

## **RACHEL J. BEANE**

---

Department of Geology • 6800 College Station • Bowdoin College • Brunswick, Maine 04011-8468  
PHONE (207) 725-3160 • FAX (207) 798-7037 • E-MAIL rbeane@bowdoin.edu

### **EDUCATION**

STANFORD UNIVERSITY, Stanford, CA

Ph.D. in Geological and Environmental Sciences, 1997. Advisor: J. G. Liou.

National Science Foundation Graduate Fellowship

WILLIAMS COLLEGE, Williamstown, MA

B. A. *magna cum laude*, Highest Honors in Geology, Sigma Xi 1993. Advisor: R. A. Wobus.

### **TEACHING POSITIONS**

ASSOCIATE PROFESSOR, Bowdoin College, 2004-present. DEPARTMENT CHAIR, 2005-2008.

Investigating Earth, Mineralogy, Structural Geology, Igneous & Metamorphic Petrology

ASSISTANT PROFESSOR, Bowdoin College, 1998-2004. Sydney B. Karofsky Prize for teaching.

ASSISTANT PROFESSOR, Bowling Green State University, 1997-1998.

### **RESEARCH POSITIONS**

VISITING SCHOLAR, Department of Geological Sciences, University of Michigan, Fall 2008.

RESEARCH FELLOW, Department of Earth Sciences, University of Liverpool, Fall 2001.

Research in D. Prior's Electron Backscatter Diffraction laboratory.

VISITING SCIENTIST, National Museum of Natural History, Smithsonian Institution, Spring 2002.

Research with S. Sorensen on eclogite chemistry.

VISITING SCHOLAR, Department of Earth Sciences, Boston University, Spring 2002.

Research in T. Plank's LA-ICP-MS laboratory.

### **PEER REVIEWED PUBLICATIONS** (\* denotes undergraduate student author)

Grew, E.S., Yates, M.G., Beane, R.J., Floss, C. and Gerbi, C., *accepted*. Chopinite-sarcopside solid solution,  $[(\text{Mg,Fe})_3(\text{PO}_4)_2]$ , in GRA95209, a transitional acapulcoite: Implications for phosphate genesis in meteorites. *American Mineralogist*.

Johnson, S.E., Lenferink, H.J., Price, N.A., Marsh, J.H., Koons, P.O., West, D.P., and Beane, R.J., *accepted*. Clast-based kinematic vorticity gauges: the effects of slip at matrix/clast interfaces. *Journal of Structural Geology*

Beane, R.J. and Urquhart, J. 2009. Providing Research Experiences to Non-Science Majors in an Introductory Science Course. In Boyd, M. and Wesemann, J., ed., Broadening Participation in Undergraduate Research: Fostering Excellence and Enhancing the Impact. *Council on Undergraduate Research* publication, p. 223-226.

Beane, R.J. and Sorensen, S.S., 2008. Element mobility in the Maksyutov subducted slab, southern Ural Mountains, Russia. In Metamorphic conditions along convergent plate junctions: Mineralogy, petrology, geochemistry, and tectonics – A tribute to J. G. Liou (W.G. Ernst and D. Rumble III, eds.), *Geological Society of America International Book Series*, v. 10, p.577-597.

Beane, R. and Leech, M., 2007. The Maksyutov Complex: The first UHP terrane 40 years later, in Cloos, M., Carlson, W.D., Gilbert, M.C., Liou, J.G., and Sorensen, S.S., eds., *Convergent Margin Terranes and Associated Regions. Geological Society of America Special Paper* 419, ch. 8, p. 153-170.

Beane, R.J. and Field, C., 2007. Kyanite deformation in whiteschist of the UHPM Kokchetav Massif, Kazakhstan. *Journal of Metamorphic Geology* v. 25, p. 117-128.

Hawkins, A.T., Selverstone, J., Brearley, A.J., Beane, R.J., Carlson, W.D. and Ketcham, R., 2007. Origin and mechanical significance of honeycomb garnets in high-pressure metasedimentary rocks from the Tauern Window, Eastern Alps. *Journal of Metamorphic Geology*, 25, 565-583.

