

JOHN W. SHERVAIS

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Degrees, Education

Ph.D., 1979, University of California, Santa Barbara
B.Sc., 1971, San Jose State University, California
Diploma, 1966, Santa Maria High School, Santa Maria, California

Dissertation

Petrology and Structure of the Alpine Lherzolite Massif at Balmuccia, Italy
Professor C.A. Hopson, Principal Advisor

Professional Experience

Professor and Head, Department of Geology
Utah State University, 2000-Present

University of South Carolina, 1984-2000
Professor, 1992-2000

Associate Professor, 1988-1992
Assistant Professor, 1984-1988

Research Associate, University of Tennessee, Knoxville: 1982-1984
Visiting Assistant Professor, University of California, Davis: 1982
Visiting Lecturer, University of California, Santa Barbara: 1981
NATO Post-Doctoral Fellow, Eidgenössische Technische Hochschule (ETH)
Zürich, Switzerland: 1979-1980

Awards and Honors

Fellow, Geological Society of America, 1993
NATO Postdoctoral Fellowship, ETH, Zürich, Switzerland, 1980
University of California Regent's Fellowship, 1976-1977

Professional Activities

Department Head (Utah State University), 2000-Present
Director of Undergraduate Studies (University of South Carolina), 1988-2000
Associate Editor, Lunar and Planetary Science Conference Proceedings, 1987-1992
Associate Editor, Geological Society of America Bulletin, 1989-1996

Professional Organizations

Geological Society of America (Fellow)
The American Geophysical Union
The American Alpine Club

Administration

University of South Carolina:

Director of Undergraduate Studies, Geological Sciences; 1988-2000. Initiated and coordinated comprehensive revision of geological science curriculum, 1998-1999. Authored Department of Geological Sciences assessment of B.Sc. programs in Geology and Geophysics for the S.C. Commission on Higher Education and for an external program review.

Chair of the departmental self-study committee, chair of the university's internal grants review panel, member of the department Tenure and Promotion committee, member of the Faculty Senate, and member of several other college or university-level committees (electron microscopy center committee, radiation safety committee, scholarship committee).

Director of the Electron Microprobe Facility (1987-2000) and the X-ray fluorescence laboratory (1984-2000).

Utah State University:

Department Head: Responsible for finances, including state funds, development accounts, indirect cost returns, and course fees. Also responsible for faculty and staff evaluation, course schedules, development, assessment, and program review.

Chair, Department Head Executive Committee. Organize meetings of department heads and annual retreat; work with Provost to communicate department head concerns and issues to administration (2006-2007).

Coordinated and wrote department self-study, as part of 10-year Regents Review process (2000-2001); wrote strategic plan that reflects the departments self-study and the results of the external review (2001-2002).

Arranged and coordinated visit by an External Review team, as part of our 10-year Regents Review process and providing a written departmental response to the final report of the external review team (2001).

Organize and host annual meetings of the USU Geology Advisory Board, which assists us in development efforts and program support (2003 to present).

Development efforts: ~\$340,000+ in private funding for our department over the last four years.

Wrote assembled the portfolio for our successful "Department Teaching Excellence" Award, which resulted in \$20,000 in new operating funds for our department.

Arranged for courses to be taught in the Honors program by department faculty as part of normal course load, generating current expense income to replace State budget cuts to operating funds.

Member of the Water Initiative Advisory Board.

Curriculum Development

University of South Carolina:

BS Geology. As Director of Undergraduate Studies, initiated and coordinated comprehensive revision of geological science curriculum, 1998-1999. Initiated and coordinated comprehensive revision of geological science curriculum, 1998-1999.

Utah State University:

MS in Applied Environmental Geosciences and *BS in Applied Environmental Geosciences.* Developed and wrote program proposals for these new degree programs, approved by the Board of Regents June 2006.

PhD in Geology: Developed and wrote program proposal for the PhD in Geology approved by the Board of Regents in December 2005.

