Stephen B. Taylor
Earth and Physical Sciences Department
Western Oregon University
Monmouth, OR 97361

EDUCATION

1999 **Ph.D. - Geology**, West Virginia University, Morgantown, WV. Emphasis Area: Geomorphology and Surficial Processes. GPA: 4.0/4.0. Dissertation Topic: Geomorphic Controls on Sediment-Transport Efficiency in the Central Appalachians - A Comparative Analysis of Three Watersheds Underlain by the Acadian Clastic Wedge.

1988 **Post-Master's Graduate Work (PhD)**, Geology, University of New Mexico, Albuquerque, NM. Graduate course work in Geomorphology-Surficial Processes, Soil Genesis-Chemistry, Process Sedimentology, Volcaniclastics, and Paleomagnetism. GPA: 3.8/4.0. Preliminary Dissertation Topic: Tectonics and Sedimentation of East Pisco Basin, Central Peru. Personal leave from program in 1989 for family reasons.

1985 **M.S. - Geology**, Washington State University, Pullman, WA. Emphasis: Clastic Depositional Systems, Fluvial Sedimentology, Sedimentary Basin Analysis. GPA: 3.96/4.0. M.S. Thesis Topic: Stratigraphy, Sedimentology, and Paleogeography of the Swauk Formation in the Liberty Area, Central Cascades, Washington.

1982 **B.S. - Geology**, Slippery Rock University, Slippery Rock, PA. Cumulative GPA: 3.8/4.0, Major GPA: 3.96/4.0. Senior Thesis Topic: Subsurface Basin Analysis of Silurian Strata, Northwestern Pennsylvania.

EMPLOYMENT HISTORY

Present **Associate Professor of Geology**, Earth and Physical Science Department, Western Oregon University, Monmouth, OR. Serving as faculty member in the Earth and Physical Science curriculum. Primary teaching and research interests include environmental geology, hydrogeology, surficial processes, geomorphic hazards, and geographic information systems.

1999-2004 **Assistant Professor of Geology**, Earth and Physical Science Department, Western Oregon University, Monmouth, OR (refer to job description above).

2000-2003 **Project Coordinator**, PT3 Grant Initiative (Preparing Tomorrow's Teachers to Use Technology), College of Liberal Arts and Sciences, Western Oregon University, Monmouth, OR. Part-time grant project coordinator (0.25 FTE) for institution-wide initiative to infuse technology across the College of Liberal Arts and Sciences and College of Education curricula.

2001 **Visiting Professor of Geography**, Dept. of Geography, University of Oregon, Eugene, OR. Duties included teaching graduate courses in surficial processes, geomorphology, and alluvial fan depositional systems.

1999 **Project Geologist**, U.S. Filter - Chester Engineers, Inc., Pittsburgh, PA. Consulting geologist involved with industrial waste-water treatment studies, soil and water contamination investigations, environmental restoration projects, and regulatory compliance issues.

1995-1999 **Research Assistant**, Department of Geology and Geography, West Virginia University, Morgantown, WV. Funded PhD student working on surficial process studies in the Appalachians. Duties included field mapping of surficial and bedrock geology, data analysis, GIS development, report writing, and grant writing.

1993-1997 **Adjunct Instructor**, Earth Sciences Department, California University of Pennsylvania, California, PA. Served as department instructor in the graduate and undergraduate Earth Science program (geology and geography).

1990-1995 **Adjunct Instructor**, Division of Science and Technology, Westmoreland County Community College, Youngwood, PA. Served as part-time geology and geography instructor in the Division of Sciences.

1990-1994 **Senior Hydrogeologist**, Anderson Geological Services, P.O. Box 1059, Washington, PA. Geologist involved with environmental and resource evaluation studies. Work activities included hydrogeologic investigations, aquifer assessments, soil and water contamination studies, energy-resource evaluations, technical report preparation, CAD layout, cartography, and field oversight.

1990 **Adjunct Geology Instructor**, School of Arts and Sciences, Waynesburg College, Waynesburg, PA. Served as part-time geology instructor through an extension program with the Pennsylvania Department of Corrections.

1989-1990 **Hydrogeologist**, Geraghty and Miller, Inc., Environmental Consultants, Washington Trust Building, Washington, PA. Geologist involved with RCRA/CERCLA hydrogeologic investigations for private industry. Duties included site reconnaissance, supervision of soil borings, monitoring well installation, water sampling, data analysis, and report preparation. Also included experience with air pollution monitoring and environmental site assessments.