**PEER REVIEWED PUBLICATIONS** *continued* (\* denotes undergraduate student author)

- Beane, R.J. and Sorensen, S.S., 2007. Element mobility in the Maksyutov subducted slab, southern Ural Mountains, Russia. *International Geology Review*, v. 49, p. 52-72.
- Beane, R.J., and Liou, J.G., 2005. Metasomatism in Serpentinite Melange Rocks from the High-Pressure Maksyutov Complex, Southern Ural Mountains, Russia. *International Geology Review*, v. 47, p. 24-40.
- Beane, R. J., 2004. Using the scanning electron microscope for discovery based learning in undergraduate courses. *Journal of Geoscience Education*, v. 52, p. 250-253.
- Msall, M.E., Dietsche, W., Beane, R., Wichard, R. and Carpenter, J.\*, 2004. Examination of an unusual grain boundary in CaF<sub>2</sub>. *Physica Status Solidi*, v. 1, no. 11, p. 2983-2986.
- Beane, R. J., and Liou, J.G., 2004. Metasomatism in Serpentinite Melange Rocks from the High-Pressure Maksyutov Complex, Southern Ural Mountains, Russia. In Ernst, W.G., ed., Serpentinite and Serpentinites: Mineralogy, Petrology, Geochemistry, Ecology, Geophysics, and Tectonics – A tribute to Robert G. Coleman: *Geological Society of America, International Book Series*, v. 8, p. 423-439.
- Bostick, B., Jones, R.E., Chen, C., Ernst, W.G., Leech, M.L., Hacker, B.R., and Beane, R.J., 2003. Positive identification of microdiamond from the Maksyutov Complex, south Urals, Russia, *American Mineralogist* v. 88, p. 1709-1717.
- Van Vleck, H. E\* and Beane, R. J., 2001. Geochemical comparison of mafic, felsic and ultramafic rocks in the Hurrigan Mountain Melange to the Boil Mountain Ophiolite Complex, west-central Maine. *Atlantic Geology*, V. 37, issue 1, p. 3-15.
- Beane R. J. and Connelly J. N., 2000. <sup>40</sup>Ar/<sup>39</sup>Ar, U-Pb, and Sm-Nd constraints on the timing of metamorphic events in the Maksyutov Complex, southern Ural Mountains. *Journal of the Geological Society, London*, v. 157, p. 811-822.
- Beane R. J. and Wobus R. A., 1999. Petrogenesis of the Sugarloaf Syenite, Pikes Peak Batholith, Colorado. *Rocky Mountain Geology*, v. 34, p. 313-324.
- Smith D. R., Noblett J., Wobus R. A., Unruh, D., Douglass, J., Beane R. J., Davis, C., Goldman, S., Kay, G., Gustavson, B., Saltoun, B. and Stewart, J., 1999. Petrology and geochemistry of late-stage intrusions of the A-type, mid-Proterozoic Pikes Peak Batholith (Central Colorado, USA): implications for petrogenetic models. *PreCambrian Research*, v. 98, p. 271-305.
- Dobretsov. N. L., Shatsky V. S., Coleman R. G., Lennykh V. I., Valizer P. M., Liou J. G., Zhang R. and Beane R. J., 1996. Tectonic Setting of Ultrahigh-pressure Metamorphic Rocks in the Maksyutov Complex, Ural Mountains, Russia. *International Geology Review*, v. 38, p. 136-160.
- Beane R. J., Liou J. G., Coleman R. G. and Leech M. L., 1995. Petrology and Retrograde P-T Path for Eclogite of the Maksyutov Complex, Southern Ural Mountains, Russia. *The Island Arc*, v. 4, p.254-266.
- Lennykh V. I., Valizer P. M., Beane R. J., Leech M. L. and Ernst W. G., 1995. Petrotectonic Evolution of the Maksyutov Complex, Southern Urals, Russia: Implications for Ultrahigh-Pressure Metamorphism. *International Geology Review*, v. 37, p. 584-600.
- Beane, R. J. and Prior, D.J., *in revision*. Crystallographic orientation evidence for the formation of atoll garnet in eclogite. *Geology*.

