraduates on invertebrate curation projects (database formation, holotype project – search for specimens and rehousing, curation of green river plants, physical reorganization of many of the fossil invertebrates into a general stratigraphic order).
 Field work – Stewart Valley, Nevada. Timed sampling study of fossil insects (over 1,400 specimens collected). Grant in Aid and JFDA supported.
- 2001** Served as point-person of Paleontology Section.
 Reorganized section budget procedures.
 Oversaw equipment purchases and space organization.
 Move to Bruce Curtis building (MCOL) from Hunter Building.
 Specimen selection and label text for Centennial Exhibit.
 Supervision: one full-time collection manager (Murphey) and one part-time collection manager (Hall).

 Supervision and training: one graduate student, two undergraduate students and a volunteer on invertebrate curation projects.
 Field work - Three Field trips to Green River Formation, CO – fossil plants and insects. This added 200 new specimens and two new insect localities to the CU Museum's holdings.
- 2000** Reorganization of fossil insect collection.
 Accessioned approximately 1,200 new fossil plants and insects from the Douglas Pass region of the Green River Formation, CO (Middle Eocene).
 Supervision and training: one graduate student who worked to re-house Florissant fossil insects to more secure storage practices.
 Field work: Collection of material from John Day Formation, Oregon (multiple insect specimens).

SERVICE

Professional Service

Strategic Planning Workshops

Workshop to Develop and Implementation Plan for the Network Integrated Collections Alliance, American Institute of Biological Sciences (Fall 2012)
iDigBio Strategic Planning Workshop at University of Florida, Sponsored by NSF (Spring 2012)
Deep Time Earth Life Observatory Networks (DETELON) Workshop, Sponsored by NSF (Spring 2010, 2011- member of writing team for white paper)
PaleoHub Workshop, Sponsored by the Paleoportal Group (Spring 2009, Fall 2010)

Service to Professional Organizations

Education and Outreach Committee, Paleontological Society. 10/10 – Present.
Webmaster, Paleontological Society. 4/08 – Present.
Reviews Editor/Editorial Board Member, *Palaeontologia Electronica*. 12/07-Present.
Associate Editor, PALAIOS. 1/2007 – Present
Panelist, NSF – 2013
Panelist, NSF –2012
Contributing Researcher, Paleobiology Database, NCEAS, Santa Barbara, CA. 2001 – Present
Advisory Board Member, Paleobiology Database, NCEAS, Santa Barbara, CA. 2004 – 2010
Society for the Advancement of Chicanos and Native Americans – Leadership Task Force. 11/09- 7/2010.
Society for the Advancement of Chicanos and Native Americans – Summer Leadership Institute Selection Committee, Spring 2010.
Councilor (under 40), Paleontological Society. 10/07- 10/09.
Paleontological Society Student Awards Committee, Spring 08.
Co-Convener, Geological Society of America, Topical Session: Paleontology and Stratigraphy of the Late Eocene Florissant Formation, Colorado. GSA Annual Meeting, Denver, CO, 2004.
Co-Moderator, Geological Society of American, Discipline Session: Paleontology VII: Organismal Interactions and Behavior. GSA Annual Meeting, Denver, CO, 2004.
Field Trip Co-Organizer, American Association of Arachnologists Annual Meeting, to fossil arthropod localities in the Green River Formation, Western Colorado, 2003.
Hosted and Organized Fossil Insect Reception and Tour at CU Museum, during GSA Annual Meeting, Denver, CO, 2002.

Manuscripts and Books Reviewed:

American Journal of Botany, Cretaceous Research, Ecology, Geobios, GSA Special Volume: Causes and Consequences of Globally Warm Climates in the Early Paleogene, Journal of Paleontology, *Naturewissenschaften*, Rocky Mountain Geology, PALAIOS, Paleontological Short Course: The fossil record of predation, Paleontological Special Volume: Teaching Paleontology in the 21st Century, Zookeys and Zootaxa.

“Buggy Planet” by Scott Shaw, University of Chicago Press.

“Snapshots from Deep Time” by Lance Grande, University of Chicago Press.