HOTSPOT, The Snake River Scientific Drilling Project: Tracking the Yellowstone Hotspot Through Space and Time

PENDING GRANTS

<i>Agency</i>	<i>Period</i>	<i>Amount</i>	<i>Title</i>
NSF	–	Preproposal	HOTSPOT, The Snake River Scientific Drilling Project: Tracking the Yellowstone Hotspot Through Space and Time. [Continental Dynamics]
ICDP	–	Preproposal	HOTSPOT, The Snake River Scientific Drilling Project: Tracking the Yellowstone Hotspot Through Space and Time. [International Continental Drilling Program]
NSF	3/07-9/08	\$380,000	Acquisition of Analytical Scanning Electron Microscope with Digital EDS

FUNDED GRANTS

Agency	Period	Amount	Title
ESSEA	6/07-10/09	\$40,000	Training in-service teachers how teach earth system science using interactive, hands-on learning techniques (Liddell, PI; Shervais Co-PI).
ICDP	2005-2006	\$40,000	International Continental Drilling Program Workshop: Intermediate Depth Drilling of the Snake River Plain: Tracking the Yellowstone Hotspot Through Space & Time.
NSF	9/05-8/06	\$85,949	[EAR-440255] Collaborative Research: Geochemical Processes in Forearc Peridotites: Depletion, Enrichment, and Melt Reactions in the Mantle Wedge (with Sam Mukasa, Univ Michigan). (USU budget shown)
NSF	1/2004 - 12/2005	\$68,412	[EAR-337334] Is the Southern Farmington Canyon Complex an Archean/Early Proterozoic Accretionary Complex?
USGS	5/04-4/05	\$20,500	National Cooperative Geologic Mapping, EdMap Component: Geologic Mapping in the Greater Twin Falls Urban area.
USGS	5/2001- 4/2002	\$9,235	National Cooperative Geologic Mapping, EdMap Component: Geologic Mapping in California.
USC	1/2000- 12/2000	\$16,600	Ion Microprobe Study of Cumulates and Mantle Peridotites in Ophiolites: A New Way to Study Chemical Fractionation of Oceanic Crust and Upper Mantle.
USGS	6/99- 5/2000	\$9,450	National Cooperative Geologic Mapping: EdMap Component: Geologic Mapping in Idaho.
NSF	5/98- 12/99	\$90,000	[EAR-9805160] Equipment Purchase: The USC XRF Facility
USGS	6/98- 5/99	\$14,950	National Cooperative Geologic Mapping: EdMap Component: Geologic Mapping in South Carolina and Idaho (J.W. Shervais, PI/PD; A.J. Dennis, CoPI)
NSF	6/98- 5/2000	\$118,975	[EAR-9805159] Granulite and Eclogite Facies Metamorphism in the Carolina terrane: Implications for Pre-Alleghanian Collision Tectonics in the Southern Appalachians (A.J. Dennis, PI/PD, J.W. Shervais, Co-PI)
NASA	6/97- 5/00	\$45,000	[NAGW3637] SIMS Analyses of Lunar Cumulate Minerals.
NSF	1/96- 12/98	\$112,000	[EAR-9526594] Collaborative Research: Plume Tails and Continental Lithosphere: A Petrologic Traverse of the Snake River Plain [USC Budget, \$223,000 for 3 years, total project budget.]
DOE	9/94-9/96	\$207,000	SCUREF Task 170: Regional Geology and Subsurface Characterization at the Savannah River Site, South Carolina (A.J. Dennis, PI/PD, J.W. Shervais, Co-PI)
NSF	1/96-12/97	\$40,000	Equipment Upgrade:The USC Electron Microprobe
DOE	9/90-9/92	\$197,000	SCUREF Task 14: Compilation of Regional Geology, Savannah River Site, South Carolina (A.J. Dennis, PI/PD, J.W. Shervais, Co-PI)
NASA	6/93-5/97	\$81,000	[NAGW3637] Basaltic Volcanism & Ancient Planetary Crusts
NSF	4/93-9/94	\$35,000	Equipment Upgrade:The USC XRF Laboratory