**EXTERNAL GRANTS**

- Colby Bates Bowdoin Collaborative Faculty Development Grant, funded by Mellon Foundation. “Electron Backscatter Diffraction Analysis of Minerals from a California Shear Zone,” in collaboration with W. Sullivan. \$5,058, 2008-2009.
- Maine Space Grant Consortium Fellowship for undergraduate research on garnet microstructure. \$4700, 2007.
- Maine Space Grant Consortium’s NASA EPSCoR Grant “Microstructural investigations of Martian meteorites,” \$14,851, 2005-2006.
- National Science Foundation Grant, “Acquisition of an Electron Backscatter Diffraction System,” \$144,100, 2003-2005.
- National Science Foundation Grant, “Integrating research with undergraduate education through a petrotectonic study of Casco Bay, Maine,” \$38,158, 2002-2005.
- National Science Foundation Grant, “Improving undergraduate learning through use of a low-vacuum scanning electron microscope with an energy dispersive x-ray spectrometer,” \$100,000, 1999-2002.
- National Science Foundation, Graduate Fellowship, 1993-1996.
- Geological Society of America, Research Grants, 1994 and 1995.
- Sigma Xi, Grant-in-Aid of Research, 1995.

**INTERNAL GRANTS**

- Fletcher Research Grant, “Electron Backscatter Diffraction at University of Liverpool,” 2001.
- Faculty Leave Supplement, “Geochemical interpretations of eclogite,” Bowdoin College, 2001.
- Course Development Fund, “Creating a new mineralogy course,” Bowdoin College, 2000-2002.
- Course Development Fund, “Geographic Information Systems,” Bowdoin College, 1999-2001.
- Druckenmiller Research Fellowship, Bowdoin College, 1998-2000.
- Faculty Development Grants, Bowling Green State University, 1997 and 1998.
- McGee Foundation Grants, through Stanford University, 1995 and 1996.
- Shell Fund Grants, through Stanford University; 1993, 1994, 1995, and 1996.

**UNDERGRADUATE HONORS RESEARCH ADVISEES**

Forrest Horton '08, supported by Maine Space Grant Consortium (MSGC), Arthur M. Hussey Award (mineral exploration, Avalon Development Corporation; MS student, San Francisco State University).

Astrid Rodriguez '07, supported by MSGC, Arthur M. Hussey Award (MS student, Texas A&M)

Owen McKenna '07, Keck Geology Consortium project (MS student, Boise State)

Scott Drew '05, supported by NSF grant, Arthur M. Hussey Award, Walter Anderson prize (MS, PhD candidate, Ohio State University)

Brandon Levy '03, supported by NSF grant, Arthur M. Hussey Award

Lindsay Szramek '02, Keck Geology Consortium project, Doherty Fellowship, Arthur M. Hussey Award (MS University of Alaska, PhD candidate, University of Texas at Austin)

Kelly Lawrence '01, NCUR Fellowship (MS student, Tufts)

Edward Meyer '01, NCUR Fellowship (PhD, Dartmouth; Research Associate)

Harriet Van Vleck '01, Surdna Fellowship, Arthur M. Hussey Award (PhD candidate, University of Minnesota)

David Thomas '00, Surdna Fellowship, Arthur M. Hussey Award (Boat builder)

**BOWDOIN COLLEGE SERVICE**

- Ad-hoc committee on pre-major advising 2009-2010
- Geology Department Chair 2005-2008
- Committee on Teaching, 2006-2008
- Consultant for Teaching, 2005-2007
- Bowdoin Science Experience 2006, 2009
- Benefits Advisory Committee, 2005-2006
- Curriculum & Educational Policy, 2004-5.
- Budget and Financial Priorities, 2002-2003
- Recording Committee, 2000-2001.
- Academic Computing, 1999-2000.
- First-year and major advisor, 1999-
- Search and ad-hoc searches, 1998-
- Bowdoin Outing Club pre-O trip, 1999.