1988-1989 **Research Assistant**, Dept. of Geology, University of New Mexico, Albuquerque, NM. Duties included research in sedimentary basin analysis, field geology, library research, computer-assisted data management and information transfer, report writing, cartography, and technical drafting.

1986-1987 **Project Scientist**, Dept. of Agronomy and Soils, Washington State University, Pullman, WA. Duties included design and implementation of foliar fertilizer experiments, sample collection and preparation, chemical analysis of soil and plant samples, computer- assisted data management, report writing, statistical analysis and management of lower-level service workers.

1985 **Geophysical Survey Technician**, Practical Geophysics, Inc., 1634 Winder Lane, Salt Lake City, UT. Geologist involved with geophysical mineral exploration. Duties included preparation and operation of resistivity, induced polarization, self-potential, magnetic, very-low-frequency electromagnetic, and gravity surveys.

1983-1984 **Teaching/Research Assistant**, Dept. of Geology, Washington State University, Pullman, WA. Duties included instruction of Physical Geology, field geology, isotopic dating analysis, cartography, and technical drafting.

PROFESSIONAL CERTIFICATION

2002-Present **Oregon Registered Professional Geologist**, G1968, State Board of Geologist Examiners, Salem, OR.

1994-1999 **Registered Professional Geologist (PG-001002-G)**, Commonwealth of Pennsylvania Department of State, Bureau of Professional and Occupational Affairs, Harrisburg, PA (current license status: inactive).

PROFESSIONAL TRAINING

1993 National Institute of Construction Engineering Technicians (NICET) Short Course on the Installation of Geosynthetic Liner Systems: Environmental Applications and Quality Assurance/Quality Control.

1993 8 Hr OSHA Update, Health and Safety Training for Hazardous Waste Workers

1989 40 Hr OSHA Health and Safety Training for Hazardous Waste Workers

ACADEMIC HONORS

1998 Selected as outstanding PhD student in Geology at West Virginia University with departmental nomination to Phi Kappa Phi honor society.
1997 Honorable Mention, J. Hoover Mackin Research Grant, Geological Society of America
1995-1996 Meritorious Graduate Scholarship, Dept. of Geology and Geography, West Virginia University, Morgantown, WV.
1982 Graduated Summa Cum Laude, Geology, from Slippery Rock University.
1982 Charter member of Slippery Rock Chapter of Sigma Gamma Epsilon.
1981 Recipient of National Association of Geology Teachers Scholarship for Summer Field Studies.
1981 Recipient of Outstanding Junior Award in Geology, Slippery Rock University.
1980 Recipient of Outstanding Sophomore Award in Geology, Slippery Rock University.
1978-1982 Dean's List Honor Student eight of eight semesters at Slippery Rock University.

GRANTS AND FELLOWSHIPS

2004	Center for Water and Environmental Sustainability / U.S. Geological Survey
2004	Western Oregon University Foundation Grant
2004	WOU Center for Teaching and Learning Undergraduate Research Grant
2004	Western Oregon University Faculty Professional Development Grant
2003	Oregon Community Foundation Grant
2002	Western Oregon University, Faculty Professional Development Grant
2002	Western Oregon University, PT3 (U.S. Dept. of Education) Faculty Grant
2002	Murdock Trust Partners in Science Extension Grant
2001	Western Oregon University, Faculty Professional Development Grant
2001	Western Oregon University, PT3 (U.S. Dept. of Education) Faculty Grant
2000-2001	Murdock Trust Partners in Science Research Grant
2000-2001	OCEPT Faculty Fellowship
2000	ESRI University Software Donation Award.
1999	Western Oregon University, Faculty Professional Development Grant
1997-1999	NASA Earth System Science Fellowship (Training Grant ESS/97-0080)
1997	U.S. Geological Survey - EDMAP Program (Contract 1434-HQ-97-AG-01782)
1996	The Vehse Award for Travel and Research, West Virginia University
1996	Sigma Xi Society for Scientific Research - Research Grants
1996	Geological Society of America - Research Grants
1996	Office of Academic Affairs and Research, West Virginia University
1996	U.S. Geological Survey - EDMAP Program (Contract 1434-HQ-96-AG-01561)
1989	Student Research Allocation Committee, University of New Mexico
1989	The Geological Society of America - Research Grants
1984	Student Travel Award, The Graduate School, Washington State University
1983	Shell Oil Company, Western Exploration and Production, Houston, TX.

