GSA has a long tradition of collaborating with a wide range of partners in pursuit of our mutual goals to advance the geosciences, enhance the professional growth of society members, and promote the geosciences in the service of humanity. GSA works with other organizations on many programs and services.

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As the Society looks to the future, it aims to build strong, meaningful partnerships with societies and organizations across the country and around the world in service to members and the larger geoscience community. National and international societies with consistent aims and missions of advancing the geosciences and/or science in general are invited to affiliate with GSA as Associated Societies. For further information, or if your organization’s contact person has changed, please contact GSA’s Executive Director, Vicki McConnell, at vmcconnell@geosociety.org.

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<tr>
<td>Society for American Archaeology (SAA)</td>
<td>Society for Environmental Geochemistry and Health (SEGH)</td>
<td>Society for Mining, Metallurgy &amp; Exploration (SME)</td>
<td>SEPM (Society for Sedimentary Geology)</td>
<td>Society for the Preservation of Natural History Collections (SPNHC)</td>
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22–25 October • Seattle, Washington, USA
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GSA Soils and Soil Processes Interdisciplinary Interest Group
GSA Structural Geology and Tectonics Division
History of Earth Sciences Society (HESS)
History of the Geoscience Section of the Geological Society of Italy
IGCP 640 program S4SLIDE (Significance of Modern and Ancient Submarine Slope Landslides)
IGCP 653: Onset of the Great Ordovician Biodiversification Event
International Association for Geoscience Diversity
International Association of GeoChemistry
International Association of Hydrogeologists
International Association of Limnogeology
International Lithosphere Program
International Medical Geology Association
International Society of Groundwater for Sustainable Development (ISGSD)
International Subcommission on Stratigraphic Classification
Journal of Maps
Lunar and Planetary Institute (LPI)
Microanalysis Society
Mineralogical Society of America
National Association of Black Geoscientists
National Association of Geoscience Teachers
National Association of Geoscience Teachers Geo2YC Division
National Association of Geoscience Teachers, Division of Geoscience Education Research
National Association of Geoscience Teachers, Teacher Education Division
National Cave and Karst Research Institute
National Earth Science Teachers Association
National Ground Water Association (NGWA)
National Park Service
North American Commission on Stratigraphic Nomenclature
Northwest Energy Association (NWEA)
Palaeontological Association
Palaeontological Research Institution
Paleontological Society
SEPM (Society for Sedimentary Geology)
Sigma Gamma Epsilon
Society for the Preservation of Natural History Collections
Society of Economic Geologists
UNAVCO
U.S. Forest Service
U.S. Geological Survey—National Cooperative Geologic Mapping Program
U.S. National Committee-International Quaternary Congress
Volcanic and Magmatic Studies Group
Washington Division of Geology and Earth Resources
Winners Academic Solutions
YES Network
GSA Section Meetings

South-Central Section
12–13 March
Little Rock, Arkansas, USA
Meeting Chair: Michael DeAngelis, mtdeangelis@ualr.edu
www.geosociety.org/sc-mtg
Photo by Oliver Beland.

Northeastern Section
18–20 March
Location: Burlington, Vermont, USA
Meeting Chairs: Charlotte Mehrten, cmehrten@uvm.edu; Andrea Lini, alini@uvm.edu
www.geosociety.org/ne-mtg
Photo by Stephen Wright.

Southeastern Section
12–13 April
Location: Knoxville, Tennessee, USA
Meeting Chair: Colin D. Sumrall, csumrall@utk.edu
www.geosociety.org/se-mtg
Photo by Bruce McCamish.

North-Central Section
16–17 April
Ames, Iowa, USA
Meeting Chair: William Simpkins, bsimp@iastate.edu
www.geosociety.org/nc-mtg
Photo by Bri Gerke.

Rocky Mountain/Cordilleran Joint Section Meeting
15–17 May
Flagstaff, Arizona, USA
Meeting Chair: Paul Umhoefer, paul.umhoefer@nau.edu
www.geosociety.org/rm-mtg
Photo credit: findyourspot.com.
### Sessions by Category

All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meeting schedule, download GSA’s app at community.geosociety.org/gsa2017/mobileapp.

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<td>9 a.m.–5:30 p.m.</td>
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<td>14</td>
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<td>66</td>
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**Geosciences**

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**Geoinformatics**

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**Geology and Health**

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### Sessions by Category

All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meeting schedule, download GSA's app at community.geosociety.org/gsa2017/mobileapp.

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**Geophysics/Geodynamics**

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**Geoscience and Public Policy**

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<td>163</td>
<td>T122. On the Cutting Edge: Fifteen Years of Impacts on Geoscience Education (Posters)</td>
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<td>164</td>
<td>T129. The Challenge of Defining Student Success: Broadening Participation, Measuring Success, and Preparing 2YC and 4YC Students for a Variety of Transitions (Posters)</td>
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<td>204</td>
<td>T115. Hands-On Teaching Demonstrations that Combine Geoscience and Societal Issues: Audience Participation Requested!</td>
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**Geoscience Information/Communication**

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**History and Philosophy of Geology**

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## Sessions by Category

All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meeting schedule, download GSA’s app at community.geosociety.org/gsa2017/mobileapp.

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<td>5</td>
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<td>6</td>
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<td>T10. Groundwater Influenced Ecosystems: Springs, Gaining Streams, and Terrestrial Ecosystems (Posters)</td>
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<td>T12. Hydrogeology, Geochemistry, and Wetland Processes: A Session in Honor of the Career of Donald I. Siegel (Posters)</td>
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<td>32</td>
<td>D3. The Geochemistry, Biogeochemistry, and Ecology of Cave and Karst Settings</td>
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<td>D4. Paleoclimatology, Sedimentary, and Historical Studies in Caves and Karst Features</td>
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<td>102</td>
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<td>232</td>
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**Marine/Coastal Science**

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**Mineralogy/Crystallography**

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**Paleontology, Biogeography/Biostratigraphy**

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**Paleontology, Diversity, Extinction, Origination**

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<td>330</td>
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<tr>
<td>199</td>
<td>T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles</td>
<td>Tuesday</td>
<td>8–11:50 a.m.</td>
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<td>272</td>
<td>D17. Paleontology, Paleoecology/Taphonomy (Posters)</td>
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<td>273</td>
<td>T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles (Posters)</td>
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<td>306</td>
<td>T62. Ancient Environments of South America</td>
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<td>8–11:30 p.m.</td>
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<tr>
<td>307</td>
<td>T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes</td>
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<td>332</td>
<td>T65. Eco-Evolutionary Dynamics in the Fossil Record</td>
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<td>380</td>
<td>T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes (Posters)</td>
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### Palaeontology, Phylogenetic/Morphological Patterns

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<td>221</td>
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### Petrology, Igneous

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<td>140</td>
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<td>1:30–5:05 p.m.</td>
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<td>208</td>
<td>T161. Petrology across the Inner Solar System: In Honor of Roebling Medalist Ed Stolper</td>
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### Petrology, Metamorphic

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### Planetary Geology

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<td>54</td>
<td>T202. Experimental Planetary Geology: Using Laboratory and Other Experiments to Advance Our Understanding of Geology on Planetary Bodies</td>
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<td>113</td>
<td>T205. Impact Cratering: From Fire to Ice—Cratering across the Solar System</td>
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<td>146</td>
<td>T204. Friends of Hoth: Episode II—Icy Bodies of the Solar System</td>
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<td>177</td>
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<td>178</td>
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<td>180</td>
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<td>192</td>
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<td>276</td>
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<td>319</td>
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<td>342</td>
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**Precambrian Geology**

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<td>181</td>
<td>T252. Cratonic Assembly in the Precambrian: Forming the Core of Modern and</td>
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<td></td>
<td>Ancient Landmasses (Posters)</td>
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<td>T256. The Co-Evolution of Life and Its Environment during the Precambrian:</td>
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<td>The Rise of Oxygenic Photosynthesis and the Great Oxidation Event</td>
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<td>278</td>
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<td>279</td>
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<td></td>
<td>The “Boring Billion” and Mid-Proterozoic Emergence of Complex Life</td>
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<td>280</td>
<td>T255. The Co-Evolution of Life and Its Environment during the Precambrian:</td>
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<td></td>
<td>The Late Proterozoic Rise of Animals; Climate, Tectonic, and Environmental</td>
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<td>Dynamics, and the Transition into the Early Paleozoic (Posters)</td>
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<tr>
<td>324</td>
<td>T254. The Co-Evolution of Life and Its Environment during the Precambrian:</td>
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<td>346</td>
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**Quaternary Geology**

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<td>the Hubbard Glacier</td>
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<td>143</td>
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All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meeting schedule, download GSA’s app at community.geosociety.org/gsa2017/mobileapp.

