

# CAROL F. SAWYER

Department of Earth Sciences, University of South Alabama  
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## EDUCATION

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- 2007 Ph.D., Geography (Environmental Geography Concentration), Texas State University-San Marcos  
Dissertation: Frost heaving and surface clast movement in alpine tundra in eastern Glacier National Park, Montana Advisor: Dr. David R. Butler
- 2003 M.S., Geography, Southwest Texas State University (now Texas State University-San Marcos)  
Thesis: Aerial-photographic inventory and analysis of landslides in northeastern Yellowstone National Park, Wyoming Advisor: Dr. David R. Butler
- 2001 B.S., Earth Science with honors, Montana State University-Bozeman  
Major: Geography Minors: Physical Geography and History

## EMPLOYMENT

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- 2008 – present Assistant Professor, Geography, Department of Earth Sciences, University of South Alabama
- 2007 Instructor, Geography, Department of Earth Sciences, University of South Alabama
- 2003 – 2007 Ph.D. Instructor, Department of Geography, Texas State University-San Marcos
- 2002 – 2003 Graduate research assistant, Department of Geography, Southwest Texas State University

## RESEARCH INTERESTS

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- Geomorphology
- Environmental Change
- Biogeomorphology
- Alpine environments
- Natural hazards

## RESEARCH EXPERIENCE

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- Fieldwork: Glacier National Park, Montana, (repeat photography and establishment of long-term research sites for dissertation research)  
Yellowstone National Park, Wyoming (repeat photography and identification of landslide debris)
- Prepared and analyzed tree discs for snow avalanche chronologies construction
- Archival research to reconstruct timelines of events
- Using aerial photography to identify geomorphic hazards

## **COURSES PREPARED AND TAUGHT**

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Introduction to Physical Geography (undergraduate level)  
 Landscape Processes (undergraduate level)  
 Atmospheric Processes (undergraduate level)  
 Environmental Earth Sciences (undergraduate level)  
 Geography Orientation (undergraduate level)  
 Introduction to Geographic Information Sciences (undergraduate level)  
 Field Methods (undergraduate and graduate level stacked course)

## **PUBLICATIONS**

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### **REFEREED PUBLICATIONS**

- Butler, David R. and Carol F. Sawyer. 2008. Dendrogeomorphology and High Magnitude Snow Avalanches: A Review and Case Study. *Natural Hazards and Earth System Sciences*, in press.
- Butler, David R., George P. Malanson, Lynn M. Resler, Stephen J. Walsh, Forrest D. Wilkerson, Ginger L. Schmid, and Carol F. Sawyer. In Press. Geomorphic Patterns and Processes at Alpine Treeline. In: *The Changing Treeline of Glacier National Park, Montana, U.S.A.*, Elsevier, in press.
- Sawyer, Carol F. and David R. Butler. 2006. The Use of Historical Picture Postcards as Photographic Sources for Examining Environmental Change: Promises and Problems. *Geocarto International*, 21 (3): 73-80.
- Sawyer, Carol F. and David R. Butler. 2006. A Chronology of High-Magnitude Snow Avalanches Reconstructed from Archived Newspapers. *Disaster Prevention and Management: An International Journal*, 15 (2): 313-24.
- Sawyer, Carol F. and David R. Butler. 2004. Landslide Aspect: A Methodological Approach to Circular Data for Hazard Analysis. *Papers of the Applied Geography Conferences 27*, October 2004, St. Louis, MO, 67-74.
- Viertel, David C., Carol F. Sawyer, J. Ronald Eyton, and David R. Butler. 2003. The Application of Artificially Induced Stereo Visualization for Landslide Identification in Yellowstone National Park. *Papers and Proceedings of the Applied Geography Conferences 26*, November 2003, Colorado Springs, CO, 307-12.

### **BOOK REVIEWS**

- Sawyer, Carol F., 2008. Book review of "Soils: Genesis and Geomorphology", by R. Schaetzl and S. Anderson. *Geomorphology*, in press.
- Sawyer, Carol F., 2006. Book review of "Mountain Geomorphology", by P. Owens and O. Slaymaker, editors. *Geomorphology*, 83 (1-2): 195-96.