PUBLICATIONS (Reverse Chronological Order)

Dutton, B.E., Myers, J.A., Taylor, S.B., Poston, P.E., and Schepige, A., In Review, Collaborative Approaches to Contextual, Field-Based Interdisciplinary Environmental Science: Why More Heads are Better Than One: to be submitted to the Journal of College Science Teaching.

Taylor, S.B., Templeton, J.H., and Giles, D.E.L., 2003, Cinder Cone Morphometry and Volume Distribution at Newberry Volcano, Oregon: Implications for Age Relations and Structural Control on Eruptive Process: Geological Society of America Abstracts with Programs, v. 35, no. 6, Fall National Meeting, Seattle.

Giles, D.E.L., Taylor, S.B., and Templeton, J.H., 2003, Compilation of a Digital Geologic Map and Geodatabase for Newberry Volcano, Central Oregon: A Framework for Gis-Based Analyses of Volcanic Process And Products in a Back-Arc Setting: Geological Society of America Abstracts with Programs, v. 35, no. 6, Fall National Meeting, Seattle.

PUBLICATIONS (Cont.)

Collett, C., Halverson, B., and Taylor, S.B., 2003, Preparing for Oregon's 21st Century Schools by Integrating Technology Across the Curriculum: Forging Partnerships Between Education and Liberal Arts and Science: National Education Computing Conference, Abstracts with Programs, Seattle.

Taylor, S.B., 2002, Bedrock Control on Slope Gradients in the Luckiamute Watershed, Central Coast Range, Oregon: Implications for Sediment Transport and Storage: American Geophysical Union Abstracts with Programs, Fall Meeting 2002, San Francisco, California.

Taylor S.B. and Copa, P.M., 2002, Integrating Technology Across the Curriculum: Forging Partnerships Between Education and Liberal Arts and Science (abstract): U.S. Dept. of Education, Preparing Tomorrow's Teachers to Use Technology (PT3) National Meeting, Abstracts with Programs, Washington, D.C.

Taylor, S.B., Dutton, B.E., and Poston, P.E., 2002, Luckiamute River watershed, upper Willamette Basin, Oregon – An integrated environmental study for K-12 Educators, in Moore, G.W., Field Guide to Geologic Processes in Cascadia: Oregon Department of Geology and Mineral Industries Special Paper 36, p. 167-186.

Taylor, S.B. and Swartzentruber, R.L., 2002, Year 2 Partners in Science Research Project - Case Study of Anderson Creek Debris Flow Site, Lincoln County, Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.

Taylor, S.B., Madarish, D., and Kite, J.S., 2001, Gravel distribution analysis of three channel systems in the central Appalachians: Comparative evaluation of sediment-transport efficiency and valley-erosion dynamics: Abstracts with Program, Binghamton Symposium, Mountain Geomorphology: Integrating Earth Systems, University of North Carolina, Chapel Hill, North Carolina, p. 49-50.

Dutton, B.E., and Taylor, S.B., 2001, A course in Natural Science: A model for integrating content, research, and pedagogy: Abstracts with Program, Oregon Collaborative for Excellence in Preparation of Teachers (OCEPT) Showcase 2001, Salem, Oregon.

Taylor, S.B. and Swartzentruber, R.L., 2001, Year 1 Partners in Science Research Project - Geomorphic Hazards Assessment in West-Central Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.

Taylor, S.B., 2000, Sediment-storage budgets for colluvium-dominated watersheds in the central Appalachians: Geological Society of America, Abstracts with Program, Fall 2000 National Meeting, v. 32, no. 7.

Davis, E.N., Taylor, S.B., Kite, J.S., and Fedorko, N., 1999, Periglacial landforms and deposits of Canaan Valley, Tucker County, West Virginia: Field Trip Guide Book for the Annual Meeting, West Virginia Soc. of Professional Soil Scientists, Morgantown, WV, 30 p.

PUBLICATIONS (Cont.)

Taylor, S.B., 1998, Geomorphic analysis of small-scale debris fans at three central Appalachian watersheds: Implications for controls on sediment transport efficiency [abs.]: Geological Society of America, Abstracts with Program, Fall National Meeting, v.30, no.7, p. A-141.

Kite, J.S., Taylor, S.B., Davis, E.N., and D'Urso, G.J., 1998, Optimum scales for surficial geology maps of mountainous areas in the eastern United States [abs.]: Geological Society of America, Abstracts with Program, Fall 1998 National Meeting, v. 30, no. 7, p. A-137.

