

CURRICULUM VITAE
DAVID P. HAWKINS
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EDUCATION

- 1996 Ph.D.: Massachusetts Institute of Technology, Cambridge, MA
Thesis: U-Pb Geochronologic constraints on the tectonic and thermal evolution of Paleoproterozoic crust in the Grand Canyon, Arizona; Thesis Advisor: Samuel A. Bowring
- 1989-1991 PhD candidate: Washington University, St Louis, MO (before transferring to MIT)
- 1991 M.S.: The George Washington University, Washington, DC
Thesis: Geology of the Battle Mountain Complex, Robertson River Suite, northern Virginia; Thesis Advisor: Richard P. Tollo
- 1983 B.A. in Biology: Clark University, Worcester, MA

ACADEMIC APPOINTMENTS

- 2018 – Associate Professor Emeritus, Wellesley College (WC), Wellesley, MA
- 2013 – 2016 Chair, Department of Geosciences, Wellesley College (WC), Wellesley, MA
- 2008 – 2017 Associate Professor, Wellesley College (WC), Wellesley, MA (*tenured 2010*)
- 2007 - 2008 Chair, Department of Geosciences, Denison University (DU), Granville, OH
- 2005 - 2008 Associate Professor, Denison University (DU), Granville, OH
- 1999 - 2005 Assistant Professor, Denison University (DU), Granville, OH
- 1997 - 1999 Visiting Assistant Professor, Colorado College (CC), Colorado Springs, CO
- 1996 - 1997 Visiting Assistant Professor, Franklin & Marshall College (F&M), Lancaster, PA

EXTERNAL RESEARCH FUNDING OF NOTE

National Science Foundation Grant EAR-0536969 (2006-2009) “RUI: Collaborative Research: RUI: Linking pluton construction with magma chamber evolution in the Vinalhaven intrusive complex.” Awarded \$109,719 for a three-year research project conducted with co-Principal Investigator Dr. Robert Wiebe of Franklin & Marshall College.

National Science Foundation Grant EAR-0003555 (2001-2004) “*Collaborative Research: RUI: Mechanisms of hybridization in silicic magma chambers affected by mafic injections and their imprint on granite: The Vinalhaven complex, coastal Maine.*” Awarded \$104,371 for a three-year research project conducted with co-Principal Investigator Dr. Robert Wiebe of Franklin & Marshall College.

INTERNAL RESEARCH FUNDING OF NOTE

Wellesley College Brachman Hoffman Small Grant (2012), “*Refining the Paleogeography of Late Paleozoic Pangean North America.*” Awarded \$5,000.

Wellesley College Faculty Award (2012), “*Insights into Pangean Paleogeography.*” Awarded \$2,500.

Denison University Research Fund Grant (2000), “*Geologic Evidence for Explosive Volcanic Eruptions from Fossilized Granite Magma Chambers: Field Studies of Granite Plutons in Maine, Colorado & California.*” Awarded \$4,380.

SELECTED PUBLICATIONS (peer-reviewed)