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Sediments, Carbonates

| 86  | D53. Sediments, Carbonates (Posters)                                         | Sunday    | 9 a.m.–5:30 p.m.  | WSCC, Halls 4EF           |
| 182 | T84. The Dynamics of Stratigraphy and Sedimentation (Posters)                | Monday    | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |

Sediments, Clastic

| 15  | T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill I | Sunday    | 8–11:50 a.m.      | WSCC, Ballroom 6C         |
| 43  | T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill II | Sunday    | 1:30–4 p.m.       | WSCC, Ballroom 6C         |
| 87  | D23. Sediments, Clastic (Posters)                                            | Sunday    | 9 a.m.–5:30 p.m.  | WSCC, Halls 4EF           |
| 101 | T87. Fluvio-Deltaic Processes and Their Stratigraphic Record                   | Monday    | 8–10 a.m.         | WSCC, Ballroom 6C         |
| 134 | T85. Clear as Mud: Stratigraphic, Diagenetic, Sedimentologic, Geomechanical Analyses, and Modern Analogs of Ancient Mudrock Systems | Monday    | 1:30–5:30 p.m.    | WSCC, Ballroom 6C         |
| 183 | T87. Fluvio-Deltaic Processes and Their Stratigraphic Record (Posters)        | Monday    | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |
| 184 | T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill (Posters) | Monday    | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |
| 202 | T86. Controls, Geomorphology, and Depositional Architecture of Fluvial-Tidal Sediments through Space and Time | Tuesday   | 8–11:25 a.m.      | WSCC, Ballroom 6C         |
| 231 | T88. Mudstone Facts: Deposition, Diagenesis, and Source of Basin Fluids       | Tuesday   | 1:30–5:05 p.m.    | WSCC, Ballroom 6C         |
| 295 | D22. From Processes to Stratigraphy                                          | Wednesday | 8–11:45 p.m.      | WSCC, Ballroom 6C         |

Soils

<p>| 209 | T168. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols   | Tuesday   | 8 a.m.–noon       | TCC, Skagit 3             |
| 240 | T171. Terroir                                                              | Tuesday   | 1:30–4:35 p.m.    | TCC, Skagit 3             |
| 284 | T168. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols (Posters) | Tuesday   | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |
| 285 | T169. Deciphering Climate Change and Climate Variability in the Geologic Record Using Palaeosols, Loess, Palaeoweathering Profiles, Pedosedimentary Sequences, and Polygenetic Soils: Their Applications and Limitations as Terrestrial Proxies in Understanding Impacts of Climatic Changes (Posters) | Tuesday   | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |
| 286 | T170. Rock Transforming to Soil—The Weathering Engine Intersects with the Carbon Cycle (Posters) | Tuesday   | 9 a.m.–6:30 p.m.  | WSCC, Halls 4EF           |</p>
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**All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meeting schedule, download GSA’s app at community.geosociety.org/gsa2017/mobileapp.**

