

# The Compass: Earth Science Journal of Sigma Gamma Epsilon

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Volume 84 | Issue 3

Article 6

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11-5-2012

## Sigma Gamma Epsilon Undergraduate Research Poster Session

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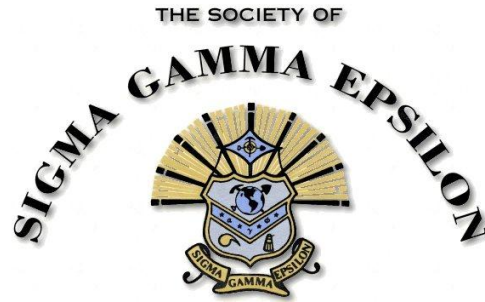
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### Recommended Citation

Elswick, Erika (2012) "Sigma Gamma Epsilon Undergraduate Research Poster Session," *The Compass: Earth Science Journal of Sigma Gamma Epsilon*: Vol. 84: Iss. 3, Article 6.

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Geological Society of America Annual Meeting  
Charlotte Convention Center  
Charlotte, North Carolina  
4-7 November 2012

**Sigma Gamma Epsilon Undergraduate Research Poster Session**  
**Session No. 92**  
**Monday, 5 November 2012,**  
**Charlotte Convention Center, Hall B**

The Sigma Gamma Epsilon undergraduate research poster session will highlight recent and on-going student research. Abstracts for poster presentations listed below will be available in the Geological Society of America Abstracts with Programs.

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- 92-1 71 [SEDIMENT RECORD FROM A BOG ON THE TRUJILLO MEADOWS LANDSLIDE \(>10.6 KA\), SOUTHEASTERN SAN JUAN MOUNTAINS, SOUTHERN COLORADO: CIRONE, Ashley M.<sup>1</sup>, SMITH, Jacqueline A.<sup>1</sup>, JOHNSON, Bradley G.<sup>2</sup>, and DIEMER, John A.<sup>3</sup>, \(1\) Physical & Biological Sciences, The College of Saint Rose, 432 Western Avenue, Albany, NY 12203, cironea218@strose.edu, \(2\) Environmental Studies, Davidson College, Box 7056, Davidson, NC 28035-7056, \(3\) Department of Geography & Earth Sciences, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223](#)
- 92-2 72 [PRELIMINARY GEOLOGIC AND GEOMORPHIC MAP OF LATE NEOGENE AND YOUNGER SEDIMENTS IN THE EASTERN PORTION OF THE OVERTON, NE 7.5 MINUTE QUADRANGLE, NEVADA: THAKKAR, Kavita, Department of Physics, Geology and Astronomy, University of Tennessee at Chattanooga, Chattanooga, TN 37403, ptc531@mocs.utc.edu and BROCK-HON, Amy L., Department of Physics, Geology and Astronomy, University of Tennessee at Chattanooga, 615 McCallie Avenue, Chattanooga, TN 37403](#)
- 92-3 73 [DOES HYDRO-FRACKING AFFECT LOCAL SURFACE WATERS? A TEST FOR CHEMICAL SIGNATURES: CORRIER, Kristen Lee<sup>1</sup>, BROWN, Terri<sup>2</sup>, MCKINNEY, Michael L.<sup>3</sup>, HREN, Michael<sup>3</sup>, and TSCHAPLINSKI, Timothy J.<sup>4</sup>, \(1\) Environmental Studies, University of Tennessee, Knoxville, TN 37996, ysn249@utk.edu, \(2\) Earth and Planetary Science, University of Tennessee, Knoxville, TN 37996, \(3\) Earth and Planetary Science, The University of Tennessee, 306 Earth and Planetary Sciences Building, Knoxville, TN 37996-1410, \(4\) Biosciences Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831](#)

- 92-4 74 [SHELL DECAY RATES OF FRESHWATER MUSSELS: INSIGHTS FOR SPECIES CONSERVATION](#): **PIGG, Andy Austin**, University of Tennessee Knoxville, 1412 Circle Drive, Knoxville, TN 37996-1410, apigg@utk.edu, **MCKINNEY, Michael L.**, Earth and Planetary Science, The University of Tennessee, 306 Earth and Planetary Sciences Building, Knoxville, TN 37996-1410, and **MINCY, Grant**, Geology Department, University of Tennessee, Knoxville, TN 37916
- 92-5 75 [SOIL COMPACTION AT BONNAROO MUSIC AND ARTS FESTIVAL, MANCHESTER, TN](#): **LEDOUX, St. Thomas Majeau**, Earth and Planetary Sciences, University of Tennessee, Knoxville, 1605 Fremont Place, Apt 2, Knoxville, TN 37917, sledoux@utk.edu
- 92-6 76 [EFFECTIVENESS OF BEST MANAGEMENT PRACTICES IN IMPROVING WATER QUALITY AND STREAM MORPHOLOGY ON CATTLE FARMS IN CENTRAL VIRGINIA](#): **MACKLIN, Katherine M.** and **AMBERS, Rebecca K.R.**, Dept. of Environmental Studies, Sweet Briar College, 134 Chapel Rd, Sweet Briar, VA 24595, macklin13@sbc.edu
- 92-7 77 [POSITIVE CARBON ISOTOPE SHIFT IN THE MIDDLE TO LATE ORDOVICIAN: NO LINK WITH SEA LEVEL?](#): **TRIGG, Cody**, School of Earth Sciences, The Ohio State University, Columbus, OH 43210, trigg.18@osu.edu, **SALTZMAN, Matthew R.**, School of Earth Sciences, The Ohio State University, 275 Mendenhall Laboratory, 125 South Oval Mall, Columbus, OH 43210, **CARLUCCI, Jesse R.**, Department of Geosciences, Midwestern State University, Wichita Falls, TX 76308, **WESTROP, Stephen R.**, Oklahoma Museum of Natural History and School of Geology & Geophysics, Univ of Oklahoma, Norman, OK 73072, **LESLIE, Stephen A.**, Department of Geology and Environmental Sciences, James Madison University, MSC 6903, Harrisonburg, VA 22807, **YOUNG, Seth A.**, Department of Geological Sciences, Indiana University, Bloomington, IN 47405, **BERGSTROM, Stig M.**, School of Earth Sciences, The Ohio State University, Columbus, OH 43210-1308, **SEDLACEK, Alexa R.C.**, School of Earth Sciences, The Ohio State University, 275 Mendenhall Laboratory, 125 S. Oval Mall, Columbus, OH 43210, and **EDWARDS, Cole T.**, Earth Sciences, The Ohio State University, 275 Mendenhall Laboratory, 125 South Oval Mall, Columbus, OH 43210
- 92-8 78 [EVALUATING ANTHROPOGENIC IMPACT ON WATER QUALITY OF OHIO RIVERS OVER TIME](#): **DAILEY, Kelsey R.**, School of Earth Sciences, The Ohio State University, 275 Mendenhall Laboratory, 125 South Oval Mall, Columbus, OH 43210, dailey.154@osu.edu and **LYONS, W. Berry**, Byrd Polar Research Center and School of Earth Sciences, The Ohio State University, Columbus, OH 43210
- 92-9 79 [ECOSYSTEM DYNAMICS IN AN EXTREME ENVIRONMENT: LAKE FRYXELL, TAYLOR VALLEY, ANTARCTICA](#): **RYTEL, Alex L.**, 1574 Worthington St, Columbus, OH 43201, rytel.4@osu.edu, **HERBEL, Radu**, Department of Statistics, The Ohio State University, Columbus, OH 43210, **LYONS, W. Berry**, Byrd Polar Research Center and School of Earth Sciences, The Ohio State University, Columbus, OH 43210, **PRISCU, John C.**, Department of Land Resources and Environmental Sciences, Montana State University, P.O. Box 173120, Bozeman, MT 59717-3120, and **MCKNIGHT, Diane M.**, Institute for Arctic and Alpine Research, Univ. of Colorado, 1560 30th Street, Boulder, CO 80309
- 92-10 80 [REMEDICATION OF AQUIFERS WITH OXIDANT BEARING SODIUM SILICATE SOLUTIONS/GELS](#): **COTTER, Zachary MK<sup>1</sup>**, **SOLPUKER, U.<sup>1</sup>**, and **SCHWARTZ, F.W.<sup>2</sup>**, (1) School of Earth Sciences, The Ohio State University, 125 South Oval Mall, 275 Mendenhall Laboratory, Columbus, OH 43210, Cotter.66@buckeyemail.osu.edu, (2) School Earth Sciences, The Ohio State University, 125 S. Oval Mall, Columbus, OH 43210
- 92-11 81 [AN INQUIRY INTO THE EVOLUTION AND SEDIMENTS OF CAVES ALONG THE SCIOTO RIVER](#): **PARKER, Eric M.**, Earth Science, The Ohio State University, 439 Yearling Drive, Berea, OH 44017, parker.807@osu.edu