- Wiebe, R. A. and Hawkins, D. P., 2015, Growth and impact of a mafic–silicic layered intrusion in the Vinalhaven Intrusive Complex, Maine: *Journal of Petrology*, v. 56, p. 273-298.
- Karlstrom, K.E., Ilg, B.R., Hawkins, D.P., Williams, M.L., Dumond, G., Mahan, K., and Bowring, S.A., 2012, Vishnu basement rocks of the Upper Granite Gorge: Continent formation 1.84 to 1.66 billion years ago, in Timmons, J.M., and Karlstrom, K.E., eds., *Grand Canyon Geology: Two Billion Years of Earth's History: Geological Society of America Special Paper 489*, p. 7-24.
- Wiebe, R.A., Wark, D.A., and Hawkins, D.P., 2007, Insights from quartz cathodoluminescence zoning into crystallization of the Vinalhaven granite, coastal Maine: *Contributions to Mineralogy and Petrology*, v. 154, p. 439-453.
- Wiebe, R.A., Jellinek, M., Markley, M.J., Hawkins, D.P., and Snyder, D., 2007, Steep schlieren and associated enclaves in the Vinalhaven granite, Maine: possible indicators for granite rheology: *Contributions to Mineralogy and Petrology*, v. 153, p. 121-138.
- Hawkins, D. P., and Wiebe, R. A., 2004, Discrete stoping events in granite plutons: A signature of eruptions from silicic magma chambers?: *Geology*, v. 32, p. 1021-1024.
- Wiebe, R. A., Manon, M. R., Hawkins, D. P. & McDonough, W. F., 2004, Late stage mafic injection and thermal rejuvenation of the Vinalhaven granite, coastal Maine: *Journal of Petrology*, v. 45, p 2133-2153.
- Wiebe, R.A., Blair, K., Hawkins, D.P., and Sabine, C., 2002, Mafic injections, in situ hybridization, and crystal accumulation in the Pyramid Peak granite, California: *Geological Society of America Bulletin*, v114, p. 909-920.
- Wiebe, R.A., Frey, H., and Hawkins, D.P., 2001, Basaltic pillow mounds in the Vinalhaven intrusion, Maine: *Journal of Volcanology and Geothermal Research*, v 107, p 171-184.
- Hawkins, D.P., and Bowring, S.A., 1999, U-Pb monazite, xenotime and titanite geochronologic constraints on the high-temperature thermal history of Paleoproterozoic migmatites from the Grand Canyon: *Contributions to Mineralogy and Petrology*, v. 134, p. 150-169.
- Hodges, K., Bowring, S., Davidek, K., Hawkins, D., and Krol, M., 1998, Evidence for rapid displacement on Himalayan normal faults and the importance of tectonic denudation in the evolution of mountain ranges: *Geology*, v. 26, p.483-486.
- Hawkins, D.P., and Bowring, S.A., 1997, U-Pb systematics of Monazite and xenotime: Case studies from the Paleoproterozoic of the Grand Canyon, Arizona: *Contributions to Mineralogy and Petrology*, v. 127, p. 87-103.
- Hawkins, D.P., Bowring, S.A., Ilg, B.R., Karlstrom, K.E., and Williams, M.L., 1996, U-Pb geochronologic constraints on Paleoproterozoic crustal evolution, Upper Granite Gorge, Grand Canyon, Arizona: *Geological Society of America Bulletin*, v. 108, p. 1167-1181.
- Ilg, B.R., Karlstrom, K.E., Hawkins, D.P., and Williams, M.L., 1996, Tectonic evolution of Paleoproterozoic rocks in the Grand Canyon: Insights into middle crustal processes: *Geological Society of America Bulletin*, v. 108, p. 1149-1166.
- Hoffman, P.F., Hawkins, D.P., Isachsen, C.E., and Bowring, S.A., 1996, Preliminary U-Pb zircon ages for early Damara magmatism in the Summas Mountains and Welwischia Inlier, northern Damara belt, Namibia: *in* *Communications of the Geological Survey of Namibia*, v 9, Windhoek.

FIELD GUIDES, BOOK CHAPTERS AND OTHER CONTRIBUTIONS

- Hawkins, D.P., and Wiebe, R.A., 2007, Construction of the subvolcanic Vinalhaven intrusive complex, coastal Maine, in Twentieth Annual Keck Research Symposium in Geology Proceedings, p. 96-135, http://keck.wooster.edu/publications/2007_abstracts/2007TOC.html.
- Karlstrom, K.E., Ilg, B.R., Williams, M.L., Hawkins, D.P., Bowring, S.A., and Seaman, S.J., 2004, Paleoproterozoic rocks of the Granite Gorges, *in* Beus, S.S. and Morales, M., eds., *Grand Canyon Geology*: New York, Oxford University Press, volume 2, p. 9-38.

FIELD GUIDES, BOOK CHAPTERS AND OTHER CONTRIBUTIONS – continued

- Wiebe, R.A., Snyder, D., Hawkins, D.P., 2001, GSA Field Forum: Correlating volcanic and plutonic perceptions of silicic magma chamber processes: Evidence from coastal Maine plutons: GSA Today, v 11, no. 1, p 26.
- Wiebe, R.A., and Hawkins, D.P., 2000, Igneous Geology of Vinalhaven Island: *in* New England Intercollegiate Geological Field Conference, 92nd Annual Meeting, Yates, M.G., Lux, D.R., and Kelley, J.T., eds., Guidebook to Field Trips in Coastal and East-Central Maine, p 94-106.
- Wiebe, R.A., Snyder, D., and Hawkins, D.P., *unpublished*, Guidebook: Geological Society of America Field Forum: Correlating volcanic and plutonic perceptions of silicic magma chamber processes: evidence for coastal Maine plutons: Ellsworth, Maine, September 14-18, 2000, 66p.