### Tectonics/Tectonophysics

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<td>19</td>
<td>8 a.m.</td>
<td>T157. Origin and Evolution of the Continental Crust: A Celebration of the Career of Paul Mueller (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Skagit 2</td>
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<td>21</td>
<td>8 a.m.</td>
<td>T163. Petrochronology: Advances and Applications to Petrogenesis and Tectonics I <em>(GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division; Mineralogical Society of America; Geochemical Society)</em></td>
<td>TCC, Skagit 4</td>
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<tr>
<td>22</td>
<td>8 a.m.</td>
<td>T174. Cordilleran Ice Sheet Outburst Floods: From Glacial Lake Missoula to the Hubbard Glacier <em>(GSA Sedimentary Geology Division)</em></td>
<td>TCC, Chelan 5</td>
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<td>23</td>
<td>8 a.m.</td>
<td>T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest I <em>(GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)</em></td>
<td>TCC, Chelan 4</td>
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<td>24</td>
<td>8 a.m.</td>
<td>T194. The Aeolian Realm: Dunes, Dust, and Loess <em>(GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</em></td>
<td>TCC, Chelan 2</td>
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<td>25</td>
<td>8 a.m.</td>
<td>T207. Volcanism and Tectonism across the Solar System <em>(GSA Planetary Geology Division)</em></td>
<td>TCC, Tahoma 1</td>
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<tr>
<td>26</td>
<td>8 a.m.</td>
<td>T216. Spatiotemporal Variations and the Role of Fluids in Fault-Zone Hydromechanical Processes <em>(GSA Structural Geology and Tectonics Division; GSA Hydrogeology Division; GSA Energy Geology Division; Future of Tectonics Initiative)</em></td>
<td>TCC, Tahoma 2</td>
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<tr>
<td>27</td>
<td>8 a.m.</td>
<td>T220. Challenges in Tectonics: Planetary Evolution in Four Dimensions—The New Global Tectonics <em>(GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</em></td>
<td>TCC, Tahoma 4</td>
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<td>28</td>
<td>8 a.m.</td>
<td>T221. Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens <em>(GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)</em></td>
<td>TCC, Tahoma 3</td>
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<td>29</td>
<td>8 a.m.</td>
<td>T223. Intraplate Earthquake Sources, Processes, and Hazards in Central and Eastern North America <em>(GSA Structural Geology and Tectonics Division; GSA Geophysics Division; GSA Environmental and Engineering Geology Division; GSA Quaternary Geology and Geomorphology Division; EarthScope National Office)</em></td>
<td>TCC, Tahoma 5</td>
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<tr>
<td>30</td>
<td>8 a.m.</td>
<td>T249. New Voices in Geobiology I <em>(GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</em></td>
<td>WSCC, Room 602/603</td>
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<td>31</td>
<td>1:30 p.m.</td>
<td>T245. Subduction Zone Coseismic Landslides <em>(GSA Environmental and Engineering Geology Division; GSA Quaternary Geology and Geomorphology Division)</em></td>
<td>TCC, Tahoma 2</td>
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<td>32</td>
<td>1:30 p.m.</td>
<td>D3. The Geochemistry, Biogeochemistry, and Ecology of Cave and Karst Settings</td>
<td>WSCC, Room 612</td>
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<td>33</td>
<td>1:30 p.m.</td>
<td>D25. Geoscience Education Session: International Field Experiences in the Digital Age and Adapting Mental Models by Using Food for Teaching</td>
<td>WSCC, Room 3A</td>
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<tr>
<td>34</td>
<td>1:30 p.m.</td>
<td>D46. Marine/Coastal Science Session</td>
<td>WSCC, Room 604</td>
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<td>35</td>
<td>1:30 p.m.</td>
<td>T5. Arsenic and Other Geogenic Contaminants in Groundwater Resources: Linking Water Quality, Food Security, and Treatment II <em>(GSA Hydrogeology Division; GSA Geology and Health Division; GSA International/International Interdisciplinary Interest Group; International Society of Groundwater for Sustainable Development [ISGSD]; International Medical Geology Association; GSA Environmental and Engineering Geology Division; GSA Geobiology &amp; Geomicrobiology Division)</em></td>
<td>WSCC, Room 618/619/620</td>
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<tr>
<td>36</td>
<td>1:30 p.m.</td>
<td>T8. Fate, Effects, and Mitigation of Chemical and Fuel Releases in Surface and Subsurface Environments <em>(GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Energy Geology Division)</em></td>
<td>WSCC, Room 613/614</td>
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<tr>
<td>37</td>
<td>1:30 p.m.</td>
<td>T13. In Honor of John M. (Jack) Sharp Jr.: Celebrating over 40 Years of Science, Students, and Stewardship II <em>(GSA Hydrogeology Division; International Association of Hydrogeologists)</em></td>
<td>WSCC, Room 615/616/617</td>
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<tr>
<td>38</td>
<td>1:30 p.m.</td>
<td>T43. High-Resolution Investigations of the Permian-Triassic Transition <em>(GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology]; Paleontological Society; Paleontological Research Institution)</em></td>
<td>WSCC, Room 611</td>
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<tr>
<td>39</td>
<td>1:30 p.m.</td>
<td>T45. Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System II <em>(Paleontological Society; GSA Limnogeology Division)</em></td>
<td>WSCC, Room 609</td>
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<td>40</td>
<td>1:30 p.m.</td>
<td>T51. Biodiversity Dynamics in the Face of Environmental Change: Integrating Paleontological and Neontological Approaches to Macroevolution II <em>(Paleontological Society; Paleontological Research Institution)</em></td>
<td>WSCC, Room 608</td>
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<td>41</td>
<td>1:30 p.m.</td>
<td>T55. Life and Times in the Early Paleozoic (Paleontological Society)</td>
<td>WSCC, Room 607</td>
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<tr>
<td>42</td>
<td>1:30 p.m.</td>
<td>T64. Citizen Science in Paleontology: Harnessing Public Interest to Advance Research and STEM Education II (Paleontological Society; GSA Geology and Society Division; GSA Geoscience Education Division)</td>
<td>WSCC, Room 606</td>
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<tr>
<td>43</td>
<td>1:30 p.m.</td>
<td>T89. The Dynamics of Tectono–Sedimentary Systems During Basin Formation and Fill II (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, WSCC; Ballroom 6C</td>
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<tr>
<td>44</td>
<td>1:30 p.m.</td>
<td>T92. Tectonics and Sedimentation, Avulsion, and Experimental Stratigraphy, and History of Western North America: A Celebration of Paul Heller’s Career (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, Room 307/308</td>
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<td>45</td>
<td>1:30 p.m.</td>
<td>T99. Augmented and Virtual Reality in Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers; GSA Geoinformatics Division)</td>
<td>WSCC, Room 2A</td>
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<td>46</td>
<td>1:30 p.m.</td>
<td>T128. Teaching about the Earth Online</td>
<td>WSCC, Room 2B</td>
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<td>47</td>
<td>1:30 p.m.</td>
<td>T153. Geochemical and Petrologic Forensics in the study of Earth’s Magmatism: A Tribute to the Distinguished Career of Jon Davidson (1959–2016) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)</td>
<td>TCC, Skagit 2</td>
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<td>48</td>
<td>1:30 p.m.</td>
<td>T159. Teasing New Information out of (Old) Zircon: In Honor of Dustin Trail, 2017 MSA Recipient (Mineralogical Society of America: Collaborative for Research in Origins [CRIO], the John Templeton Foundation–FFAME Origins Program)</td>
<td>TCC, Skagit 3</td>
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<tr>
<td>49</td>
<td>1:30 p.m.</td>
<td>T163. Petrochronology: Advances and Applications to Petrogenesis and Tectonics II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division; Mineralogical Society of America; Geochemical Society)</td>
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<td>50</td>
<td>1:30 p.m.</td>
<td>T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest II (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)</td>
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<tr>
<td>51</td>
<td>1:30 p.m.</td>
<td>T191. Looking to the Past to Understand the Future: Glacial Chronology and Process (GSA Quaternary Geology and Geomorphology Division)</td>
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<tr>
<td>52</td>
<td>1:30 p.m.</td>
<td>T195. Undergraduate Research Talks: The Next Step in Student Research Projects (GSA Geoscience Education Division; GSA Geoinformatics Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Hydrogeology Division; GSA Limnogeology Division; GSA Archaeological Geology Division; GSA Karst Division)</td>
<td>TCC, Chelan 5</td>
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<td>53</td>
<td>1:30 p.m.</td>
<td>T197. No Dates: No Rates—Utilizing Geochronometers to Quantify Rates of Geomorphic Processes or Archaeological Development over a Wide Range of Temporal and Spatial Scales (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Karst Division)</td>
<td>WSCC, Room 3B</td>
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<tr>
<td>54</td>
<td>1:30 p.m.</td>
<td>T202. Experimental Planetary Geology: Using Laboratory and Other Experiments to Advance Our Understanding of Geology on Planetary Bodies (GSA Planetary Geology Division; GSA Geophysics Division; GSA Sedimentary Geology Division)</td>
<td>TCC, Tahoma 1</td>
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<tr>
<td>55</td>
<td>1:30 p.m.</td>
<td>T224. Multi-Proxy Records for Large-Scale Translation and Vertical Strain along Active and Ancient Strike-Slip Fault Systems (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative; GSA Sedimentary Geology Division)</td>
<td>TCC, Tahoma 3</td>
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<tr>
<td>56</td>
<td>1:30 p.m.</td>
<td>T226. New Perspectives on Processes of Subduction Initiation and Termination (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geophysics Division)</td>
<td>TCC, Tahoma 5</td>
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<tr>
<td>57</td>
<td>1:30 p.m.</td>
<td>T228. Origin, Accretion, and Translation of Mesozoic–Cenozoic Terranes along the Pacific Margin of North America (GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Tahoma 4</td>
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<td>58</td>
<td>1:30 p.m.</td>
<td>T236. Characterizing Cascadia’s Earthquakes—Reexamining Open Questions about Cascadia Seismic and Tsunami Hazards (GSA Geophysics Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Yakima 1</td>
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<tr>
<td>60</td>
<td>1:30 p.m.</td>
<td>T249. New Voices in Geobiology II (GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
<td>WSCC, Room 602/603</td>
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<tr>
<td>61</td>
<td>2 p.m.</td>
<td>P1. The Changing Face of Geoscience in the 21st Century: Increasing Diversity and Inclusion to Solve Complex Problems (GSA Geology and Society Division; GSA Committee on Diversity in the Geosciences; Earth Science Women’s Network; International Association for Geoscience Diversity; Geoscience Alliance; Association for Women Geoscientists)</td>
<td>WSCC, Ballroom 6A</td>
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<td>62</td>
<td>3:45 p.m.</td>
<td>T217. Challenges in Tectonics: Synergies between Meeting Societal Needs and Advancing Interdisciplinary Research in Tectonics and Structural Geology (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>TCC, Tahoma 2</td>
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<tr>
<td>63</td>
<td>9 a.m.</td>
<td>T196. Advances in Geoarchaeology (Posters) (GSA Archaeological Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
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<td>64</td>
<td>9 a.m.</td>
<td>T197. No Dates: No Rates—Utilizing Geochronometers to Quantify Rates of Geomorphic Processes or Archaeological Development over a Wide Range of Temporal and Spatial Scales (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Karst Division)</td>
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<td>65</td>
<td>9 a.m.</td>
<td>D30. Investigations in Economic Geology (Posters)</td>
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<td>66</td>
<td>9 a.m.</td>
<td>T78. Environmental Impact Studies for Energy Geology (Posters) (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>67</td>
<td>9 a.m.</td>
<td>T83. Unconventional Energy Resources: Advances and Evolution in Tight Reservoir Assessment and Production (Posters) (GSA Energy Geology Division; GSA Sedimentary Geology Division)</td>
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<td>68</td>
<td>9 a.m.</td>
<td>T243. Environmental and Engineering Geology Student Research Competition (Posters) (GSA Environmental and Engineering Geology Division; Association of Environmental &amp; Engineering Geologists)</td>
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<td>69</td>
<td>9 a.m.</td>
<td>D32. Geochemistry (Posters)</td>
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<td>9 a.m.</td>
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<td>71</td>
<td>9 a.m.</td>
<td>T145. Geologic Maps and Their Derivatives (Posters) (Association of American State Geologists; GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>72</td>
<td>9 a.m.</td>
<td>D39. Surface Processes and Geomorphic Evolution, from the Coastlines to the Glaciers (Posters)</td>
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<td>73</td>
<td>9 a.m.</td>
<td>T194. The Aeolian Realm: Dunes, Dust, and Loess (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
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<td>74</td>
<td>9 a.m.</td>
<td>D45. Geophysics/Geodynamics (Posters)</td>
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<td>75</td>
<td>9 a.m.</td>
<td>T74. Integrating Geohazards Data into Planning and Land-use Management Decisions (Posters) (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geology and Society Division; GSA Geoinformatics Division; GSA Karst Division)</td>
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<td>76</td>
<td>9 a.m.</td>
<td>T102. Beyond the Road-Cut: Virtual, Local, and Nontraditional “Field” Teaching and Learning Experiences (Posters)</td>
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<td>77</td>
<td>9 a.m.</td>
<td>T118. Integration of Field and Laboratory-Based Experience toward Designing Pedagogically Sound Curriculum Enhancement Activities in the Geosciences (Posters) (GSA Hydrogeology Division; GSA Sedimentary Geology Division; National Association of Geoscience Teachers; American Institute of Professional Geologists; GSA Environmental and Engineering Geology Division; GSA Geoscience Education Division; National Earth Science Teachers Association; GSA Quaternary Geology and Geomorphology Division; Council on Undergraduate Research Geosciences Division; GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)</td>
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<td>78</td>
<td>9 a.m.</td>
<td>T127. Supporting Geoscience Student Transfer Between Institutions and Transitions into the Workforce: Pathways to Success (Posters) (GSA Geology and Society Division; GSA Geoscience Education Division; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division)</td>
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### Sessions Calendar

All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meetings schedule, download GSA’s app at community.geosociety.org/gsa2017/mobileapp.

