

**Daniel K. Holm**

Department of Geology, Kent State University, Kent, OH 44242 USA  
Tel: 330.672.4094; Fax: 330.672.7949  
dholm@kent.edu

**Education**

**1992** Ph.D.-Geology, Harvard University. Advisor: Brian Wernicke.  
**1986-87** Fulbright student scholar, University of Otago, Dunedin, New Zealand.  
**1986** M.S.-Geology, University of Minnesota, Duluth. Advisor: Tim Holst.  
**1984** B.A.-Geology, University of Rochester, *magna cum laude*

**Professional Experience**

**2008-present** Chairman, Dept. of Geology, Kent State University  
**2008 (spring)** Faculty Fulbright Scholar, Krakow Poland  
**2003-present** Professor of Geology, Dept. of Geology, Kent State University  
**1999-2008** Assistant Chairman, Dept. of Geology, Kent State University  
**1997-2003** Associate Professor of Geology with tenure, Kent State University  
**1992-97** Assistant Professor of Geology, Kent State University

**Field Experience**

Extensive field work in the southern Lake Superior region (director of thirteen MS thesis projects)  
Mapping of the Black Mountains, Death Valley, CA (Ph.D. dissertation related)  
Mapping of the Pine Valley Mountains, southwest Utah (Director of one Ph.D. and three MS thesis projects)  
Mesostructural analysis, Franz Josef Glacier valley, New Zealand (Fulbright student experience)

**Current Research Interests**

Proterozoic tectonic evolution of the southern Lake Superior region  
Exhumation of high-pressure rocks in the Sudetes, southern Poland and Czech Republic  
Application of AMS and structural analysis on igneous and high-grade metamorphic rocks (Utah, Montana, and Poland)

**Honors and Awards:**

GSA Fellow (elected 2007)  
NSF CAREER Awardee  
Faculty Fulbright Scholar Awardee  
Phi Beta Kappa

**Editorships held:** Associate Editor of Precambrian Research (Jan. 2006 to present); Guest Editor of Special Issue of Precambrian Research (2007).

**External Research Grants:**

NSF EAR-9304070 Unroofing history of the Early Proterozoic Penokean fold-and-thrust belt (\$88,380; 1993-96)  
NSF EAR-9303909 (with Dahl, KSU) Acquisition of a magstream separator (\$11,700; 1993-95)  
ACS-PRF Assessing vertical axis rotations in large magnitude extensional regimes: A case study of the Black Mountains, Death Valley extended terrane, CA (\$20,000; 1994-97)  
NSF CAREER Award (EAR 9526944) Tectonic setting, depth of emplacement, and unroofing history of the Middle Proterozoic Wolf River batholith and associated plutons, Wisconsin (\$126, 119; 1995-99).  
NSF EAR-9902704 (with Van Schmus, KU) Post-Penokean crustal stabilization in the Lake Superior region, north-central United States (\$69,900 Kent portion; 1999-2002)

USGS Structure, stratigraphy, and geologic history of the Pinto Quadrangle, southwest Utah (EDMAP program, \$7000; 2000-01)

NSF EAR-02-07392 (with Schneider, OU) Influence of a Proterozoic southern Laurentia long-lived convergent orogen in the Lake Superior region, USA (Kent Portion \$135,000 with one year supplement; 2002-05).

Bema Gold Corporation: Structural controls of gold mineralization in western Ethiopia (\$15,500; 2005-2006).

**Internal Research Grants:** Awarded ten University Research Council grants of \$2500 each for ongoing research projects in the Black Hills, Upper Great Lakes, southwest Utah, southern Poland, and central Montana (92, 94, 97, 99, 00, 01, 02, 03, 04, and 06).

**Courses Taught:** Earth Dynamics, Structural Geology, Tectonics & Orogeny, Precambrian Geology, Advanced Structural Geology, Research Orientation, First Year Colloquium, Field Geology (Black Hills, SD; Colorado Springs, CO).

**Teaching Grants and Honors:** Twice nominated for the College of Arts & Sciences Distinguished Teacher Award (1993, 2003); five time recipient of the Glenn W. Frank Distinguished Teacher Award (1995, 1999, 2001, 2003, 2005); three time recipient of Teaching Council grants (1994, 1998, 2001).

**Graduate advisees:** David Schneider (MS, 1995), Kim Darrah (MS, 1996), David Hacker (Ph.D., 1998), Denise Romano (MS, 1999), Craig Mancuso, (MS, 2000), Dan Schweitzer (MS, 2001), Christie O'Boyle (MS, 2003), Mary McKenzie (MS, 2004), BJ Arnold (MS, 2005), Jeff Loofboro (MS, 2005), Don Cornell (MS, 2005), Amanda Gross (MS, 2006), Peggy Stonier (MS, 2006), Elizabeth Fein (2008, expected), Merida Keatts (MS, 2008, expected), Angie Hull (MS, expected 2009), Jenna Hojnowski (MS, expected 2010).