**ABSTRACTS**

- Sawyer, Carol F. and David R. Butler. 2008. Effects of Frost Heaving on the Distribution of Surficial clasts on Solifluction Treads Glacier National Park, MT. 104th Annual Meeting of the Association of American Geographers, Boston, MA.
- Sawyer, Carol F. and David R. Butler. 2007. Heave rates and distribution in periglacial pans, eastern Glacier National Park, Montana. 38<sup>th</sup> International Binghamton Geomorphology Symposium, Durham, NC.
- Sawyer, Carol F. and David R. Butler. 2007. Patterns of seasonal frost heaving and surface clast movement in turf-banked terraces, eastern Glacier National Park, Montana. 103<sup>rd</sup> Annual Meeting of the Association of American Geographers, San Francisco, CA.
- Sawyer, Carol F. and David R. Butler. 2006. Soil Disturbances and Infiltration Rates in Glacier National Park, Montana. 37<sup>th</sup> International Binghamton Geomorphology Symposium, Columbia, SC.
- Sawyer, Carol F. 2006. Observations of Seasonal Movement of Surface Clasts in Turf-Banked Terraces, Eastern Glacier National Park, Montana. 102<sup>nd</sup> Annual Meeting of the Association of American Geographers, Chicago, Illinois, 474.
- Sawyer, Carol F. and David R. Butler. 2005. Comparison of a Tree-Ring Chronology of Snow Avalanches Occurrence with a Historically Based Avalanche Record, Glacier National Park, Montana. Program, Southwestern Division of the Association of American Geographers, Fayetteville, AR.
- Butler, David R., George P. Malanson, Stephen J. Walsh, Lynn M. Resler, Daniel B. Fagre, and Carol F. Sawyer. 2005. Multi-scale Geomorphic Impacts and Controls on Alpine Treeline. 36<sup>th</sup> Annual Binghamton Geomorphology Symposium, *Abstracts Proceedings, Geomorphology and Ecosystems*, Buffalo, NY, p. 49.
- Sawyer, Carol F. and David R. Butler. 2005. Snow-avalanches in Southern Glacier National Park, Montana: Revisiting a Historical Account using Newspaper Reports. *Abstracts, Association of American Geographers Annual Meeting*, Denver, CO.
- Sawyer, Carol F. 2004. Landscape Change in Mountain Environments: Using Antique Picture Postcards to Observe 100 years of Landscape Change. *Abstracts, Association of American Geographers Annual Meeting*, Philadelphia, PA.
- Sawyer, Carol F. and David R. Butler. 2003. Aerial-photographic Inventory and Analysis of Landslides in Northeastern Yellowstone National Park, Wyoming. *Abstracts, Papers and Proceedings of the Applied Geography Conferences* 26, November 2003, Colorado Springs, CO, 558.

Sawyer, Carol F. 2003. Landslide Mapping using Aerial Photographs in Yellowstone National Park, Wyoming. *Abstract, Association of American Geographers Annual Meeting*, New Orleans, LA.

Crowe, Joanna C. and Carol F. Sawyer. 2002. Canyon Lake Dam Flood of July, 2002. 33<sup>rd</sup> International Binghamton Geomorphology Symposium, Bloomsburg, IN.

### **NON-REFEREED PUBLICATIONS**

Bailey, Rachel, Carol F. Sawyer, and Rebecca P. Brown. 2005. 2410 Lab Manual: Labs and Materials for Introduction to Physical Geography, Department of Geography, Texas State University.

### **CONFERENCE PRESENTATIONS**

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Effects of Frost Heaving on the Distribution of Surficial clasts on Solifluction Treads Glacier National Park, MT. 104th Annual Meeting of the Association of American Geographers, Boston, MA, 2008.

Heave rates and distribution in periglacial pans, eastern Glacier National Park, Montana. 38<sup>th</sup> International Binghamton Geomorphology Symposium, Durham, NC, 2007.

Patterns of seasonal frost heaving and surface clast movement in turf-banked terraces, eastern Glacier National Park, Montana. 103<sup>rd</sup> Annual Meeting of the Association of American Geographers, San Francisco, CA, 2007.

Soil Disturbances and Infiltration Rates in Glacier National Park, Montana. 37<sup>th</sup> International Binghamton Geomorphology Symposium, Columbia, SC, 2006. (poster)

Observations of Seasonal Movement of Surface Clasts in Turf-Banked Terraces, Eastern Glacier National Park, Montana. 102<sup>nd</sup> Annual Meeting of the Association of American Geographers, Chicago, IL, 2006. (illustrated poster).

Comparison of a Tree-Ring Chronology of Snow Avalanches Occurrence with a Historically based Avalanche Record, Glacier National Park, Montana. Southwestern Division of the Association of American Geographers, Fayetteville, AR, 2005.