John W. Shervais – Curriculum Vita

NSF	7/92-12/95	\$90,000	[EAR9206719] Technician Support for USC Electron Microprobe Laboratory (Shervais, PI/PD)
NSF	2/91-7/93	\$76,000	[EAR-9018721] Collaborative Research: Petrology, Geochemistry and Age of Accreted Oceanic Crust, California Coast Ranges. (Shervais, PD; \$116,000 all PIs).
NSF	1/89- 12/91	\$50,000	[EAR-8816398] Petrology and Geochemistry of Accreted Oceanic Crust, California Coast Ranges.
NSF	1/89- 12/90	\$11,500	Economic Mineral Deposits in Pakistan (travel grant, International Programs)
USC	5/88-4/89	\$1,700	South Carolina Gabbros
NSF	4/87-9/89	\$38,000	Collaborative Research: Mantle Metasomatism in Alpine Peridotites (Shervais, PI/PD) *USC Budget, \$63,000 total project.
NASA	6/86-5/93	\$169,540	Basaltic Volcanism & Ancient Planetary Crusts
USC	5/86-5/87	\$1,500	Geochemical finger-printing of accreted terranes, California
NSF	4/86-9/87	\$225,000	Aquisition of an Electron Microprobe System
USC	5/85-9/86	\$2,200	Ankaramite Volcanism in California

Dissertations Completed

Scott Vetter	Petrogenesis of basalts on the Earth and Moon, <i>Ph.D. Dissertation</i> , University of South Carolina, 1989.
M. Tahir Shah	Geochemistry, Mineralogy, and Petrology of the Sulfide Mineralization and Associated Rocks in the Area around Besham and Dir, Northern Pakistan, <i>Ph.D. Dissertation</i> , University of South Carolina, 1991.
M.U.K. Khattak	Petrology And Stable Isotope Geochemistry of the Nanga Parbat-Haramosh Massif, Northern Pakistan, <i>Ph.D. Dissertation</i> , University of South Carolina, 1995.
Imtiaz Ahmad	Collision Tectonics in NW Himalaya: Structure, Stratigraphy, and P-T path of the India Plate, Lower Swat, North Pakistan, <i>Ph.D. Dissertation</i> , University of South Carolina, 1999.
Prosper Nude	Alkaline Carbonatites of the Dahomeyide orogen, Ghana (University of Ghana).

Theses Completed

Suzanne Shelly	Geochemistry of metavolcanic rocks, Carolina Slate Belt, <i>M.Sc. Thesis</i> , 1988.
Iлона Lawless	Petrology, Chemistry, and Petrogenesis of alkaline volcanic and plutonic rocks from Tahiti, French Polynesia, <i>M.Sc. Thesis</i> , University of South Carolina, 1990.
Joe Beaman	Petrology and geochemistry of cumulate plutonic rocks and dikes, Elder Creek Ophiolite, California, <i>M.Sc. Thesis</i> , University of South Carolina, 1990.
Marchell Zoglman	The Stonyford Volcanic Complex, California: A Jurassic intraplate seamount, <i>M.Sc. Thesis</i> , University of South Carolina, 1991.
Richard A. Cooke	Compositional effects of Mantle Metasomatism in Alpine Peridotites, <i>M.Sc. Thesis</i> , University of South Carolina, University of South Carolina, 1992.
Joshua Mauldin	Petrology and Geochemistry of Crystalline Basement from a Neoproterozoic Volcanic Arc, Savannah River Site, South Carolina, <i>M.Sc. Thesis</i> , University of South Carolina, 1997.
Matthew Cooke	Petrology, Geochemistry, and Hydrology of basaltic volcanism, Central Snake River Plain, Idaho, <i>M.Sc. Thesis</i> , University of South Carolina, 1999.
Adele Simpson Seymore	Tectonic Implications of the Stony Creek Basaltic Sandstone, Late Jurassic Great Valley Series, Stonyford, California, <i>M.Sc. Thesis</i> , University of South Carolina, 1999.
Scott Matthews	Geology of the Owinza Butte, Shoshone SE, and Star Lake Quadrangles: Snake River Plain, Southern Idaho, <i>M.Sc. Thesis</i> , University of South Carolina, 2000.
Cameron Snow	The Coast Range ophiolite at Cuesta Ridge, California; Utah State University, <i>M.Sc. Thesis</i> , Utah State University, 2002.

John W. Shervais – Curriculum Vita

Kyle Andreasson Is the Southern Farmington Canyon Complex an Archean/Early Proterozoic Accretionary Complex? *M.Sc. Thesis*, Utah State University, 2007.