“Prehistoric Life: Evolution and the Fossil Record” by Bruce Lieberman and Roger Kaesler, Wiley-Blackwell Publishing.

“Principles of Paleontology, Third Edition” by Arnie Miller and Mike Foote, Freeman Press.

Grants and Fellowships Reviewed:

Mac Arthur Fellowship Evaluation (Summer 2008)
NSF – Division of Earth Sciences, Sedimentary Geology & Paleontology (Fall 2010, Spring 2012)
NSF – Division of Earth Sciences, Postdoctoral Fellowships (Spring 2008, Fall 2009)
NSF – Division of Polar Programs, Antarctic Sciences (Fall 2007).
NSF - Division of Environmental Biology, Systematic Biology (Spring 2005, Fall 2005).
NSF - Division of Biological Infrastructure, Biological Research Collections (Fall 2004).

University Service

2012-2013

Boulder Faculty Assembly – Diversity Committee, NSF-STEP: CU-Boulder Pre-Collegiate Development Program- Steering Committee.

2011-2012

Boulder Faculty Assembly – Diversity Committee, AGEP Faculty Steering Committee, Speaker at Summer Minority Access to Research Training Program – “Graduate School: The Application Process” (Summer 2011).

2010-2011

Co-Chair -Chancellor’s Advisory Committee on Minority Affairs (CACMA), Co-Facilitator and Organizer – CU Boulder Faculty of Color Group, Boulder Faculty Assembly – Diversity Committee, AGEP Faculty Steering Committee, SACNAS-CU Boulder Chapter – Faculty Co-Advisor, SACNAS-CU Boulder Chapter – Workshop Co-Coordinator and Co-Facilitator (3 professional development workshops for undergraduates in Spring 2011), Speaker at Miramontes Arts and Sciences Program (MASP) Colloquium (Spring 2011), Co-Facilitator – Graduate Teaching Program – “Achieving Balance” (Fall 2010), Speaker at New Faculty Orientation for the LEAP program (Fall 2010), Panelist at LEAP – Leadership Development Workshop (Summer 2010). Speaker at Summer Minority Access to Research Training Program – “Making the most of conferences” (Summer 2010).

2009-2010

Co-Facilitator and Organizer – Faculty of Color Group (Spring), Boulder Faculty Assembly – Diversity Committee (Spring), AGEP Faculty Steering Committee, Panelist at LEAP – Leadership Development Workshop (Spring), SACNAS-CU Boulder Chapter – Faculty Resource (Spring), Panelist at New Faculty Orientation (Fall), Panelist at CU-Boulder Diversity and Inclusion Summit (Fall).

2008-2009

AGEP Faculty Steering Committee

Department Committee Assignments

2012-2013

Graduate Admissions Committee – Geological Sciences, Collections Committee – CU Museum

2011-2012

Executive Committee - Geological Sciences (Summer 2011), *On sabbatical Fall 2011*

2010-2011

Executive Committee - Geological Sciences (Fall 2010-Spring 2011), Diversity Liason - Geological Sciences, Chair of Geological Sciences Sloan Fellowship Committee

2009-2010

Diversity Liason - Geological Sciences, Chair of Geological Sciences Sloan Fellowship Committee, Interim Honors Committee Representative – Geological Sciences (Spring), Chair – Search for Invertebrate Paleontology Collections Manager – CU Museum (Summer)

2008-2009

Geological Sciences Diversity Liason, Chair of Geological Sciences Sloan Fellowship Committee, Geological Sciences Department Chair Search Committee, CU Museum Curriculum Committee, CU Museum Anthropology Curator Search.

2007-2008

Geological Sciences Diversity Liason, Chair of Geological Sciences Sloan Fellowship Committee, CU Museum Curriculum Committee, CU Museum FRPA Evaluation Committee.

2006-2007

Geological Sciences Diversity Liason, Chair of Geological Sciences Sloan Fellowship Committee, Geological Sciences Department Chair Search Committee (Fall semester), CU Museum mid-term salary committee

2005-2006

CU Museum Director Exploratory Committee (Spring Semester), Museum Collections Committee (Spring Semester), Geological Sciences Diversity Liason, Geological Science Sloan Fellowship Committee.