**PROFESSIONAL SERVICE**

- Reviewer, NSF grants, textbooks, and geologic journal articles.
- Cutting Edge NAGT workshop leader "Pursuing an Academic Career," 2010.
- Cutting Edge NAGT workshop leader "Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career," 2009.
- Cutting Edge NAGT workshop leader "Pursuing an Academic Career," 2009.
- Trustee, Harpswell Heritage Land Trust, 2008-2011.
- Cutting Edge NAGT workshop leader "Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career," 2006.
- Chair, AGU 2005 session, Ultrahigh-Pressure Metamorphism: Geodynamics
- Cutting Edge NAGT workshop leader "Preparing for an Academic Career," 2005.
- Kibbe Science Symposium on "Microstructure analysis using electron backscatter diffraction" (Convener), Bowdoin College, 2005.
- Keck Geology Consortium advisory board member, 1998-2002.
- Geological Society of America, campus representative, 1999-present.
- Mineralogical Society of America, Distinguished Public Service Award Committee, 2003-2005.
- Kibbe Science Symposium on Appalachian Geology (Convener), Bowdoin College, 2000.

**CONFERENCE PAPERS** (\* denotes undergraduate student author)

- Sullivan, W.A. and Beane, R.J., 2009. Asymmetric quartz crystallographic fabrics produced during constrictional deformation. *Geological Society of America, Abstracts with Programs*, v. 41.
- Grew, E.S., Yates, M.G., Beane, R.J., Floss, C. and Gerbi, C., 2008. Chopinite-sarcopside solid solution (Mg,Fe)<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, in Lodranite GRA95209. 71<sup>st</sup> Annual Meteoritical Society Meeting.
- Tsai, C.-H., Zhou, H., Izuka, Y., and Beane, R. J., 2008. Textures of progressive garnet growth recorded in Ti-rich metagabbros from the southern Tongbai Mountains, central China. Goldschmidt Conference Abstracts. *Geochimica et Cosmochimica Acta*; v. 72, p. A958.
- Grew, E.S., Yates, M.G., Beane, R.J., Floss, C. and Gerbi, C., 2008. Chopinite-sarcopside in meteorite GRA95209. Goldschmidt Conference Abstracts. *Geochimica et Cosmochimica Acta*; v. 72, p. A328.
- Horton, F.\*, Beane, R.J., Ketcham, R., and Irby, I.\*, 2008. EBSD and HRXCT analysis of elongated garnets of the Spring Point Formation, Casco Bay, ME. *Geological Society of America, Abstracts with Programs*, v. 40.
- Beane, R. and Urquhart, J., 2007. Field and petrologic research projects in introductory courses. *Geological Society of America, Abstracts with Programs*, v. 39, p.246
- Naus-Thijssen, F., Johnson, S., and Beane, R., 2007. Crenulation cleavage development and its rheological implications. *Geological Society of America, Abstracts with Programs*, v. 39, p.78.
- Rodriguez, A.\* and Beane, R.J., 2006. Pigeonite Microstructures in Martian Meteorite EETA79001. *Geological Society of America, Abstracts with Programs*, v. 38, No. 7, p.77.
- Naus-Thijssen, F., Johnson, S., and Beane, R.J., 2006. Chemical and Mechanical Development of Crenulation Cleavage. Knowledge Based Materials, Marie Curie Summer School on Polyphase and Composite Materials, Älvdalen, Sweden.
- Rodriguez, A.\* and Beane, R.J., 2006. Pigeonite Microstructures in Martian Meteorite EETA79001. Maine Space Grant Consortium, Annual Meeting, Boothbay, Maine.
- Beane, R.J. and Field, C.F., 2005. Kyanite deformation in whiteschist of the UHPM Kokchetav Massif, Kazakhstan. *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V43A-1549.
- Lea, P.D., Beane, R. J., and Laine, E. P., 2005. Building a strong geoscience department by emphasizing curriculum and pedagogy. *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract ED13B-1145.
- Hawkins, A., Selverstone, J., Brearley, A. and Beane, R., 2005. Fishnet and atoll garnets from the Tauern Window, Eastern Alps: Conditions and Mechanisms of Formation. *Geological Society of America, Abstracts with Programs*, v. 37, p. 226.
- Msall, M.E., Dietsche, W., Beane, R., Wichard, R. and Carpenter, J\*, 2004. Examination of an unusual grain boundary in CaF<sub>2</sub>. The 11<sup>th</sup> International Conference on Phonon Scattering in Condensed Matter (Phonons2004), St. Petersburg, Russia.
- Levy, B. M.\*, Beane, R. J., and Hussey, A. M. II, 2003. The Peaks Island Member of the Cushing Formation Interpreted as a Sub-Aqueous Volcanic Flow Succession in Southeastern Maine. *Geological Society of America, Abstracts with Programs*, v. 35, p.5.
- Beane, R. J. and Prior, D. J , 2002. Using EBSD analysis to interpret garnet microstructures. *Geological Society of America, Abstracts with Programs*, v. 34, p. 9.
- Szramek, L.\* and Beane, R. J., 2002. Correlation and stratigraphy of exotic blocks in the Vinalhaven Pluton, Maine to the Seal Cove Formation. *Geological Society of America, Abstracts with Programs*, v. 34, p. 66.
- Bostick, B., Jones, R.E., Chen, C., Ernst, W.G., Leech, M.L., and Beane, R.J., 2002, Microdiamonds identified from the Maksyutov metamorphic complex, south Urals, Russia, *Eos Transactions American Geophysical Union*, 83 (47), V51B-1262.
- Leech, M.L., Metzger, E.P., Wooden, J.L., Jones, R.E., Schwartz, C.L., Beane, R.J., 2002, New eclogitization and protolith ages for the Maksyutov Complex (south Ural Mountains) based on

