**Jonathan D. Phillips—Curriculum Vita**

**Employment and Professional Experience**

•Professor, Department of Geography, University of Kentucky, 2000 – 2020. Professor Emeritus, 2021-

•Adjunct Professor, Department of Geography, Planning & Environment, East Carolina University, 2020-

•Research Scientist, Department of Forest Ecology, Sylva Tarouca Institute, Brno, Czech Republic

•Chief Scientist, Copperhead Road Geosciences, LLC, 2006-2013 (also CEO, CFO, secretary, custodian, & technician).

•Professor and Head, Department of Geography, College of Geosciences, Texas A&M University, 1997 - 2000.

•Assistant to Full Professor, Department of Geography, East Carolina University, 1988- 1997. Also adjunct professor of geology.

•Assistant Professor, Department of Geography, Arizona State University, 1986-1988.

•Executive Director, Pamlico-Tar River Foundation, Washington, N.C., 1984-86.

•Various part-time research and teaching positions: Rutgers University, East Carolina University, Pitt County Community College; 1980-1984.

•Various full- and part-time journalism positions: Washington, N.C., Vanceboro, N.C., Christiansburg, Va., 1977-84.

**Education**

Ph.D., 1985, Rutgers University. Major: Geography/Geomorphology.

M.A., 1982, East Carolina University. Major: Physical Geography.

B.A., 1979, Virginia Tech. Major: Communications. Minor: Environmental science.

North Carolina High School Equivalency Certificate, 1975.

**Publications--refereed articles, chapters, and books** (\*indicates student at time of submission).

Phillips, J.D. 2022. Store and pour: The evolution of flow systems in landscapes. *Catena* 216: 106357.

Phillips, J.D. 2022. Geomorphology of the fluvial-estuarine transition zone, Neuse River, North Carolina. *Earth Surface Processes and Landforms* 47: 2044-2061. **doi:** [**https://doi.org/10.1002/esp.5362**](https://doi.org/10.1002/esp.5362)

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Phillips, J.D. 2022. The law of scale independence. *Annals of GIS* 28, 15-29. DOI: 10.1080/19475683.2022.2026466

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Šamonil, P., Phillips, J.D., Bobek, P., Danek, P. 2021. Stromy formují šumavskou krajinu. Ziva 6/2021, 282-284 (in Czech).

Phillips, J.D. 2021. *Landscape Evolution. Landforms, Ecosystems, and Soils.* Elsevier, Amsterdam.

Phillips, J.D., Šamonil, P. 2021. Biogeomorphological Domination of Forest Landscapes: An Example From the Šumava Mountains, Czech Republic. *Geomorphology* 383, 107698.

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Phillips, J.D., Marion, D.A., \*Kilcoyne, K. 2021. Fine sediment storage in an eroding forest trail system. *Physical Geography* 42, 50-72. <https://doi.org/10.1080/02723646.2020.1743613>.

Šamonil, P., Phillips, J.D., Pawlik, Ł. 2020. Indirect biogeomorphic and soil evolutionary effects of spruce bark beetle. *Global and Planetary Change* 195: 103317.

Phillips, J.D., Marion, D.A., \*Kilcoyne, K. 2020. Concentration and divergence of sediment in an erosional landscape. *Geomorphology* 367: 107281.

\*Jerin, T., Phillips, J.D. 2020. Biogeomorphic Keystones and Equivalents: Examples from a Bedrock Stream. *Earth Surface Processes and Landforms* 45, 1877-1894.DOI: 10.1002/esp.4853.

Šamonil, P., Phillips, J.D., \*Danĕk, P., Beneš, V., Pawlik, Ł. 2020. Soil, regolith, and weathered rock: Theoretical concepts and evolution in old-growth temperate forests, central Europe. *Geoderma* 368, 114261.

Phillips, J.D., 2020. Evolutionary creativity in landscapes. *Earth Surface Processes and Landforms* 45, 109-120.

Phillips, J.D., 2019. State factor analysis of ecosystem response to climate change. *Ecological Complexity* 40(A) 100789.

