

## CURRICULUM VITAE

Kevin G. Stewart  
Department of Geological Sciences  
122 Mitchell Hall  
University of North Carolina  
Chapel Hill, North Carolina 27599-3315  
(919) 962-0683

### Education

*Ph.D. in Geology*, 1987, University of California, Berkeley, California.  
Thesis title: A Study of Compressional and Extensional Structures in the Northern Apennine fold-and-thrust belt. Thesis supervisor: Walter Alvarez  
*B.S. in Geology*, 1980, University of Michigan, Ann Arbor, Michigan.

### Professional Experience

- Technical Program Chair, 2012 Geological Society of America Southeastern Section meeting.
- Chair, Carolina Summer Reading Program Book Selection Committee 2012
- Faculty Council, University of North Carolina, Chapel Hill, 2000-2001; 2010-2013.
- Faculty Hearings Committee (2011-2014) Chair, 2012
- University of North Carolina – Chapel Hill Educational Policy Committee, (2006-2009).
- Chair, University Teaching Award Committee (2006).
- University Teaching Award subcommittee member 1992, 2003, 2004, 2005, 2009.
- Chapman Fellow, University of North Carolina, Chapel Hill, Fall 2003
- President, Carolina Geological Society, 2000-2001.
- Vice-President, Carolina Geological Society, 1999-2000.
- Advisory Committee on Intellectual Life, University of North Carolina, Chapel Hill, 2000 - 2004.
- Administrative Board of the College of Arts and Sciences, University of North Carolina, Chapel Hill, 1999-2002.
- Associate Professor, Department of Geology, University of North Carolina, Chapel Hill, 1994 - present.
- Organizer and Leader, Carolina Geological Society Annual Field Conference, September 27-28, 1997
- Advisor, College of Arts and Sciences, University of North Carolina, Chapel Hill, 1995-96.
- Assistant Professor, Department of Geology, University of North Carolina, Chapel Hill, 1987 - 1993.
- Visiting Professor, 1987, University of Perugia, Italy.

- Teaching and Research Assistant, Department of Geology and Geophysics, University of California, Berkeley, 1982 - 1986.

### **Awards and Academic Honors**

*Nominee, Professorial Award, American Association of Petroleum Geologists Foundation (2015).*

*Board of Governors' Award for Excellence in Teaching, University of North Carolina, Chapel Hill (2008).*

*Fellow, Institute for the Arts and Humanities, University of North Carolina, Chapel Hill. (2003 – present)*

*Chapman Fellowship (2003), Institute for the Arts and Humanities, University of North Carolina, Chapel Hill.*

*Tanner Award for Excellence in Undergraduate Teaching (2002), University of North Carolina – Chapel Hill.*

*Member, Academy of Distinguished Teaching Scholars, University of North Carolina, Chapel Hill, 2000 - present.*

*James M. Johnston Teaching Excellence Award (1991). University of North Carolina - Chapel Hill.*

*Outstanding Teaching Award University of California, Berkeley (1984).*

### **Memberships**

Geological Society of America

Carolina Geological Society

### **External Research Grants**

- U.S. Geological Survey, “Mapping and analysis of post-orogenic fault zones in the Blue Ridge of western North Carolina” (5/1/2015 – 4/30/2016), \$10,467, Principal Investigator.
- U.S. Geological Survey, " Laramide deformation and the emplacement of the Heart Mountain allochthon (6/1/12-5/31/13), \$8,298 (Principal Investigator).
- U.S. Geological Survey, " The timing of Laramide deformation in northwestern Wyoming “ (6/1/11-5/31/12), \$5,895 (Principal Investigator).
- U.S. Department of Education, Teachers for a Competitive Tomorrow (2008-2013) \$1.25 million (Principal Investigator)
- Burroughs-Wellcome Fund – “Geosciences in Middle Schools” (2007-2010) \$171,222 (co-Principal Investigator)
- U.S. Geological Survey, " Testing models for the timing of Laramide orogenesis in south-central Montana “ (6/1/03-5/31/04), \$11,400 (Principal Investigator).
- U.S. Geological Survey, "Constraining the Phanerozoic motion of the Colorado Plateau: A continued mapping project in the northern Sierra Nacimiento, New Mexico" (6/1/01-5/31/02), \$6313 (Principal Investigator).