- U-Pb zircon SHRIMP data, *Eos Transactions American Geophysical Union*, 83 (47), V51B-1263.
- Beane, R. J., 2001. Using the scanning electron microscope for discovery based learning in undergraduate courses. *Geological Society of America, Abstracts with Programs*, v. 33, p. 243.
- Lawrence, K. E.\* and Beane, R. J., 2001. Geochemistry of the metamorphosed Spring Point and Cushing Formations. *Abstracts with Programs, Geological Society of America*, v. 33, p. 10.
- Meyer, E. E.\* and Beane, R. J., 2001. A petrographic study of the Spring Point Formation, Casco Bay, Maine. *Abstracts with Programs, Geological Society of America*, v. 33, p. 10.
- Van Vleck, H.\* and Beane, R. J., 2001. Petrography and geochemistry of mafic blocks in the Hurricane Mountain melange in west-central Maine. *Atlantic Geoscience Society Colloquium*, p. 33.
- Thomas, D. W.\* and Beane, R. J., 2000. Deformation of the Hurricane Mountain Formation Melange along Tomhegan and Cold Streams, west-central Maine. *Abstracts with Programs, Geological Society of America*, v. 32, p.78.
- Beane, R. J., 1998. Implications of mineral textures and element zoning for the formation of atoll-shaped garnets in eclogite. *Eos, American Geophysical Union; Supplement*, v. 78 (V31B-12).
- Beane R. J., 1997. Ar/Ar evidence for Devonian high-pressure metamorphism in the South Urals. *Abstracts with Programs, Geological Society of America*; v. 29, p. 119.
- Beane R. J., 1996. Calcium Metasomatism in Mafic Rocks of the Maksyutov Complex, Southern Urals. *EOS, American Geophysical Union; Supplement*, v. 77, p. 837. *Session co-convener*.
- Beane R. J., Connelly J. N., and Liou J. G., 1996. Evidence for Devonian Eclogite-facies Metamorphism in the Maksyutov Complex, Southern Ural Mountains, Russia. *Abstracts with Programs, Geological Society of America*; v. 28, p. 170. *Invited talk*.
- Leech M. L., Valizer P. M., Ernst W. G., and Beane R. J., 1996. Metamorphism and deformation in the high- to ultrahigh-pressure Maksyutov Complex, southern Ural Mountains, Russia. EUROPROBE, Conference on the Uralides, Granada, Spain.
- Beane R. J., 1995. Metamorphism of the Serpentinite Melange in the Maksyutov Complex, Southern Ural Mountains. *EOS, American Geophysical Union; Supplement*, v. 76, p. 678.
- Lennykh V. I., Valizer, P. M., Beane R. J., Leech M. L. and Ernst W. G., 1995. Petrotectonics of the Maksyutov Ultrahigh-Pressure/High-Pressure Metamorphic Complex, South Ural Mountains, Russia. *EOS, American Geophysical Union; Supplement*, v. 76, p. 668.
- Beane R. J. and Liou J. G., 1995. Serpentinite Melanges of the Maksyutov Complex, Southern Ural Mountains, Russia. *Abstracts with Programs, Geological Society of America*; v. 27, p. 316.
- Beane R. J., Liou J. G., Coleman R. G., McWilliams M. O. and Lennykh V., 1994. Field Relations, Mineral Assemblages and Age of HP-UHPM, Maksyutov Complex, Ural Mountains, Russia. *EOS, American Geophysical Union; Supplement*, v. 75, p. 744.
- Beane R. J., Liou J. G., Zhang R. Y., Coleman R. G., McWilliams M. O. and Lennykh V., 1994. Compositional and  $^{40}\text{Ar}/^{39}\text{Ar}$  Data for HP-UHPM, Maksyutov Complex, Ural Mountains, Russia: Evidence for P-T Conditions and Age of Metamorphism. *Abstracts with Programs, Geological Society of America*; v. 26, p. 226.
- Beane R. J. and Wobus R. A., 1993. Field Relations, Petrography and Geochemistry of the Sugarloaf Intrusive Center, Pikes Peak Batholith, Colorado. *EOS, American Geophysical Union; Supplement*, v. 74, p. 634.
- Sturm M., Smith D. R., Beane R., Wobus R. A. *et al.*, 1993. Geochemistry of Late Stage Alkaline Intrusions of the Pikes Peak Batholith, Colorado. *Abstracts with Programs, Geological Society of America*; v. 25, p. 271.
- Beane R. J., 1993. Field Relations, Petrology, and Geochemistry of Sugarloaf Complex, Pikes Peak Batholith. *Keck Research Symposium in Geology, Abstracts Volume*; v. 6, p. 22-25.