Phillips, J.D., Pawlik, L., Samonil, P., 2019. Weathering fronts. *Earth-Science Reviews* 198: 102295.

Phillips, J.D., Marion, D.A., 2019. Coarse sediment storage and connectivity and off-highway vehicle use, Board Camp Creek, Arkansas. *Geomorphology* 344: 99-112.

Phillips, J.D., 2019. Evolutionary pathways in soil-geomorphic systems. *Soil Science* 184: 1-12.

Marion, D.A., Phillips, J.D., Yocum, C., Jahnz, J., 2019. Sediment availability and off-highway vehicle trails in the Ouachita Mountains, USA. *Journal of the American Water Resources Association* <https://doi.org/10.1111/1752-1688.12793>.

Phillips, J.D., 2018. Place formation and axioms for reading the natural landscape. *Progress in Physical Geography* 42: 697-720.

Phillips, J.D., 2018. Self-limited biogeomorphic ecosystem engineering in epikarst soils. *Physical Geography* 39: 304-328.

Phillips, J.D., 2018. Environmental gradients and complexity in coastal landscape response to sea level rise. *Catena* 169: 107-118.

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Phillips, J.D., 2018. Coastal wetlands, sea-level, and the dimensions of geomorphic resilience. *Geomorphology* 305: 173-184.

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\*Jerin, T., Phillips, J.D., 2017. Local efficiency in fluvial systems: Lessons from Icicle Bend. *Geomorphology* 282: 119-130.

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\*Abd-Elmabod, S.K., Jordan, A., Fleskens, L., Phillips, J.D., Munoz-Rojas, M., van der Ploeg, M., Anaya-Romero, M., El-Ashry, S., de la Rosa, D. 2017. Modeling agricultural suitability along soil transects under current conditions and improved scenario of soil factors. Soil Mapping & Process Modeling for Sustainable Land Use Management (ed. P. Pereira, E.C. Brevik, M. Munoz-Rojas, B.A. Miller). Amsterdam: Elsevier, p. 193-219.

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Phillips, J.D., 2016. Complexity of Earth surface system evolutionary pathways. *Mathematical Geosciences* 48: 743-765. DOI 10.1007/s11004-016-9642-1

Phillips, J.D., 2016. Vanishing point: scale independence in geomorphic hierarchies. *Geomorphology* 266: 66-74.

\*Daněk, P., Šamonil, P., Phillips, J.D., 2016. Geomorphic controls of soil spatial complexity in a primeval mountain forest in the Czech Republic. *Geomorphology* 273: 280-291.

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Phillips, J.D., 2014. Thresholds, mode-switching and emergent equilibrium in geomorphic systems. *Earth Surface Processes and Landforms* 39: 71-79. DOI: 10.1002/esp.3492 (invited State of the Science contribution).

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Phillips, J.D., 2013. Sources of spatial complexity in two coastal plain soil landscapes. *Catena* 111: 98-103.

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Phillips, J.D., 2013. Watershed fragmentation in coastal plain rivers. *Physical Geography* 34: 273-292.

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Phillips, J.D. 2013. Hydrological connectivity of abandoned channel water bodies on a coastal plain river. *River Research and Applications* 29: 149-160.

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Phillips, J.D. 2012. Synchronization and scale in geomorphic systems. *Geomorphology* 137: 150-158.

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Phillips, J.D. 2010. Amplifiers, filters, and the response of Kentucky rivers to climate change. *Climatic Change* 103: 571-595.

Slattery, M.C., \*Todd, L.M., Phillips, J.D., \*Breyer, J.A. 2010. Holocene sediment accretion in the Trinity River delta, Texas, in relation to modern fluvial input. *Journal of Soils and Sediments* 10: 640-651.

Phillips, J.D. 2010. The convenient fiction of steady-state soil thickness. *Geoderma* 156: 389-398.

Phillips, J.D. 2010. The job of the river. *Earth Surface Processes and Landforms* 35: 305- 313.