**Publications:**

- 48] Mazur, S., Czerny, J., Majka, J., Manecki, M., Smyrak, A., Wypych, A., & Holm, D., in review, A strike-slip terrane boundary in Wedel Jarlsberg Land, Svalbard, and its bearing on correlations of SW Spitsbergen with the Pearya terrane and Timanide belt: *J. Geological Society of London* (submitted Sept. 1, 2008).
- 47] Medaris, L.G., Dott, R.H., Singer, B.S., Van Schmus, W.R., & Holm, D.K., 2008, Reply to N. Van Wyck's Comment on "Two Paleoproterozoic (Statherian) siliciclastic metasedimentary sequences in central Wisconsin: The end of the Penokean Orogeny and cratonic stabilization of the southern Lake Superior region" *Precambrian Research*, v. 164, p. 236-238.
- 46] Majka, J., Mazur, S., Manecki, M., Czerny, J., & Holm, D., 2008, Late Neoproterozoic amphibolite facies metamorphism of a pre-Caledonian basement block in southwest Wedel Jarlsberg Land, Spitsbergen: new evidence from U-Th-Pb dating of monazite. *Geological Magazine* (in press).
- 45] Pressler, R., Schneider, D.A., Petronis, M., Holm, D.K., & Geissman, J., 2007, Pervasive horizontal fabric and rapid vertical extrusion: lateral over-turning and margin sub-parallel flow of deep crustal migmatites, northeastern Bohemian Massif: *Tectonophysics*, v. 443, p. 19-36.
- 44] Holm, D.K., Schneider, D., & Chandler, V.W., 2007, Proterozoic tectonic and crustal evolution of the Upper Great Lakes region, North America: *Precambrian Research*, v. 157, p. 1-3.
- 43] Medaris, L.G., Jr., Van Schmus, W.R., Loofboro, J., Stonier, P.J., Zhang, X., Holm, D.K., Singer, B.S., & Dott, R.H., Jr., 2007, Two Paleoproterozoic (Statherian) siliciclastic metasedimentary sequences in central Wisconsin: The end of the Penokean Orogeny and cratonic stabilization of the southern Lake Superior region: *Precambrian Research*, v. 157, p. 188-202.