Theses and Dissertations in Progress

V. Ruth Hobson Remote sensing of basaltic volcanics, Central Snake River Plain, Idaho, M.Sc., USU

Meghan Zarnetske Basaltic volcanism in the Western Snake River Plain, Idaho, M.Sc., USU

Aaron Peterson Geochemical Provenance of Clastic Sedimentary Rocks, M.Sc., USU

Undergraduate Student Projects

Bruce Hebbel Chemical analyses of volcanic rocks from New Zealand by x-ray fluorescence, 1987

Kenny McKown An x-ray diffraction study of secondary mineral assemblages in Stonyford Volcanic Complex, northern California, 1989

Melinda McGee A field mapping study of the Stonyford Volcanic complex and adjacent rocks, northern California Coast Ranges, 1990

Bradley Hammel Chemical effects of metasomatism in alpine peridotites, 1990

Beth Ann Gaddis Geochemistry of Diorite-Quartz Diorite intrusive suite, Elder Creek Ophiolite, California, 1991-1992

John Stuart Electron microprobe study of lunar cumulate rocks, 1994-1995

Eric Vinson Geochemistry of Diorite-Quartz Diorite intrusive suite, Elder Creek Ophiolite, California, 1996.

Patrick Garrow Basaltic volcanism, Central Snake River Plain, 1998-1999.

Tonya Bunn X-ray fluorescence analysis of volcanic rocks, 1998-1999.

Childs Cantley Petrology and geochemistry of eclogites, Carolina terrane, SC, 1999

Christine Lüttich Major and trace element geochemistry of volcanic rocks from southern Idaho, 1999-2000.

PUBLICATIONS – TECHNICAL

Geologic Maps

- Scott H. Matthews, **John W. Shervais**, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Shoshone SE Quadrangle, Jerome and Lincoln Counties, Idaho: Idaho Geological Survey, Moscow Idaho, DWM-62 scale 1:24,000.
- Scott H. Matthews, **John W. Shervais**, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Star Lake Quadrangle, Jerome and Lincoln Counties, Idaho: Idaho Geological Survey, Moscow Idaho, DWM-67 scale 1:24,000.
- Matthew F. Cooke, **John W. Shervais**, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Dietrich Butte Quadrangle, Lincoln County, Idaho: Idaho Geological Survey, Moscow Idaho, DWM-63 scale 1:24,000.
- Matthew F. Cooke, **John W. Shervais**, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Dietrich Quadrangle, Lincoln County, Idaho: Idaho Geological Survey, Moscow Idaho, DWM-66 scale 1:24,000.
- John W. Shervais**, Matthew F. Cooke, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Owinza Quadrangle, Lincoln County, Idaho, Idaho Geological Survey, Moscow Idaho: Idaho Geological Survey, Moscow Idaho, DWM-64 scale 1:24,000.
- John W. Shervais**, Scott H. Matthews, John D. Kauffman, and Kurt L. Othberg, 2006, Geologic Map of the Owinza Butte Quadrangle, Jerome and Lincoln Counties, Idaho: Idaho Geological Survey, Moscow Idaho, DWM-65 scale 1:24,000.
- John D. Kauffman, Kurt L. Othberg, **John W. Shervais**, Matthew F. Cooke, 2005, Geologic Map of the Shoshone Quadrangle, Lincoln County, Idaho: Idaho Geological Survey, Moscow Idaho; DWM-44, Scale: 1:24000.
- Keith A. Howard and **John W. Shervais**, 1973, Geologic map of Smith Prairie, Elmore County, Idaho: *U. S. Geological Survey Miscellaneous Investigations*, Map 1-818.

Technical Reports

- Shervais, J.W.**, Branney, M.J., Geist, D.J., Hanan, B.B., Hughes, S.S., Prokopenko, A.A., Williams, D.F., 2006, HOTSPOT: The Snake River Scientific Drilling Project – Tracking the Yellowstone Hotspot Through Space and Time. Scientific Drilling, no 3, 56-57. Doi:10.2204/iodp.sd.3.14.2006.
- Vetter, S.K. and **Shervais, J.W.**, 1991, Dynamic melting in the genesis of mare basalts, in L.A. Taylor and J. Longhi, editors, *LPI Workshop on Mare Basalts*, LPI Technical Report 91-03, 61-62.
- Shervais, JW**, Knapp, S., and Taylor, L.A., 1984, Breccia Guidebook No. 7: 14321, NASA Planetary Materials Branch, Publication No. 69, JSC 19492, Lyndon Johnson Space Center, Houston, 57 pp.
- Shervais, JW**, and Taylor, L.A., 1983, Breccia Guidebook No. 5: 14305, NASA Planetary Materials Branch, Publication No. 68, JSC 19267, Lyndon Johnson Space Center, Houston, 58 pp.