Snow-avalanches in Southern Glacier National Park, Montana: Revisiting a Historical Account using Newspaper Reports. 101<sup>st</sup> Annual Meeting of the Association of American Geographers, Denver, CO, 2005.

Landslide Aspect: A Methodological Approach to Circular Data for Hazard Analysis. Applied Geography Conference, St. Louis, MO, 2004.

Landscape Change in Mountain Environments: Using Antique Picture Postcards to Observe 100 years of Landscape Change. 100<sup>th</sup> Annual Meeting of the Association of American Geographers, Philadelphia, PA, 2004.

Aerial-photographic Inventory and Analysis of Landslides in Northeastern Yellowstone National Park, Wyoming. Applied Geography Conference, Colorado Springs, CO, 2003.

Landslide Mapping using Aerial Photographs in Yellowstone National Park, Wyoming. 99<sup>th</sup> Annual Meeting of the Association of American Geographers, New Orleans, LA, 2003.

Preliminary Aerial-Photo Inventory of Landslides in the Northeast Quadrant of Yellowstone National Park, Wyoming. Southwestern Division of the Association of American Geographers, Laredo, TX, 2002. (poster)

## **GRANTS**

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- 2007 Charles Redd Summer Grant for Upper Division and Graduate Students, \$800
- 2006 Geological Society of America Graduate Student Research Grant, \$1,800
- 2006 Binghamton Geomorphology Symposia Travel Grant, \$250
- 2006 Preparing for an Academic Career in the Geosciences Travel Grant, \$100
- 2004 College of Liberal Arts Travel Grant, Texas State University-San Marcos, \$250

## **HONORS AND AWARDS**

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- 2007 Outstanding College of Liberal Arts Graduate Student
- 2007 Prentice-Hall Graduate Student Publication Award
- 2007 Outstanding Graduate Student in the Department of Geography
- Preparing for an Academic Career in the Geosciences, a National Science Foundation-sponsored Workshop, Stanford, CA, 2006.
- Graduate Award for Outstanding Service, Department of Geography, Texas State University, 2006.
- Rand McNally Graduate Award, Southwest Texas State University, 2003.
- Golden Key International Honor Society, 2000

## **SERVICE**

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- 2008-2013 Member, Binghamton Geomorphology Symposium Steering Committee
- 2008-2009 Undergraduate Scholarship Committee, College of Arts and Sciences, University of South Alabama
- 2008-2009 Curriculum Committee, Department of Earth Sciences, University of South Alabama
- 2007 - present Chair, Library Committee, Department of Earth Sciences, University of South Alabama
- 2007 - present Geography Assessment Committee, Department of Earth Sciences, University of South Alabama
- 2007 - present Lab Space Users Committee, Department of Earth Sciences, University of South Alabama
- 2008 Human Geography Search Committee, Department of Earth Sciences, University of South Alabama

- 2005 - 2007 Ph.D. Student Representative to the Faculty, Department of Geography, Texas State University
- 2005 - 2007 Ph.D. Student Representative to the Graduate Studies Committee, Department of Geography, Texas State University
- 2006 - 2007 Muriel Muir Excellence in Mentoring Award Selection Committee, Texas State University
- 2006 - 2007 Organized the Graduate Forum's Von Humboldt Brown Bag Speaker Series, Department of Geography, Texas State University
- 2005 - 2006 Presidential Award in Excellence in Service Committee, Texas State University
- 2005 - 2006 University Council, Texas State University
- 2002 - 2003 Master's student representative to the Mentoring Committee, Department of Geography, Southwest Texas State University
- 2001 - 2003 Alumni Reunion and Student Celebration Committee, Department of Geography, Southwest Texas State University

- Reviewer for Physical Geography and Geography Compass

## **SCHOLARSHIPS**

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- 2006-2007 Sally Ann Karnau Geography Research Dissertation Scholarship, Department of Geography, Texas State University
- 2004-2007 Liberal Arts College Graduate Scholarship, Texas State University
- 2005-2006 Ray and Marian Butler Environmental Geography Scholarship, Department of Geography, Texas State University
- 2003-2004 Natural Hazards Scholarship, Department of Geography, Southwest Texas State University

## **ORGANIZATIONS**

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Association of American Geographers

- Mountain Geography Specialty Group
- Biogeography Specialty Group
- Cryosphere Specialty Group
- Geomorphology Specialty Group
- Hazards Specialty Group

Southeastern Division of the Association of American Geographers

Geological Society of America

- Geosciences Education Division
- Quaternary Geology and Geomorphology Division