Phillips, J.D., \*McCormack, S., \*Duan, J., \*Russo, J.P., \*Schumacher, A.M., \*Tripathi, G.N., \*Brockman, R.B., \*Mays, A.B., \*Pulugurtha, S.P. 2010. Origin and interpretation of knickpoints in the Big South Fork River basin, Kentucky-Tennessee. *Geomorphology* 114: 188-198.

Phillips, J.D., \*Park, L. 2009. Forest blowdown impacts of Hurricane Rita on fluvial systems. *Earth Surface Processes and Landforms* 34: 1069-1081.

Phillips, J.D. 2009. Landscape evolution space and the relative importance of geomorphic processes and controls. *Geomorphology* 109: 79-85.

Phillips, J.D. 2009. Changes, perturbations, and responses in geomorphic systems. *Progress in Physical Geography* 33: 17-30.

Phillips, J.D. 2009. Biological energy in landscape evolution. *American Journal of Science* 309: 271-290.

Phillips, J.D. 2009. Soils as extended composite phenotypes. *Geoderma* 149: 143-151.

Phillips, J.D. 2009. Avulsion regimes in southeast Texas rivers. *Earth Surface Processes and Landforms* 34: 75-87.

Phillips, J.D., \*Lutz, J.D. 2008. Profile convexities in bedrock and alluvial streams. *Geomorphology* 102: 554-566.

Phillips, J.D., Marion, D.A., Turkington, A.V. 2008. Pedologic and geomorphic impacts of a tornado blowdown event in a mixed pine-hardwood forest. *Catena* 75: 278-287.

Phillips, J.D., Lorz, C. 2008. Origins and implications of soil layering. *Earth-Science Reviews* 89: 144-155.

Phillips, J.D. 2008. Soil system modeling and generation of field hypotheses. *Geoderma* 145: 419-425.

Phillips, J.D. 2008. Geomorphic controls and transition zones in the lower Sabine River. *Hydrological Processes* 22: 2424-2437.

Phillips, J.D. 2008. Goal functions in ecosystem and biosphere evolution. *Progress in Physical Geography* 32: 51-64.

Phillips, J.D., Slattery, M.C. 2008. Antecedent alluvial morphology and sea level controls on form-process transition zones in the lower Trinity River, Texas. *River Research and Applications* 24: 293-309.

Phillips, J.D., Turkington, A.V., Marion, D.A. 2008. Weathering and vegetation effects in early stages of soil formation. *Catena* 72: 21-28.

Phillips, J.D., 2007. Perfection and complexity in the lower Brazos River. *Geomorphology* 91: 364-377.

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**Research Grants and Contracts** (Dates, title, funding entity, amount, role).

2022. Specialist Report: Geomorphic Impacts of Post-Storm Recovery Plans at Neuse River Recreation Sites, North Carolina. USDA Forest Service, Croatan National Forest.

2019-2021. Biological Soil Creep. Czech Science Foundation, co-investigator.

2016-2018. Biomechanical Effects of Trees in Old-Growth Forests. Czech Science Foundation, $56,000, co-investigator.

2013. Coevolution of Soils and Ecosystems in Unmanaged Forests of the Czech Republic. European Union, $4,000. co-PI.

2012-13. Geomorphic Thresholds in the lower Brazos River, Texas. Texas Instream Flow Program, $45,000, PI.

2012. Geomorphology of the Lower Trinity River in the Vicinity of the Proposed Capers Ridge Pump Station for the Luce Bayou Interbasin Transfer Project. AECOM, Inc., Houston, TX. Amount withheld at client request.

2011. Geomorphic Responses to Changes in Flow Regimes in Texas Rivers. Texas Instream Flow Program, $35,000, PI.

2011-12. Riparian Geomorphology and Buffer Zones. Texas Water Development Board, $12,000, PI.

2011. Channel Cross Sections and Critical Flow Levels in Texas Streams. Subcontract to River Systems Institute, Texas State University, $6,000.

2010-2013. Impacts of Off-Highway Vehicle Trails in the Ouachita National Forest. USDA Forest Service, $60,000. P.I.