Taylor, S.B., 1997, Sandstone lithofacies, regolith production, and surficial processes in the central Appalachians: Preliminary analysis of landscapes underlain by the Acadian clastic wedge [abs.]: EOS Transactions of the American Geophysical Union, v. 78, no. 46, Fall Meeting Supplement, p. F286.

Taylor, S.B., 1997, The influence of sedimentary lithofacies on hillslope processes in the central Appalachians: A conceptual model based on analysis of landscapes underlain by the Acadian clastic wedge [abs.]: Geological Society of America, Abstracts with Program, Fall 1997 National Meeting, v. 29, no. 7, p. A-411.

Taylor, S.B., Kite, J.S., and Kuhn, K., 1996, Surficial map criteria for unglaciated humid-mountainous landscapes - linkage of process and landform: An example from the Fernow Experimental Forest, Tucker County, West Virginia [abs.]: Geological Society of America, Fall 1996 National Meeting, Abstracts with Programs, v. 28.

Larsen, D., and Taylor, S.B., 1991, Stratigraphy and sedimentology of the Espinaso Formation in the Cerrillos area, in Smith, G.A. and others, A tale of two volcaniclastic aprons: Field guide to the sedimentology and physical volcanology of the Oligocene Espinaso Formation and Miocene Peralta Tuff, north-central New Mexico: New Mexico Bureau of Mines and Mineral Resources Bulletin 137, p. 90-92.

Smith, G.A., Larsen, D., Harlen, S.S., McIntosh, W.C., Erskine, D.W., and Taylor, S.B., 1991, A tale of two volcaniclastic aprons: Field guide to the sedimentology and physical volcanology of the Oligocene Espinaso Formation and Miocene Peralta Tuff, north-central New Mexico: New Mexico Bureau of Mines & Mineral Resources Bulletin 137, p.87-103.

Wright, R., and Taylor, S. B., 1989, Small-scale changes in relative sea-level in the East Pisco Basin, Peruvian Forearc Margin, central Peru [abs.]: Abstracts with Program, International Association of Sedimentologists and British Sedimentological Research Group Symposium, Eustatic Sea-Level Changes at Active Plate Margins, London, U.K.

Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1988, Sedimentation and tectonics of the lower and middle Eocene Swauk Formation in eastern Swauk Basin, central Cascades, central Washington: Canadian Journal of Earth Science, v. 25, no. 7, p. 1020-1036.

PUBLICATIONS (Cont.)

Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1987, Depositional and tectonic framework of the lower to middle Eocene Swauk Formation, eastern Swauk Basin--A model for early Tertiary basin development beneath the Columbia River Plateau [abs.]: American Association of Petroleum Geologists Bulletin, v. 71, no. 8, p. 1016.

Taylor, S. B., 1985, Stratigraphy, sedimentology, and paleogeography of the Swauk Formation in the Liberty area, central Cascades, Washington: Unpub. M. S. Thesis, Washington State University, Pullman, WA, 199 p.

Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1984, Reversals of paleo-drainage patterns in Eocene Swauk basin, Washington: implications for strike-slip basin evolution [abs.]: Geological Society of America Abstracts with Program, v. 16, no. 6, p. 674.

Johnson, S. Y., Fraser, G. T., Roberts, J. W., Taylor, S. B., 1984, Eocene strike-slip faulting and basin formation in Washington [abs.]: American Association of Petroleum Geologists Bulletin, v. 68, no. 4, p. 493.

UNPUBLISHED TECHNICAL REPORTS

Taylor, S.B., 2004, Geology of the Luckiamute River watershed, upper Willamette Basin, Polk and Benton Counties, Oregon: *in* Garono, R.J., Anderson, B.D., Harma, K., Buhl, C., and Adamus, P., Luckiamute / Ash Creek / American Bottom Watershed Assessment: Unpublished Technical Document, Luckiamute Watershed Council, Western Oregon University, Monmouth, Oregon, Appendix A – 19 p., available on line at <URL: http://www.wou.edu/las/natsci_math/geology/luckiamute/Appendix A Geology of Luckiamute River Watershed.pdf, updated June 2204.

Taylor, S.B, 2000, Geomorphic Controls on Debris Flow Hazards and Sediment-Transport Efficiency in the Central Appalachians - Final Technical Report to the NASA Earth System Science Program (Contract No. ESS/97-0080): Submitted to the ESS Program, NASA Headquarters, Washington, D.C.

