

Stewart A. Scales

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Department of Geography/College of Natural Resources and Environment

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EDUCATION

M.S. Geography, Virginia Tech, December 2011

Thesis: *Spatial patterns of soil charcoal deposition after a prescribed fire on Middle Mountain, VA*

B.A. Geography (Honors), Geosciences Minor, Virginia Tech, December 2009

AREAS OF SPECIALIZATION

Mapping & Cartography, Appalachian geography, geography of Virginia, physical geography, wildland fire behavior, biogeography, geology, environmental studies

ACADEMIC APPOINTMENTS & TEACHING

Instructor: August 2014 - Present

Department of Geography, CNRE, Virginia Tech

- Courses taught: Introduction to Physical Geography (GEOG 1104, 3 credits, 150 students)
Maps and Mapping (GEOG 2314, 3 credits, 92 students)
Geography of Tea (GEOG 2984, 3 credits, 20 students)
Geography of Appalachia (GEOG 3224, 3 credits, 40 students)
Geography of Virginia (GEOG 3214, 3 credits, 27 students)
Environmental Problems, Population and Development (GEOG 3104, 3 credits, 41 students)
Cartography (GEOG 3314, 3 credits and lab, 40 students) ***Pathways course**

Adjunct Instructor: January 2012 – May 2014

Similar duties as listed above with Virginia Tech Geography

Adjunct Instructor: August 2011 – May 2013

Department of Geospatial Science, College of Science and Technology, Radford University, VA

- Courses taught: Introduction to Environmental Studies (3 credits, 102 students)
Appalachian Geography (3 credits, 50 students)

Graduate Teaching Associate: January 2011 – December 2011

Department of Geography, CNRE, Virginia Tech, VA

- Sole instructor for Introduction to Physical Geography (3 credits, 77 students). Prepared and presented all lectures, administered in-class exercises, quizzes, exams, and updated homework assignments.

Graduate Teaching Assistant: August 2010 – January 2011

Department of Geography, CNRE, Virginia Tech, VA

- Assisted primary instructor with class and lecture preparation, testing, updating materials, preparing exercises, grading, and guest lecturing

Undergraduate Teaching Assistant: August 2008 – May 2009

Department of Geography, CNRE, Virginia Tech, VA

- Conducted pedagogical research/literature review on classroom environments and incorporation of media/videos into lectures
- Developed an 11-quiz suite for use in Introduction to Physical Geography based on the BBC's *Planet Earth* series to supplement in-class lectures and materials

PUBLICATIONS, INTERVIEWS, AND WORKS IN THE MEDIA

- 2018** Scales S; Satterwhite E; August A. (2018). Mapping Appalachia's Boundaries: Historiographic Overview and Digital Collection. *Journal of Appalachian Studies*, 24(1).

Map Publication: Eastern Hemisphere. In progress, to be published as a reference source for a monograph.

Map Publication: [Mapping Appalachia's Boundaries](#). A 28-map suite hosted by ArcGIS Online, showcasing previous publications of Appalachia's physical and political boundaries. Supplement to the Journal of Appalachian Studies Publication

Map Publication: *Cumberland Gap: First Gateway West*. Scales, A. 2018. Overmountain Press, Johnson City, TN. Produced three maps to show Cumberland Gap, physical geology, and the surrounding region at different scales.

- 2017** Map Publication: *Study Area Map*. Produced for the Ecological and Human Health in Rural Communities Project, Virginia Tech.

CNRE News Magazine - [Geography Teacher Training Academy Visits Mining Towns](#)

WUVT Blacksburg– Appalachian Studies Conference interview with Dr. Anita Puckett, Appalachian Studies Program.

WVTF Roanoke – a piece about the Appalachian Studies Conference and Southwest Virginia. [Who are the Appalachians?](#)

Virginia Tech News – VT Hosts the [Appalachian Studies Conference](#)

Map Publication: [Hiking and Outdoor Recreation in Western Virginia](#). Produced in Google Maps. 5,075 views (4/21/18)

2016 [Trajectory Magazine: Andrew Ryan](#) A former student wins \$10,000 scholarship through the US Geospatial Intelligence Foundation

Map Publication: *Southwest Virginia*. Reference maps produced for use by the VA Geographic Alliance. Featured topography and significant points in the region.