2010-11. Channel Change Caused by Water and Sediment Distribution in the San Antonio River Deltaic Plain. Guadalupe-Blanco River Authority, $44,000, P.I.

2010. Hydraulic Units of the Sabine River. Texas Instream Flow Program. $52,000, P.I.

2009-10. Geomorphic Study of the Guadalupe River, Texas. Texas Instream Flow Program. $45,000, P.I.

2008. Texas/Louisiana Flow Split in the Sabine River/Cutoff Bayou Area. TCB, Inc., Houston Texas. Amount withheld at client’s request. Consultant.

2007-2008. Geomorphic Processes, Controls, and Transition Zones in the Middle and Lower Trinity River. Texas Instream Flow Program, $45,000. P.I.

2007-2008. Geomorphic Units of the Lower Sabine River. Texas Instream Flow Program, $35,000. P.I.

2006-2007. Field-Based Analysis in support of a Geomorphic Assessment of the Brazos and Navasota River Subbasin. Texas Instream Flow Program, $30,000. P.I.

2006-2007. Geomorphic Equilibrium in Southeast Texas Rivers. Texas Instream Flow Program, $30,000. P.I.

2006-2007. Geomorphic Processes, Controls, and Transition Zones in the Lower Sabine River. Texas Water Development Board/U.S. Army Corps of Engineers, $65,000. P.I.

2005-2006. Geomorphic Context, Constraints, and Change in the Lower Brazos and Navasota Rivers, Texas. Texas Instream Flow Program, $28,000. P.I.

2004-2006. Fluviokarst Landscape Whole-System Sensitivity to Land Use Changes, Kentucky River, U.S.A. U.S. Environmental Protection Agency, Science to Achieve Results Program, $37,172. Co-investigator.

2004-2006. Effects of trees on bedrock weathering, soil thickness, and rock fragment occurrence in Ouachita Mountain Soils. U.S. Forest Service, $20,817 plus in-kind support. P.I.

2004-2005. Relative Importance of Fluvial and Non-Fluvial Sediment Sources in Galveston Bay. Texas Water Development Board. $61,000. Co-P.I.

2003-2005. Sediment production and alluvial buffering in a steepland river basin Waipoa River, New Zealand. National Science Foundation, $250,000, Co-P.I.

2001-2004. Sediment retention in the lower Trinity River. Texas Water Development Board, $65,000. P.I.

2002-2003. Coevolution of forests and soils in the Ouachita Mountains. U.S. Forest Service, $16,600 plus USFS in-kind support. P.I.

2001-2002. Pedologic effects of forest changes in the Ouachita mountains region. U.S. Forest Service, $20,000 plus USFS in-kind support. P.I.

1999-2000. Radionuclide signatures of fluvial sediment in Caney Creek, Texas. U.S. Forest Service $7,000 and Texas A&M College of Geosciences Research Enhancement Fund match, $7,000. PI.

1999-2001. Sediment retention in bottomland hardwoods of the Angelina River, Texas. Texas Water Development Board, $50,000. PI 1999/2000; co-PI 2000/2001.

1998-2000. Mission Geography. NASA. Total project funding $950,000; Phillips portion $10,000. Earth System Science Consultant.

1995-1998. Quantifying soil erosion and sediment delivery on North Carolina Coastal Plain croplands. U.S. Department of Agriculture, $149,000. Co-PI.

1994-1995. Pre-settlement landscapes of the Croatan National Forest. U.S. Forest Service, $10,000. PI.

1993-1994. Overbank sedimentation during the upper Mississippi River flood, 1993. National Science Foundation, $22,000. Co-PI.

1990. Basinwide water quality and natural resource management plan for the Pamlico- Tar River basin. Pamlico-Tar River Foundation, Inc., $6,500. Project Director.

1988-1989. Marina siting policy for the Pamlico River and western Pamlico Sound. Pamlico-Tar River Foundation, Inc., $5,515. Project Director.