- 92-12 82 [PRIMARY PRODUCTIVITY AND PALEOXYGENATION FOLLOWING THE END-PERMIAN MASS EXTINCTION: A GEOCHEMICAL ANALYSIS OF GRIESBACHIAN SEDIMENTS FROM THE WESTERN CANADIAN SEDIMENTARY BASIN \(ALBERTA, CANADA\):](#) **AGREDANO, Elizabeth**, Department of Geological Sciences, California State University, Fullerton, 800 N. State College Blvd, Fullerton, CA 92831, elizabethagredano@csu.fullerton.edu, **WOODS, Adam D.**, Department of Geological Sciences, California State University, Fullerton, 800 N. State College Blvd, Fullerton, CA 92834-6850, **ZONNEVELD, J.-P.**, Department of Earth and Atmospheric Sciences, University of Alberta, Edmonton, AB T6G 2E3, Canada, and **BEATTY, Tyler W.**, Department of Geoscience, University of Calgary, 2500 University Drive N.W, Calgary, AB T2N 1N4
- 92-13 83 [AGE AND PROVENANCE OF THE OLDEST SEDIMENTS IN THE NORTHERN PENINSULAR RANGES FOREARC BASIN, ORANGE CO., CA:](#) **HOLLIS, Natalie**, Department of Geological Sciences, California State University, Fullerton, 800 North State College Blvd, Fullerton, CA 92834-6850, nhollis@csu.fullerton.edu, **GEVEDON, Michelle L.**, Geological Sciences, California State University Fullerton, 800 N. State College Blvd, Fullerton, CA 92834, and **CLEMENS-KNOTT, Diane**, Department of Geological Sciences, California State University, Fullerton, CA 92834
- 92-14 84 [STABLE ISOTOPIC PALEOCLIMATE RECORD IN CALCAREOUS TUFA FROM MALANAPHY SPRINGS STATE PRESERVE, WINNESHIEK COUNTY, IOWA, USA:](#) **BURKET, S. Bekah**<sup>1</sup>, **WANAMAKER, Alan D. Jr**<sup>2</sup>, and **SIMPKINS, William W.**<sup>2</sup>, (1) Stetson University, 421 N Woodland Blvd, DeLand, FL 32723, bekahburket@gmail.com, (2) Department of Geological and Atmospheric Sciences, Iowa State University, 253 Science I, Ames, IA 50011-3212
- 92-15 85 [AN EXPANDED STRATIGRAPHIC RECORD OF NORTH AMERICAN PLATE MOTION DURING THE EARLY STAGES OF THE MID-CONTINENT RIFT:](#) **MUSTAIN, Monica**, Illinois State University, Normal, IL 61761, mrmusta@ilstu.edu, **VAUGHAN, Angus A.**, Department of Geology, Carleton College, 300 North College Street, Northfield, MN 55057, **SWANSON-HYSELL, Nicholas L.**, Institute for Rock Magnetism, University of Minnesota, Department of Earth Sciences, 100 Union Street SE, Minneapolis, MN 55455, and **FEINBERG, Joshua**, Institute for Rock Magnetism, University of Minnesota, Department of Geology and Geophysics, 310 Pillsbury Drive SE, Minneapolis, MN 55455
- 92-16 86 [INFLUENCE OF MECHANICAL STRATIGRAPHY ON THRUST BELT MORPHOLOGY IN PHYSICAL MODELS:](#) **STECKER, E.C.**, Department of Physical Sciences, Kutztown University, Kutztown, PA 19530, estec453@live.kutztown.edu and **TINDALL, Sarah**, Department of Physical Sciences, Kutztown Univ, Kutztown, PA 19530
- 92-17 87 [RECENT FOLDING, GEOMORPHIC EVOLUTION, AND PALEOCLIMATE: APSHERON PENINSULA, AZERBAIJAN:](#) **LESLIE, Caitlin E.**, Geology, Grand Valley State University, 1 Campus Drive, Allendale, MI 49401, leslicca@mail.gvsu.edu, **WEBER, John**, Geology, Grand Valley State University, 1 Campus Drive, PAD 118, Allendale, MI 49401, **WAMPLER, Peter J.**, Geology Department, Grand Valley State University, 1 Campus Drive, Allendale, MI 49401, and **ALIYEVA, Elmira**, Geology, Geology Institute of Azerbaijan National Academy of Sciences, Baku, AZ1000, Azerbaijan
- 92-18 88 [A COMPOSITIONAL INVESTIGATION OF POST-DETONATION NUCLEAR DEBRIS: RESULTS FROM IN SITU INVESTIGATIONS OF TRINITITE GLASS:](#) **HAINLEY, Timothy J.**, **SMIERCIAK, Madeline F.**, **WELSH, Nolan P.**, **SIMONETTI, Antonio**, **BELLUCCI, Jeremy**, **KOEMAN, Elizabeth**, and **WALLACE, Christine**, Civil & Environmental Engineering and Earth Sciences, University of Notre Dame, 156 Fitzpatrick Hall, Notre Dame, IN 46556, thainley@nd.edu
- 92-19 89 [VALIDATION AND APPLICATION OF IN-SITU IRON-MANGANESE OXIDE COATED STREAM PEBBLES AS SENSORS FOR ARSENIC SOURCE MONITORING:](#) **CASTEEL, Amanda M.**, Earth and Environmental Science, Lehigh University, 1 West Packer Ave, Bethlehem, PA 18015, amc413@lehigh.edu, **PETERS, Stephen C.**, Earth and Environmental Sciences, Lehigh University, 1 W Packer Ave, Bethlehem, PA 18015, and **BLAKE, Johanna M.T.**, Earth and Environmental Sciences, Lehigh University, 1 W. Packer Ave, Bethlehem, PA 18015