SELECTED CONFERENCE ABSTRACTS

- Karlstrom, K.E., Williams, M.L., Condie, K.C., Hawkins, D.P., Chamberlain, K.R., Crowley, J.L., 2016, Sam Bowring's Role in Redefining U-Pb Geochronology in the Southwestern USA (Invited Presentation): Geological Society of America - Abstracts with Programs, v. 48, no. 7, p. 39. doi: 10.1130/abs/2016AM-282380.
- Cantine, M.D., Sanchez, T.B., George, S.W., and Hawkins, D.P., 2013, Age Distribution Composition of Detrital Zircons in the Permian Brushy Canyon Formation, Delaware Basin, West Texas: Geological Society of America - Abstracts with Programs, v. 45, no. 5, p. 39.
- Duncan, C.R., Hoisington, A.E., and Hawkins, D.P., 2013, Insights into the Late Paleozoic Geology of an Ancestral Rocky Mountain Range from Detrital Zircon in the Fountain Formation, Manitou Springs, Colorado: Geological Society of America - Abstracts with Programs, v. 45, no. 5, p. 38.
- Hawkins, D., Brown, N., Wiebe, R., Klemetti, E., and Wobus, R., 2009, Documenting the Timescale of Pluton Construction: U-Pb Geochronology of the Subvolcanic Vinalhaven Intrusion and Associated Volcanic Rocks: Geological Society of America - Abstracts with Programs, vol. 41, no.7, p. 148.
- Hawkins, D. P., Thompson, M.D. & Wiebe, R. A., 2009, A strategy for paleomagnetic investigation of intrusive complexes in the northern Appalachians: Geological Society of America - Abstracts with Programs, vol. 41, no.3, p. 19.
- Hawkins, D. P. and Wiebe, R. A., 2007, Longevity of the Silurian Vinalhaven Intrusive Complex, Maine, USA: Eos, Transactions, AGU, v. 88, No. 52, p.
- Wiebe, R. A. & Hawkins, D.P., 2007, Episodic Growth and Solidification of the Vinalhaven Intrusive Complex, Maine, USA: Eos, Transactions, AGU, v. 88, No. 52, p.
- Hawkins, D. P. and Wiebe, R. A., 2004, Timescale for Incremental Construction of the Silurian Vinalhaven Intrusive Complex, Coastal Maine, USA: Eos, Transactions, AGU, v. 85, No. 47, p. F1935.
- Wiebe, R. A. & Hawkins, D.P., 2004, Construction of the Vinalhaven Intrusive Complex, Maine, USA: the Plutonic Record of Evolving Magma Chambers Affected by Multiple Episodes of Replenishment, Rejuvenation, Crystal Accumulation and Eruption: Eos, Transactions, AGU, v. 85, No. 47, p. F1931-2.
- Wiebe, R A; Wobus, R A; Hawkins, D P, 2004, Keck consortium field projects on the Maine coast: Geological Society of America - Abstracts with Programs, vol. 36, no.5, p. 418.
- Wiebe, R. A. & Hawkins, D.P., 2004, Multiple replenishments in an evolving silicic magma chamber: the Vinalhaven intrusive complex, Maine, USA: Geochimica et Cosmochimica Acta, (Goldschmidt Conference abstract).
- Hawkins, D. P. and Wiebe, R. A., 2003, High-precision temporal constraints on the construction of a periodically replenished, subvolcanic magma chamber: The Silurian Vinalhaven Intrusion, Maine, USA *in* Arima, M., Nakajima, T., and Ishihara, S., (editors) Hutton Symposium V: The Origin of Granites and Related Rocks, Abstract with Program: Geological Survey of Japan, Interim-Report 29, p 43.
- Wiebe, R.A., Manon, M.R., and Hawkins, D.P., 2003, Remobilization of the Vinalhaven granite by intrusion of basaltic magma, Maine, USA *in* Arima, M., Nakajima, T., and Ishihara, S., (editors) Hutton Symposium V: The Origin of Granites and Related Rocks, Abstract with Program: Geological Survey of Japan, Interim-Report 29, p 165.