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<td>79</td>
<td>9 a.m.</td>
<td>T132. Undergraduate Research Posters Showcasing Research by 2YC and 4YCU Geoscience Students (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division; International Association for Geoscience Diversity)</td>
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<td>80</td>
<td>9 a.m.</td>
<td>T137. Geoheritage Matters (Posters) (GSA Geology and Society Division)</td>
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<td>81</td>
<td>9 a.m.</td>
<td>T140. New Tools in the Geologist’s Toolbelt: Using Technology to Educate and Inspire Others about Geology (Posters) (Washington Division of Geology and Earth Resources; GSA Environmental and Engineering Geology Division)</td>
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<td>82</td>
<td>9 a.m.</td>
<td>T2. A Showcase of Undergraduate Research in Hydrogeology (Posters) (GSA Hydrogeology Division; Council on Undergraduate Research Geosciences Division)</td>
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<td>83</td>
<td>9 a.m.</td>
<td>T55. Life and Times in the Early Paleozoic (Posters) (Paleontological Society)</td>
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<td>84</td>
<td>9 a.m.</td>
<td>D18. Paleontology, Phylogenetic/Morphological Patterns (Posters)</td>
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<td>85</td>
<td>9 a.m.</td>
<td>D52. Petrology, Metamorphic (Posters)</td>
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<td>86</td>
<td>9 a.m.</td>
<td>D53. Sediments, Carbonates (Posters)</td>
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<td>87</td>
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<td>D23. Sediments, Clastic (Posters)</td>
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<td>88</td>
<td>9 a.m.</td>
<td>D24. Stratigraphy (Posters)</td>
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<td>89</td>
<td>9 a.m.</td>
<td>T216. Spatiotemporal Variations and the Role of Fluids in Fault-Zone Hydromechanical Processes (Posters) (GSA Structural Geology and Tectonics Division; GSA Hydrogeology Division; GSA Energy Geology Division; Future of Tectonics Initiative)</td>
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<td>90</td>
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<td>T221. Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)</td>
<td>WSCC, Halls 4EF</td>
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### Monday, 23 October

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<td>91</td>
<td>8 a.m.</td>
<td>D11. Paleontology, Paleoecology/Taphonomy</td>
<td>WSCC, Room 606</td>
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<td>92</td>
<td>8 a.m.</td>
<td>P2. Landscapes in the Anthropocene I (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; GSA Hydrogeology Division; GSA Geology and Public Policy Committee; Geology [journal])</td>
<td>WSCC, Ballroom 6A</td>
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<tr>
<td>93</td>
<td>8 a.m.</td>
<td>T6. Cross-Border Community Engagement Using Geoscience Research, Education, and Outreach (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Karst Division)</td>
<td>WSCC, Room 613/614</td>
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<tr>
<td>94</td>
<td>8 a.m.</td>
<td>T12. Hydrogeology, Geochemistry, and Wetland Processes I: A Session in Honor of the Career of Donald I. Siegel (GSA Hydrogeology Division)</td>
<td>WSCC, Room 618/619/620</td>
</tr>
<tr>
<td>95</td>
<td>8 a.m.</td>
<td>T22. Water Resources and Management in Coastal and Inland Aquifers—Emphasis on Small Island Developing States of the Caribbean (GSA Hydrogeology Division; GSA International/International Interdisciplinary Interest Group; GSA Geology and Health Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)</td>
<td>WSCC, Room 615/616/617</td>
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<tr>
<td>96</td>
<td>8 a.m.</td>
<td>T31. GeoCorps and Geoscientists-in-the-Parks Internships on Public Lands: Providing Career Development Opportunities for Students and Recent Graduates (GSA Geology and Society Division; U.S. Forest Service; National Park Service)</td>
<td>WSCC, Room 612</td>
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<tr>
<td>97</td>
<td>8 a.m.</td>
<td>T38. Cenozoic Paleoclimates and Ecosystems I (Paleontological Society; Geochemical Society; Paleontological Research Institution; Cushman Foundation for Foraminiferal Research; GSA Sedimentary Geology Division; GSA Limnogeology Division)</td>
<td>WSCC, Room 609</td>
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<tr>
<td>98</td>
<td>8 a.m.</td>
<td>T40. Earth Life Transitions and Major Continental Biological Events of the Phanerozoic (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division; Geochemical Society; Paleontological Society; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, Room 611</td>
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<tr>
<td>99</td>
<td>8 a.m.</td>
<td>T49. Advances in Computational Paleobiology: Reshaping Our Understanding of the Fossil Record (Palaeontological Association; Paleontological Society)</td>
<td>WSCC, Room 608</td>
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<td>100</td>
<td>8 a.m.</td>
<td>T59. Studies in Paleobiology and Paleocology I: In Honor of Professor David J. Bottjer (GSA Geobiology &amp; Geomicrobiology Division; Paleontological Society; SEPM [Society for Sedimentary Geology]; Paleontological Research Institution)</td>
<td>WSCC, Room 607</td>
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<td>101</td>
<td>8 a.m.</td>
<td>T87. Fluvio-Deltaic Processes and Their Stratigraphic Record (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, WSCC, Ballroom 6C</td>
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<tr>
<td>102</td>
<td>8 a.m.</td>
<td>T93. Lacustrine Systems across Space and Time I (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, Room 307/308</td>
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<td>103</td>
<td>8 a.m.</td>
<td>T100. Barriers, Misconceptions, and Progress in Improving Climate Literacy and Strategies for Communicating about Climate Change (GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research; National Association of Geoscience Teachers; Climate Literacy Network [CLEAN]; GSA Geology and Society Division)</td>
<td>WSCC, Room 3A</td>
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<td>104</td>
<td>8 a.m.</td>
<td>T122. On the Cutting Edge: Fifteen Years of Impacts on Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers)</td>
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<td>8 a.m.</td>
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<td>106</td>
<td>8 a.m.</td>
<td>T149. Celebrating Dr. John W. Valley’s Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene I (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)</td>
<td>TCC, Skagit 2</td>
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<td>107</td>
<td>8 a.m.</td>
<td>T162. The Dance of Arcs: Causes of Arc Migrations, Flare-Ups, and Magmatic Focusing I (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Skagit 4</td>
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<td>108</td>
<td>8 a.m.</td>
<td>T166. Great Maps in the History of Geology (GSA History and Philosophy of Geology Division; GSA Planetary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Structural Geology and Tectonics Division; History of Earth Sciences Society [HES])</td>
<td>TCC, Skagit 3</td>
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<tr>
<td>109</td>
<td>8 a.m.</td>
<td>T172. A Call to Arms: Applying Quaternary Science in the 21st Century (GSA Quaternary Geology and Geomorphology Division; U.S. National Committee-International Quaternary Congress; GSA Geology and Society Division; American Quaternary Association [AMQUA]; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Limnogeology Division)</td>
<td>TCC, Chelan 5</td>
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<tr>
<td>110</td>
<td>8 a.m.</td>
<td>T176. Glacier-Landscape Interactions, Loess Palaeoclimatology, and Interdisciplinary Quaternary Science I: In Memory of Stephen C. Porter (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
<td>TCC, Chelan 4</td>
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<td>111</td>
<td>8 a.m.</td>
<td>T193. Quantifying Geomorphic Processes and Rates of Landscape Evolution (GSA Quaternary Geology and Geomorphology Division)</td>
<td>TCC, Chelan 2</td>
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<td>112</td>
<td>8 a.m.</td>
<td>T196. Advances in Geoarchaeology I (GSA Archaeological Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
<td>WSCC, Room 3B</td>
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<td>113</td>
<td>8 a.m.</td>
<td>T205. Impact Cratering: From Fire to Ice—Cratering across the Solar System (GSA Planetary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Tahoma 1</td>
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<td>114</td>
<td>8 a.m.</td>
<td>T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle I (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>TCC, Tahoma 2</td>
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<td>115</td>
<td>8 a.m.</td>
<td>T227. Ophiolite and Ocean Plate Stratigraphy Records in Modern and Ancient Accretionary and Collisional Orogenic Belts in the Circum Pacific Region I (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geophysics Division; Geological Society of China; GSA Sedimentary Geology Division)</td>
<td>TCC, Tahoma 4</td>
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<td>116</td>
<td>8 a.m.</td>
<td>T234. What Are the Conditions That Lead to Detachment Faulting? (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Tahoma 3</td>
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<td>117</td>
<td>8 a.m.</td>
<td>T241. Volcano-Tectonic Evolution of the East African Rift System (GSA International/International Interdisciplinary Interest Group; GSA Geophysics Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Yakima 1</td>
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22–25 October • Seattle, Washington, USA
# Sessions Calendar