Anderson, R.W. and Taylor, S.B., 1999, Proposed remediation strategy for groundwater contaminated with chlorinated hydrocarbons at the Trent Tube and Steel Plant, southeast Wisconsin: Submitted to Trent Tube and Steel, Inc.

Taylor, S.B. 1999, Recommendation for abatement of coal-bed methane degassing at the Girty's Run Sewer Project Site, Allegheny County, Pennsylvania: Submitted to Pine Township.

Taylor, S.B. and Kite, J.S., 1998, Surficial and bedrock geology of the Little River basin, George Washington National Forest, Augusta County, Virginia: Submitted to the U.S. Geological Survey National Cooperative Mapping Program (EDMAP Contract 1434-HQ-97-AG-01782), Reston, VA, multiple map sheets with report.

UNPUBLISHED TECHNICAL REPORTS (Cont.)

Taylor, S.B. and Kite, J.S., 1997, Surficial and bedrock geology of the upper North Fork drainage basin, Monongahela National Forest, Pocahontas County, West Virginia: Submitted to the U.S. Geological Survey National Cooperative Mapping Program (EDMAP Contract 1434-HQ-96-AG-01561), Reston, VA, multiple map sheets with report.

Taylor, S.B., Kite, J.S., and Kuhn, K., 1996, Bedrock and surficial geology of the Fernow Experimental Forest, Tucker County, West Virginia: Submitted to the USDA Northeastern Forest Experiment Station, Timber and Watershed Laboratory, Parsons, WV, multiple map sheets with report.

Anderson, R.W. and Taylor, S.B., 1993, Preliminary statistical analysis of landfill water quality data: J & J Landfill, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1993, Results of groundwater impact assessment at disposal cell 1, J & J Landfill, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1993, Sewage facility planning module section G. Preliminary hydrogeology of a small flow sewage treatment facility, Mystic Rocks Golf Course, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1993, Pump-testing and preliminary hydrogeologic impact assessment of the production well-field at Mystic Rocks Golf Course, Fayette County, Pennsylvania: Submitted to Nemacolin Woodlands, Inc.

Anderson, R.W. and Taylor, S.B., 1993, Impact assessment of a small-flow sewage treatment facility at the Bosmyer property, Allegheny County, Pennsylvania: Submitted to Century 21 Real Estate Services Division.

Anderson, R.W. and Taylor, S.B., 1993, Private water supply impact assessment at the Gould Mine permit area, Washington County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1992, Municipal waste permit application: geology and hydrogeology of an abandoned surface mine complex, southern coal district, Illinois: Submitted to Laidlaw Waste Systems, Inc.

Anderson, R.W. and Taylor, S.B., 1992, Expert witness testimony: Angerman vs. Buskey, hydrogeologic impact assessment of gas well drilling in Westmoreland County, Pennsylvania: submitted for review to Westmoreland County Court.

UNPUBLISHED TECHNICAL REPORTS (Cont.)

Anderson, R.W. and Taylor, S.B., 1992, Coal surface mining permit application: geology and hydrogeology of the Prep. II mine permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1992, Residual solid waste permit application: geology and hydrogeology of the White Pines permit area, Lycoming County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1992, Installation of methane gas monitoring probes and groundwater monitoring wells at the M.C. Arnoni Landfill, South Park Township, Pennsylvania: submitted to J&L Engineering, Inc.

Anderson, R.W. and Taylor, S.B., 1991, Small operators assistance program: geology and hydrogeology of the Maderia permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1990, Coal surface mining permit application: geology and hydrogeology of the Gould Mine permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

REFERENCES

Dr. Jeff Templeton, Division of Natural Sciences and Mathematics, Western Oregon University, Monmouth, OR, 97361, (503) 838-8207, courtna@wou.edu

Dr. J. Steven Kite, Associate Professor, Department of Geology, West Virginia University, Morgantown, WV, 26506, (304) 293-5603, jkite@wou.edu

Dr. John F. Zaengle, Assistant Professor, Department of Biology and Chemistry, University of Wisconsin - Superior, 1800 Grand Ave., Superior, WI 54880, (715) 394-8322

Robert W. Anderson, Manager of Geosciences/Solid Waste, U.S. Filter - Chester Engineers, Cherrington Corporate Center, 600 Clubhouse Drive, Pittsburgh, PA 15108, (412) 269-5700