- 92-20 90 [REASSESSING PENNSYLVANIA ABANDONED COAL MINE DISCHARGES: VIRGONE, Kayla M.](#), SOLLY, Joseph A., BURROWS, Jill E., and PETERS, Stephen C., Earth and Environmental Sciences, Lehigh University, 1 W Packer Ave, Bethlehem, PA 18015, kmv210@lehigh.edu
- 92-21 91 [SPATIAL AND TEMPORAL VARIABILITY OF STABLE ISOTOPES IN AN UPPER BED II TUFA, OLDUVAI GORGE, TANZANIA: KARIS, Alyssa M.](#), Earth and Planetary Sciences, Rutgers University, 610 Taylor Road, Piscataway, NJ 08854-8066, karis.alyssa@gmail.com, ASHLEY, Gail M., Earth and Planetary Sciences, Rutgers Univ, 610 Taylor Road, Piscataway, NJ 08854-8066, and WRIGHT, James D., Geological Sciences, Rutgers University, 610 Taylor Road, Wright-Reiman Labs, Piscataway, NJ 08854
- 92-22 92 [CARBON SEQUESTRATION BENEATH THE NEW JERSEY CONTINENTAL SHELF: AN ASSESSMENT OF THE GEOLOGICAL AND SOCIO-POLITICAL FACTORS: HLAVATY, Corie L.](#), Rutgers University, Department of Earth and Planetary Sciences, New Brunswick, NJ 08901, chlavyt@eden.rutgers.edu, KOPP, Robert E., Department of Earth and Planetary Sciences, Rutgers University, New Brunswick, NJ 08901, MILLER, Kenneth G., Dept. of Earth and Planetary Sciences, Rutgers University, Wright Laboratories, 610 Taylor Rd, Piscataway, NJ 08854, BROWNING, James V., Dept. of Earth and Planetary Sci, Rutgers University, Wright Laboratories, 610 Taylor Rd, Piscataway, NJ 08854, REINFELDER, Y.F., Department of Earth and Planetary Sciences, Rutgers University, Wright Labs, 610 Taylor Road, Piscataway, NJ 08854-8066, MOUNTAIN, Gregory S., Earth and Planetary Sciences, Rutgers University, Wright Labs, 610 Taylor Rd, Piscataway, NJ 08854, and SLATER, Brian, Office of Oil and Gas, New York State Museum, 3128 Cultural Education Center, Albany, 12230
- 92-23 93 [MICROBIAL ASSEMBLAGES IN A SMALL, URBAN RESERVOIR IMPACTED BY ACID MINE DRAINAGE, OAKLAND, CA: WU, Caroline<sup>1</sup>](#), FAUL, Kristina L.<sup>1</sup>, and RADEMACHER, Laura K.<sup>2</sup>, (1) Environmental Sciences Program/Department of Chemistry, Mills College, 5000 MacArthur Blvd, Oakland, CA 94613, cwu@mills.edu, (2) Department of Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211
- 92-24 94 [A SEARCH FOR APATITE AND ZIRCON IN THE ROCKS OF THE MARLBOROUGH FAULT SYSTEM, SOUTH ISLAND, NEW ZEALAND: LUGO CENTENO, Cristina M.](#), RESESS Internship at UNAVCO, Boulder, CO, and, Department of Geology, University of Puerto Rico at Mayaguez, Mayaguez, PR 00680, cristina.lugo@upr.edu, DUVALL, Alison R., Department of Earth and Space Sciences, University of Washington and Department of Geological Sciences, University of Colorado, Boulder, CO 80309, and FLOWERS, Rebecca, Department of Geological Sciences, University of Colorado, Boulder, Campus Box 399, 2200 Colorado Ave, Boulder, CO 80309
- 92-25 95 [KINEMATIC ANALYSIS OF THE ROSENDALE THRUST FAULT, NORTHERNMOST CENTRAL APPALACHIAN FOLD-THRUST BELT, NEW YORK: GUNDERSEN, Melissa](#), Geology, SUNY New Paltz, 1 Hawk Drive, New Paltz, NY 12561, mel.gundersen86@hawkmil.newpaltz.edu, VOLLMER, Frederick W., Geology, SUNY New Paltz, New Paltz, NY 12401, MAINWARING, Nicole E., Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 92511, BURMEISTER, Kurtis C., Dept of Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211, WALKER, Jeffrey R., Earth Science and Geography, Vassar College, 124 Raymond Ave, Box 735, Poughkeepsie, NY 12604, and KUIPER, Yvette D., Geology and Geological Engineering, Colorado School of Mines, 1516 Illinois Street, Golden, CO 80401
- 92-26 96 [THE DISTRIBUTION OF ANTHROPOGENIC LEAD IN AN URBAN SOIL: A CASE STUDY FROM ROCHESTER, NY: POPE, Gina G.](#) and NOLL, Mark R., Department of the Earth Sciences, The College at Brockport, State University of New York, 350 New Campus Dr, Brockport, NY 14420, gpope1@brockport.edu
- 92-27 97 [GEOLOGICAL PARAMETERS IN MODELLING NATURAL WASTE-WATER TREATMENT SYSTEMS FOR THE GLOBAL POOR: EDGREN, David C.](#), WALLETT, Kaitlyn N., and GREENBERG, Jeffrey K., Geology and Environmental Science, Wheaton College, Wheaton, IL 60187, kaitlyn.wallett@my.wheaton.edu

- 92-28 98 [CARBON AND OXYGEN ISOTOPE EVIDENCE FOR THE ORIGIN OF LATE-KINEMATIC CARBONATE VEINS IN PROTEROZOIC METABASALTIC ROCKS, EASTERN BLACK HILLS, SD](#): **GATES, Christopher H.**<sup>1</sup>, WEBB, Forrest C.<sup>2</sup>, and GREENBERG, Jeffrey K.<sup>1</sup>, (1) Geology and Environmental Science, Wheaton College, Wheaton, IL 60187, chris.gates@my.wheaton.edu, (2) Geology, Univ. of Kentucky, Lexington, KY 40536
- 92-29 99 [GIS WATERSHED ANALYSIS FOR EROSION CONTROL OF UPPER LA BAIE DES MOUSTIQUES, NORTHWEST HAITI](#): **WRIGHT, J. Toby**, MEADOWS, Derek, KISHKUNAS, Kaitlyn M., and GREENBERG, Jeffrey K., Geology and Environmental Science, Wheaton College, Wheaton, IL 60187, toby.wright@my.wheaton.edu
- 92-30 100 [GLACIOCHEMISTRY OF A SHALLOW ICE CORE FROM THE WEST ANTARCTIC ICE SHEET: SOURCES AND IMPLICATIONS](#): **THOMPSON, Lauren M.**, Chemistry, Wheaton College (MA), Norton, MA 02766, lmthompson9@gmail.com, EVANS, Matthew J., Chemistry Department, Wheaton College, Norton, MA 02766, FREY, Karen, Geography, Clark University, Worcester, MA 01610, and DAS, Sarah, Woods Hole Oceanographic Institution, Woods Hole, MA 02543
- 92-31 101 [DETERMINING DEPOSITIONAL HETEROGENEITY THROUGH CLAY MINERALOGY AND PARTICLE SIZE ANALYSIS OF AN EARLY MIOCENE PALEO-FOREST PALEOSOL, HIWEGI FORMATION, RUSINGA ISLAND, KENYA](#): **HORNER, William H.**<sup>1</sup>, MICHEL, Lauren A.<sup>1</sup>, PEPPE, Daniel J.<sup>1</sup>, DRIESE, Steven<sup>1</sup>, MCNULTY, Kieran P.<sup>2</sup>, LEHMANN, Thomas<sup>3</sup>, DUNSWORTH, Holly M.<sup>4</sup>, and HARCOURT-SMITH, William E.H.<sup>5</sup>, (1) Department of Geology, Baylor University, One Bear Place #97354, Waco, TX 76798-7354, W\_Horner@baylor.edu, (2) Department of Anthropology, University of Minnesota, 395 Hubert H. Humphrey Center, 301 19th Avenue South, Minneapolis, MN 55455, (3) Abteilung Paläoanthropologie und Messelforschung, Forschungsinstitut und Naturmuseum Senckenberg, Senckenberganlage 25, Frankfurt, D-60325, Germany, (4) Department of Sociology and Anthropology, University of Rhode Island, 507 Chafee Building, 10 Chafee Road, Kingston, RI 02881, (5) Department of Vertebrate Paleontology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024
- 92-32 102 [MAGNETOSTRATIGRAPHY OF THE EARLY MIOCENE HIWEGI FORMATION \(RUSINGA ISLAND, LAKE VICTORIA, KENYA\)](#): **MCCOLLUM, Mark Samson**, Geology, Baylor University, 2220 S 2nd St, Waco, TX 76706, mark\_mccollum@baylor.edu, PEPPE, Daniel J., Department of Geology, Baylor University, One Bear Place #97354, Waco, TX 76798-7354, MCNULTY, Kieran P., Department of Anthropology, University of Minnesota, 395 Hubert H. Humphrey Center, 301 19th Avenue South, Minneapolis, MN 55455, DUNSWORTH, Holly M., Department of Sociology and Anthropology, University of Rhode Island, 507 Chafee Building, 10 Chafee Road, Kingston, RI 02881, HARCOURT-SMITH, William E.H., Department of Vertebrate Paleontology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024, and ANDREWS, Alexandra L., Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA 02139
- 92-33 103 [PRELIMINARY FINITE STRAIN AND FABRIC ANALYSIS OF CONGLOMERATE FROM THE SHAWANGUNK FORMATION; NORTHERN APPALACHIAN FOLD-THRUST BELT, HUDSON VALLEY, NEW YORK](#): **KLEMM, Brittany M.**<sup>1</sup>, VOLLMER, Frederick W.<sup>2</sup>, and BURMEISTER, Kurtis C.<sup>1</sup>, (1) Department of Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211, b\_klemm@u.pacific.edu, (2) Department of Geology, SUNY New Paltz, 1 Hawk Drive, New Paltz, NY 12401
- 92-34 104 [SEDIMENT CORE DERIVED HISTORY OF METAL CYCLING THROUGH A SMALL, ACID MINE DRAINAGE IMPACTED RESERVOIR IN OAKLAND, CA](#): **YUN, Jason E.L.**<sup>1</sup>, RADEMACHER, Laura K.<sup>1</sup>, and FAUL, Kristina L.<sup>2</sup>, (1) Department of Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211, j\_yun1@u.pacific.edu, (2) Environmental Sciences Program/Department of Chemistry, Mills College, 5000 MacArthur Blvd, Oakland, CA 94613