Map Publication: *Geology and Topography of Riner, VA*. Geologic and hydrologic map of Riner VA, produced for a private landowner.

Map Publication: *Floyd, VA is the Center of the World*. Azimuthal equidistant map produced for the Floyd Country Store to be used in determining linear travel distances of visitors.

2015 NPR - [The Crooked Road Links Rural Music Communities](#)

Richmond Times Dispatch: [A Crooked Road Leads to Music](#)

Virginia Tech: [Save Our Towns](#) website for connecting community leaders in Southwest Virginia

2014 Map Publication: Virginia's Counties and Independent Cities. Labeled political map produced for APS 3464 – Appalachian Communities Course, Virginia Tech.

CONFERENCE PRESENTATIONS

• August, A., **Scales, S.**, Satterwhite, E. 2018. *Mapping Appalachia's Boundaries: Historiographic Overview and Digital Collection*. OGIS Symposium, Virginia Tech.

Scales, S., Ellington, M., Howk, J., Mills, M., Sloan, J. 2017. *Geography of Appalachia: Strategies for Teaching, Featuring Student Projects*. Appalachian Studies Association Conference. Blacksburg, VA.

• **Scales, S.** 2017. *Mapping Appalachia: A Beginner's Hands-On Introduction to Creating County Maps Using Appalachian Regional Commission Data and ArcGIS Software*. Workshop, Appalachian Studies Association Conference, Blacksburg, VA.

- **Scales, S.** 2017. Bald Knob and Mountain Lake. Hike showcasing the region's physical geography, geology and biogeography. Appalachian Studies Association Conference, Blacksburg, VA.
- **Scales, S.,** and Kennedy, L. 2012. *Spatial Patterns of Soil Charcoal Deposition after a Prescribed Fire on Middle Mountain, VA.* Fire Learning Network Annual Meeting, Warm Springs, VA.
- **Scales, S.,** and Kennedy, L. 2011. *Spatial Patterns of Soil Charcoal Deposition after a Prescribed Fire on Middle Mountain, VA.* AAG Conference Research Poster, Seattle, WA
- Sams, B., Kennedy, L., **Scales, S.,** LeBlanc, A., Bhuta, A.R., Franklin, L., Agriesti, K., Selnick, D., Goff, D. 2011. *Potential for Long-Term Fire History from Charcoal Preserved in Small Wetlands on Warm Springs Mountain, Virginia.* AAG Conference Research Poster, Seattle, WA
- Kennedy, L., Bhuta, A.R., Gibson, G., Powers, J., LeBlanc, A., **Scales, S.** 2010. *Soil Charcoal as Evidence of Past Fires in Longleaf Pine Forest on Virginia's Coastal Plain.* AAG Conference Research Poster
- Gibson, G., Kennedy, L., Powers, J., LeBlanc, A., Durden, A., Carey, J., **Scales, S.** 2010. *Soil Charcoal Patterns in a Rare Montane Pine Barren of the Southern Appalachians.* AAG Conference Research Poster

RESEARCH

Carolina Hemlock Research Group: January 2012 – January 2014

Department of Geography, Virginia Tech, VA

- Co-leader of graduate and undergraduate research team studying stand dynamics and habitat of *Tsuga caroliniana*
- Selected and supervised undergraduate researchers in field and lab techniques
- Assisted in coordination of research trips, planning, and field research

Graduate Teaching/Research Assistant: August 2010 – December 2011

Department of Geography, Virginia Tech, VA

- Assistant manager of Paleoenvironments and Biogeography Labs
- Selected and interviewed new undergraduate students to assist with research projects and instructed them on lab techniques, safety protocols, and sampling procedures
- Trained new laboratory participants in correct lab procedures and use of microscopes, loss-on-ignition furnace, and computer software