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<td>119</td>
<td>8 a.m.</td>
<td>T248. Microbialite Textures and Chemical Signatures in Continental Settings: Forging the Link between the Modern and Ancient (GSA Geobiology &amp; Geomicrobiology Division; GSA Limnogeology Division; GSA Karst Division)</td>
<td>WSCC, Room 602/603</td>
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<tr>
<td>120</td>
<td>8 a.m.</td>
<td>T252. Cratonic Assembly in the Precambrian: Forming the Core of Modern and Ancient Landmasses (GSA Structural Geology and Tectonics Division)</td>
<td>WSCC, Room 604</td>
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<tr>
<td>121</td>
<td>1:30 p.m.</td>
<td>D1. Recent Advances in Hydrogeology</td>
<td>WSCC, Room 615/616/617</td>
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<td>122</td>
<td>1:30 p.m.</td>
<td>D4. Paleoclimate, Sedimentary, and Historical Studies in Caves and Karst Features</td>
<td>WSCC, Room 612</td>
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<td>123</td>
<td>1:30 p.m.</td>
<td>D10. Paleontology, Paleoeconomy/Paleobotany</td>
<td>WSCC, Room 604</td>
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<td>124</td>
<td>1:30 p.m.</td>
<td>D44. Geophysics to Solve Geological Problems and the Annual George P. Woollard Award Presentation</td>
<td>TCC, Yakima 1</td>
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<td>125</td>
<td>1:30 p.m.</td>
<td>P2. Landscapes in the Anthropocene II (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; GSA Hydrogeology Division; GSA Geology and Public Policy Committee; Geology [journal])</td>
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<td>126</td>
<td>1:30 p.m.</td>
<td>T12. Hydrogeology, Geochemistry, and Wetland Processes II: A Session in Honor of the Career of Donald I. Siegel (GSA Hydrogeology Division)</td>
<td>WSCC, Room 618/619/620</td>
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<td>127</td>
<td>1:30 p.m.</td>
<td>T15. Monitoring the Complex Nature of Water Balances and Solute Transport at the Groundwater–Surface Water Interface (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)</td>
<td>WSCC, Room 613/614</td>
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<td>128</td>
<td>1:30 p.m.</td>
<td>T38. Cenozoic Paleoclimates and Ecosystems II (Paleontological Society; Geochemical Society; Paleontological Research Institution; Cushman Foundation for Foraminiferal Research; GSA Sedimentary Geology Division; GSA Limnogeology Division)</td>
<td>WSCC, Room 609</td>
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<tr>
<td>129</td>
<td>1:30 p.m.</td>
<td>T47. Recent Developments in Cyclostratigraphy (Cushman Foundation for Foraminiferal Research; Geochemical Society; Geologic TimeScale Foundation; Winners Academic Solutions; YES Network; GSA Sedimentary Geology Division)</td>
<td>WSCC, Room 611</td>
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<tr>
<td>130</td>
<td>1:30 p.m.</td>
<td>T53. Digital, Digital Get Down: Frontiers in Virtual Paleontology (Paleontological Society; Paleontological Research Institution; GSA Geoinformatics Division)</td>
<td>WSCC, Room 606</td>
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<td>131</td>
<td>1:30 p.m.</td>
<td>T59. Studies in Paleobiology and Paleoecology II: In Honor of Professor David J. Bottjer (GSA Geobiology &amp; Geomicrobiology Division; Paleontological Society; SEPM [Society for Sedimentary Geology]; Paleontological Research Institution)</td>
<td>WSCC, Room 607</td>
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<td>132</td>
<td>1:30 p.m.</td>
<td>T60. The Onset of the Great Ordovician Biodiversity Event (GOBE): Testing Hypotheses with Diverse Data Sets (Paleontological Society; GSA Geobiology &amp; Geomicrobiology Division; GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology]; IGCP 653: Onset of the Great Ordovician Biodiversification Event; Paleontological Research Institution)</td>
<td>WSCC, Room 608</td>
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<tr>
<td>133</td>
<td>1:30 p.m.</td>
<td>T78. Environmental Impact Studies for Energy Geology (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)</td>
<td>WSCC, Room 602/603</td>
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<td>134</td>
<td>1:30 p.m.</td>
<td>T85. Clear as Mud: Stratigraphic, Diagenetic, Sedimentologic, Geomechanical Analyses, and Modern Analogs of Ancient Mudrock Systems (GSA Sedimentary Geology Division; GSA Energy Geology Division; GSA Limnogeology Division)</td>
<td>WSCC, WSCC, Ballroom 6C</td>
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<td>135</td>
<td>1:30 p.m.</td>
<td>T93. Lacustrine Systems across Space and Time II (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM [Society for Sedimentary Geology])</td>
<td>WSCC, Room 307/308</td>
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<td>136</td>
<td>1:30 p.m.</td>
<td>T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)</td>
<td>WSCC, Room 2B</td>
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<td>137</td>
<td>1:30 p.m.</td>
<td>T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning (National Association of Geoscience Teachers; GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)</td>
<td>WSCC, Room 2A</td>
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<td>138</td>
<td>1:30 p.m.</td>
<td>T124. Practical Advice for In-Service and Pre-Service K–12 Earth Science Teacher Preparation and Professional Development (National Earth Science Teachers Association; National Association of Geoscience Teachers, Teacher Education Division)</td>
<td>WSCC, Room 3A</td>
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<td>139</td>
<td>1:30 p.m.</td>
<td>T149. Celebrating Dr. John W. Valley’s Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)</td>
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<td>140</td>
<td>1:30 p.m.</td>
<td>T162. The Dance of Arcs: Causes of Arc Migrations, Flare-Ups, and Migmatic Focusing II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Skagit 4</td>
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<td>141</td>
<td>1:30 p.m.</td>
<td>T167. The History of the Petroleum Industry: Hydraulic Fracturing—The 20th and 21st Century (GSA History and Philosophy of Geology Division; GSA Energy Geology Division; History of Earth Sciences Society (HESS); GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; History of the Geoscience Section of the Geological Society of Italy)</td>
<td>TCC, Skagit 3</td>
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<td>142</td>
<td>1:30 p.m.</td>
<td>T176. Glacier-Landscape Interactions, Loess Paleoclimatology, and Interdisciplinary Quaternary Science II: In Memory of Stephen C. Porter (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
<td>TCC, Chelan 4</td>
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<tr>
<td>143</td>
<td>1:30 p.m.</td>
<td>T177. Ice Streams of North American Ice Sheets and Their Stratigraphic and Sedimentary Record (GSA Quaternary Geology and Geomorphology Division)</td>
<td>TCC, Chelan 2</td>
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<td>144</td>
<td>1:30 p.m.</td>
<td>T185. Geomorphology of Human-Altered Landscapes (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Environmental and Engineering Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group)</td>
<td>TCC, Chelan 5</td>
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<td>145</td>
<td>1:30 p.m.</td>
<td>T196. Advances in Geoarchaeology II (GSA Archaeological Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
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<td>146</td>
<td>1:30 p.m.</td>
<td>T204. Friends of Hoth: Episode II—Icy Bodies of the Solar System (GSA Planetary Geology Division)</td>
<td>TCC, Tahoma 1</td>
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<td>147</td>
<td>1:30 p.m.</td>
<td>T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle II (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>TCC, Tahoma 2</td>
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<td>148</td>
<td>1:30 p.m.</td>
<td>T213. Integrated Approaches to Deciphering Major Crustal Boundaries in Polyphase Orogenic Settings (GSA Structural Geology and Tectonics Division; Society of Economic Geologists; GSA Geophysics Division)</td>
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<td>149</td>
<td>1:30 p.m.</td>
