

GEOSCIENCES

at Virginia Tech

Weekly Newsletter #6, Oct. 6, 2014



PHOTO (Esther Schwarzenbach): Jurassic Ophiocarbonate deposits in a quarry in the Northern Appenines, Italy. These rocks formed as peridotite was exposed to seawater along a mid-ocean ridge.

UPCOMING EVENTS

Geological Society of America (GSA) annual meeting, 10/19-10/22, Vancouver, BC, Canada

- A large and diverse group of Hokies will be present at GSA! If you are attending the meeting, support your fellow Hokies by attending their presentations! VT GEOS presentations (both poster and oral) are listed below. Thanks to **Brady Ziegler** for compiling this list!
- Virginia Tech Geosciences will have a booth in the exhibit hall for prospective students! We will be stationed at booth 304. Whether you're an alumnus or a prospective student, come visit us to learn more about all the great work going on in our department!
- Find out more about the GSA meeting [here](#)

Sunburst Consulting recruiting visit

- **WHEN:** Monday, October 27, 11:15 am. Pizza will be served.
- **WHERE:** Room 4069, Derring Hall. Interested in interviewing? Send a resume to Layaka Mann at L.Mann@sunburstfield.com. If you have any questions, contact CBelback@sunburstconsulting.com. You can find more information about Sunburst at their [website](#).

Department Seminar, 10/31: *Title TBD*

- **WHO:** Hap McSween (University of Tennessee). Learn more about Dr. McSween's research [here](#)
- **WHEN:** Friday, October 31, 4:00 pm. Refreshments served at 3:45 pm in the 4th floor lounge.
- **WHERE:** Room 4069, Derring Hall

LIST OF ABSTRACTS AT GSA FEATURING VT GEOS FACULTY AND STUDENTS

VT folks are highlighted in orange

Sunday, 10/19

2.17-2.07 GA EOLIANITES AND EVAPORITIC CONTINENTAL PLAYA SEDIMENTARY ROCKS FROM THE DEWERAS GROUP, ZIMBABWE: THE WORLD'S OLDEST DESERT?
MASTER, Sharad and **ERIKSSON, Kenneth A.** (presentation, Session No. 27, 9:15 AM)

ACRITARCH BIOSTRATIGRAPHY OF THE EDIACARAN DOUSHANTUO FORMATION IN AN UPPER SLOPE FACIES
HAWKINS, Andrew D., XIAO, Shuhai, JIANG, Ganqing, SHI, Xiaoying, and WANG, Xinqiang (presentation, Session No. 26, 10:30 AM)

SEISMIC REFRACTION EVIDENCE FOR A LARGE VOLUME OF MELT RESIDUAL BENEATH THE COAST MOUNTAINS BATHOLITH COMPLEX NEAR BELLA COOLA, BRITISH COLUMBIA
HOLE, John A., WANG, Kai, SPENCE, George D., STEPHENSON, Andrew L., MILLER, Kate C., CLOWES, Ronald M., HOLLISTER, Lincoln S., and ANDRONICOS, Christopher L. (presentation, Session No. 65, 1:30 PM)

TESTING GLACIALLY INDUCED LANDSCAPE TRANSIENCE; GLEN SHIEL AND THE MAMORE RANGE, NW SCOTLAND
FAME, Michelle L., SPOTILA, James A., and OWEN, Lewis A. (presentation, Session No. 69, 2:00 PM)

SURFACE PROCESSES ON THE EARLY PRECAMBRIAN EARTH – A RETROSPECTIVE
ERIKSSON, Kenneth A. (presentation, Session No. 85, 2:00 PM)

DRAINAGE DIVIDE STRUCTURE: POTENTIAL TOOL AND VIABLE INFLUENCE ON THE EVOLUTION OF GLACIATED BASINS
SPOTILA, James A. (presentation, Session No. 69, 2:15 PM)

AMMONITE BIOSTRATIGRAPHY OF THE EARLY JURASSIC (PLIENSCHACHIAN–TOARCIC) SUNRISE FORMATION, GABBS VALLEY AND CLAN ALPINE MOUNTAINS, WEST-CENTRAL NEVADA
CARUTHERS, Andrew H., SMITH, Paul L., GRÖCKE, Darren R., GILL, Benjamin C., TRABUCHO-ALEXANDRE, João, and **THEM, Theodore R. II** (poster, Session No. 46, Booth #247, 3:00 PM – 5:00PM)

QUANTIFIED VERTICAL STRAIN PROFILE OF MID-CRUSTAL DEFORMATION IN THE GREATER HIMALAYAN SEQUENCE, ANNAPURNA-DHAULAGIRI HIMALAYA, NEPAL
PARSONS, Andrew J., PHILLIPS, Richard J., LLOYD, Geoffrey E., SEARLE, Micheal P., and **LAW, Richard D.** (poster, Session No. 58, Booth #373, 3:00 PM – 5:00PM)