- U.S. Geological Survey, "Constraining the Phanerozoic motion of the Colorado Plateau: A mapping project in the northern Sierra Nacimiento, New Mexico" (6/1/00-5/31/01), \$13,250 (Principal Investigator).
- U.S. Geological Survey, "Mapping and related studies within the Ashe Metamorphic Suite of the Fries thrust sheet, Blue Ridge Mountains, NC" (6/1/99-5/31/00), \$7,500 (Principal Investigator).
- U.S. Geological Survey, "Mapping within the Blue Ridge thrust complex, western North Carolina" (5/1/98 - 5/1/99), \$16,000 (Principal Investigator).
- National Science Foundation, "Eclogite from the Blue Ridge thrust complex, western North Carolina: New constraints on tectonics and high-pressure metamorphism" (1/1/94-7/31/96) \$150,000 (Principal Investigator)
- Petroleum Research Fund of the American Chemical Society "Controls on carbonate platform evolution, Northern Apennines, Italy"(1/1/93-8/31/97) \$50,000 (Principal Investigator)

### **Internal Research Grants**

- University Research Council, UNC-Chapel Hill (2003-04) \$1,400
- University Research Council, UNC-Chapel Hill (1996-98) \$1,800
- Junior Faculty Development Award, UNC-Chapel Hill (1989) \$3,000
- University Research Council, UNC-Chapel Hill (1987-89) \$1,800
- University Research Council, UNC-Chapel Hill (1986-88) \$1,500

### **Publications**

- Stewart, K.G., and Wooten, R.M., 2018, Editors, Active Tectonics and Active Landscapes in an Ancient Orogen: Carolina Geological Society Guidebook, 164 p.
- Hill, J.S., and Stewart, K.G., 2018, The Boone fault and its implications for Cenozoic topographic rejuvenation of the southern Appalachian Mountains, in Stewart, K.G. and Wooten, R., eds., Old Wine in New Bottles: Active Tectonics and Active Landscapes in an Ancient Orogen: Carolina Geological Society Guidebook, p. 97-110.
- Hill, J.S., Stewart, K.G., and Biryol, B., 2018, Mantle motion and topographic rejuvenation in the Southern and Central Appalachians, in Stewart, K.G. and Wooten, R., eds., Old Wine in New Bottles: Active Tectonics and Active Landscapes in an Ancient Orogen: Carolina Geological Society Guidebook, p. 111 -124.
- Hill, J.S., and Stewart, K.G., in revision, Automatic knickpoint detection and comparison of stream directions relative to internal fabrics along western North Carolina Blue Ridge streams: Submitted to Geomorphology.
- Jackson, W.T., Bartholomew, M.J., Dupre, W.R., Armstrong, T.F., Stewart, K.G., 2016 in press, Campanian paleoseismites of the Elk Basin anticline, northern Bighorn Basin: A record of initial Laramide deformation: Journal of Sedimentary Research.
- Rapprecht, R., Stewart, K.G., LaPoint, D., Stein, H., 2013, The Deep River gold-copper-molybdenum prospect: Potential subvolcanic porphyry mineralization in the Hyco Arc, central North Carolina, in Hibbard and Pollock, eds., One Arc, Two Arc, Old Arc, New Arc: Carolina Geological Society Guidebook, p. 193-211.