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<td>150</td>
<td>1:30 p.m.</td>
<td>T231. Subduction Top to Bottom 2 (ST2B-2), Cascadia and Beyond (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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<td>152</td>
<td>4 p.m.</td>
<td>GSA Hydrogeology Division: Henry Darcy Distinguished Lecture</td>
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<td>9 a.m.</td>
<td>T34. Sigma Gamma Epsilon-Undergraduate Research (Posters) (Sigma Gamma Epsilon; GSA Karst Division)</td>
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<td>155</td>
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<td>D48. Geology and Health (Posters)</td>
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<td>156</td>
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<td>T248. Microbialite Textures and Chemical Signatures in Continental Settings: Forging the Link between the Modern and Ancient (Posters) (GSA Geobiology &amp; Geomicrobiology Division; GSA Limnogeology Division; GSA Karst Division)</td>
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<td>157</td>
<td>9 a.m.</td>
<td>T249. New Voices in Geobiology (Posters) (GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
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<td>158</td>
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<td>T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)</td>
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<td>159</td>
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<td>T191. Looking to the Past to Understand the Future: Glacial Chronology and Process (Posters) (GSA Quaternary Geology and Geomorphology Division)</td>
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<td>160</td>
<td>9 a.m.</td>
<td>T193. Quantifying Geomorphic Processes and Rates of Landscape Evolution (Posters) (GSA Quaternary Geology and Geomorphology Division)</td>
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<td>161</td>
<td>9 a.m.</td>
<td>T236. Characterizing Cascadia’s Earthquakes—Reexamining Open Questions about Cascadia Seismic and Tsunami Hazards (Posters) (GSA Geophysics Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>162</td>
<td>9 a.m.</td>
<td>T104. Broader Impacts Activities as Vehicles for Filling the Geoscience Pipeline (Posters) (GSA Geoscience Education Division)</td>
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<td>WSCC, Halls 4EF</td>
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<td>165</td>
<td>9 a.m.</td>
<td>T135. Comedy in the Geosciences (Posters) (GSA Geology and Society Division)</td>
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<td>166</td>
<td>9 a.m.</td>
<td>T138. Geology Rocks! A Musical Session on the Sounds of Science (Posters) (GSA Geology and Society Division; GSA Geoscience Education Division)</td>
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<td>167</td>
<td>9 a.m.</td>
<td>D55. Great Maps and Other Topics in the History of Geology (Posters)</td>
<td>WSCC, Halls 4EF</td>
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<td>168</td>
<td>9 a.m.</td>
<td>D2. Recent Advances in Hydrogeology (Posters)</td>
<td>WSCC, Halls 4EF</td>
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<td>169</td>
<td>9 a.m.</td>
<td>T5. Arsenic and Other Geogenic Contaminants in Groundwater Resources: Linking Water Quality, Food Security, and Treatment (Posters) (GSA Hydrogeology Division; GSA Geology and Health Division; GSA International/International Interdisciplinary Interest Group; International Society of Groundwater for Sustainable Development [ISGSD]; International Medical Geology Association; GSA Environmental and Engineering Geology Division; GSA Geobiology &amp; Geomicrobiology Division)</td>
<td>WSCC, Halls 4EF</td>
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<td>170</td>
<td>9 a.m.</td>
<td>T8. Fate, Effects, and Mitigation of Chemical and Fuel Releases in Surface and Subsurface Environments (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Energy Geology Division)</td>
<td>WSCC, Halls 4EF</td>
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<tr>
<td>171</td>
<td>9 a.m.</td>
<td>D6. The Multidisciplinary Faces of Cave and Karst Science (Posters)</td>
<td>WSCC, Halls 4EF</td>
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<td>173</td>
<td>9 a.m.</td>
<td>T43. High-Resolution Investigations of the Permian-Triassic Transition (Posters) (GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology]; Palaeontological Society; Palaeontological Research Institution)</td>
<td>WSCC, Halls 4EF</td>
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<td>174</td>
<td>9 a.m.</td>
<td>D15. Paleontology, Biogeography/Biostratigraphy (Posters)</td>
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<td>175</td>
<td>9 a.m.</td>
<td>T60. The Onset of the Great Ordovician Biodiversity Event (GOBE): Testing Hypotheses with Diverse Data Sets (Posters) (Palaeontological Society; GSA Geobiology &amp; Geomicrobiology Division; GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology]; IGCP 653: Onset of the Great Ordovician Biodiversification Event; Palaeontological Research Institution)</td>
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<td>176</td>
<td>9 a.m.</td>
<td>T163. Petrochronology: Advances and Applications to Petrogenesis and Tectonics (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division; Mineralogical Society of America; Geochemical Society)</td>
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<td>177</td>
<td>9 a.m.</td>
<td>D54. Planetary Potpourri (Posters)</td>
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<td>178</td>
<td>9 a.m.</td>
<td>T204. Friends of Hoth: Episode II—icy Bodies of the Solar System (Posters) (GSA Planetary Geology Division)</td>
<td>WSCC, Halls 4EF</td>
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<td>179</td>
<td>9 a.m.</td>
<td>T205. Impact Cratering: From Fire to Ice—Cratering across the Solar System (Posters) (GSA Planetary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>180</td>
<td>9 a.m.</td>
<td>T207. Volcanism and Tectonism across the Solar System (Posters) (GSA Planetary Geology Division)</td>
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<td>181</td>
<td>9 a.m.</td>
<td>T252. Cratonic Assembly in the Precambrian: Forming the Core of Modern and Ancient Landmasses (Posters) (GSA Structural Geology and Tectonics Division)</td>
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<td>182</td>
<td>9 a.m.</td>
<td>T84. The Dynamics of Stratigraphy and Sedimentation (Posters) (GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology])</td>
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<td>183</td>
<td>9 a.m.</td>
<td>T87. Fluvio-Deltaic Processes and Their Stratigraphic Record (Posters) (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; SEPM [Society for Sedimentary Geology])</td>
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<td>184</td>
<td>9 a.m.</td>
<td>T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill (Posters) (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; SEPM [Society for Sedimentary Geology])</td>
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<td>185</td>
<td>9 a.m.</td>
<td>T90. Advancing Seismic and Sequence Stratigraphy: Insights from Testing the Fundamentals (Posters) (GSA Environmental and Engineering Geology Division; GSA Energy Geology Division; GSA Sedimentary Geology Division)</td>
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<td>186</td>
<td>9 a.m.</td>
<td>T91. Chemostratigraphy: Environments, Correlation, and Time (Posters) (North American Commission on Stratigraphic Nomenclature; SEPM [Society for Sedimentary Geology]; International Subcommission on Stratigraphic Classification; GSA Sedimentary Geology Division)</td>
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<td>187</td>
<td>9 a.m.</td>
<td>T92. Tectonics and Sedimentation, Avulsion, and Experimental Stratigraphy, and History of Western North America: A Celebration of Paul Heller’s Career (Posters) (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; SEPM [Society for Sedimentary Geology])</td>
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<td>188</td>
<td>9 a.m.</td>
<td>T234. What Are the Conditions That Lead to Detachment Faulting? (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
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**Tuesday, 24 October**

