

## **SAMUEL D. MATSON**

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### **EDUCATION**

- August, 2010    **University of Minnesota**, Minneapolis, MN  
**Ph.D.** in Geology  
Dissertation: *Stable Isotopic Investigation of Late Neogene Terrestrial Paleoecology and Paleoclimate of the Circum-Mediterranean Region*  
Advisor: Dr. David L. Fox
- Dec., 2004    **University of Minnesota**, Minneapolis, MN  
**M.S.** in Geology  
Thesis: *Evaluation of the use of stable isotopes from turtles, crocodylians, and fish to understand paleoclimates: An example from the Paleocene-Eocene of the Clarks Fork Basin, Wyoming*  
Advisor: Dr. David L. Fox
- August, 2002    **University of Nebraska**, Lincoln, NE  
**B.S.** in Geology

### **PUBLICATIONS**

- Matson, S.D.**, Gibert, Ll., Scott, G.R., and Fox, D.L., 2015, Wet climate in southeast Spain during the Messinian Salinity Crisis, *Geology* (in review).
- Nadelson, L.S., Jorcyk, C., Yang, D., Smith, M.J., **Matson, S.**, Cornell, K., and Husting, V., 2015, What good is it for me? Development and validation of the Individual Science Usefulness Survey, *Science and Public Policy* (revised, under review)
- Nadelson, L.S., Jorcyk, C., Yang, D., Smith, M.J., **Matson, S.**, Cornell, K., and Husting, V., 2014, I just don't trust them: The development and validation of an assessment instrument to measure trust in science and scientists, *School Science and Mathematics*, v. 114, no. 2, p. 76–86.
- Matson, S.D.**, Rook, L., Oms, O., and Fox, D.L., 2012, Carbon isotopic record of terrestrial ecosystems spanning the Late Miocene extinction of *Oreopithecus bambolii*, Baccinello Basin, Tuscany, *Journal of Human Evolution*, v. 63, p. 127–139.
- Matson, S.D.** and Fox, D.L., 2010, Stable isotopic evidence for terrestrial latitudinal climate gradients in the Late Miocene of the Iberian Peninsula, *Palaeogeography, Palaeoecology, Palaeoclimatology*, v. 287, p. 28–44.
- Matson, S. D.** and Fox, D. L., 2008, Can fossil turtle bone apatite be used to reconstruct paleoclimates? *PALAIOS*, v. 23, p. 24–34.