Undergraduate Research Assistant: August 2008 – May 2009

Department of Geography, Virginia Tech, VA

- Conducted charcoal collection analysis with Dr. Lisa Kennedy and graduate students
- Completed loss-on-ignition (LOI) analysis of sediment cores from the Dominican Republic
- Both assignments were completed for undergraduate research credit in Geography

PROFESSIONAL DEVELOPMENT AND WORKSHOPS

2016 Title IX and Retaliation training, Virginia Tech

2011 AAG Faculty Development Alliance Early Career Workshop, Boulder, CO

- A one week workshop for early career faculty focusing on career building skills, time management, grant writing, course preparation, and teaching skills

2010 Human Subjects Protection Training

PROFESSIONAL SERVICE & OUTREACH

2017 Virginia Geographic Alliance: AP Human Geography Field Trip. *Rural Landscapes and Folk Cultures in Southwest Virginia*. Guide for a weekend trip to coal communities in Wise County, VA.

2016 - Present Instructor: "Geology and Biogeography of Virginia", Virginia Master Naturalist Program, New River Valley Chapter

Gamma Theta Upsilon, Eta Zeta Chapter – Geographic Honors Society Faculty Advisor

Undergraduate Committee Member, Geography Department, Virginia Tech.

2012 – Present Instructor: "Geology and Biogeography of Virginia", Virginia Master Naturalist Program, Roanoke Chapter

2010 Officer, Virginia Tech Society for Conservation GIS (SCGIS)

2007 - 2009 Student Ambassador, College of Natural Resources and Environment

- Student representative for department of geography, responsible for public contact with prospective undergraduate students at open houses, college graduates at alumni events, and recruiting new students.

INVITED PRESENTATIONS

- 2016** *Mapping Appalachia – a tutorial for displaying data in Google Maps.* Appalachian Studies Department, Virginia Tech
- Bluegrass and the Crooked Road.* Talk given at the Solitude Building, Virginia Tech. Mountains of Music Homecoming event.
- 2015** *How to Lie with Maps – Map Projections.* Guest lecture for the Language and Culture Institute, Virginia Tech
- 2014** *“The Banjo: bluegrass and old time playing techniques”* – Guest lecture, Appalachian Community Research Course, Virginia Tech
- “Bluegrass: my personal influences”* – Guest Lecture, Introduction to Appalachian Studies Course
- 2013** *“The Roanoke Valley and Appalachian Region.”* Keynote Address at Opening Ceremony. SEDAAG Conference, Roanoke Virginia
- 2012** *Cultural Development in Appalachia* – Mountain Geography course, Virginia Tech
- 2011** *The AAG Faculty Development Alliance* – a colloquium presentation for faculty and graduate students, Virginia Tech Geography Department
- Geography and Geology of the Appalachian Region* – Geography of Virginia course, Radford University

AWARDS AND GRANTS

- 2018** Outstanding Instructor. Department of Geography. CNRE Annual Awards Ceremony.
- 2011** Outstanding Teaching Assistant Award, Virginia Tech Department of Geography
- Virginia Tech Geography Dept. Travel Grant – AAG Faculty Development Workshop
Award: \$500.00
- Virginia Tech Geography Dept. Travel Grant – AAG Conference, Seattle, WA
Award: \$500.00
- 2010** Virginia Tech Office of GIS and Remote Sensing Research (OGIS) Poster Competition, 2nd place
Award: \$175.00

Virginia Tech Graduate Research Development Program (GRDP) Travel Fund
Award: \$455.00

2009 Outstanding Undergraduate Award, Virginia Tech Department of Geography

Stuermann Memorial Scholarship: Virginia Tech College of Natural Resources and the Environment
Award: \$5000.00

2008 Stuermann Memorial Scholarship: Virginia Tech College of Natural Resources and the Environment
Award: \$5000.00

Ambassador Scholarship: Virginia Tech College of Natural Resources and Environment
Award: \$1,000.00

2007 Stuermann Memorial Scholarship
Award: \$5000.00

2005 Presidential Student Service Award
• Awarded by President G.W. Bush for volunteer service in the Virginia State Parks

Jefferson Book Award, University of Virginia

Lonesome Pine Office on Youth Service Award
• Served for 3 years as the Wise County representative for the Lonesome Pine Office on Youth, a local nonprofit organization that prepares youth to be active and productive citizens in the community.