2004-2005

Museum Exhibits Committee (Fall semester), Geological Sciences Diversity Liason, Geological Sciences Sloan Fellowship Committee.

2003-2004

Museum Search for Assistant Director Committee Member, Museum Collections Committee, Museum Exhibits Committee (Fall-Summer), Geological Sciences Sloan Fellowship Committee, Geological Sciences Research PRP Committee Member.

2002-2003

Museum Steering Committee, Museum Curriculum Committee, Museum Collections Committee, Geological Sciences Sloan Fellowship Committee

2001-2002

Chair of Museum Search Committee for Vertebrate Paleontologist, Museum Space Committee, Museum Collections Committee, Museum AAM Accreditation Committee, Museum Curriculum Committee, Geological Sciences Executive Committee Member, Geological Sciences Sloan Fellowship Committee.

2000-2001

Museum Space Committee, Museum Collections Committee, Museum AAM Accreditation Committee, Museum Curriculum Committee, Geological Sciences Sloan Fellowship Committee

University Service in Education and Community Programs

Technical Adviser for Florissant Fossil Beds N.M. Exhibits Planning Team (2010-2012).

Insect Activities and Tours for 2nd graders (~75 students and teachers) from University Hill Elementary School, Boulder, CO (Spring 2012)

Girls and Science Day at CU, hosted groups of middle school girls from the Boulder Valley School District (Spring 2011).

Developed and ran two-day workshop titled "A paleobotanical overview" for the Colorado Native Plant Society (Spring 2010).

Speaker, "The History of Life", University of Colorado Museum Docent Training (Fall 2009).

Development of Fossil Kits for 3rd graders in BVSD in collaboration with E. Leckey and C. Regan (Summer 2009).

Speaker and Moderator – 3rd grade teacher training, University of Colorado Museum (Spring 2009)

"Insects Caught in Time" for grades 3-6, Mamie Doud Eisenhower Public Library, Broomfield, CO. 7/08.

Panelist, "Bringing Culture to Work", SOARS/RESESS Programs, University Corporation for Atmospheric Research, Boulder, CO. 6/08.

"Art and Science: A perfect combination", Shining Mountain Waldorf School, Boulder, CO. 9/2007.

Tour of Paleontology Hall, Shining Mountain Waldorf School (Fall 2007)

Faculty Panelist, Ronald E. McNair Postbaccalaureate Achievement Program (Summer 2006)

Members Only, Family Fossil Fun Event (Fall 2005)

Florissant Shale Splitting Event (Fall 2005)

"Insects, Plants and Climate Change: What we can learn from the 34 million year old Florissant Formation". CU Museum of Natural History, University of Colorado, Boulder, CO. 2/05.

Helped host CU Museum Family Day (Spring 2004)

Hosted Girls at the Museum Exploring Science (GAMES) Program (Fall 2002, Spring 2004 & 2005)
Host and Introduction of Herbert Meyer, Park Paleontologist, “The Late Eocene Upland Forests of Florissant: Living on the Verge of Global Climate Change”, CU Museum (Spring 2005).
Host and Collections Tour – Colorado Native Plant Society, Fossil plant workshop (Spring 2005).
Founder and Facilitator of the Paleontology Reading Group (Fall 2003- Spring 2004)
Panelist, “Life in Academia”, Summer Minority Access to Research Training (SMART) Program, University of Colorado, Boulder, CO. 7/03.
Keynote Speaker, SMART Program, Reception and Awards Ceremony, University of Colorado, Boulder, CO. 8/03.
“New Perspectives on Old Fossils”, In Centennial Anniversary Celebration of the CU Museum of Natural History, University of Colorado, Boulder, CO. 11/02.
“A Future for Fossil Insects”. In 100th Anniversary Celebration of the Geological Sciences Department, University of Colorado, Boulder, CO. 10/02.