- Ting, S.R., Leung, Y.F., Stewart, K.G., Smith, A.C., Roberts, G.L., and Dees, S., 2012, A preliminary study of career education in middle school: *Journal of Career and Technical Education*, v. 27, p. 84-97.
- Wagner, L.S., Stewart, K., and Metcalf, K., 2012, Crustal-scale shortening structures beneath the Blue Ridge Mountains, North Carolina, USA: *Lithosphere*, p. 242-256, doi:10.1130/L184.1
- Supak, S., Leung, Y-F., Stewart K., 2010, Geotourism potential in North Carolina: perspectives from interpretation at state parks, *in* Newsome, D., and Dowling, R.K., eds., *Geotourism: The tourism of geology and landscape*: Goodfellow, London, p. 172-183.
- Miller, B.V., Stewart, K.G., Whitney, D.L., 2010, Three tectonothermal pulses recorded in eclogite and amphibolite of the Eastern Blue Ridge, Southern Appalachians *in* Tollo, R.P., Bartholomew, M.J., Hibbard, J.P., and Karabinos, P.M., eds., *From Rodinia to Pangea: the lithotectonic record of the Appalachian region*, Geological Society of America Memoir 206, p. 701-724, doi:10.1130/2010.1206(27)
- Waters-Tormey, C.L., and Stewart, K.G., 2010, Heterogeneous wrench-dominated transpression in the deep crust recorded by the Burnsville fault and related structures, Blue Ridge, North Carolina: Implications for the Acadian orogeny in the Southern Appalachians *in* Tollo, R.P., Bartholomew, M.J., Hibbard, J.P., and Karabinos, P.M., eds., *From Rodinia to Pangea: the lithotectonic record of the Appalachian region*, Geological Society of America Memoir 206, p. 917-934, doi:10.1130/2010.1206(35).
- Bartholomew, M.J., Stewart, K.G., Wise, D.U., and Ballantyne, H., 2008, Paleoseismites: Indicators of Laramide tectonism and other events near the Bighorn Basin, Montana and Wyoming: *Northwest Geology*, v. 37, p. 135-158.
- Stewart, K. G., Bartholomew, M. J., and Ballantyne, H. A. (2008). Laramide paleoseismites of the bighorn basin; Roaming the Rocky Mountains and environs; Geological field trips. *GSA Field Guide*, 10, 249-263. doi:10.1130/2008.fld010(13)
- Stewart, K.G., and Roberson, M.R.. 2007, *Exploring the Geology of the Carolinas*; University of North Carolina Press, Chapel Hill, North Carolina, 320 pp.
- Miller, B.V., Fetter, A.H., and Stewart, K.G., 2006, Plutonism in three orogenic pulses, Eastern Blue Ridge Province, southern Appalachians: *Geological Society of America Bulletin*, v. 18, p. 171-184.
- Trupe, C. H., Stewart, K. G., Adams, M. G., and Foudy, J. P., 2004, Deciphering the Grenville of the southern Appalachians through evaluation of the post-Grenville tectonic history in northwestern North Carolina, *in* R. P. Tollo, L. Corriveau, J. B. McLelland, and M. J. Bartholomew, eds., *Proterozoic tectonic evolution of the Grenville orogen in North America*: Boulder, Colorado, Geological Society of America Memoir 197, p. 679-695.
- Pollock, C.J., Stewart, K.G., Hibbard, J.P., Wallace, L., and Giral, R., 2004, Thrust wedge tectonics and strike-slip faulting in the Sierra Nacimiento, New Mexico, *in* Cather, S.M., McIntosh, W.C., and Kelley, S.A., eds, *Tectonics, geochronology, and volcanism in the Southern Rocky Mountains and Rio Grande rift*, New Mexico Bureau of Geology and Mineral Resources, Bulletin 160. p. 97-112.
- Trupe, C.H., Stewart, K.G., Adams, M.G., Waters, C.L., Miller, B.V., and Hewitt, L.K.,

- 2003, The Burnsville fault: Evidence for the timing and kinematics of Acadian dextral transform tectonics in the southern Appalachians: *Geological Society of America Bulletin*, v. 115, no. 11, p. 1365-1376.
- Stewart, K.G., Dennison, J.M., and Bartholomew, M.J., 2002, Late Mississippian paleoseismites from southeastern West Virginia and southwestern Virginia, *in*, Rast, N, and Etensohn, F.R, and Brett, C.E., eds., *Ancient Seismites: Geological Society of America Special Paper 359.*, p. 127-144.
- Hibbard, J.P., Stewart, K.G., and Henika, W.S., 2001, Framing the Piedmont Zone in North Carolina and Southern Virginia, in Hoffman, C.W., editor, *Field Trip Guidebook, 50<sup>th</sup> Annual Meeting, Southeastern Section, Geological Society of America*, p. 1-26.
- Dennison, J.M., and Stewart, K.G., editors, 2000, *Geologic Field Guide to Extensional Structures along the Allegheny Front in Virginia and West Virginia near the Giles County Seismic Zone: West Virginia Geological Survey Open File Report OF9805*, 101p.
- Roberson, M-R, West, N.W., and Stewart, K.G., 1999, *Learning In The Natural Laboratory: An Introductory Geology Lab Manual*, Revised edition: Kendall/Hunt, 111 p.
- Dennison, J.M., and Stewart, K.G., editors, 1998, *Geologic Field to Extensional Structures along the Allegheny Front in Virginia and West Virginia near the Giles County Seismic Zone: Field trip guidebook for Southeastern Section Geological Society of America meeting, Charleston, West Virginia*, 101p.
- Dennison, J.M., Mehlhop, A.L., and Stewart, K.G., 1998, Geologic setting of field trip, in Dennison, J.M., and Stewart, K.G., editors, *Geologic Field to Extensional Structures along the Allegheny Front in Virginia and West Virginia near the Giles County Seismic Zone: Field trip guidebook for Southeastern Section Geological Society of America meeting, Charleston, West Virginia*, p. 1-22.
- Roberson, M-R, West, N.W., and Stewart, K.G., 1997, *Learning In The Natural Laboratory: An Introductory Geology Lab Manual: Kendall/Hunt*, 188 p.
- Stewart, K.G., Adams, M.G., and Trupe, C.H., 1997, Paleozoic structural evolution of the Blue Ridge thrust complex, western North Carolina: in Stewart, K.G., Adams, M.G., and Trupe, C.H., editors, *Carolina Geological Society 1997 Field Trip Guidebook*, p. 21-31.
- Stewart, K.G., Adams, M.G., and Trupe, C.H. (editors), 1997, Paleozoic structure, metamorphism, and tectonics of the Blue Ridge of western North Carolina: *Carolina Geological Society 1997 Field Trip Guidebook*, 101 p.
- Adams, M.G., Mallard, L.D., Trupe, C.H., and Stewart, K.G., 1996, Computerized geologic compilation: in Depaor, D.G., editor, *Structural Geology and Computers*, Pergamon, p. 457-470.
- Mehlhop, A.L., Dennison, J.M., and Stewart, K.G., 1996, Extensional structures along the Allegheny Front in Virginia and West Virginia near the Giles County seismic zone: in J.M. Dennison, editor, *Geologic Field Guide to Devonian Hydrocarbon Stratigraphy, Charleston, West Virginia, Appalachian Geological Society*, p. 135-149.
- Stewart, K.G., 1996, Book review of: *The Geology of Switzerland: An Introduction to Tectonic Facies*, by Kenneth J. Hsü: *American Scientist*, v. 84, p. 498.