## PRESENTATIONS

- Matson, S.D.**, Gibert, Ll., Scott, G.R., and Fox, D.L., 2014, Plio-Pleistocene continental paleoclimate record from the Zújar section, Guadix-Baza Basin (SE Spain). (abstract accepted, 2014 American Geophysical Union Annual Meeting, 15–19 December, San Francisco, CA)
- \*Bundy, K. and **Matson, S.D.**, 2013, Assessing the reliability of stable isotopes in fossil bone: A unique case study of prehistoric lung pathology (poster presentation, 2013 Geological Society of America Annual Meeting, 27–30 October, Denver, CO)
- Matson, S.D.**, Rook, L., Oms, O., and Fox, D.L., 2011, Carbon isotopic record of the relative roles of biotic and abiotic factors in the Late Miocene extinction of *Oreopithecus bambolii*, Baccinello Basin, Tuscany (oral presentation, 2011 Society of Vertebrate Paleontology Annual Meeting, 2–5 November, Las Vegas, NV)
- Matson, S.D.**, Gibert, Ll., Fox, D.L., and Scott, G.R., 2011, Wet climate in southeast Spain during the Messinian Salinity Crisis (oral presentation, 2011 Geological Society of America Annual Meeting, 9–12 October, Minneapolis, MN)
- Matson, S.D.** and Viskupic, K., 2011, Mobile technology as a tool for enhancing student learning in geosciences (poster presentation, Geological Society of America Annual Meeting, 9–12 October, Minneapolis, MN)
- Matson, S.**, Benvenuti, M.G., Oms, O., Papini, M., and Rook, L., 2011, Stable isotope analyses and faunal turnover of a Late Miocene vertebrate-bearing succession in southern Tuscany (Italy) (poster presentation by L. Rook, Joint RCMNS – RCANS Interim Colloquium, 21, Salamanca, Spain)
- Matson, S.D.** and Fox, D.L., 2009, Late Neogene terrestrial paleoclimate and paleoecology of the Iberian Peninsula: A stable isotopic record from mammals (oral presentation, 2009 Geological Society of America Annual Meeting, 18–21 October, Portland, OR)
- Matson, S.D.** and Fox, D.L., 2007, Stable isotopic record of Messinian mammals from the circum-Mediterranean region (oral presentation, 2007 Society of Vertebrate Paleontology Meeting, 17–20 October, Austin, TX)
- Matson, S.D.**, Fox, D.L., Marcot, J.D., Janis, C., 2006, Comparison of Neogene records of environmental change in the Great Plains, U.S.A., based on paleosol carbonates and paleodiets of Equidae (oral presentation, 2006 Society of Vertebrate Paleontology Meeting, 17–22 October, Ottawa, Canada)
- Matson, S. D.** and Fox, D. L., 2005, Can Fossil Turtle Bone Apatite be Used to Reconstruct Paleoclimates? (poster presentation, 15th annual Goldschmidt Conference, 20–25 May 2005, Moscow, ID)
- Matson, S. D.** and Fox, D. L., 2005, Stable isotope record from paleosols and mammals, Guadix-Baza Basin, Spain. (oral presentation, second annual Midwest Symposium of Student Paleontologic Research, 8–9 April 2005, Madison, WI)
- Matson, S. D.** and Fox, D. L., 2004, The oxygen isotopic integrity of fossil turtle bone: An example from the Paleocene-Eocene of Wyoming. (oral presentation, 2004 Geological Society of America Annual Meeting, 7–10 November, Denver, CO)
- Matson, S. D.**, Voorhies, M. R., Corner, R. G., Joeckel, R. M., Vrana, B., 2002, A new long-necked plesiosaur specimen from the Graneros Shale (Cretaceous, Cenomanian), Ponca State Park, Nebraska. (oral presentation, 112<sup>th</sup> annual meeting of the Nebraska Academy of Sciences, 26 April 2002, Lincoln, NE)
- Matson, S. D.**, Gosselin, D. C., Harvey, F. E., Goeke, J. W., 2002, Investigation of groundwater and surface water interactions in an irrigated area of western Nebraska using geochemical and stable isotopic evidence. (oral presentation, 112<sup>th</sup> annual meeting of the Nebraska Academy of Sciences, 26 April 2002, Lincoln, NE)

\*student author

## **COURSES TAUGHT**

**Clinical Assistant Professor** (2014 – present), **Lecturer** (2010–2014)

Dept. of Geosciences, Boise State University, Boise, ID (2014 – present)

GEOS 100 – Fundamentals of Geology (12 times; 1,926 students total)

GEOS 101 – Global Environmental Science (8 times; 516 students total)

GEOS 102 – Historical Geology (1 time; 38 students total)

GEOS 315 – Sedimentation and Stratigraphy (3 times; 51 students total)

GEOS 482 – Geology Summer Field Camp (1 time; 15 students total)

**Instructor** (Spring 2010) Dept. of Geology and Geophysics, University of Minnesota, Minneapolis, MN

GEO 1002 – Earth History (1 time; 35 students total)

**Adjunct Faculty** (2007–2010), Dept. of Geology, University of St. Thomas, St. Paul, MN

GEOL 111 – Introduction to Physical Geology (2 times; 62 students total)

GEOL 114 – Science of Natural Disasters (4 times; 90 students total)

GEOL 130 – Earth History (1 time; 67 students total)

GEOL 260 – Regional Geology and Field Methods (4 times; 54 students total)

**Senior Geology Instructor:** Swiss Semester Program, Zermatt, Switzerland (Fall, 2008)

Physical Geology (1 time; 37 students total)

Taught a field-based course for American secondary students in the Pennine Alps of southwest Switzerland. Served as academic advisor for four students.

**Adjunct Faculty:** Dept. of General Education, Academy College, Bloomington, MN (Spring, 2006)

GM 2013 – Environmental Science (1 time; 5 students total)

GM 3000 – Geology (1 time; 6 students total)

**Teaching Assistant:** Dept. of Geology and Geophysics, Univ. of Minnesota, Minneapolis, MN (2002 – 2007)

GEO 1001 – Earth and Its Environments Lab (1 time; 19 students total)

GEO 1002 – Earth History Lab (3 times; 120 students total)

GEO 3401 – Geochronology and Earth History Lab (1 time; 9 students total)

GEO 3911 – Introductory Field Geology Lab (1 time; 17 students total)

GEO 4602 – Sedimentology and Stratigraphy Lab (2 times; 37 students total)

GEO 4631W – Earth Systems Lab (1 time; 27 students total)