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<td>D5. Cave and Karst Processes, Hazards, and Monitoring</td>
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<td>190</td>
<td>8 a.m.</td>
<td>D9. Paleontology, Conservation Paleobiology</td>
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<td>191</td>
<td>8 a.m.</td>
<td>D40. Structural Geology and Tectonics: Advances in Understanding Fault Systems, Plate Boundaries and Deformation: Observations and Experiments</td>
<td>TCC, Tahoma 3</td>
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<td>192</td>
<td>8 a.m.</td>
<td>P3. IODP-ICDP Expedition 364 to the Chicxulub Impact Crater (GSA Planetary Geology Division; GSA Geophysics Division; International Continental Scientific Drilling Program [ICDP]; European Consortium for Ocean Research Drilling [ICDP-ECORD]; Lunar and Planetary Institute [LPI])</td>
<td>WSCC, Ballroom 6A</td>
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<td>193</td>
<td>8 a.m.</td>
<td>T4. Approaches to Applied Modeling for Industry and the Public (GSA Hydrogeology Division; GSA Geology and Society Division; National Ground Water Association [NGWA]; GSA Environmental and Engineering Geology Division)</td>
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<td>194</td>
<td>8 a.m.</td>
<td>T10. Groundwater Influenced Ecosystems: Springs, Gaining Streams, and Terrestrial Ecosystems (GSA Hydrogeology Division; GSA Karst Division; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>195</td>
<td>8 a.m.</td>
<td>T20. The Critical Zone As Heterogeneous Media: Implications for Physical, Chemical, and Biological Processes (GSA Hydrogeology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
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<td>196</td>
<td>8 a.m.</td>
<td>T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present I (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)</td>
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<td>197</td>
<td>8 a.m.</td>
<td>T56. Mass Extinctions I: Past, Present, and Future! (<em>Paleontological Research Institution</em>; <em>GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division</em>; <em>Cushman Foundation for Foraminiferal Research</em>; <em>Paleontological Society</em>; <em>Volcanic and Magmatic Studies Group</em>)</td>
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<td>198</td>
<td>8 a.m.</td>
<td>T66. Exceptionally Preserved Proterozoic–Early Paleozoic Fossils (<em>Paleontological Society</em>; <em>GSA Geobiology &amp; Geomicrobiology Division</em>; <em>Paleontological Research Institution</em>)</td>
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<td>199</td>
<td>8 a.m.</td>
<td>T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles (<em>GSA Geobiology &amp; Geomicrobiology Division</em>; <em>GSA Sedimentary Geology Division</em>; <em>GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division</em>; <em>Paleontological Society</em>; <em>GSA Limnogeology Division</em>)</td>
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<td>200</td>
<td>8 a.m.</td>
<td>T75. Planetary Climate Disruption Demands Urgent Global Policy Action (<em>GSA Quaternary Geology and Geomorphology Division</em>; <em>GSA Energy Geology Division</em>; <em>GSA Environmental and Engineering Geology Division</em>; <em>GSA Geology and Society Division</em>; <em>GSA Hydrogeology Division</em>)</td>
<td>WSCC, Room 611</td>
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<td>201</td>
<td>8 a.m.</td>
<td>T79. Geologic Energy Research I (<em>GSA Energy Geology Division</em>; <em>GSA Environmental and Engineering Geology Division</em>)</td>
<td>WSCC, Room 602/603</td>
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<td>202</td>
<td>8 a.m.</td>
<td>T86. Controls, Geomorphology, and Depositional Architecture of Fluvial-Tidal Sediments through Space and Time (<em>GSA Sedimentary Geology Division</em>; <em>SEPM [Society for Sedimentary Geology]</em>)</td>
<td>WSCC, WSCC, Ballroom 6C</td>
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<td>203</td>
<td>8 a.m.</td>
<td>T105. Building an Inclusive Geoscience Community Today for Tomorrow I (<em>GSA Geoscience Education Division</em>; <em>GSA Diversity in the Geosciences Committee</em>; <em>GSA Geology and Society Division</em>; <em>National Association of Black Geoscientists</em>)</td>
<td>WSCC, Room 2A</td>
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<td>204</td>
<td>8 a.m.</td>
<td>T115. Hands-On Teaching Demonstrations that Combine Geoscience and Societal Issues: Audience Participation Requested! (<em>National Association of Geoscience Teachers</em>; <em>GSA Geoscience Education Division</em>)</td>
<td>WSCC, Room 3A</td>
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<td>205</td>
<td>8 a.m.</td>
<td>T120. Making Thinking Visible: Actions and Expressions of Problem Solving and Decision Making in the Geosciences (<em>GSA Geoscience Education Division</em>; <em>National Association of Geoscience Teachers</em>, <em>Division of Geoscience Education Research</em>)</td>
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<td>206</td>
<td>8 a.m.</td>
<td>T147. What Can You Do with Geoinformatics? (<em>GSA Geoinformatics Division</em>; <em>Geoscience Information Society</em>; <em>American Geosciences Institute</em>; <em>American Geophysical Union</em>; <em>GSA Environmental and Engineering Geology Division</em>; <em>GSA Geoscience Education Division</em>; <em>Association of American State Geologists</em>; <em>GSA Karst Division</em>)</td>
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<td>207</td>
<td>8 a.m.</td>
<td>T152. Fluids and Melts in Geologic Systems</td>
<td>TCC, Skagit 2</td>
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<td>208</td>
<td>8 a.m.</td>
<td>T161. Petrology across the Inner Solar System: In Honor of Roebling Medalist Ed Stolper (<em>Mineralogical Society of America</em>; <em>GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division</em>; <em>GSA Planetary Geology Division</em>)</td>
<td>TCC, Skagit 4</td>
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<td>209</td>
<td>8 a.m.</td>
<td>T168. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols (<em>GSA Sedimentary Geology Division</em>; <em>GSA Soils and Soil Processes Interdisciplinary Interest Group</em>)</td>
<td>TCC, Skagit 3</td>
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<td>210</td>
<td>8 a.m.</td>
<td>T175. Earthquakes, Faults, and Fault Systems in the Pacific Northwest (<em>Washington Division of Geology and Earth Resources</em>; <em>GSA Structural Geology and Tectonics Division</em>)</td>
<td>TCC, Chelan 4</td>
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<td>211</td>
<td>8 a.m.</td>
<td>T181. The Geological Signature of Natural Hazard Events I (<em>GSA Environmental and Engineering Geology Division</em>; <em>GSA Sedimentary Geology Division</em>)</td>
<td>TCC, Chelan 5</td>
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<td>213</td>
<td>8 a.m.</td>
<td>T218. Understanding the Interplay of Structural, Metamorphic, and Magmatic Processes in the Evolution of Convergent Margins: Lessons from the Proterozoic to Present-Day South American Andean Margin (<em>GSA Structural Geology and Tectonics Division</em>; <em>GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division</em>; <em>GSA International/International Interdisciplinary Interest Group</em>)</td>
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<td>214</td>
<td>8 a.m.</td>
<td>T219. Challenges in Tectonics: Dynamic Interactions among Earth-Surface Processes, Landscape Evolution, and Tectonics I (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; SEPM [Society for Sedimentary Geology]; Future of Tectonics Initiative)</td>
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<td>215</td>
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<td>T232. Subduction Zone Response to Ridge and Plateau Collision: Perspectives from the Archean to the Cenozoic (GSA Structural Geology and Tectonics Division)</td>
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<td>216</td>
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<td>T246. Weather-Induced Landslides, Debris Flows, and Rock Fall (GSA Environmental and Engineering Geology Division; GSA Hydrogeology Division)</td>
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<td>217</td>
<td>8 a.m.</td>
<td>T247. Deciphering the Major Paleoenvironmental Crises of the Earth and Their Impact on the Marine Ecosystems and Biogeochemical Cycles (Paleontological Research Institution; GSA Sedimentary Geology Division; Paleontological Society)</td>
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<td>218</td>
<td>8 a.m.</td>
<td>T257. Contributions of Rock- and Paleo-Magnetism to Understanding Orogenic Processes</td>
<td>TCC, Yakima 1</td>
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<td>219</td>
<td>9 a.m.</td>
<td>P4. Speed Dating!: Advice on Sampling and Applications Through the Lens of the Geochronologist (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Karst Division; GSA Limnogeology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology Division; GSA Tectonics)</td>
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<td>220</td>
<td>1:30 p.m.</td>
<td>D8. Paleontology, Macrolevovolution/Biogeography</td>
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<td>221</td>
<td>1:30 p.m.</td>
<td>D14. Paleontology, Phylogenetic/Morphological Patterns: Vertebrates</td>
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<td>222</td>
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<td>D19. Geoscience and Public Policy: Bringing Our Science to Society</td>
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<td>223</td>
<td>1:30 p.m.</td>
<td>P5. Origin, Accretion, and Translation of Mesozoic-Cenozoic Terranes along the Pacific Margin of North America (GSA Structural Geology and Tectonics Division)</td>
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<td>224</td>
<td>1:30 p.m.</td>
<td>T24. How Nick Crawford’s Vision Helped Shape Contemporary Karst Science and Education (GSA Karst Division; National Cave and Karst Research Institute; GSA Hydrogeology Division; GSA History and Philosophy of Geology Division)</td>
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<td>225</td>
<td>1:30 p.m.</td>
<td>T33. Intersections of Sustainability and Geosciences (GSA Geology and Society Division; GSA Karst Division; GSA Environmental and Engineering Geology Division)</td>
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<td>226</td>
<td>1:30 p.m.</td>
<td>T39. Cushman Foundation Symposium: Microfossil Mayhem—Murder, Misfortune, and More (Cushman Foundation for Foraminiferal Research; Paleontological Research Institution; GSA Limnogeology Division; Paleontological Society; Geochemical Society; GSA Archaeological Geology Division)</td>
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<td>227</td>
<td>1:30 p.m.</td>
<td>T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present II (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)</td>
<td>WSCC, Room 609</td>
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<td>228</td>
<td>1:30 p.m.</td>
<td>T56. Mass Extinctions II: Past, Present, and Future? (Paleontological Research Institution; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Cushman Foundation for Foraminiferal Research; Paleontological Society; Volcanic and Magmatic Studies Group)</td>
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<td>229</td>
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<td>T70. Paleogenomics and Geobiology (Paleontological Society; Paleontological Research Institution; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>230</td>
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<td>T79. Geologic Energy Research II (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T88. Mudstone Facts: Deposition, Diagenesis, and Source of Basin Fluids (GSA Sedimentary Geology Division; GSA Energy Geology Division; GSA Limnogeology Division)</td>
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<td>232</td>
<td>1:30 p.m.</td>
<td>T94. Limnogeology—Progress, Challenges, and Opportunities on Earth and Beyond: A Tribute to Beth Gierlowksi-Kordesch (GSA Limnogeology Division; SEPM [Society for Sedimentary Geology]; Paleontological Society; International Association of Limnogeology; GSA Sedimentary Geology Division; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>233</td>
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<td>T101. Better Together: Partnerships That Facilitate or Enhance Experiential Learning in Undergraduate Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers)</td>
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<td>234</td>
<td>1:30 p.m.</td>
<td>T105. Building an Inclusive Geoscience Community Today for Tomorrow II (GSA Geoscience Education Division; GSA Diversity in the Geosciences Committee; GSA Geology and Society Division; National Association of Black Geoscientists)</td>
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## Sessions Calendar