- 92-35 105 [QUANTIFYING PATHS IN UHP TERRANES: A 3-D APPROACH USING THERMOBAROMETRY AND FIELD RELATIONSHIPS](#): **HABICHT, M. Helen**, Geology, Albion College, 611 E. Porter St, Albion, MI 49224, mhh11@albion.edu, **MENOLD, Carrie**, Geological Sciences, Albion College, 611 East Porter St, Albion, MI 49224, **WEBB, A. Alexander G.**, Geology and Geophysics, Louisiana State University, E235 Howe-Russell Geoscience Complex, Baton Rouge, LA 70803, and **DONALDSON, Dennis**, Louisiana State University, Baton Rouge, LA 70803
- 92-36 106 [INVESTIGATION OF BIOTURBATION AND GROUNDWATER SAPPING AS POSSIBLE CAUSES OF DIEL TURBIDITY CYCLES IN RICE CREEK, KALAMAZOO WATERSHED, MI](#): **HIDAY, Aaron D.**, LINCOLN, Timothy N., and **WILCH, Thomas I.**, Geological Sciences, Albion College, Albion, MI 49224, adh10@albion.edu
- 92-37 107 [MAGNETIC SUSCEPTIBILITY PROFILES AS A TOOL FOR CORRELATION: A CASE STUDY FROM UPPER ORDOVICIAN RED RIVER FM., NORTH DAKOTA AND BIGHORN DOLOMITE, WYOMING](#): **HOOTEN, Juliet V.**, Geology, St. Lawrence University, SMC: 1346 23 Romoda Dr, Canton, NY 13617, jvhoot10@stlawu.edu and **HUSINEC, Antun**, Geology Department, St. Lawrence University, 23 Romoda Drive, Canton, NY 13617
- 92-38 108 [SLOPE-INFLUENCED WINDTHROW OF UPROOTED WHITE PINES \(\*PINUS STROBUS\*\): LAMPSON FALLS, ADIRONDACK MOUNTAINS, NY](#): **COX, Terry**, Geology, St. Lawrence University, 23 Romoda Dr, Canton, NY 13617, tlcox10@stlawu.edu and **STEWART, Alexander K.**, Department of Geology, St. Lawrence University, Canton, NY 13617
- 92-39 109 [EVIDENCE OF A VALLEY GLACIER ANTEDATING THE LLEWELLYN GLACIER, JUNEAU ICEFIELD, CANADA: AN ANALOGUE FOR THE ADIRONDACKS?](#): **CHESLER, Aaron Jeffrey**, Geology, St. Lawrence University, SMC 1881, 23 Romoda Dr, Canton, NY 13617, ajches09@stlawu.edu and **STEWART, Alexander K.**, Department of Geology, St. Lawrence University, Canton, NY 13617
- 92-40 110 [BULK MAGNETIC SUSCEPTIBILITY AS A PROXY FOR COMPOSITIONAL VARIATION IN PLUTONIC ROCKS: MAGMA MIXING CAN BE A PROBLEM](#): **HEINER, KayeLinda**, Geology and Geophysics, University of Utah, 115 S 1460 E, Salt Lake City, UT 84112-0101, kayelinda.heiner@gmail.com, **BARTLEY, John M.**, Department of Geology and Geophysics, Univ of Utah, 115 S. 1460 E, Rm 383 FASB, Salt Lake City, UT 84112, **STEARNS, Michael A.**, Earth Science, University of California, 1006 Webb Hall, MC 9630, Santa Barbara, CA 93106-9630, and **PETERSEN, Erich U.**, Geology and Geophysics, University of Utah, 115 S. 1460 E. Rm. 383, Salt Lake City, UT 84112
- 92-41 111 [FE RATIOS IN SOILS FROM A PIEDMONT TERRACE CHRONOSEQUENCE, CATAWBA RIVER, NORTH CAROLINA](#): **RINEHART, Morgan S.**<sup>1</sup>, **EPPE, Martha C.**<sup>2</sup>, **ABERNATHY, Stephen**<sup>2</sup>, and **AQUINO, Kim**<sup>2</sup>, (1) Department of Geography & Earth Sciences, University of North Carolina at Charlotte, 9201 University City Blvd, Charlotte, NC 28223, mrineha2@uncc.edu, (2) Department of Geography & Earth Sciences, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223
- 92-42 112 [CHANGES IN THE LENGTH AND VOLUME OF RABOTS GLACIÄR, SWEDEN, 2003-2011 BASED ON GEODETIC METHODS](#): **PANKRATZ, Latysha** and **BRUGGER, Keith A.**, Geology Discipline, University of Minnesota, Morris, 600 E. 4th Street, Morris, MN 56267, pankr022@morris.umn.edu
- 92-43 113 [COMPARATIVE PETROLOGY AND MINERALOGY OF PEGMATITES FROM THE PIKES PEAK BATHOLITH, COLORADO](#): **BOLLEN, Elizabeth M.**<sup>1</sup>, **HOLLABAUGH, Curtis L.**<sup>1</sup>, and **BERG, Christopher A.**<sup>2</sup>, (1) Geosciences, University of West Georgia, Carrollton, GA 30118, ebollen1@my.westga.edu, (2) Department of Geosciences, University of West Georgia, 1601 Maple Street, Carrollton, GA 30118
- 92-44 114 [MINERALOGY AND GEOCHEMISTRY OF THE HONEYCOMB HILLS RHYOLITE, JUAB COUNTY, UTAH](#): **PHILLIPS, Judy McCurry** and **HOLLABAUGH, Curtis L.**, Geosciences, University of West Georgia, Carrollton, GA 30118, jphill16@my.westga.edu
- 92-45 115 [EVALUATION OF MICROSTRUCTURES, MINERAL CHEMISTRY, AND PRELIMINARY THERMOBAROMETRY FOR THE KINNARD CREEK FAULT, CENTRAL GEORGIA](#): **BERG, Christopher A.** and **MASSEY, Rachel**, Department of Geosciences, University of West Georgia, 1601 Maple Street, Carrollton, GA 30118, rmassey4@my.westga.edu