1987. Nonpoint source pollution spatial risk assessment. Environmental Science and Engineering Fellowship, American Association for the Advancement of Science and U.S. Environmental Protection Agency, $20,000. PI/Fellow.

1984. Geomorphic evaluation of beach nourishment, South Beach, Sandy Hook, N.J. National Park Service, $5000. Co-PI.

1983-1984. Impacts of beach nourishment, South Beach, Sandy Hook, N.J. National Park Service, $12,000. Co-PI.

Internal research grants: University of Kentucky, 2007; Texas A&M University, 1999; East Carolina University, 1992; 1990; 1989; Arizona State University, 1987.

**Other Professional Grants and Contracts**

1993. Physical geography data acquisition system. National Science Foundation, $13,000. Co-PI.

1985-1987. Water quality and coastal resource management in the Pamlico-Albemarle region, North Carolina. Mary Flagler Cary Charitable Trust, $22,000. Project Director.

1985-1987. Water quality and pollution control in the Pamlico-Tar River watershed, North Carolina. Z. Smith Reynolds Foundation, $50,000. Project Director.



1986-1987. Environmental education and outdoor recreation in Medoc Mountain State Park. North Carolina Division of Parks and Recreation, $1,000. Project Director.

1985. Pamlico-Tar River Maritime Heritage Festival. National Endowment for the Humanities, $3,140. Project Director.

**Professional Memberships & Service**

Member, Current: European Geosciences Union, Southeastern Division Association of American Geographers, International Association of Geomorphologists, International Association of Hydrological Sciences, International Union of Soil Scientists.

Member, Past (pre-retirement): American Geophysical Union, American Association of Geographers, Society of Wetland Scientists, American Water Resources Association, Soil Conservation Society of America.

International Conference on Hydropedology, 2012, program committtee and session co- organizer .

International Union of Soil Sciences, Symposium Co-Organizer, 2006 World Congress of Soil Science.

Manuscript reviewer for 59 separate scholarly journals of geography, geology, environmental science, hydrology, and soil science.

Proposal reviewer for four U.S. federal agencies, eight foreign agencies, six state agencies, and six private organizations or foundations.

External tenure and promotion reviewer for 36 U.S. universities and four non-U.S. universities. Program reviews for three U.S. and one Canadian university.

Editorial board memberships, previous and current: Geomorphology, Geoderma, Catena, Earth Surface Processes & Landforms, Transactions of the Institute of British Geographers, New Zealand Geographer, The Professional Geographer, Annals of the Association of American Geographers, Annual Review of Chaos and Bifurcations, Southeastern Geographer, Geographical Analysis, Focus

**Awards** (post-PhD)

2020. World’s Greatest Farter. Coffee mug awarded by Morgan, Nate, Caroline, and Andy Phillips.

2017. Melvin Marcus Distinguished Career Award. Geomorphology Specialty Group, Association of American Geographers.

2014. David Linton Medal. British Society for Geomorphology.

2006. University Research Professor. University of Kentucky.

1999. Distinguished Achievement Award for Research. College of Geosciences, Texas A&M University.

1997. G.K. Gilbert Award for Excellence in Geomorphic Research. Geomorphology Specialty Group, Association of American Geographers.

1995. Research Honors Award. Southeastern Division, Association of American Geographers.

1990. Great Blue Heron Award for environmental advocacy, Pamlico-Tar River Foundation, Inc.

1990. Research Achievement Award for New Scholars, Conference of Southern Graduate Schools.

1989. College Research Award, College of Arts and Sciences, East Carolina University.

1987. Environmental Science and Engineering Fellowship, American Association for the Advancement of Science.

**Personal**

Born: 4 November 1957, Roxboro, North Carolina, USA.

Family: Married to Lynn Roche Phillips since 18 June 1983. Sons: Nathan Scott Phillips, born 18 June 1988; Damien Matthew Phillips, born 18 February, 1996. Granddaughter: Caroline Harper Phillips, born 19 August, 2014; grandson Andrew Scott Phillips, born 16 November, 2017.

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