- 42] Holm, D.K., Schneider, D.A., Rose, S., Mancuso, C., McKenzie, M., Foland, K., Hodges, K.V., 2007, Proterozoic metamorphism and cooling ages from the southern Lake Superior region, USA: Precambrian Research, v. 157, p. 106-126.
- 41] Van Schmus, W.R., Schneider, D.A., Holm, D.K., Dodson, S., Nelson, B.K., 2007, New insights into the southern margin of the Archean-Proterozoic transition in the north-central U.S. based on U-Pb, Sm-Nd, and Ar-Ar geochronology: Precambrian Research, v. 157, p. 80-105.
- 40] Tohver, E., Holm, D.K., van der Pluijm, B.A., Essene, E.J., Cambray, F.W., 2007, Late Paleoproterozoic (geon 18 and 17) reactivation of the Neoproterozoic Great Lakes Tectonic Zone, northern Michigan, USA: Precambrian Research, v. 157, p. 144-168
- 39] Piercey, P., Schneider, D.A., Holm, D.K., 2007, Proterozoic metamorphic geochronology of the deformed Southern Province, northern Lake Huron region, Canada: Precambrian Research, v. 157, p. 127-143.
- 38] NICE Working Group (Holm, D.K., corresponding author), 2007, Reinterpretation of Paleoproterozoic accretionary boundaries of the north-central United States based on a new aeromagnetic-geologic compilation: Precambrian Research, v. 157, p. 71-79.
- 37] Hacker, D.B., Petronis, M.S., Holm, D.K., and Geissman, J.W., 2007, Shallow level emplacement mechanisms of the Miocene Iron Axis laccolith group, southwest Utah: Utah Geological Association Publication 35, p. 1-49 (CD-ROM).
- 36] Dahl, P.S., Hamilton, M.A., Wooden, J., Foland, K., Frei, R., McCombs, J., Holm, D.K., 2006, 2480 Ma mafic magmatism in the northern Black Hills, South Dakota; a new link connecting the Wyoming and Superior cratons: Canadian Journal of Earth Sciences, v. 43 p. 1579-1600.
- 35] Gordon, S.M., Schneider, D.A., Manecki, M., Holm, D.K., 2005, Exhumation and metamorphism of an ultrahigh-grade terrane: geochronometric investigations of the Sudete Mountains (Bohemia), Poland and Czech Republic, Journal of the Geological Society of London, v. 162, p. 841-855.
- 34] Holm, D.K., Van Schmus, W.R., MacNeill, L.C., Boerboom, T.J., Schweitzer, D., Schneider, D.A., 2005, U-Pb zircon geochronology of Paleoproterozoic plutons from the northern mid-continent, U.S.A.: Evidence for subduction flip and continued convergence after geon 18 Penokean orogenesis: Geological Society of America Bulletin, v. 117, p. 259-275.
- 33] Boerboom, T., Holm, D.K., Van Schmus, R.W., 2005, Granites of the East-central Minnesota batholith: in Robinson, L., ed., Field trip guidebook for selected geology in Minnesota and Wisconsin: Minnesota Geological Survey Guidebook 21, p. 73-96.
- 32] Boerboom, T., Holm, D.K., Woodruff, L., Cannon, W., Wirth, K., 2005, The western margin of the Keweenawan midcontinent rift system: geologic highlights of Archean, Paleoproterozoic, Mesoproterozoic, and Paleozoic bedrock in eastern Minnesota and northwestern Wisconsin: in Robinson, L., ed., Field trip guidebook for selected geology in Minnesota and Wisconsin: Minnesota Geological Survey Guidebook 21, p. 181-207.
- 31] Schneider, D.A., Holm, D.K., O'Boyle, C., Hamilton, M., Jercinovic, M., 2004. Corresponding gneiss domes and metamorphic patterns of Paleoproterozoic Laurentia, northern Midcontinent, USA. In: Whitney, Teyssier and Siddoway (eds), Geological Society of America Special Paper 380: Gneiss domes in orogeny, p. 339-357.
- 30] Keatts, M., Holm, D.K., Boerboom, T.J., Jirsa, M.A., 2004. Generation of a 1790-1770 Ma continental arc batholith in east-central Minnesota: Compass, v. 78, p. 27-34.
- 29] Holm, D.K., Loofboro, J., and Rampe, J., 2004. Evaluating the roles of intrusion and orogenesis on the Proterozoic thermal history of the northern midcontinent, U.S.A.: Compass, v. 78, p. 35-45.
- 28] Petronis, M.S., Hacker, D.B., Holm, D.K., Geissman, J.W., Harlan, S.S., 2004, Magmatic flow paths and paleomagnetism of the Miocene Stoddard Mountain laccolith, Iron Axis region, southwest Utah, USA: In Martin-Hernandez, F., Luneburg, C.M., Aubourg, C., and Jackson, M. (eds), Magnetic Fabric: Methods and Applications. Geological Society, London, Special Publications, 238, p. 251-283.