SELECTED CONFERENCE ABSTRACTS – continued

- Hawkins, D. P. and Wiebe, R. A., 2003, U-Pb constraints on magmatism related to Vinalhaven intrusion, coastal volcanic belt, Maine: Geological Society of America Abstracts with Programs, v. 35, no. 3, p 69.
- Dektor, C.L., Hawkins, D. P., Wobus, R.A., and Wiebe, R. A., 2003, Implications of Silurian U-Pb ages of stratified rocks on Vinalhaven and North Haven Islands, Penobscot Bay, Maine: Geological Society of America Abstracts with Programs, v. 35, no. 3, p 36.
- Wiebe, R.A., and Hawkins, D.P., 2003, Construction of the Vinalhaven Intrusive Complex, Vinalhaven Island, coastal Maine: Geological Society of America Abstracts with Programs, v. 35, no. 3, p 94.
- Margolin, J.B., Wiebe, R.A., and Hawkins, D.P., 2003, The origin of compositionally graded layers in the Vinalhaven Intrusion, coastal Maine: Geological Society of America Abstracts with Programs, v. 35, no.3, p. 35.
- Hawkins, D. P., Wobus, R.A., and Wiebe, R. A., 2002, Silurian U-Pb zircon dates from the Vinalhaven intrusion and associated volcanic rocks, Penobscot Bay, Maine: Geological Society of America Abstracts with Programs, v. 34, p 42.
- Wiebe, R.A., Manon, M.R., and Hawkins, D.P., 2002, Thermal rejuvenation of the Vinalhaven granite, coastal Maine: Geological Society of America Abstracts with Programs, v. 34, p162.
- Hawkins, D. P. and Wiebe, R. A., 2000, Geological signatures of explosive eruptions in granitic plutons: examples from coastal Maine, USA. *in* Skilbeck, C. G. and Hubble, T C. T. (editors) Understanding Planet Earth: Searching for a Sustainable Future. Abstracts of the 15th Australian Geological Convention, Sydney, NSW, Australia. No. 59, p. 213. (invited talk)
- Hawkins, D.P., 1999, Field-based geochronological studies for teaching students about geological time and geological reasoning: Geological Society of America Abstracts with Programs, v. 31, no. 7, p 390.
- Hawkins, D.P., and Wiebe, R.A., 1999, Geologic evidence for volcanic eruption preserved in the stratigraphy of the Vinalhaven mafic-silicic layered intrusion, Penobscot Bay, Maine: Geological Society of America Abstracts with Programs, v. 31, no. 7, p 415.
- Sanders, R.E., and Hawkins, D.P., 1999, U-Pb geochronology of porphyritic clasts from the Pennsylvanian Fountain Formation, Colorado Front Range: Volcanic equivalents of the Pikes Peak batholith: Geological Society of America Abstracts with Programs, v. 31, no. 7, 178.
- Ilg, B. R.; Bowring, Samuel A., Hawkins, D., Karlstrom, K., Nobes, D. C., 1998, Tectonic evolution of Paleoproterozoic rocks in the Grand Canyon, Arizona; insights into middle crustal processes, in Williams, M., ed., New Zealand Geological Society Geological Society of New Zealand Miscellaneous Publication Vol. 101A. Lower Hutt: Geological Society of New Zealand, p. 125.
- Hawkins, D.P., and Bowring, S.A., 1997, U-Pb IDTIMS MicroAnalysis of Monazite: Implications for U-Pb Geochronology of monazite: GAC-MAC Special Symposium on Microanalytical Techniques in Geochronology, May 1997.
- Bowring, S. A., Hodges, K. V.; Hawkins, D. P., Coleman, D. S., Davidek, K. L. Karlstrom, K. E., 1996, Thermochronology of Proterozoic middle crust, Southwestern U. S., implications for models of lithospheric evolution: Abstracts with Programs - Geological Society of America Vol. 28, no. 7. Boulder, CO, p. 452.
- Hawkins, D.P., Bowring, S.A., Williams, M.L., Karlstrom, K.E., 1996, A detailed thermal evolution of Paleoproterozoic middle crust in the Grand Canyon: Constraints from U-Pb monazite, xenotime and sphene thermochronology: Geological Society of America Abstracts with Programs, v. 28, no. 7, p. A316.
- Hawkins, D.P., and Bowring, S.A., 1995, Age variation in U-Pb monazite data from Paleoproterozoic migmatite in the Grand Canyon: Implications for U-Pb monazite geochronometry: EOS, Transactions of the American Geophysical Union, v. 76, no. 46, p. F707.
- Bowring, S.A., Hodges, K.V., Hawkins, D.P., Coleman, D.S., and Davidek, K.L., 1995, Thermochronologic complexities in Proterozoic middle crust and implications for Proterozoic lithospheric evolution, southwestern U.S.: EOS, Transactions of the American Geophysical Union, v. 76, no. 46, p. F708.

SELECTED CONFERENCE ABSTRACTS – continued

- Hodges, K.V., Bowring, S.A., Coleman, D.S., Hawkins, D.P., Davidek, K.L., 1995, Multistage thermal history of the 4.0 Ga Acasta gneisses: EOS, Transactions of the American Geophysical Union, v. 76, no. 46, p. F708.
- Johnston, T., Thompson, M., Hawkins, D.P., and Bowring, S.A., 1995, U-Pb geochronology of Neoproterozoic Cambridge argillite: Stratigraphic implications in and beyond Boston, MA: Geological Society of America Abstracts with Programs, v. 27, no. 6, p. A-161.
- Hawkins, D.P., and Bowring, S.A., 1995, U-Pb geochronological constraints on the origin of Paleoproterozoic migmatites from the Grand Canyon, Arizona, USA: Implications for the timing and duration of peak metamorphism in a high grade terrain: International Conference on Tectonics and Metallogeny of Early/Mid Precambrian Orogenic belts, Precambrian '95, Program and Abstracts, p. 259.
- Hawkins, D.P., and Bowring, S.A., 1994, Complex U-Pb systematics of Paleoproterozoic monazite from the Grand Canyon, Arizona, USA, Abstracts of the eighth international conference on geochronology, cosmochronology and isotope geology: U.S. Geological Survey Circular 1107, p. 131.
- Hawkins, D.P., Bowring, S.A., Karlstrom, K.E., 1994, Evidence for pre-1.8 Ga crust in the Upper Granite Gorge, Grand Canyon, Arizona: Implications for the eastern limit of the Mojave Province: Geological Society of America Abstracts with Programs, v. 26, no. 6, p. 17-18.
- Karlstrom-K.E., Ilg, B. Hutchison, J. Hawkins, D.P., Bowring, S.A., Williams, M.L., 1994, Paleoproterozoic heterogeneous middle crustal flow during 1.71-1.68 Ga contractional deformation, Grand Canyon, Arizona: Geological Society of America Abstracts with Programs, v. 26, no. 6., p. 22.
- Hawkins, D.P., Bowring, S.A., Karlstrom, K.E., Ilg, B.R., 1993, U-Pb geochronologic constraints on early Proterozoic crustal evolution, Upper Granite Gorge, Grand Canyon, Arizona: Geological Society of America Abstracts with Programs, v. 25, no. 6, p. 238.