TECHNICAL SKILLS

Experience with: ArcGIS 10.x, ArcGIS Pro; Cartographic Design; ERDAS Imagine; JMP; Trimble GPS products; Pathfinder Office Software; Microsoft Office Suite; field equipment (advanced map and compass navigation, increment borers, forest measuring devices & tapes); laboratory equipment (microscopes, furnaces, fume hoods and hazardous chemical handling, sampling equipment); forest plots and tree surveys, CWD and soil surveys; establishing transects.

NON-ACADEMIC EMPLOYMENT

Park Interpreter, Virginia State Parks

Claytor Lake State Park, Dublin, VA - June 2012 to September 2013 (seasonal)

Natural Tunnel State Park, Duffield, VA - June 2004 to December 2007 (seasonal)

- Responsible for leading guided environmental education programs (cave and canoe trips, night hikes, geology hikes, astronomy programs) for groups exceeding 100 visitors
- Also responsible for daily operation and maintenance of chairlift system at Natural Tunnel

Law Enforcement and Emergency Services Ranger: May 2008-August 2009 (seasonal)

U.S. National Park Service, Mammoth Cave National Park, Mammoth Cave, KY

- Served as a non-commissioned seasonal ranger tasked with public contact, patrol, and emergency response
- Certified in basic first aid, CPR, ATV operator, and Federal wildland firefighter (FFT2)
- Received outstanding service award for emergency response assistance

Aircraft Line Technician: March 2005-August 2005

Lonesome Pine Airport, Wise, VA

- Primarily responsible for refueling commercial and private aircraft
- Knowledge of FAA air traffic communication procedures

UNDERGRADUATE STUDENT MENTORSHIP

The Virginia Tech Geography Department requires all undergraduate students to complete 3 credits, (120 hours) in undergraduate research, study abroad, or independent studies projects. The following students directly mentored by me in completing their 120 hours of work in the laboratory, field, or classroom:

Undergraduate Research or Honors Projects:

Taren Woelk	Undergraduate Research Project: Understanding the Usage of New River Cave, Giles, VA. IRB# 18-753 (In Progress)
Abigail August	Undergraduate Research Project: <i>Mapping Appalachia's Boundaries: An Historiographic Overview</i> . 2018.
Emmitt Smith	Undergraduate Honors Project: <i>The Geology of eastern West Virginia: Dolly Sods and Seneca Rocks</i> . 2016.
Janet Mineva	Undergraduate Honors Project. <i>An Autobiographical Map in the Style of Erwin Raisz</i> . 2015.
Garrett Smedley	Undergraduate Research Project. <i>Laboratory Techniques for Soil Charcoal Analysis</i> . Graduated Spring 2012

Independent Study Projects:

Fallon Fulgenzi	In progress
Peter Erlenbach	Graduated Spring 2018
Lauren Berryman	Graduated Fall 2017
Janet Mineva	Anticipated graduation: Spring 2019
Kelsey Green	Graduated Spring 2017
Nancy Barnhardt	Graduated Spring 2017
Erika Cropp	Graduated Spring 2016
Nick Gilmore	Graduated Spring 2016
Caitlin Pennington	Graduated Spring 2016
Mayss Saadon	Graduated Fall 2016
Allison Wingfield	Graduated Spring 2015
Clancy Jordan	Graduated Fall 2014
Kevin Dare	Graduated Spring 2014
Kate Jones	Graduated Spring 2014
Adam Waldron	Graduated Fall 2013
Joshua Rhamy	Graduated Spring 2012
Chardy Staton	Graduated Fall 2011

PROFESSIONAL MEMBERSHIPS

American Association of Geographers (AAG)
Appalachian Studies Association (ASA)