Book Reviews and other non-reviewed

- Shervais, J.W.**, 2003, Book Review: "Ophiolites and oceanic crust: New insights from field studies and the ocean drilling program", edited by Y. Dilek, E.M. Moores, D. Elthon, and A. Nicolas, GSA Special Paper 349, 2000, 552 p., in *American Mineralogist*, January 2003.
- Shervais, J.W.**, 1988, Book Review: "Mantle Xenoliths", by P.H. Nixon, Wiley Interscience, N.Y., 844 pp., in *Science*, 241, 15 July 1988, p.366-367.
- Shervais, J.W.**, 1988, Clues emerge from Mars to Montana, *Geotimes*, June 1988, p. 22-24.

Books Edited

- James E. Wright and **John W. Shervais** (editors), 2008, *Ophiolites, Arcs, and Batholiths*, Geological Society of America, Boulder, Colorado, Special Paper 438, *in press, to be published 2008*.

PUBLICATIONS – REFEREED

Refereed Publications – Submitted

- Shervais, J.W.**, Vetter, S.K., Hanan, B.B., and Hackett, W.R., Neogene Basalts Sampled by Deep Drilling, Snake River Plain, Idaho: Mantle Processes and Crustal Evolution, *Geochemistry, Geophysics, Geosystems*, submitted Oct. 2007.
- Shervais, J.W.**, Hanan, B.B., and Vetter, S.K., Lithospheric topography, tilted plumes, and the track of the Snake River-Yellowstone Hotspot, *Tectonics*, submitted June 2007.
- Choi, S.H., **Shervais, J.W.**, Mukasa, S.B., Initiation of Franciscan Subduction along a Large-offset Fracture Zone: Evidence from Mantle Peridotites, California, California, *Geology*, submitted November 2007.
- Choi, S.H., **Shervais, J.W.**, Mukasa, S.B., Supra-Subduction and Abyssal Mantle Peridotites of the Coast Range Ophiolite, California, *Contributions to Mineralogy and Petrology*, submitted October 2007.

Refereed Publications – In press:

- Metcalf, R.V., and **Shervais, J.W.**, 2008, Supra-Subduction Zone (SSZ) Ophiolites: Is There Really An "Ophiolite Conundrum"?, in James E. Wright and John W. Shervais, editors, *Ophiolites, Arcs, and Batholiths*, Geological Society of America, Special Paper, in press.
- Shervais, J.W.**, 2008, Tonalites, Trondhjemites, and Diorites of the Elder Creek Ophiolite, California: Low Pressure Slab Melting and Reaction with the Mantle Wedge, in James E. Wright and John W. Shervais, editors, *Ophiolites, Arcs, and Batholiths*, Geological Society of America, Special Paper, in press.

Refereed Publications – In Print:

- Hanan, B.B., **Shervais, J.W.**, and Vetter, S.K., 2008, Yellowstone plume-continental lithosphere interaction beneath the Snake River Plain, *Geology*, v. 36, 51-54.
- Shervais, J.W.**, Kimbrough, D.L., Renne, P., Murchey, B., and Hanan, B.B., 2006, Multi-stage Origin of the Coast Range Ophiolite, California and Oregon: Implications for the Life Cycle of Supra-subduction Zone Ophiolites. In J.G. Liou and M. Cloos, editors, *Phase Relations, High Pressure terranes, P-T-ometry, and Plate Pushing: a tribute to W.G. Ernst*, International Book Series, v. 9, Bellwether Publishing Ltd., Columbia, MD, 570- 596. [reprinted from *International Geology Review*]
- Shervais, J.W.**, Vetter, S.K. and Hanan, B.B., 2006, A Layered Mafic Sill Complex beneath the Eastern Snake River Plain: Evidence from Cyclic Geochemical Variations in Basalt, *Geology*, v. 34, 365-368.
- Shervais, J.W.**, 2006, Significance of Subduction-related Accretionary Complexes in Early Earth Processes, in Uwe Reimold and Roger Gibson, editors, *Early Earth Processes*, Geological Society of America, Special Paper 405, 173-192.
- Shervais, J.W.**, Zoglman-Schuman, M.M., and Hanan, B.B., 2005, The Stonyford Volcanic Complex: A Forearc Seamount in the Northern California Coast Ranges, *Journal of Petrology*, doi:10.1093/petrology/egi048, v. 46 (10), 2091-2128.
- Shervais, J.W.**, Murchey, B., Kimbrough, D.L., Renne, P., and Hanan, B.B., 2005, Radioisotopic and Biostratigraphic Age Relations in the Coast Range Ophiolite, Northern California: Implications for the Tectonic Evolution of the Western Cordillera, *Geological Society of America Bulletin*, v. 117, no 5/6, p.633-653.
- Shervais, J.W.**, Kolesar, P., and Andreasen, K., 2005, Field and Chemical Study of Serpentinization – Stonyford, California: Chemical Fluxes and Mass Balance, *International Geology Review*, v. 47, 1-23.
- Shervais, J.W.**, Kauffman, J.D., Gillerman, V.S., Othberg, K.L., Vetter, S.K., Hobson, V.R., Meghan Zarnetske, M., Cooke, M.F., Matthews, S.H., and Hanan, B.B., 2005, Basaltic Volcanism of the Central and Western Snake River Plain: A Guide to Field Relations Between Twin Falls and Mountain Home, Idaho; in J. Pederson and C.M. Dehler, *Guide to Field trips in the western United States*, Field Guide volume 6, Geological Society of America, Boulder Colorado, 26 pages.