OTHER RESEARCH-RELATED PROFESSIONAL ACTIVITIES

Geological Society of America Penrose Conference

June 7-12, 2001, Mammoth Lakes, CA

Invited by the conveners to attend this six-day conference, entitled “Longevity and Dynamics of Rhyolite magma Systems,” involving an international group volcanologists, petrologists, geophysicists, and geochemists.

Co-Leader of a Field Trip in the New England Intercollegiate Field Conference (NEIGC)

October 7, 2000, Vinalhaven Island, ME

One day field trip was attended by 43 faculty and students from 15 colleges and universities. Although I co-planned the field trip and co-wrote the published field trip guide, I was unable to attend due to weather-related travel interruptions on this busy Columbus Day weekend.

Co-Director of a Geological Society of America Field Forum

September 14-16, 2000, Ellsworth, ME

This forum, entitled “Correlating Volcanic and plutonic Perceptions of Silicic Magma Chamber Processes: Evidence from Coastal Maine Plutons,” was attended by 33 petrologists, volcanologists, geophysicists and geochemists from seven countries (Argentina, Australia, Canada, England, Germany, Japan and 17 states in the US). The forum involved daily field trips and evening presentations and discussions. The Forum was co-directed with Bob Wiebe of Franklin & Marshall College and Don Snyder of the University of Michigan.

MULTI-INSTITUTION UNDERGRADUATE RESEARCH PROJECTS

Director of a Keck Geology Consortium Research Project (Summer 2006 and AY06-07)

Directed (with Bob Wiebe of Franklin & Marshall College) of a Keck Geology Consortium Research Project on Vinalhaven Island, Penobscot Bay, Maine. The four-week-long field project involved six undergraduate students who each completed a senior thesis during the academic year. I helped each student design their research project and collect field data and field observations, advised them during the school year, and edited each their contribution to the Keck Symposium Volume. I also wrote an article summarizing the project for the Symposium Proceedings Volume.

Alice Colman, *Oberlin College*
Nicholas Cuba, *Amherst College*
Matthew Hoffman, *Denison University*

William Guenther, *Carleton College*
Daniel Hawkins, *Eastern Kentucky University*
Owen McKenna, *Bowdoin College*

Co-Director of a Keck Geology Consortium Research Project (Summer 2001 and AY01-02)

Co-directed (with Bob Wiebe of Franklin & Marshall College and Bud Wobus of Williams College) a Keck Geology Consortium Research Project on Vinalhaven Island, Penobscot Bay, Maine. The five-week-long field project involved seven undergraduate students who each completed a senior thesis during the academic year. I assisted each student design their research project and collect critical field data and observations. I supervised the thesis of the Denison student.

Nathan Brill, *Amherst College*
Nathan Cardoos, *Williams College*
Andrew Gordon, *Pomona College*
Richard Henterly, *Denison University*

Matthew Manon, *Franklin & Marshall College*
Lindsay Szramek, *Bowdoin College*
Noah Westgate, *Pomona College*

Co-Director of a Keck Geology Consortium Research Project (Summer 1998 and AY98-99)

Co-directed (with Bob Wiebe of Franklin & Marshall College and Bud Wobus of Williams College) a Keck Geology Consortium Research Project on Vinalhaven Island, Penobscot Bay, Maine. The five-week-long field project involved ten undergraduate students. I helped each student design their own research project and directly supervised the student at Colorado College.