- 92-46 116 [A MODIFIED COASTAL VULNERABILITY INDEX FOR SMALL ASSOCIATED ISLANDS OF PUERTO RICO AND THE U. S. VIRGIN ISLANDS](#): **PERISON-PARRISH, Elizabeth M.**<sup>1</sup>, RUNYAN, Ryann M.<sup>1</sup>, SIEMER, Kyle W.<sup>2</sup>, JACKSON, Chester W. Jr.<sup>3</sup>, BUSH, David M.<sup>1</sup>, LLERANDI-ROMÁN, Pablo A.<sup>4</sup>, and NEAL, William J.<sup>4</sup>, (1) Department of Geosciences, University of West Georgia, Carrollton, GA 30118, eperiso1@my.westga.edu, (2) Environmental sciences, University of Toledo, 2801 Bancroft Ave, Toledo, OH 49606, (3) Department of Geology and Geography, Georgia Southern University, Statesboro, GA 30460, (4) Department of Geology, Grand Valley State University, Allendale, MI 49401
- 92-47 117 [MINERALOGY OF THE OXIDE MINERALS IN THE BUCK CREEK MAFIC-ULTRAMAFIC COMPLEX, NORTH CAROLINA](#): **GRAYBEAL, Daniel B.**<sup>1</sup>, KIEL, Nathan J.<sup>1</sup>, DYER, Elizabeth K.<sup>1</sup>, KLING, Corbin L.<sup>1</sup>, PEREZ, Amy E.<sup>1</sup>, SELLERS, Rachel C.<sup>1</sup>, FOSTER, Nicholas A.<sup>1</sup>, FLEISHER, Christopher J.<sup>2</sup>, and SWANSON, Samuel E.<sup>2</sup>, (1) Department of Geology, University of Georgia, Athens, GA 30602, dan31618@uga.edu, (2) Dept. of Geology, University of Georgia, Athens, GA 30602
- 92-48 118 [EFFICACY OF COMMERCIAL HOUSEHOLD WATER FILTERS TO REMOVE CONTAMINANTS FROM DRINKING WATER](#): **ESTABROOK, Alicia** and MUTITI, Samuel, Biology and Environmental Science Department, Georgia College & State University, Milledgeville, GA 31061, alicia.estabrook@gmail.com
- 92-49 119 [CHARACTERIZING SMALL ASSOCIATED ISLANDS OF PUERTO RICO AND USVI: PROVIDING A BASIS FOR FORECASTING SHORELINE RESPONSE TO SEA-LEVEL RISE](#): **RUNYAN, Ryann M.**<sup>1</sup>, PERISON-PARRISH, Elizabeth M.<sup>1</sup>, LOCURTO, Patricia L.<sup>1</sup>, SIEMER, Kyle W.<sup>2</sup>, JACKSON, Chester W. Jr.<sup>3</sup>, BUSH, David M.<sup>1</sup>, LLERANDI-ROMÁN, Pablo A.<sup>4</sup>, and NEAL, William J.<sup>4</sup>, (1) Department of Geosciences, University of West Georgia, Carrollton, GA 30118, rrunyan1@my.westga.edu, (2) Environmental sciences, University of Toledo, 2801 Bancroft Ave, Toledo, OH 49606, (3) Department of Geology and Geography, Georgia Southern University, Statesboro, GA 30460, (4) Department of Geology, Grand Valley State University, Allendale, MI 49401
- 92-50 120 [METAL CYCLING THROUGH AN EPHEMERAL ACID MINE DRAINAGE IMPACTED URBAN RESERVOIR IN OAKLAND, CA](#): **STITT, Caroline R.**<sup>1</sup>, FAUL, Kristina L.<sup>1</sup>, and RADEMACHER, Laura K.<sup>2</sup>, (1) Environmental Sciences Program/Department of Chemistry, Mills College, 5000 MacArthur Blvd, Oakland, CA 94613, castitt@mills.edu, (2) Department of Earth and Environmental Sciences, University of the Pacific, 3601 Pacific Avenue, Stockton, CA 95211
- 92-51 121 [MAGMATIC COMPOSITIONS AND ALTERATION OF RHYOLITIC ASH-FLOW TUFFS IN THE EASTERN SIERRAN ARC OF CALIFORNIA](#): **YAGER, Stacy L.**, Earth Sciences, IUPUI, 723 West Michigan Street, Indpls, IN 46202, slyager@umail.iu.edu, BARTH, Andrew P., Earth Sciences, Indiana University-Purdue University, 723 West Michigan Street, Indianapolis, IN 46202, DOUGLAS, Sarah R., Department of Earth Sciences, Indiana University Purdue University Indianapolis, 723 West Michigan Street, SL 118, Indianapolis, IN 46202, RIGGS, N.R., School of Earth Sciences and Environmental Sustainability, Northern Arizona University, Flagstaff, AZ 86011-4099, WALKER, J. Douglas, Department of Geology, University of Kansas, Lawrence, KS 66045, and SCHWEICKERT, Richard A., Geological Sciences, University of Nevada, Reno, Reno, NV 89557
- 92-52 122 [INSIGHTS INTO MAGMA RESERVOIR PROCESSES FROM EARLY MESOZOIC EXPLOSIVE VOLCANISM IN CALIFORNIA](#): **GEHRMAN, Rachael C.**<sup>1</sup>, BARTH, A.P.<sup>1</sup>, RIGGS, N.R.<sup>2</sup>, and WALKER, J. Douglas<sup>3</sup>, (1) Earth Sciences, Indiana University-Purdue University, 723 West Michigan Street, Indianapolis, IN 46202, rcgehrma@imail.iu.edu, (2) School of Earth Sciences and Environmental Sustainability, Northern Arizona University, Flagstaff, AZ 86011-4099, (3) Department of Geology, University of Kansas, Lawrence, KS 66045
- 92-53 123 [ZIRCON GEOCHEMISTRY RECORDS THERMAL AND COMPOSITIONAL EVOLUTION OF PLUTONS AND VOLCANIC ROCKS IN THE EASTERN SIERRA NEVADA BATHOLITH](#): **WIND, R.E.**<sup>1</sup>, WOODEN, J.L.<sup>2</sup>, BARTH, A.P.<sup>1</sup>, and RIGGS, N.R.<sup>3</sup>, (1) Earth Sciences, Indiana University-Purdue University, 723 West Michigan Street, Indianapolis, IN 46202, rewind@indiana.edu, (2) Stanford University, Stanford, CA 94305, (3) School of Earth Sciences and Environmental Sustainability, Northern Arizona University, Flagstaff, AZ 86011-4099