Beavers R. L. and Beane R. J., 1992. Use of Image Processing to Map Sedimentary Environments and Vegetation Zones of Sandy Beach Marsh, Gaspé, Canada. *Keck Research Symposium in Geology, Abstracts Volume*; v. 5, p. 33-36.

#### WEB AND OTHER PUBLICATIONS

- Macdonald, H. and Beane, R., 2009. Designing a Course: Learning, Teaching, and Assessment. Science Education Research Center (SERC)  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/macdonald\\_beane\\_designing\\_course.v2.pdf](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/macdonald_beane_designing_course.v2.pdf)
- Beane, R. and Sankey, J., 2009. Research with Undergraduates. Science Education Research Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane\\_undergrad\\_research\\_presentation.pdf](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane_undergrad_research_presentation.pdf)
- Beane, R. and Wiese, K., 2009. What to do when our teaching isn't going well. Science Education Research Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane\\_improving\\_teaching\\_handout.doc](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane_improving_teaching_handout.doc)
- Beane, R., 2009. Designing class activities and assignments. Science Education Research Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane\\_activity\\_review\\_handout.doc](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer09/beane_activity_review_handout.doc)
- Beane, R. and Argow, B., 2009. Complete website with handouts for the On the Cutting Edge Workshop: Pursuing an Academic Career. Science Education Research Center (SERC).  
<http://serc.carleton.edu/NAGTWorkshops/careerdev/NEGSA-Workshop09/index.html>
- Beane, R. J., 2008. EBSD sample preparation. Science Education Research Center (SERC).  
[http://serc.carleton.edu/research\\_education/geochemsheets/ebsd\\_sample\\_preparation.html](http://serc.carleton.edu/research_education/geochemsheets/ebsd_sample_preparation.html)
- Beane, R.J. and St. John, K., 2006. Integrating Research and Authentic Data in Undergraduate Courses. Science Education Resource Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/integrating\\_research.doc](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/integrating_research.doc)
- Beane, R.J. and St. John, K., 2006. Designing Independent Research Projects for Undergraduates. Science Education Resource Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/undergrad\\_research.doc](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/undergrad_research.doc)
- Beane, R.J., 2006. What to do when your teaching isn't going well. Science Education Resource Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/improve\\_teaching.doc](http://serc.carleton.edu/files/NAGTWorkshops/earlycareer06/improve_teaching.doc)
- Beane, R.J. and Wojtal, S., 2005. Integrating Research into Courses across the Curriculum, Science Education Resource Center (SERC).  
[http://serc.carleton.edu/files/NAGTWorkshops/careerprep/teaching/research\\_assign.doc](http://serc.carleton.edu/files/NAGTWorkshops/careerprep/teaching/research_assign.doc)
- Beane, R.J. and Wojtal, S., 2005. Moving your research forward into new settings, Science Education Resource Center (SERC).  
<http://serc.carleton.edu/NAGTWorkshops/careerprep/research/newsettings.html>
- Beane, R.J., 2005. Petrology in the field and laboratory *in* Science Research in the Classroom, created by L. Reinen, Science Education Resource Center (SERC).  
<http://serc.carleton.edu/introgeo/studentresearch/examples/PetrologyFieldLab.html>