Caroline Bruno, *Franklin & Marshall College*
Mary Beth Cherversia, *College of Wooster*
Holli Frey, *Franklin & Marshall College*
Erik Klemetti, *Williams College*
Megan Mandernach, *College of Wooster*

Jennifer Newtown, *Williams College*
Brian Porter, *Amherst College*
Michael Rhodes, *Carleton College*
Blair Schoene, *Colorado College*
Martha Wilson, *Whitman College*

SENIOR/HONORS THESES

Disha Okhai, 2017, Wellesley College, *Characterization of the Source Rocks Exposed in the Permian Florida Mountains of Equatorial Pangea.*

Sarah George, 2014, Wellesley College, *Distinguishing proximal and distal sources of sandstone by combining U-Pb age, and geochemical signatures of detrital zircons populations: An example from the Permian Brushy Canyon Formation, West Texas.*

Matthew Hoffman, 2007, Denison University, *Growth Histories of Zircon Crystals in Coarse-Grained Granite, Vinalhaven Intrusion, Coastal Maine.*

Christine Dektor, 2003, Denison University, *Implications of Silurian U-Pb ages of stratified rocks on Vinalhaven and North Haven Islands, Penobscot Bay, Maine.*

Richard Henterly, 2002, Denison University, *Petrochemistry of a mafic replenishment layer in the Vinalhaven pluton, Vinalhaven Island, Penobscot Bay, Maine.*

R. Blair Schoene, 1999, The Colorado College: *Field, petrographic, and geochemical characterization of stratigraphy at the base of the Vinalhaven pluton, Vinalhaven Island, Maine.*

SENIOR/HONORS THESES – continued

- Robert E. Sanders, 1999, The Colorado College: *Age of the Keeton porphyry and clast lithologies within the Pennsylvanian Fountain Formation: Implications for the composition of the upper Pikes Peak batholith, CO.*
- Carrie Brugger, 1999, The Colorado College: *Petrology and geochemistry of Tertiary volcanic rocks in the Crawfish Lake Quadrangle, Elkhorn Mountains, Oregon* (co-advisor).
- Amber McIntosh, 1998, The Colorado College: *Quaternary volcanic rocks in the high Cascades of southern Oregon* (co-advisor).
- Elizabeth M. Stone, 1997, Franklin & Marshall College: *Petrochemistry of the plutons in the Heart Mountain allochthon, northwest Wyoming* (co-advisor).

DIRECTED/INDEPENDENT STUDY RESEARCH PROJECTS

- Margaret Zarlengo, 2017, Wellesley College: *Does the trace element composition of igneous zircon grains reflect the tectonic environment of the magma from which they crystallized?*
- Isabelle Herde, 2016-17, Wellesley College: *Does the trace element composition of igneous zircon grains reflect the tectonic environment of magma production?*
- JoNan Bilodeau (DS), 2016-17, Wellesley College: *Constraining the provenance of 1.1. billion year old detrital zircon grains in the Late Paleozoic Delaware Basin of west Texas.*
- Isabelle Herde, 2015, Wellesley College: *Strategies for portraying trace element geochemical variation in detrital zircon populations.*
- Iglika Atanassova, 2014-2015, Wellesley College: *Expanding the criteria for distinguishing the provenance of siliciclastic sedimentary rocks: Implications for detrital zircon studies.*
- Sarah George, 2013, Wellesley College: *Potential Sources for Zircons in the Brushy Canyon Formation.*
- Marjorie Cantine, 2012-2013, Wellesley College: *The Provenance of the Brushy Canyon Formation and its Implications for Regional Sediment Transport During the Permian of Pangea.*
- Caroline Duncan, 2012-2013, Wellesley College: *Was the Pikes Peak Batholith a Point Source of Sediment during the Late Paleozoic?*
- Alex Hoisington, 2012-2013, Wellesley College: *Characterization of Zircons in Clasts and Sediment Eroding from the Ancestral Rocky Mountains in the late Pennsylvanian and early Permian.*
- Taylor Sanchez, 2011-2012, Wellesley College: *Source of Sediment in the Permian Delaware Basin, TX.*
- Noranda Brown (DS), 2012, Wellesley College: *Short Course of Geophysics: Gravity Anomalies.*
- Noranda Brown (DS), 2011, Wellesley College: *Influence of subducted serpentinite on arc lavas.*
- Kim Reed, 2011, Wellesley College: *The Evolution of the Caribbean Plate and the Lesser Antilles Arc.*
- Kate Philbrick, 2010-2011, Wellesley College: *A Study of the Geology of Northern Yellowstone.*
- Noranda Brown (DS), 2009, Wellesley College: *Evidence of magma mixing in the Vinalhaven diabase.*
- Noranda Brown (DS), Summer 2009, Wellesley College: *Evidence of magma mixing in the Vinalhaven diabase.*
- Chelsea Neill, 2007-2008, Denison University: *Changes in Volcanology over a century: From the 1902 eruption of Mt. Pelée, Martinique to the 1995 eruption of the Soufrière Hills, Montserrat.*
- Lauren Noble, 2004, Denison University: *Depictions of volcanoes in Art History.*
- Kelly Barrett, 2004, Denison University: *Tsunamis in the Atlantic Ocean basin.*
- Christine Dektor, 2003, Denison University: *Structural Geology.*
- Margaret Kinsella, 2002, Denison University: *Petrology of Island Arcs.*
- Heather McPherson, 2001, Denison University: *Volcanoes of the Taupo Volcanic Zone, New Zealand.*
- Richard Henterly, 2001, Denison University: *Regional Geology of Penobscot Bay, Maine.*
- Kristen Lydy, 2000, Denison University: *Geology & remote sensing of the Cima Volcanic Field, CA.*
- Grant Kaye, 1999, Colorado College: *Eruptive History & field guidebook to the Long Valley caldera, CA*

UNDERGRADUATE RESEARCH ASSISTANTS HIRED ON NSF GRANTS

Noranda Brown, Kimberly Corwin and Kylene Romine (Summer 2009): Field and research assistants during on Mt Desert Island (Acadia National Park). Supported by NSF Grant EAR-0536969.