Popular Press, Interviews and Articles

Featured “Scientists In Action: Q&A”, SACNAS News Winter/Spring 2013, vol. 15, no. 2.
<http://sacnas.org/about/stories/sacnas-news/winter-2013/Q-and-A>
“Auditory organs found in insect fossils hint at the evolutionary relationship between predator and prey”
Jan. 10, 2012.
http://www.scientificamerican.com/gallery_directory.cfm?photo_id=CF519CC1-BF63-09EE-C2677C806509F317
“Hear that? Insects can, and it's the sound of a hunting bat. Fossils reveal secrets of critters' weird ears, and how they evolved before predators existed”
http://www.msnbc.msn.com/id/45876341/ns/technology_and_science-science/#.TwUKjYH4J2c
“50-Million-Year-Old Cricket And Katydid Fossils Hint At The Origins Of Insect Hearing”, Jan. 3, 2012
<http://news.science360.gov/obj/story/a22b6f8f-d884-460c-aa88-1c80127a86e3>
“Fossils Reveal Secrets of Insects' Weird Ears”, Jan. 3, 2012
<http://www.livescience.com/17721-fossil-insect-ear-evolution.html>
“Ancient Crickets Hint At The Origins Of Insect Hearing”, Jan. 3, 2012
<http://www.redorbit.com/news/science/1112448666/ancient-crickets-hint-at-the-origins-of-insect-hearing/>
“Fossils Reveal Secrets of Insects' Weird Ears”, Jan. 4, 2012
<http://cryptozoologynews.blogspot.com/2012/01/fossils-reveal-secrets-of-insects-weird.html>
“50-million-year-old crickets with ears”, Jan. 9, 2012
<http://www.futurity.org/science-technology/50-million-year-old-crickets-with-ears/>
“50 million year old cricket and katydid fossils hint at the origins of insect hearing”, Jan. 3, 2012
http://www.sciencecodex.com/read/50_million_year_old_cricket_and_katydid_fossils_hint_at_the_origins_of_insect_hearing-83776
“Pasikoniki i swierszcze mają świetny słuch”, Jan. 9, 2012
<http://www.wprost.pl/ar/287164/Pasikoniki-i-swierszcze-maja-swietny-sluch/>
“Fósseis de 50 milhões de anos ajudam a entender evolução da audição nos insetos” Jan. 3, 2012
<http://veja.abril.com.br/noticia/ciencia/fosseis-de-50-milhoes-de-anos-ajudam-a-entender-evolucao-da-audicao-nos-insetos>
“Ancient Cricket hints at origin of insect hearing”, Jan. 3, 2012
<http://scienceblog.com/51357/ancient-cricket-hints-at-origin-of-insect-hearing/>
“Fossils hint at origin of insect hearing”, Jan. 3, 2012
<http://www.examiner.com/paeontology-in-national/fossils-hint-at-origin-of-insect-hearing>
“50-million-year-old cricket and katydid fossils from Colorado hint at origin of insect hearing”, Jan. 3, 2012
<http://colorado.edu/news/r/2302239cc3c8ba1ad98332a1e786d6ba.html>
“50-Million-Year-Old Fossils Show Evolution of Insect Ears”, Jan. 3, 2012
<http://www.laboratoryequipment.com/news-50-Million-Year-Old-Fossils-Show-Evolution-of-Insect-Ears-010412.aspx?xmlmenuid=51>

Featured as one of the “Paleo People” on the Paleoportal Website.

http://www.paleoportal.org/index.php?globalnav=paleopeople&interview_id=13

Featured in article “The Many Hats of the Museum Curator”, by Jennifer Griffin in The AWIS (Association for Women in Science) Newsletter, Vol. 26, No. 1, pgs. 30-31 (Winter 2007).

“Florissant Tops Amber Deposits for Fossil Beetle Richness, According To CU-Boulder Study”, Nov. 2004
http://www.geosociety.org/meetings/2004/prCU_florissant.htm

“Florissant Tops Amber Deposits For Fossil Beetle Richness, According To CU-Boulder Study” Nov. 2004
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