- 92-54 124 [GEOCHEMISTRY OF THE BANDED IRON FORMATIONS AND THEIR HOST ROCKS IN THE EASTERN DESERT OF EGYPT](#): **BACKUS, Ethan L.**<sup>1</sup>, GAGNON, Kelli E.<sup>1</sup>, EL-SHAZLY, Aley K.<sup>1</sup>, and KHALIL, Khalil Isaac<sup>2</sup>, (1) Geology Department, Marshall University, Huntington, WV 25755, backus7@live.marshall.edu, (2) Geology, Alexandria University, Alexandria, Egypt
- 92-55 125 [ANALYSIS OF ICE SPRINGS VOLCANIC FIELD STRUCTURES, BLACK ROCK DESERT, UTAH](#): **PEPPERS, Matthew Henry**<sup>1</sup>, JUDGE, Shelley A.<sup>1</sup>, POLLOCK, Meagen<sup>1</sup>, HALL, Tricia<sup>1</sup>, CARY, W.<sup>2</sup>, SIMS, Whitney<sup>3</sup>, and HINTZ, Amanda<sup>4</sup>, (1) Department of Geology, The College of Wooster, 944 College Mall, Scovel Hall, Wooster, OH 44691, mpeppers13@wooster.edu, (2) Department of Geology, The College of Wooster, 1189 Beall Avenue, Wooster, OH 44691, (3) Wooster, OH 44691, (4) Geologic Hazards Program, Utah Geologic Survey, 1594 W. North Temple, Salt Lake City, UT 84114
- 92-56 126 [A PRELIMINARY STUDY OF DINOSAUR ILLNESS AND INJURY THROUGH THE MESOZOIC: A POSSIBLE CASE OF NORTH AMERICAN BIAS?](#): **HOWELL, Logan S.**, Department of Geology, Appalachian State University, ASU Box 32067, Boone, NC 28608-2067, howellls@email.appstate.edu, ESTRIDGE, Katie, Environmental Science Program, Appalachian State University, ASU Box 32067, Boone, NC 28608-2067, and HECKERT, Andrew B., Dept. of Geology, Appalachian State University, ASU Box 32067, Boone, NC 28608
- 92-57 127 [QUANTITATIVE DESCRIPTION OF UPPER CRETACEOUS ELASMOBRANCHS USING DIGITAL THREE-DIMENSIONAL MICROSCOPY](#): **HARRISON, A. Alex**, Department of Geology, Appalachian State University, ASU Box 32067, Boone, NC 28608, harrisonaa@appstate.edu and HECKERT, Andrew B., Dept. of Geology, Appalachian State University, ASU Box 32067, Boone, NC 28608
- 92-58 128 [A TRANSMISSION ELECTRON MICROSCOPY STUDY OF THE MICROBE-MINERAL INTERFACE IN THE RHIZOSPHERE OF PINE](#): **NIEDZIELA, Sheila M.**<sup>1</sup>, DOHNALKOVA, A.<sup>2</sup>, GREENBERG, K.A.<sup>1</sup>, AREY, B.<sup>2</sup>, BALOGH-BRUNSTAD, Z.<sup>1</sup>, SHI, Z.<sup>3</sup>, and KELLER, C.K.<sup>3</sup>, (1) Department of Geology and Environmental Sciences, Hartwick College, Oneonta, NY 13820, NiedzielaS@hartwick.edu, (2) Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, WA 99352, (3) School of the Environment, Washington State University, Pullman, WA 99164
- 92-59 129 [BREAK A LEG: COULD PROCOPTODON GOLIAH HOP?](#): **COOK, John**, Geology, Muskingum University, 163 Stormont St, New Concord, OH 43762, jcook@muskingum.edu and RODLAND, David L., Geology, Muskingum University, Boyd Science Center 223, 123 Stormont Street, New Concord, OH 43762
- 92-60 130 [GYPSUM FORMATION IN ACID MINE DRAINAGE AFFLICTED STREAMS IN PERRY COUNTY, OHIO](#): **JONES, Tanya**, Muskingum University, 163 Stormont Street, New Concord, OH 43762, tanyaj@muskingum.edu and RODLAND, David L., Geology, Muskingum University, Boyd Science Center 223, 123 Stormont Street, New Concord, OH 43762
- 92-61 131 [DEGLACIATION HISTORY INFERRED FROM STABLE ISOTOPE COMPOSITION OF TUNDRA VEGETATION AT NY-ÅLESUND, SVALBARD, NORWAY](#): **KIM, Mun Gi**, School of Earth and Environmental Sciences, Seoul National University, Seoul, 151-747, South Korea, lancearth@snu.ac.kr and LEE, Yong Il, School of Earth and Environmental Sciences, Seoul National University, Seoul, 151-747, South Korea
- 92-62 132 [MONITORING WATER QUALITY FOR HISTORICAL AND EMERGING IMPACTS, WASHINGTON COUNTY, PA](#): **NICHOLSON, Bryan**, FREDRICK, Kyle C., and LOHR, Lisa, Earth Sciences, California University of Pennsylvania, 250 University Avenue, Campus Box 55, California, PA 15419, nic4603@calu.edu
- 92-63 133 [ASSESSING GROUNDWATER CONTRIBUTION FROM AMD TREATMENT PONDS TO LAKE ARTHUR, MORAIN STATE PARK, PA](#): **MILLER, Matthew David**<sup>1</sup>, FREDRICK, Kyle C.<sup>2</sup>, and LOHR, Lisa<sup>2</sup>, (1) Earth Sciences, California University of Pennsylvania, 250 University Avenue, California, PA 15419, mil3069@calu.edu, (2) Earth Sciences, California University of Pennsylvania, 250 University Avenue, Campus Box 55, California, PA 15419