- Adams, M.G., Stewart, K.G., Trupe, C.H., and Willard, R.A., 1996, Tectonic significance of high-pressure metamorphic rocks and dextral strike-slip faulting in the southern Appalachians: in Hibbard, J.P., van Staal, C.R., Cawood, P., and Colman-Sadd, S., eds., *New Perspectives in the Appalachian-Caledonian Orogen*, Geological Association of Canada Special Paper 41, p. 21-42.
- Hodgkins, M.A., and Stewart, K.G., 1994, The use of fluid inclusions to constrain fault zone temperature and kinematic history: An example from the Alpi Apuane, Italy: *Journal of Structural Geology*, v. 16, p. 85-96.
- Stewart, K.G., and Hibbard, J.P., 1992, Low-angle thrust faulting at the eastern edge of the San Juan Basin associated with the Nacimiento Uplift: San Juan Basin IV, *New Mexico Geological Society, Guidebook 43*, p. 7-9.
- Dennison, J.M., and Stewart, K.G. (editors), 1992, *Geologic field guides to North Carolina and vicinity: University of North Carolina at Chapel Hill, Geologic Guidebook No. 1*, 233 p.
- Stewart, K.G., and Alvarez, W., 1991, Mobile-hinge kinking in layered rocks and models: *Journal of Structural Geology*, v. 13, p. 243-259.
- Bice, D.M., and Stewart, K.G., 1990, The formation and drowning of isolated carbonate seamounts: tectonic and ecological controls in the northern Apennines, in Tucker, M.E., Wilson, J.L., Crevello, P.D., Sarg, J.R., and Read, J.F., eds., *Carbonate Platforms: Facies, Sequences, and Evolution*, International Association of Sedimentologists Special Publication no. 9., p. 145-168.
- Stewart, K.G., and Castellarin, A., 1989, Exotic clasts in a Pliocene conglomerate near Pesaro have an Alpine source: *Bollettino Societa Geologica Italiana*, v. 108, p. 607-618.
- Stewart, K.G., 1986, Book review of: *The Techniques of Modern Structural Geology, Vol. 1: Strain Analysis*, by J.G. Ramsay and M.I. Huber: *Tectonophysics*, v. 127, no. 1/2, p. 175-176.
- Bice, D.M., and Stewart, K.G., 1985, Ancient erosional grooves on exhumed by-pass margins of carbonate platforms: Examples from the Apennines: *Geology*, v. 13, p. 565-568. Vol. 34.