Monday, 10/20

PALEONTOLOGICAL AND STRATIGRAPHIC RELATIONSHIPS OF THE JELM AND POPO AGIE FORMATIONS (CHUGWATER GROUP, WY)

LOVELACE, David M., STOCKER, Michelle R., CAMPBELL, Brandon T., and NASSIF, James P. (presentation, Session 108, 8:35 AM)

A CONTRAST IN CRUSTAL STRUCTURE ACROSS THE STEEP CRATONIC MARGIN OF IDAHO-OREGON, ILLUMINATED BY EARTHSOPE IDOR CONTROLLED-SOURCE SEISMIC DATA

DAVENPORT, Kathy K. (poster, Session No. 122, Booth #92, 9:00 AM – 11:00 AM; 5:00 PM – 6:30 PM)

DEEP-WATER SEDIMENT TRANSFER VIA SLOPE CHANNELS AS REFLECTED IN OUTCROPPING CRETACEOUS STRATA OF THE ANDEAN CORDILLERA, SOUTHERN CHILE

DANIELS, Benjamin G., HUBBARD, Stephen M., AUCHTER, Neal C., ROMANS, Brian W., PEMBERTON, Erin A.L., REIMCHEN, Aaron P., JACKSON, Allison A., and STRIGHT, Lisa (poster, Session No. 140, Booth #344, 9:00 AM – 11:00 AM; 5:00 PM – 6:30 PM)

TWO-STAGE DEFORMATION, AND TWO STYLES OF LOCALIZATION, IN A DEEP CRUSTAL NORMAL SENSE SHEAR ZONE: MOUNT HAY BLOCK, CENTRAL AUSTRALIA

WATERS-TORMEY, Cheryl, ASHLEY, Kyle T., and TRACY, Robert (presentation, Session No. 91, 11:00 AM)

A NEW JURASSIC LAGERSTATTE FROM ALBERTA, CANADA, PRESERVED DURING THE TOARCIAN OCEAN ANOXIC EVENT

MARTINDALE, Rowan C., THEM, Theodore R. II, GILL, Benjamin C., and KNOLL, Andrew H. (presentation, Session No. 108, 11:15 AM)

RAPID ENVIRONMENTAL CHANGES DURING THE EARLY JURASSIC (PLIENSBACHIAN TO TOARCIAN STAGES) IN WESTERN NORTH AMERICA RECORDED IN THE GEOCHEMISTRY OF ORGANIC-RICH MUD ROCKS

THEM, Theodore R. II, GILL, Benjamin C., TULSKY, Emma T., and GRÖCKE, Darren R. (presentation, Session No. 105, 11:15 AM)

EXPRESSION OF THE TOARCIAN CARBON ISOTOPE EVENT IN A SILICEOUS BLACK SHALE FROM NEW YORK CANYON, NEVADA

GRÖCKE, Darren R., CARUTHERS, Andrew H., GILL, Benjamin C., TRABUCHO-ALEXANDRE, João, THEM, Theodore R. II, and SMITH, Paul L. (presentation, Session No. 105, 11:30 AM)

RATES OF ARSENIC MOBILIZATION DURING FE-REDUCTION IN WETLAND SEDIMENTS CONTAMINATED WITH BTEX: INFLUENCES OF ETHANOL AND NITRATE AS CO-CONTAMINANTS

ZIEGLER, Brady A., MCGUIRE, Jennifer T., and COZZARELLI, Isabelle M. (presentation, Session No. 157, 1:45 PM)

GLACIOLOGY IN THE CHUGACH RANGE OF SOUTH CENTRAL ALASKA

VALENTINO, Joshua, OWEN, Lewis A., and SPOTILA, James (poster, Session No. 137, Booth #288, 2:00 PM – 4:00 PM; 5:00 PM – 6:30 PM)

METAL-SULFUR RADII FOR USE IN GEOCHEMISTRY

GIBBS, G.V., ROSS, Nancy L., ROSSO, Kevin M. (presentation, Session No. 164, 2:25 PM)

TOXIC ELEMENT MOBILIZATION FROM BLACK SHALES

CHERMAK, John, RIMSTIDT, J. Donald, and SCHREIBER, Madeline E. (presentation, Session No. 157, 3:30 PM)

RATE OF PETROLEUM HYDROCARBON BIODEGRADATION IN ANOXIC WETLAND SEDIMENT WITH THE ADDITION OF COMMON CO-CONTAMINANTS

CLARK, Cassandra J., **ZIEGLER, Brady A.**, MCGUIRE, Jennifer T., and COZZARELLI, Isabelle M. (presentation, Session No. 157, 4:45 PM)