- 92-64 134 [QUALITATIVE AND QUANTITATIVE ASSESSMENT OF TAPHONOMIC PATTERNS IN MODERN ALGAE AND CYANOBACTERIA: IMPLICATIONS FOR IDENTIFYING PRECAMBRIAN MICROFOSSILS](#): **SELLY, Tara**, Geology Department, Gustavus Adolphus College, 800 W. College Ave, St. Peter, MN 56082, [tselly@gustavus.edu](mailto:tselly@gustavus.edu), **BARTLEY, Julie K.**, Geology Department, Gustavus Adolphus College, St. Peter, MN 56082, and **PORTER, Susannah M.**, Earth Science, University of California at Santa Barbara, Santa Barbara, CA 93106
- 92-65 135 [SPATIAL DISTRIBUTIONS AND YIELDS OF HG AND TRACE ELEMENTS FROM AN OMBROTROPHIC PEATLAND](#): **SEELLEN, Emily**<sup>1</sup>, **AGATHER, Alison**<sup>1</sup>, **ALVERSON, Nickolas**<sup>2</sup>, **CARLSON, Benjamin**<sup>3</sup>, **JEREMIASON, Jeff**<sup>1</sup>, and **SEBESTYEN, Stephen D.**<sup>4</sup>, (1) Environmental Studies, Gustavus Adolphus College, 800 W College Ave, St Peter, MN 56082, [eseelen@gustavus.edu](mailto:eseelen@gustavus.edu), (2) Geology, Gustavus Adolphus College, 800 W College Ave, St Peter, MN 56082, (3) Chemistry, Gustavus Adolphus College, 800 W. College Ave, St. Peter, MN 56082, (4) USDA Forest Service, Northern Research Station, 1831 Highway 169 E, Forestry Sciences Lab, Grand Rapids, MN 55744
- 92-66 136 [RELATIONSHIPS BETWEEN ORGANIC MATTER AND TRACE ELEMENTS IN AN OMBROTROPHIC BOG](#): **AGATHER, Alison**<sup>1</sup>, **SEELLEN, Emily**<sup>1</sup>, **CARLSON, Benjamin**<sup>2</sup>, **JEREMIASON, Jeff**<sup>1</sup>, and **SEBESTYEN, Stephen D.**<sup>3</sup>, (1) Environmental Studies, Gustavus Adolphus College, 800 W College Ave, St Peter, MN 56082, [aagather@gustavus.edu](mailto:aagather@gustavus.edu), (2) Chemistry, Gustavus Adolphus College, 800 W. College Ave, St. Peter, MN 56082, (3) USDA Forest Service, Northern Research Station, 1831 Highway 169 E, Forestry Sciences Lab, Grand Rapids, MN 55744
- 92-67 137 [MIDDLE THROUGH UPPER MIOCENE DEPOSITIONAL HISTORY IN THE WEDDELL SEA](#): **CHIN, Shamar**<sup>1</sup>, **O'CONNELL, Suzanne**<sup>2</sup>, **HARWOOD, David**<sup>3</sup>, **GEWECKE, Aaron**<sup>3</sup>, and **SCHWARZ, Stephen**<sup>1</sup>, (1) Earth and Environmental Science, Wesleyan University, 265 Church Street, Room 455, Middletown, CT 06459, [scchin@wesleyan.edu](mailto:scchin@wesleyan.edu), (2) Earth and Environmental Sciences, Wesleyan University, 265 Church Street, Middletown, CT 06459, (3) Department of Earth and Atmospheric Sciences, University of Nebraska-Lincoln, Lincoln, NE 68588-0340
- 92-68 138 [MINERALOGIC AND GEOCHEMICAL ANALYSIS OF A TRIASSIC DIABASE: LIVERPOOL, PA](#): **ELICK, Jennifer M.** and **STRELLA, Lauren**, Earth and Environmental Sciences, Susquehanna University, 514 University Avenue, Fisher Science, Rm 27, Selinsgrove, PA 17870, [elick@susqu.edu](mailto:elick@susqu.edu)
- 92-69 139 [CONTROLS ON BEDROCK SINUOSITY IN EASTERN TIBET](#): **CURLISS, Lydia**, Geology Department, Oberlin College, 403 Carnegie Building, 52 W. Lorain St, Oberlin, OH 44074, [lcurliss@oberlin.edu](mailto:lcurliss@oberlin.edu) and **SCHMIDT, Amanda H.**, Geology, Oberlin College, 52 West Lorain Street, Oberlin, OH 44074-1044
- 92-70 140 [RELATIONSHIPS BETWEEN LAND USE AND WATER QUALITY OF THE KARST AQUIFER BENEATH BOWLING GREEN, KENTUCKY](#): **LORD, Emma**<sup>1</sup>, **GROVES, Chris**<sup>1</sup>, and **SLATTERY, Tim**<sup>2</sup>, (1) Hoffman Environmental Research Institute, Western Kentucky University, Bowling Green, KY 42101, [lorde@greenmtn.edu](mailto:lorde@greenmtn.edu), (2) Department of Public Works, City of Bowling Green, Kentucky, Bowling Green, KY 42101
- 92-71 141 [EVIDENCE OF A PROGRADATIONAL SYSTEM IN FLUVIAL SHEET SANDS, MORRISON FORMATION, OJITO WILDERNESS, NM](#): **BODMAN, C.**, Earth and Planetary Sciences, University of New Mexico, Albuquerque, 87131, [cbodman@unm.edu](mailto:cbodman@unm.edu), **PICKEL, Alexandra**, Earth and Planetary Sciences, University of New Mexico, MSC03 2040, 1 University of New Mexico, Albuquerque, NM 87131-0001, and **WEISSMANN, Gary S.**, Earth and Planetary Sciences, University of New Mexico, Albuquerque, NM 87131

- 92-72 142 [ANALYSIS OF SEDIMENT CORES FROM THE ELK MEADOWS LANDSLIDE AND THE SILVER LAKES LANDSLIDE: WHAT SEDIMENT CORES TELL US ABOUT THE TIMING AND ENVIRONMENTAL CONDITIONS OF LARGE LANDSLIDES IN THE SOUTHEASTERN SAN JUAN MOUNTAINS](#): **KRUEGER, Kelsey**<sup>1</sup>, SCHMIDT, Catherine<sup>1</sup>, CIRONE, Ashley M.<sup>2</sup>, SMITH, Jacqueline A.<sup>2</sup>, DIEMER, John A.<sup>3</sup>, and JOHNSON, Bradley G.<sup>1</sup>, (1) Environmental Studies, Davidson College, Box 7056, Davidson, NC 28035-7056, kekrueger@davidson.edu, (2) Physical & Biological Sciences, The College of Saint Rose, 432 Western Avenue, Albany, NY 12203, (3) Department of Geography & Earth Sciences, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223
- 92-73 143 [THE SCALE OF CHEMICAL HETEROGENEITY WITHIN INDIVIDUAL BASALT ERUPTIVE UNITS](#): **DOUPNIK, Samantha R.** and HART, William K., Department of Geology & Environmental Earth Science, Miami University, 114 Shideler Hall, Oxford, OH 45056, doupnisr@muohio.edu
- 92-74 144 [TECTONIC HISTORY OF THE Khibiny Massif, Kola Penninsula, Russia](#): **DUNNING, Cody**<sup>1</sup>, MAAS, Aaron<sup>1</sup>, KAUFFMAN, Matthew<sup>1</sup>, CAUFMAN, Emily<sup>1</sup>, BEZDEK, Maurice<sup>1</sup>, NIKITINA, Daria<sup>2</sup>, and ONDRUCH, Jakub<sup>3</sup>, (1) Geology and Astronomy, West Chester University, 700 S High Street, West Chester, PA 19383, cd710569@wcupa.edu, (2) Geology and Astronomy, West Chester University, West Chester, PA 19382, (3) Masaryk University, Czech Republic
- 92-75 145 [PROGRESSIVE GREENSTONE CLAST WEATHERING IN DATED QUATERNARY DEBRIS FLOWS, MADISON COUNTY, VIRGINIA](#): **BRADLEY, Robert**, Ocean, Earth and Atmospheric Sciences, Old Dominion University, 4600 Elkhorn Avenue, Norfolk, VA 23529, rbrad024@odu.edu, WHITTECAR, G. Richard, Ocean Earth and Atmospheric Sciences, Old Dominion University, Norfolk, VA 23529, and EATON, L. Scott, Department of Geology & Environmental Science, James Madison University, MSC 6903, Harrisonburg, VA 22807
- 92-76 146 [GEOCHEMICAL AND PETROLOGIC ANALYSIS OF EARLY PHASE VOLCANISM OF THE MARYSVALE VOLCANIC FIELD, SOUTH CENTRAL UTAH](#): **GENTRY, Amanda**, Geoscience Department, Weber State University, 2507 University Circle, Ogden, UT 84408, amanda.l.gentry@gmail.com and BIEK, Robert F., Utah Geol Survey, PO Box 146100, Salt Lake City, UT 84114-6100
- 92-77 147 [EVALUATION OF WATER-RICH BOUNDARY LAYERS FORMED DURING PARTIAL CRYSTALLIZATION OF SYNTHETIC PEGMATITE MELTS](#): **BENAWAY, Rachel**<sup>1</sup>, SIRBESCU, Mona-Liza C.<sup>1</sup>, and SCHMIDT, Christian<sup>2</sup>, (1) Earth and Atmospheric Sciences, Central Michigan University, Mount Pleasant, MI 48859, benaw1ra@cmich.edu, (2) GFZ German Research Centre for Geosciences, Helmholtz Centre, Potsdam, D-14473, Germany
- 92-78 148 [FLUID EVOLUTION DURING CRYSTALLIZATION OF THE KING'S X PEGMATITE, FLORENCE COUNTY, WISCONSIN, USA](#): **PRICE, Thomas J.** and SIRBESCU, Mona-Liza C., Earth and Atmospheric Sciences, Central Michigan University, Mount Pleasant, MI 48859, price3tj@cmich.edu
- 92-79 149 [OXYGEN ISOTOPE CONSTRAINTS ON MID-MIOCENE SILICIC MAGMA PRODUCTION IN THE OWYHEE MOUNTAINS \(ID\)](#): **MEEK, Tyler N.**<sup>1</sup>, BRUESEKE, Matthew E.<sup>1</sup>, LARSON, Peter B.<sup>2</sup>, and HASTEN, Zachary E.L.<sup>1</sup>, (1) Department of Geology, Kansas State University, Manhattan, KS 66506, tnmeek@k-state.edu, (2) School of Earth & Environmental Sciences, Washington State University, Pullman, WA 99164
- 92-80 150 [GRAVITY AND MAGNETIC ANALYSIS OF THE ST. FRANCOIS MOUNTAINS, SOUTHEAST MISSOURI](#): **LARSON, Mark**<sup>1</sup>, BERTALOTT, Johnny R.<sup>2</sup>, and MICKUS, Kevin<sup>1</sup>, (1) Geology, Missouri State University, Springfield, MO 65897, Mark3@live.missouristate.edu, (2) Geography, Geology, and Planning, Missouri State University, 901 S. National Ave, Springfield, MO 65897
- 92-81 151 [ESTIMATES OF OFFSET OF QUATERNARY ALLUVIAL FAN SURFACES ALONG NORMAL FAULTS BOUNDING THE CENTRAL AND NORTHERN GRANT RANGE AND RAILROAD VALLEY IN EAST-CENTRAL NEVADA](#): **SULLIVAN, Zachary**, CAMILLERI, Phyllis A., and DEIBERT, Jack E., Geosciences, Austin Peay State University, P.O. Box 4418, Clarksville, TN 37044, zsullivan@my.apsu.edu