Joe Boreman, Maddie Mohre, Zack Trunkely, Christine Wissink (June 2006): Visitors and field trip participants at the beginning of the Vinalhaven Keck Project. Funded by NSF Grant EAR-0536969

Alex Lechler and Rose Fortman (June 2006): Field assistants for myself and Matt Hoffman on Vinalhaven Island. Funded by NSF Grant EAR-0536969

Matt Hoffman and Rose Fortman (August 2005): Participated in a five day field trip to plutons on the Maine coast. Funded by Denison accounts.

Christine Dektor (Summer 2003): Christine built upon her senior research by completing additional literature research that focused on a compilation of all described fossils in the Silurian of the Maritime provinces of Canada. Funded by NSF Grant EAR-0003555.

Kelly Barrett (Summer 2003): Kelly organized my rock specimens in a new storage unit, and expanded and documented my collection of digital images. Funded by NSF Grant EAR-0003555.

Chris Russell & Brand Rodenberg (Summer 2002) field assistants on Vinalhaven Island for myself and Christine Dektor as Christine completed field work and sampling for her senior thesis project. Funded by NSF Grant EAR-0003555.

Kelly Barrett and Chris Russell (Fall 2001): Both Kelly and Chris digitized my collection of photographic slides for use in classes. Funded by departmental funds & DURF Grant.

Rick Henterly (Sept 2001 – May 2002): Rick completed sample work associated with my research in Maine while he completed the work on his senior research project. Funded by DURF Grant and NSF Grant EAR-0003555.

Christa Lackmeyer (Sept 2001 to May 2002): Christa acquired research and teaching resources from the library. Funded by departmental funds, DURF Grant and NSF Grant EAR-0003555.

Christa Lackmeyer and Stephanie Konfal (Sept 2000 to May 2001): Christa and Stephanie cut rock samples for thin sections (for research), organized my collection of research papers, field guidebooks, and maps, acquired research resources from the library, and helped me establish and organize my rock processing labs. Funded by departmental funds and DURF Grant.

Christine Dektor (Sept 1999 to May 2003): Christine cut rock samples for thin sections (teaching resources), curated the department's teaching collection of rocks, and helped me process samples for research in Maine. Funded by departmental funds, DURF Grant and NSF Grant EAR-0003555.

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science

American Geophysical Union, *Life Member*

The Geochemical Society

Geological Society of America

International Association of Volcanology and Chemistry of the Earth's Interior, *Life Member*