- Beane, R.J., 2005. Analyzing beach sands with a SEM/EDS *in* Science Research in the Classroom, created by L. Reinen, Science Education Resource Center (SERC).  
<http://serc.carleton.edu/introgeo/studentresearch/examples/SEMbeachsands.html>
- Beane, R.J., 2004. Electron Backscatter Diffraction. *The Maine Geologist*, v. 30, no. 1, p. 7-8.
- Beane, R.J., 2004. Honoring the "Offer of the College" by Losing Ourselves in Generous Enthusiasms, Bowdoin College Honors Day Address.  
<http://www.bowdoin.edu/news/archives/1bowdoincampus/001453.shtml>

**INVITED TALKS**

- Harpswell Heritage Land Trust, Maine, 2009. "Introduction to the geology of Giant Stairs."
- Curtis Memorial Library, Brunswick, Maine, 2007. "Geology Careers and Opportunities."
- Bailey Island Association, Maine, 2006. "Geology of Bailey Island."
- Stanford University, California, 2005. "Fluid-mediated mass transfer in subduction zones: geochemistry of eclogites and metapelites, Maksyutov Complex, south Ural Mountains."
- Harpswell Heritage Land Trust, Maine, 2005. "Exploring the geology of Giant Stairs."
- Bowdoin College, Brunswick, Maine, 2005. "Volcanoes in Brunswick? And other research into our geologic history." Faculty Seminar sponsored by the Dean for Academic Affairs.
- Harpswell Heritage Land Trust, Maine, 2005. "Volcanoes in Harpswell? And other tales of our local geologic history."
- Bowdoin College, Brunswick, Maine, 2005. "Bringing Research into the Classroom." Faculty talk sponsored by the Committee on Teaching.
- Bowdoin College, Brunswick, Maine, 2004. "Stimulating Discussion in Introductory Courses." Faculty talk sponsored by the Committee on Teaching.
- Bowdoin College, Brunswick, Maine, 2004. "Honoring the Offer of the College by Losing Ourselves in Generous Enthusiasms." Honors Day Address.
- Bates College, Lewiston, Maine, 2003. "The History of Metamorphism in Maine" for the Geological Society of Maine short course.
- Bowdoin College, Brunswick, Maine, 2002. "Into the depths of the earth and back: uncovering the story of a subduction zone in Russia's Ural Mountains." Faculty Lecture sponsored by the Dean for Academic Affairs.
- Carnegie Institution, Washington D.C. 2002. "Geochemical interpretations of eclogite."
- University of Liverpool, U.K., 2001. "Using EBSD to interpret atoll garnet formation."
- Boston University, Massachusetts, 2001. "Implications of high-pressure metamorphism with examples from the south Ural Mountains."
- University of Maine at Orono, 2000. "Implications of high-pressure metamorphism with examples from the south Ural Mountains."
- Williams College, Williamstown, Massachusetts, 2000. "Implications of high- and ultrahigh-pressure metamorphism, with examples from Russia and Kazakhstan."
- University of Maine at Farmington, 2000. "Implications of high- and ultrahigh- pressure metamorphism, with examples from Russia and Kazakhstan."
- Bowdoin College, Brunswick, Maine, 1999. Panelist for "Women in Science" discussion.
- Research Science Institute (a summer program for high-school students) at Massachusetts Institute of Technology, 1998: "High-pressure metamorphism in subduction zones."
- Bowdoin College, Brunswick, Maine, 1998: "High-pressure metamorphism in a Paleozoic subduction zone, Ural Mountains, Russia."
- Eastern Transvaal Consolidated Mines Ltd., Barberton, South Africa, 1997: "Metasomatism and high-pressure metamorphism in the South Ural Mountains."
- Bowling Green State University, Bowling Green, Ohio, 1997: "Sleuthing in the South Urals."
- Geological Society of America Symposium, Colorado, 1996. "Evidence for Devonian eclogite-facies metamorphism in the Maksyutov Complex, southern Ural Mountains, Russia."