- 92-82 152 [POSSIBLE MICROBIAL INFLUENCE ON DISSOLUTION OF PYRITE IN DEMOPOLIS CHALK NE, MISSISSIPPI](#): BAGHAI-RIDING, Nina<sup>1</sup>, BISE, Robert D.<sup>2</sup>, **KAZAL, Elizabeth A.**<sup>3</sup>, COLLINS, Joe D. Jr<sup>4</sup>, KIRKLAND, Brenda L.<sup>4</sup>, MERRITT, Danielle N.<sup>5</sup>, MOODY, Holly A.<sup>6</sup>, ROBERTS, Walter, G. Jr<sup>6</sup>, and SHOWS, Krista J.<sup>7</sup>, (1) Biological and Physical Sciences, Delta State University, Cleveland, MS 38733, (2) Department of Geosciences, Mississippi State University, Starkville, MS 39762, (3) Department of Geosciences, Mississippi State University, Starkville, MS 39759, eak69@msstate.edu, (4) Department of Geosciences, Mississippi State University, P.O. Box 5448, Mississippi State, MS 39762, (5) Department of Geosciences, Mississippi State University, P.O. Box 5448, Starkville, MS 39759, (6) Division of Biological and Physical Sciences, Delta State University, Cleveland, MS 38732, (7) Department of Geosciences, Mississippi State University, P.O. Box 5448, Starkville, MS 39759
- 92-83 153 [ENHANCED MICROBIAL PRECIPITATION OF IRON OXIDES IN DEMOPOLIS CHALK FORMATIONS](#): **KIRKLAND, Brenda L.**<sup>1</sup>, LINDSEY, Cary<sup>2</sup>, WOODARD, Candace<sup>3</sup>, SIMMONS, Jeremy<sup>2</sup>, JASPER, Gabriel<sup>4</sup>, COLLINS, Joe D. Jr<sup>1</sup>, BAGHAI-RIDING, Nina L.<sup>5</sup>, TISDALE, Robin<sup>2</sup>, and GRANT, George<sup>6</sup>, (1) Department of Geosciences, Mississippi State University, P.O. Box 5448, Mississippi State, MS 39762, blk39@msstate.edu, (2) Department of Geosciences, Mississippi State University, Starkville, MS 39762, (3) Division of Biological and Physical Sciences, Delta State University, Cleveland, MS 38732, (4) Biological and Environmental Sciences, Delta State University, Cleveland, MS 38733, (5) Biological and Environmental Sciences, Delta State Univ, PO Box 3262 DSU, Cleveland, MS 38733, (6) Division of Biological and Physical Sciences, Delta State University, Cleveland, MS 38733
- 92-84 154 [INDURATED, IRON-RICH LAYERS RELATED TO MICROBES IN CENTRAL MISSISSIPPI SANDSTONE](#): **CUPIL, Andrew Louis III**<sup>1</sup>, GRIFFITH, Collie<sup>2</sup>, HORNE, Bobby L. Jr<sup>3</sup>, WILLIAMS, Curlina<sup>3</sup>, MCGEE, Jervis Sr<sup>3</sup>, KILPATRICK, Jessica<sup>4</sup>, WAHIDI, Mahnaz<sup>2</sup>, COLLINS, Joe D. Jr<sup>5</sup>, and BAGHAI-RIDING, Nina<sup>3</sup>, (1) Geoscience, Mississippi State University, Department of Geoscience, Mississippi State, MS 39762, alc605@msstate.edu, (2) Department of Geosciences, Mississippi State University, Department of Geoscience, Mississippi State, MS 39762, (3) Biology, Delta State University, 1003 West Sunflower Road, Cleveland, MS 38732, (4) Department of Geosciences, Mississippi State University, Department of Geoscience, Starkville, MS 39759, (5) Department of Geosciences, Mississippi State University, P.O. Box 5448, Mississippi State, MS 39762
- 92-85 155 [GEOCHEMICAL AND MINERALOGICAL MAPPING OF HYDROTHERMAL ALTERATION IN THE CENTRAL SNAKE RIVER PLAIN](#): **TRUSIAK, Adrianna**<sup>1</sup>, LING, Xafira<sup>1</sup>, SNYDER, Walter S.<sup>2</sup>, WILLIAMS, Nekesha<sup>3</sup>, and BLOCK, Karin A.<sup>4</sup>, (1) Department of Earth and Atmospheric Sciences, City College of New York, New York, NY 10031, adrianna.trusiak@gmail.com, (2) Department of Geosciences, Boise State University, 1910 University Drive, Boise, ID 83725, (3) CUNY-City College, 160 Convent Avenue, New York, NY 10031, (4) Department of Earth and Atmospheric Sciences, City College of New York, 160 Convent Avenue MR 106, New York, NY 10031
- 92-86 156 [REMOTE SENSING, SPECTROMETRY, AND IMAGE ANALYSIS APPLIED TO CHARACTERIZATION OF A HYDROTHERMALLY ACTIVE SITE IN THE SNAKE RIVER PLAIN](#): **DIXON, Shadae**<sup>1</sup>, ZHENG, Dong<sup>1</sup>, ROWE, Terry<sup>1</sup>, SNYDER, Walter S.<sup>2</sup>, WILLIAMS, Nekesha<sup>1</sup>, and BLOCK, Karin A.<sup>1</sup>, (1) Department of Earth and Atmospheric Sciences, City College of New York, 160 Convent Avenue MR 106, New York, NY 10031, kblock@ccny.cuny.edu, (2) Department of Geosciences, Boise State University, 1910 University Drive, Boise, ID 83725
- 92-87 157 [GEOTHERMOMETRY OF HYDROTHERMAL WATERS IN THE GREAT BASIN, WESTERN UNITED STATES](#): **MARQUINEZ, Joselyn**<sup>1</sup>, IDOKO, Fidelis<sup>1</sup>, RAHMAN, Mohammed<sup>1</sup>, SNYDER, Walter S.<sup>2</sup>, WILLIAMS, Nekesha<sup>1</sup>, and BLOCK, Karin A.<sup>1</sup>, (1) Department of Earth and Atmospheric Sciences, City College of New York, 160 Convent Avenue MR 106, New York, NY 10031, kblock@ccny.cuny.edu, (2) Department of Geosciences, Boise State University, 1910 University Drive, Boise, ID 83725

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