Mineralogical Society of America

EXTENDED FIELD TRIPS FOR UNDERGRADUATE STUDENTS

<u>Location</u>	<u>When</u>	<u>Duration (days)</u>	<u>Travel By</u>	<u>Role</u>	<u>Students</u>
<i>Field Trips from Wellesley College</i>					
<i>Death Valley, Owens Valley, Long Valley C.</i>	<i>Jan 2017</i>	<i>19</i>	<i>plane + vans</i>	<i>L</i>	<i>12</i>
<i>Mount St. Helens Volcano, WA</i>	<i>Oct 2016</i>	<i>4</i>	<i>plane + vans</i>	<i>L</i>	<i>17</i>
<i>West Texas & New Mexico (research)</i>	<i>May 2016</i>	<i>4</i>	<i>plane + vans</i>	<i>L</i>	<i>3</i>
<i>Mud Hills, Mojave Desert, CA</i>	<i>Oct 2015</i>	<i>4</i>	<i>plane + vans</i>	<i>L</i>	<i>8</i>
<i>Death Valley, Owens Valley, Long Valley C.</i>	<i>Jan 2015</i>	<i>17</i>	<i>plane + vans</i>	<i>L</i>	<i>11</i>
<i>Vinalhaven Island, Maine</i>	<i>Oct 2014</i>	<i>3</i>	<i>vans</i>	<i>L</i>	<i>16</i>
<i>West Texas & New Mexico</i>	<i>Mar 2014</i>	<i>5</i>	<i>plane + vans</i>	<i>L</i>	<i>8</i>
<i>West Texas & New Mexico (research)</i>	<i>Dec 2012</i>	<i>3</i>	<i>plane + vans</i>	<i>L</i>	<i>3</i>
<i>Colorado Front Range (research)</i>	<i>Nov 2012</i>	<i>3</i>	<i>plane + vans</i>	<i>L</i>	<i>3</i>
<i>Hawaii (Big Island) & Long Valley Caldera</i>	<i>Jan 2012</i>	<i>18</i>	<i>plane + vans</i>	<i>ML</i>	<i>12</i>
<i>Long Valley Caldera & Death Valley</i>	<i>May 2011</i>	<i>5</i>	<i>plane + vans</i>	<i>L</i>	<i>4</i>
<i>Volcanoes & Geology of New Zealand</i>	<i>Jan 2010</i>	<i>20</i>	<i>plane + vans</i>	<i>ML</i>	<i>20</i>
<i>Field Trips from Denison University, Granville, OH</i>					
<i>Long Valley Caldera</i>	<i>May 2008</i>	<i>5</i>	<i>plane + vans</i>	<i>ML</i>	<i>10</i>
<i>Coastal Maine</i>	<i>Sep 2007</i>	<i>5</i>	<i>plane + vans</i>	<i>ML</i>	<i>24</i>
<i>Hawaii (Big Island and Oahu)</i>	<i>Mar 2006</i>	<i>11</i>	<i>plane + vans</i>	<i>ML</i>	<i>21</i>
<i>Northern Vermont</i>	<i>Sep 2005</i>	<i>5</i>	<i>plane + vans</i>	<i>CL</i>	<i>18</i>
<i>Coastal Maine</i>	<i>May 2005</i>	<i>5</i>	<i>vans</i>	<i>L</i>	<i>6</i>
<i>Long Valley Caldera</i>	<i>May 2005</i>	<i>6</i>	<i>plane + vans</i>	<i>ML</i>	<i>11</i>
<i>Outer Banks of North Carolina</i>	<i>Mar 2005</i>	<i>5</i>	<i>vans</i>	<i>CL</i>	<i>22</i>
<i>Frenchman's Bay, Maine</i>	<i>Sep 2004</i>	<i>5</i>	<i>plane + vans</i>	<i>CL</i>	<i>14</i>
<i>West Texas & New Mexico</i>	<i>Mar 2004</i>	<i>6</i>	<i>plane + vans</i>	<i>CL</i>	<i>17</i>
<i>Death Valley & Owens Valley</i>	<i>Mar 2003</i>	<i>5</i>	<i>plane + vans</i>	<i>ML</i>	<i>18</i>
<i>Catskill Foreland Basin Complex</i>	<i>Sep 2002</i>	<i>5</i>	<i>vans</i>	<i>ML</i>	<i>16</i>
<i>Geology & Geomorphology of Costa Rica</i>	<i>Mar 2002</i>	<i>12</i>	<i>plane + vans</i>	<i>CL</i>	<i>18</i>
<i>New Mexico Volcanoes</i>	<i>May 2001</i>	<i>5</i>	<i>plane + vans</i>	<i>L</i>	<i>11</i>
<i>Outer Banks of North Carolina</i>	<i>Apr 2001</i>	<i>5</i>	<i>vans</i>	<i>CL</i>	<i>22</i>
<i>Southwestern USA*</i>	<i>Mar 2000</i>	<i>8</i>	<i>plane + vans</i>	<i>ML</i>	<i>15</i>
<i>Field Trips from Colorado College, Colorado Springs, CO</i>					
<i>New Mexico Volcanoes</i>	<i>May 1999</i>	<i>15</i>	<i>vans</i>	<i>L</i>	<i>30</i>
<i>Western US Igneous Rocks†</i>	<i>Sep 1998</i>	<i>13</i>	<i>vans</i>	<i>ML</i>	<i>9</i>
<i>Field Trips from Franklin & Marshall College, Lancaster, PA</i>					
<i>Southwestern USA*</i>	<i>Mar 1997</i>	<i>8</i>	<i>plane + vans</i>	<i>ML</i>	<i>15</i>
<i>Field Trips from MIT, Cambridge, MA</i>					
<i>Environmental Geoscience Trip SW USA*</i>	<i>Jan 1996</i>	<i>10</i>	<i>plane + vans</i>	<i>CL</i>	<i>16</i>
<i>Environmental Geoscience Trip SW USA*</i>	<i>Jan 1995</i>	<i>10</i>	<i>plane + vans</i>	<i>CL</i>	<i>19</i>
<i>Environmental Geoscience Trip SW USA*</i>	<i>Jan 1994</i>	<i>10</i>	<i>plane + vans</i>	<i>CL</i>	<i>12</i>

L = sole leader, ML = main leader, CL = co-leader,

** California and Nevada: Mojave Desert, China Lake Geothermal Plant, Owens Valley, Long Valley Caldera, Yucca Mtn, & Death Valley*

† California and Oregon: Sierra Nevada Batholith, Long Valley Caldera, Mt Lassen, Medicine Lake Volcano, Crater Lake