**EXTENDED FIELD TRIPS AND FIELD COURSES**

- Petrologic and structural field studies in Maine, 1998 – ongoing.
- Blueschists and eclogites of Syros, Greece. Keck Geology Consortium Project, 2000.
- GSA Field Forum: Silicic magma chamber processes - evidence from coastal Maine plutons, 2000.
- Geology of South Africa field trip. Participant and contributor to field guide. Stanford, 1997.
- Geology of Alaska field trip. Coordinated itinerary and field guide. Stanford University, 1995.
- Kokchetav Massif, Kazakhstan. Field examination of ultrahigh-pressure metamorphism, 1994.
- Maksyutov Complex, Russia. Field research of subduction zone complex. 1993-1996.
- Geology of Pikes Peak Batholith, Keck Geology Consortium Project, Colorado, 1992.
- Geology summer field course, Big Horn Basin, Wyoming. Iowa State University, 1992.
- Paleoecology of rocky shores field course, Baja California, Mexico. Williams College, 1992.
- Research assistant for Keck Geology Consortium Project, Gaspè Peninsula, Quebec, 1991.

**TEACHING WORKSHOPS**

- Cutting Edge NAGT workshop leader “Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career,” 2009.
- Cutting Edge NAGT workshop leader “Pursuing an Academic Career,” GSA Northeastern Section Meeting, 2009.
- Cutting Edge NAGT workshop leader “Early Career Geoscience Faculty: Teaching, Research, and Managing Your Career,” William and Mary, 2006.
- Workshop for Writing Intentional Courses, Bowdoin College, 2006.
- Cutting Edge NAGT workshop leader “Preparing for an Academic Career,” University of Pennsylvania, 2005.
- Hewlett teaching workshop, Bowdoin College, 2000.
- Women throughout the curriculum workshop, Bowdoin College, 1999.
- Workshop for early career faculty, National Association of Geoscience Teachers & NSF, 1999.
- First-year seminar writing and teaching workshop, Bowdoin College, 1998.
- Effective teaching workshop, National Association of Geoscience Teachers, GSA, 1995.

**OTHER WORKSHOPS AND COURSES**

- Cutting Edge virtual workshop, “Evaluation and Web Development,” 2009.
- EBSD short course, University of Liverpool, 2001.
- Thermodynamic Modeling of Mineral Reactions: An Introduction to GIBBs, F. Spear, 2001.
- MARGINS Theoretical and Experimental Institute: Inside the Subduction Factory, 2000.
- Ultrahigh-Pressure Metamorphism and Tectonics, Stanford University, 1994 & 1998.
- Emergency Medical Technician Course, Wilderness Medicine Institute, Colorado, 1996