Tuesday, October 21st

TECTONIC EVOLUTION OF THE GREATER HIMALAYAN SEQUENCE, ANNAPURNA-DHAULAGIRI HIMALAYA, CENTRAL NEPAL

PARSONS, Andrew J., PHILLIPS, Richard J., LLOYD, Geoffrey E., SEARLE, Micheal P., **LAW, Richard D.** (presentation, 9:05 AM)

BEYOND SAND: USING A BLEND OF NON-COHESIVE AND SEMI-COHESIVE ORGANIC MATERIALS TO DEVELOP ADAPTIVE ANALOGUE DEFORMATION MODELS FOR THE CLASSROOM

PRINCE, Philip S. (digital poster, Session No. 203, Booth #DP7, 9:00 AM – 11:00 AM; 5:00 PM – 6:30 PM)

EXPLORATORY STUDIES OF ¹³C DIFFUSION INTO OLIVINE AND QUARTZ

WATSON, E. Bruce, CHERNIAK, Daniele J., and **MERGELBERG, Sebastian** (presentation, Session No. 189, 11:25 AM)

SULFUR ISOTOPE EVIDENCE FOR LATE ORDOVICIAN OCEAN OXYGENATION: IMPLICATIONS FOR THE DRIVERS OF THE HIRNANTIAN EXTINCTION

GILL, Benjamin C., LYONS, Timothy W., YOUNG, Seth A., KALJO, Dimitri, and SALTZMAN, Matthew R. (presentation, Session No. 255, 2:20 PM)

TAPHONOMY AND PALEOECOLOGY OF SILURIAN ALGAL-LAGERSTÄTTEN

LODUCA, Steven T., SCHIFFBAUER, James D., and **XIAO, Shuhai** (presentation, Session No. 235, 3:00 PM)

A GIGANTIC EDIACARAN FOSSIL FROM SIBERIA

BYKOVA, Natalia, GRAZHDANKIN, Dmitriy, NAGOVITSIN, Konstantin, and **XIAO, Shuhai** (presentation, Session No. 235, 3:45 PM)

SUBDUCTED SLAB DYNAMICS: UNDERSTANDING THE CAUSES OF SLAB STAGNATION

KING, Scott D., FROST, Daniel J., and RUBIE, David C. (presentation, Session No. 239, 4:15 PM)

Wednesday, October 22nd

ASSOCIATION OF ARSENIC WITH IRON MINERALS IN A DISSOLVED HYDROCARBON PLUME

ZIEGLER, Brady A., **SCHREIBER, Madeline E.**, and COZZARELLI, Isabelle M. (presentation, Session No. 283, 8:30 AM)

QUANTIFYING ARSENIC RELEASE FROM MINERALS TO WATER: THEORY VS. PRACTICE

SCHREIBER, Madeline E. (presentation, Session No. 283, 9:00 AM)

SPATIAL AND SEASONAL VARIABILITY IN ARSENIC AND OTHER SOLUTES IN GROUNDWATER ALONG THE MEKONG RIVER, NORTHEAST THAILAND

FRYAR, Alan, **SCHREIBER, Madeline**, PHOLKORN, Kewaree, SRISUK, Kriengsak, and **ZIEGLER, Brady A.** (presentation, Session No. 283, 10:15 AM)

FACTORS AFFECTING CAPROCK INTEGRITY DURING AQUIFER PRESSURIZATION

BURBEY, Thomas J. and ZHOU, John (presentation, Session No. 285, 10:20 AM)

EARLY JURASSIC PARALIC TO SHALLOW MARINE MICROBIAL ENVIRONMENTS OF NEVADA: A UNIQUE RECORD OF THE TOARCIC OCEANIC ANOXIC EVENT

GRÖCKE, Darren R., CARUTHERS, Andrew H., KATALINIC, Victor, TRABUCHO-ALEXANDRE, João, **GILL, Benjamin C.**, **THEM, Theodore R. II**, and SMITH, Paul L. (poster, Session No. 300, Booth #84, 2:00 PM – 4:00 PM; 5:00 PM – 6:30 PM)

SEQUENCE STRATIGRAPHY AND STABLE CARBON ISOTOPE RECORD FROM THE LATE JURASSIC PLATFORM INTERIOR, ADRIATIC PLATFORM, CROATIA

HUSINEC, Antun, PRTOJAN, Bozo, and **READ, James F.** (presentation, Session No. 346, 3:45 PM)

Have a picture and short caption, or news that you want to send for next week's newsletter? Email your news items to Victor Guevara at vguevara@vt.edu.