- 27] Hacker, D., Holm, D.K., Rowley, P., Blank, R., 2002, Associated Miocene laccoliths, gravity slides and volcanic rocks, Pine Valley Mountains and Iron Axis region, southwestern Utah: USGS Open File Report 02-172, p. 235-283.
- 26] Holm, D.K., Schneider, D.A., 2002, Ar/Ar evidence for ca. 1800 Ma tectonothermal activity along the Great Falls tectonic zone, central Montana: Canadian Journal of Earth Sciences, v. 39, p. 1719-1728.
- 25] Petronis, M.S., Geissman, J.W., Holm, D.K., Schauble, E., Wernicke, B., 2002, Assessing vertical-axis rotations in large-magnitude extensional regimes: A transect across the Death Valley Extended Terrane, California: Journal of Geophysical Research, v. 107, p. EPM 4-1 to 4-21.
- 24] Romano, D., Holm, D.K., and Foland, K., 2000, Determining the extent and nature of post-Penokean Mazatzal-related overprinting in the southern Lake Superior region, north-central United States: Precambrian Research, v. 104, p. 25-46.
- 23] Boerboom, T., and Holm, D.K., 2000, Early Proterozoic Intrusive Igneous rocks of Southwestern Stearns County, Minnesota: Minnesota Geological Survey Report of Investigations 56, 36 p., 1 plate.
- 22] Holm, D.K., 1999, A geodynamic model for Early Proterozoic post-tectonic magma genesis in the southern Trans-Hudson (Black Hills, South Dakota) and Penokean (southern Lake Superior) orogens: in special issue (Proterozoic Magmatism) of Rocky Mountain Geology, v. 34, p. 183-194.
- 21] Dahl, P.S., Holm, D.K., Gardner, E.T., Foland, K.A., Hubacher, F.A., 1999, New constraints on the timing of Early Proterozoic tectonism in the Black Hills (South Dakota), with implications for docking of the Wyoming Province with Laurentia: Geological Society of America Bulletin, v. 111, p. 1335-1349.
- 20] Manecki, M., Holm, D.K., Czerny, J., and Lux, D., 1998, Thermochronologic evidence for late Proterozoic (Vendian) cooling in southwest Wedel Jarlsberg Land, Spitsbergen: Geological Magazine 135, p. 63-69.
- 19] Holm, D.K., Lux, D.R., 1998, Depth of emplacement and tilting of the Middle Proterozoic (1470 Ma) Wolf River batholith, Wisconsin: Ar/Ar thermochronologic constraints: Canadian Journal of Earth Sciences, v. 35, p. 1143-1151.
- 18] Holm, D.K., Schneider, D.A., Coath, C., 1998, Age and deformation of Early Proterozoic quartzites in the southern Lake Superior region: Implications for extent of foreland deformation during final assembly of Laurentia: Geology, v. 26, p. 907-910.
- 17] Holm, D.K., Darrach, K., Lux, D.R., 1998, Evidence for widespread ~1760 Ma metamorphism and rapid crustal stabilization of the Early Proterozoic (1870-1820 Ma) Penokean orogen, Minnesota: American Journal of Science, v. 298, p. 60-81.
- 16] Holm, D.K., Dahl, P.S., Lux, D.R., 1997, Ar/Ar evidence for Middle Proterozoic (1300-1500 Ma) slow cooling of the southern Black Hills, South Dakota, mid-continent, North America: Implications for early Proterozoic P-T evolution and post-tectonic magmatism: Tectonics, v. 16, p. 609-622.
- 15] Schneider, D.A., Holm, D.K., Lux, D.R., 1996, On the origin of Early Proterozoic gneiss domes and metamorphic nodes, northern Michigan: Canadian Journal of Earth Sciences, v. 33, p. 1053-1063.
- 14] Holm, D.K., Lux, D.R., 1996, Core complex model proposed for gneiss dome development during collapse of the Paleoproterozoic Penokean orogen, Minnesota: Geology, v. 24, p. 343-346.
- 13] Holm, D.K., 1995, Relation of deformation and multiple intrusion in the Death Valley extended region, California, with implications for magma entrapment mechanism: Journal of Geophysical Research, v. 100, p. 10,495-10,505.
- 12] Holm, D.K., Fleck, R.J., Lux, D.R., 1994, The Death Valley turtlebacks reinterpreted as Miocene-Pliocene folds of a major detachment fault: Journal of Geology, v. 102, p. 718-727.
- 11] Holm, D.K., Pavlis, T.L., Topping, D.J., 1994, Black Mountains Crustal Section, Death Valley Region, California: in Geological Investigations of an Active Margin: Geological Society of America Cordilleran Section Fieldtrip Guidebook, San Bernardino County Museum Association,

p. 31-54.

- 10] Holm, D.K., Geissman, J.W., Wernicke, B., 1993, Tilt and rotation of the footwall of a major normal fault system: Paleomagnetism of the Black Mountains, Death Valley extended terrane, California: Geological Society of America Bulletin, v. 105, p. 1373-1387.
- 9] Holm, D.K., Holst, T.B., Lux, D.R., 1993, Post-collisional cooling of the Penokean orogen, east-central Minnesota: Canadian Journal of Earth Sciences, v. 30, p. 913-917.
- 8] Holm, D.K., Dokka, R.K., 1993, Interpretation and tectonic implications of cooling histories: An example from the Black Mountains, Death Valley, California: Earth and Planetary Sciences letters, v. 116, p. 63-80.
- 7] Holm, D.K., Snow, J.K., Lux, D.R., 1992, Thermal and barometric constraints on the intrusive and unroofing history of the Black Mountains: Implications for timing, initial dip, and kinematics of detachment faulting in the Death Valley region, California: Tectonics, v. 11, p. 507-522.
- 6] Holm, D.K., Dokka, R.K., 1991, Major late Miocene cooling of the middle crust associated with extensional orogenesis in the Funeral Mountains, California: Geophysical Research Letters, v. 18, p. 1775-1778.
- 5] Holm, D.K., Wernicke, B., 1991, Black Mountains crustal section, Death Valley extended terrain, California: Geology, v. 18, p. 520-523.
- 4] Asmerom, Y, Snow, J.K., Holm, D.K., Jacobsen, S.B., Wernicke, B.P., Lux, D.R., 1990, Rapid uplift and crustal growth in extensional environments: An isotopic study from the Death Valley region, California: Geology, v. 18, p. 223-226.
- 3] Holm, D.K., Selverstone, J., 1990, Rapid growth and strain rates inferred from synkinematic garnets: Penokean orogeny, Minnesota: Geology, v. 18, p. 166-169.
- 2] Holm, D.K., Norris, R.J., Craw, D., 1989, Brittle and ductile deformation in a zone of rapid uplift: central Southern Alps, New Zealand: Tectonics, v. 8, p. 153-168.
- 1] Holm, D.K., Holst, T.B., Ellis, M.A., 1988, Oblique subduction, footwall deformation, and imbrication: a model for the Penokean orogeny in east-central Minnesota: Geological Society of America Bulletin, v. 100, p. 1811-1818.