### **Abstracts 2013-2019**

- Bartholomew, M.J., Kwon, Y., Stewart, K. G., Hill, J. S., Wooten, R. M., Witt, A. C., Prince, P., Evans, M. A., Jackson Jr., W. T, And Cook, B., 2019, Relic Appalachian uplands: landscapes that may have evolved from the front- and back-sides of rifting: *Geological Society of America Abstracts with Programs*. Vol. 51, No. 3,
- Hill, J.S., Stewart, K.G., Biryol, B.C., 2018, Young topography, new faults, and mantle reorganization in an ancient mountain range: A case study from the Appalachians: *Geological Society of America Abstracts with Programs*. Vol. 50, No. 3, doi: 10.1130/abs/2018SE-313229
- Greenawald, D., Stewart, K.G., and Gaynor, S., 2017, Amphibolite zircon U-Pb geochronology in the Ashe Metamorphic Suite, Eastern Blue Ridge, North Carolina: *Geological Society of America Abstracts with Programs*. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-305430
- Blackwell, Emma, Stewart, Kevin, Montanari, Alessandro, and Maniero, Maurizio, 2017, Structural and kinematic analysis of the Conero Riviera from Ancona to

- Portonovo, Italy: Geological Society of America *Abstracts with Programs*. Vol. 49, No. 3 doi: 10.1130/abs/2017SE-290757.
- Hill, Jesse S., Stewart, Kevin G., 2016, A newly discovered fault zone near Boone, North Carolina and Cenozoic topographic rejuvenation of the Southern Appalachian mountains: Geological Society of America *Abstracts with Programs*. Vol. 48, No. 7 doi: 10.1130/abs/2016AM-283940.
- Stewart, Kevin G., and Hill, Jesse S., 2016. Post-orogenic uplift of the Southern Appalachians: Geological Society of America *Abstracts with Programs*. Vol. 48, No. 7 doi: 10.1130/abs/2016AM-287660.
- Gavel, Michelle, Stewart, Kevin G. and Hill, Jesse S., 2016, Kinematic vorticity analysis of the Linville Falls thrust sheet near Boone, NC: Geological Society of America *Abstracts with Programs*. Vol. 48, No. 7, doi: 10.1130/abs/2016AM-285734.
- Bridgeman, J.L. and Stewart K.G., 2015, Diachronous metamorphism between amphibolite and eclogite of the Ashe Metamorphic Suite and implications for the Southern Appalachians: Geological Society of America *Abstracts with Programs*. Vol. 47, No. 2, p. 22.
- Hill, J.S. and Stewart, K.G., 2015, Automatic detection of knickpoints and comparison of stream directions relative to foliation along streams of the western North Carolina Blue Ridge: Geological Society of America *Abstracts with Programs*. Vol. 47, No. 2, p. 4.
- Stewart, K.G., 2015, Estimates on the magnitude and timing of post-orogenic topographic rejuvenation of the Southern Appalachians using isostasy and deformed coastal plain rocks: Geological Society of America *Abstracts with Programs*. Vol. 47, No. 2, p. 82.
- Hill, J.S., and Stewart, K.G., 2014, Automatic selection of knickpoints in longitudinal river profiles using open-source R script and a combination of normalized steepness, smoothed slope, and sum of the differences: Geological Society of America *Abstracts with Programs*. Vol. 46, No. 6, p.523.
- Bridgeman, J.L., and Stewart, K.G., 2014, Determining the extent of eclogite facies metamorphism in the Eastern Blue Ridge through geochemical analysis of surrounding amphibolite bodies: Geological Society of America *Abstracts with Programs*. Vol. 46, No. 6, p.552.
- Odom, William E., III, and Stewart, K.G., 2014, Analyzing symmetry of valleys at stream bends to characterize possible Neogene uplift in the Blue Ridge mountains of North Carolina: Geological Society of America *Abstracts with Programs*. Vol. 46, No. 3, p.96
- Neser, Laura, and Stewart, Kevin G., 2013, Cretaceous-Paleogene geology and the nature of Laramide deformation along the western edge of the Bighorn Basin, northwestern Wyoming: Geological Society of America *Abstracts with Programs*. Vol. 45, No. 7, p.376
- Neser, Laura, and Stewart, Kevin G., 2013, Spectral analysis of Paleogene red beds to reveal the location of the Paleocene-Eocene thermal maximum and the timing of Laramide deformation, northwestern Wyoming: Geological Society of America *Abstracts with Programs*, Vol. 45, No. 7, p.669

Hill, Jesse, S., and Stewart, Kevin G., 2013, Differential movement of discrete crustal blocks during Neogene uplift of the southern Appalachian Blue Ridge province: Geological Society of America *Abstracts with Programs*, Vol. 45, No. 7, p.723