- Shervais, J.W.**, Kolesar, P., and Andreasen, K., 2004, Field and Chemical Study of Serpentinization – Stonyford, California: Chemical Fluxes and Mass Balance., in W.G. Ernst, editor, *Serpentine and serpentinites: mineralogy, petrology, geochemistry, ecology, geophysics, and tectonics (a tribute to Robert G. Coleman)*, International Book Series, v. 8, Bellwether Publishing Ltd., Columbia, MD, 452- 474. [reprinted from International Geology Review]
- Dennis, A.J., **Shervais, J.W.**, Mauldin, J., Maher, H.D. Jr., and Wright, J.E., 2004, Petrology and Geochemistry of Neoproterozoic Volcanic Arc Terranes Beneath the Atlantic Coastal Plain, Savannah River Site, South Carolina, *Geological Society of America Bulletin*, v 116, 572–593.
- Shervais, J.W.**, Kimbrough, D.L., Renne, P. Murchey, B., and Hanan, B.B., 2004, Multi-stage Origin of the Coast Range Ophiolite, California and Oregon: Implications for the Life Cycle of Supra-subduction Zone Ophiolites. *International Geology Review*, v. 46, 289-315.
- Shervais, J.W.**, Dennis, A.J., McGee, J.J., and Secor, D.T., 2003, Deep in the heart of Dixie: Pre-Alleghanian eclogite and HP granulite metamorphism in the Carolina terrane, South Carolina, USA. *Journal of Metamorphic Geology*, 21 (1): 65-80.
- Shervais, J.W.**, Shroff, G., Vetter, S.K., Matthews, S., Hanan, B.B., and McGee, J.J., 2002, Origin of the western Snake River Plain: Implications from stratigraphy, faulting, and the geochemistry of basalts near Mountain Home, Idaho. in Bill Bonnichsen, C.M. White, & Michael McCurry (eds) *Tectonic and Magmatic Evolution of the Snake River Plain Volcanic Province*, Idaho Geological Survey Bulletin 30, Moscow, Idaho, 343-361.
- Shervais, J.W.**, 2001, Birth, Death, and Resurrection: The Life Cycle of Suprasubduction Zone Ophiolites, *Geochemistry, Geophysics, Geosystems*, vol. 2, (Paper number 2000GC000080), 20,925 words, 8 figures, 3 tables.
- Dennis, A.J., **Shervais, J.W.**, and Maher, H.D. Jr., 2000, Outline of the Geology of Appalachian Basement Rocks Underlying the Savannah River Site, Aiken, SC, in D. E. Wyatt and M. K. Harris (editors) *Savannah River Site: Environmental Remediation Systems in Unconsolidated Upper Coastal Plain Sediments - Stratigraphic and Structural Considerations*, Carolina Geological Society, 2000 Annual Field Trip Guidebook, WSRC-MS-2000-00606 (CD ROM), 95-113.
- Dennis, A.J., **Shervais, J.W.**, and Secor, D.T., Jr., 2000, Newberry, South Carolina Eclogite: Structural setting and style of occurrence, in A. Wyeth (editor) *A Compendium of Field Trips of South Carolina Geology*, South Carolina Department of Natural Resources, Geological Survey, 29-38.
- Mukasa, S.B. and **Shervais, J.W.**, 1999, Growth of subcontinental lithosphere: evidence from repeated dike injections in the Balmuccia Iherzolite massif, Italian Alps. *Lithos*, 48, 287-316.
- Shah, M.T. and **Shervais, J.W.**, 1999, The Dir-Utror metavolcanic sequence, Kohistan arc terrane, northern Pakistan. *Journal of Asian Earth Sciences*, 17/4, 459-475.
- Mukasa, S.B., and **Shervais, J.W.**, 1999, Growth of subcontinental lithosphere: evidence from repeated dike injections in the Balmuccia Iherzolite massif, Italian Alps, in R.D. van der Hilst & W.F. McDonough (eds) *Composition, Deep Structure and Evolution of Continents*, Developments in Geotectonics, v. 24, Elsevier Science, Amsterdam, 287-316.
- Shervais, J.W.**, 1999, Highlands crust at the Apollo 14 site: Surfing the Fra Mauro shoreline. in G.A. Snyder, C.R. Neal, and W.G. Ernst (eds), *Planetary Geology and Geochemistry*, Geological Society of America, International Book Series, v. 2, 194-206. [reprinted from International Geology Review]
- Shervais, J.W.** and McGee, J.J., 1999, Petrology of the western Highlands Province: Ancient crust formation at the Apollo 14 site. *Journal Geophysical Research*, Vol. 104 , No. E3 , 5891-5920.
- Shervais, J.W.**, 1999, Highlands crust at the Apollo 14 site: Surfing the Fra Mauro shoreline. *International Geology Review*, 41, 141-153.
- Shervais, J.W.** and McGee, J.J., 1999, KREEP cumulates in the western lunar highlands: Ion & electron microprobe study of Alkali anorthosites and norites from Apollo 14. *American Mineralogist*, vol 84, #5/6, 806-820.
- Shervais, J.W.** and McGee, J.J., 1998, Ion & electron microprobe study of Mg suite troctolites, norite, and anorthosites from Apollo 14: Evidence for urKREEP assimilation during Petrogenesis of Apollo 14 Mg-suite rocks. *Geochimica Cosmochimica Acta*, 62/17, 3009-3023.
- Shah, M.T. and **Shervais, J.W.**, 1997, Oxygen isotope geochemistry of the Dir metavolcanic sequence and associated copper mineralization in Kohistan arc terrane, northern Pakistan. *The Nucleus*, 34, 49-55.

- Shervais, J.W.**, Shelley, S.A., and Secor, D.T. Jr., 1996, The Carolina terrane: A rifted volcanic arc in the southeastern Piedmont, in *Avalonian and Related Terranes of the Circum-Atlantic*, D. Nance (ed), Geol. Soc. America Special Publication 304, 219-236.
- Dennis, A.J. and **Shervais, J.W.**, 1996, The Carolina terrane in northwestern South Carolina: Insights into the development of an evolving island arc; in *Avalonian and Related Terranes of the Circum-Atlantic*, D. Nance (ed), Geol. Soc. America Special Publication 304, 237-256.
- Khattak, M.U.K., Stakes, D.S., and **Shervais, J.W.**, 1995, P-T-t paths of garnets from the Nanga Parbat-Haramosh massif, the Kohistan and the Ladakh island arc terranes, northern Pakistan. *Geol. Bull. Univ. Peshawar*, 28, 97-108.
- Khattak, M.U.K., Stakes, D.S., **Shervais, J.W.**, Arif, M., and Shah, M.T., 1995, Stable isotope thermometry of the Nanga Parbat-Haramosh massif and the Kohistan-Ladakh island arc, northern Pakistan. *Geol. Bull. Univ. Peshawar*, 28, 109-126.
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