**Teaching Assistant:** School of Natural Resource Sciences, Univ. of Nebraska, Lincoln, NE (Spring, 2001)

NRES 299A – Earth System Science for Educators Lab (1 time; 25 students total)

## **HONORS AND AWARDS**

### **Academic and Service Awards**

Nominee for College of Arts and Sciences Teaching Award (2014)

Honorable Mention, Golden Apple Award, Associated Students of Boise State University (2014)

Volunteer Service Award, University of Nebraska State Museum (1999, 2002, 2004)

Chancellor's Leadership Award, University of Nebraska (1998)

Dean's List (Fall Semester), University of Nebraska (2000)

### **Fellowships**

W.H. Emmons Fellowship, University of Minnesota Dept. of Geology and Geophysics (2007)

T.F. Andrews Fellowship, University of Minnesota Dept. of Geology and Geophysics (2006)

R.C. Dennis Fellowship, University of Minnesota Dept. of Geology and Geophysics (2005)

J.W. Gruner Fellowship, University of Minnesota Dept. of Geology and Geophysics (2004)

## RESEARCH GRANTS

International Thesis Research Grant, University of Minnesota Graduate School (2007)  
Student Member Travel Grant, Society of Vertebrate Paleontology (2007)  
Graduate Student Research Grant, Geological Society of America (2004, 2005)  
Summer Research Grant, Univ. Minnesota Dept. Geology and Geophysics (2003 – 2008)  
Undergraduate Creative Activity & Research Experience Grant, Univ. Nebraska (2000, 2001)

## SYNERGISTIC AND VOLUNTEER ACTIVITIES

**Undergraduate Research Mentor** (2013-2014): Advised an undergraduate student on a primary research project through the Student Research Initiative at Boise State University. The student presented her research at the 2013 Summer BSU Undergraduate Research Conference and at the 2013 Geological Society of America Annual Meeting, and is currently drafting a manuscript for publication in a peer-reviewed journal.

**Workshop Participant** (2011-2014): Represented Boise State University at the 2011 Science Education for New Civic Engagements and Responsibilities (SENCER) Summer Institute, and at the 2014 Science Education Resource Center (SERC) “On the Cutting Edge” workshop entitled *Undergraduate Research in Earth Science Classes: Engaging Students in the First Two Years*.

**Journal Referee** (2013-2014): Formally reviewed manuscripts for the *Journal of Paleontology* (research article) and the *Geological Society of America Field Guide* series (book chapter).

**Convener/Moderator** (2011): Co-convener and moderated the *Advances in Terrestrial Paleoclimatology and Paleocology* topical session and moderated the *Paleoclimatology/Paleoceanography* general session at the 2011 Geological Society of America Annual Meeting.

**Guest Speaker** (2003-2013): Presented lectures and displays to illustrate concepts of geology, paleontology, and geochemistry to K-12 students and senior citizens at several metro-area institutions in Minneapolis, MN, and Boise, ID. Presented the keynote speech at the 2008 National Honor Society induction ceremony at Newman Grove High School, Nebraska.

**STEM Education Research Scholar** (2011): Participated in a research focus group at Boise State University exploring the ways in which undergraduate participation in primary research experiences affects perceptions and understanding of the nature of science.

**SENCER Institute Participant** (2011): Attended the 2011 Science Education for New Civic Engagements and Responsibilities (SENCER) Summer Institute at Butler University to explore using civic engagement to enhance student learning in science and math at Boise State University.

**m-Learning Scholar** (2011): Participated in a research focus group at Boise State University exploring the potential of mobile technology for enhancing teaching and learning.

**Field Trip Leader** (2003-2013): Led fossil hunting trips for Girl Scouts and underprivileged K-12 students as part of youth outreach programs through the Bell Museum, Redeemer Lutheran Church, and the Little Earth of United Tribes Community Center. Led overnight and one-day geological field trips to MN, IA, SD, NE, and WI as part of the NSF-sponsored REU program.

**Museum Volunteer** (1999-2004) Assisted with field excavations and public outreach activities for the Division of Vertebrate Paleontology, University of Nebraska State Museum.

## PROFESSIONAL MEMBERSHIPS

Geological Society of America  
Society of Vertebrate Paleontology  
National Association of Geoscience Teachers  
American Geophysical Union

## **REFERENCES:**

**Dr. David Wilkins**, Associate Professor and Department Chair

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**Dr. Christopher Hill**, Associate Professor and Associate Dean of the Graduate College

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**Dr. David Fox**, Associate Professor

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**Dr. Karen Viskupic**, Research Professor

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**Dr. Thomas Hickson**, Professor

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