All Technical Sessions will take place either at The Conference Center (TCC) or the Washington State Convention Center (WSCC). To browse the entire meetings schedule, download GSA's app at community.geosociety.org/gsa2017/mobileapp.

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<td>T114. Getting It Done: Experiences of Implementing the Framework and NGSS in Earth and Space Science</td>
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<td>1:30 p.m.</td>
<td>T143. Curating Physical Samples in a Digital World (GSA Geoinformatics Division; Paleontological Society; Society for the Preservation of Natural History Collections; Paleontological Research Institution; Cushman Foundation; GSA Geobiology &amp; Geomicrobiology Division; Association of American State Geologists)</td>
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<td>T148. System-Scale Zonation of Ore Systems: Insights into 3D Architecture from Lateral and Deep Exposures Due to Mining and Structural Deformation (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Society of Economic Geologists)</td>
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<td>T150. Chemical Scene Investigations of Large Igneous Provinces II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)</td>
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<td>T165. Recent Advances in Understanding Volcanism of the Yellowstone Hotspot</td>
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<td>T171. Terroir (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
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<td>241</td>
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<td>T181. The Geological Signature of Natural Hazard Events II (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)</td>
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<td>242</td>
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<td>T188. Interrelationship between Tectonic Uplift and Quaternary Glaciations on the Tibetan Plateau and Its Surrounding Mountains</td>
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<td>243</td>
<td>1:30 p.m.</td>
<td>T189. Landscapes in the Anthropocene (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Sedimentary Geology Division; GSA Limnogeology Division)</td>
<td>TCC, Chelan 4</td>
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<tr>
<td>244</td>
<td>1:30 p.m.</td>
<td>T206. Geomorphology and Landscape Evolution of Mars: The G.K. Gilbert Award Session I (GSA Planetary Geology Division)</td>
<td>TCC, Chelan 1</td>
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<tr>
<td>245</td>
<td>1:30 p.m.</td>
<td>T212. Geologic Mapping in the Pacific Northwest and Beyond: Recent Maps, Advances, and New Insights: In Memory of Russell C. Evarts and His Extensive Contributions to Pacific Northwest Geologic Mapping (Washington Division of Geology and Earth Resources; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Environmental and Engineering Geology Division; GSA Geology and Society Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
<td>TCC, Chelan 2</td>
</tr>
<tr>
<td>246</td>
<td>1:30 p.m.</td>
<td>T219. Challenges in Tectonics: Dynamic Interactions among Earth-Surface Processes, Landscape Evolution, and Tectonics II (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; SEPM [Society for Sedimentary Geology]; Future of Tectonics Initiative)</td>
<td>TCC, Chelan 4</td>
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<tr>
<td>247</td>
<td>1:30 p.m.</td>
<td>T222. Decadal to Millennial Strain Accumulation at Subduction Zones (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>TCC, Chelan 5</td>
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<tr>
<td>248</td>
<td>1:30 p.m.</td>
<td>T251. Tsunami Hazards: Innovations in Mapping, Modeling, and Outreach (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geoinformatics Division)</td>
<td>WSCC, Room 618/619/620</td>
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<td>249</td>
<td>1:30 p.m.</td>
<td>T256. The Co-Evolution of Life and Its Environment during the Precambrian: The Rise of Oxygeic Photosynthesis and the Great Oxidation Event (GSA Geobiology &amp; Geomicrobiology Division)</td>
<td>TCC, Skagit 5</td>
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<tr>
<td>250</td>
<td>3 p.m.</td>
<td>Mineralogical Society of America (MSA) Awards Lectures, Presidential Address, and Annual Business Meeting</td>
<td>TCC, Skagit 4</td>
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<tr>
<td>251</td>
<td>4:30 p.m.</td>
<td>GSA Hydrogeology Division: Birdsall-Dreiss Distinguished Lecture</td>
<td>WSCC, Ballroom 6B</td>
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<td>252</td>
<td>9 a.m.</td>
<td>T244. Landslide Inventories, Databases, Hazard Maps, Risk Analysis, and Beyond (Posters) (GSA Environmental and Engineering Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Geoinformatics Division)</td>
<td>WSCC, Halls 4EF</td>
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<tr>
<td>253</td>
<td>9 a.m.</td>
<td>T149. Celebrating Dr. John W. Valley’s Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)</td>
<td>WSCC, Halls 4EF</td>
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<td>254</td>
<td>9 a.m.</td>
<td>T151. Consequences of Fluids in Subduction Zones: From Grain Scale to Plate Boundary Shear Zone (Posters) (GSA Hydrogeology Division)</td>
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<td>255</td>
<td>9 a.m.</td>
<td>T152. Fluids and Melts in Geologic Systems (Posters)</td>
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<td>256</td>
<td>9 a.m.</td>
<td>T247. Deciphering the Major Paleoenvironmental Crises of the Earth and Their Impact on the Marine Ecosystems and Biogeochemical Cycles (Posters) (Paleontological Research Institution; GSA Sedimentary Geology Division; Paleontological Society)</td>
<td>WSCC, Halls 4EF</td>
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<td>257</td>
<td>9 a.m.</td>
<td>T185. Geomorphology of Human-Altered Landscapes (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Environmental and Engineering Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group)</td>
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<td>258</td>
<td>9 a.m.</td>
<td>T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)</td>
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<td>259</td>
<td>9 a.m.</td>
<td>T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning (Posters) (National Association of Geoscience Teachers; GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)</td>
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<td>260</td>
<td>9 a.m.</td>
<td>T120. Making Thinking Visible: Actions and Expressions of Problem Solving and Decision Making in the Geosciences (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)</td>
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<td>261</td>
<td>9 a.m.</td>
<td>T121. Natural History Museums in the 21st Century—Programming for the Future While Preserving the Past (Posters) (GSA Geoscience Education Division; Paleontological Society; GSA Geoinformatics Division)</td>
<td>WSCC, Halls 4EF</td>
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<td>262</td>
<td>9 a.m.</td>
<td>T123. Pedagogical Applications of Point Cloud Collection and Manipulation (Posters) (GSA Geoscience Education Division; UNAVCO; GSA Geoinformatics Division)</td>
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<td>263</td>
<td>9 a.m.</td>
<td>T124. Practical Advice for In-Service and Pre-Service K–12 Earth Science Teacher Preparation and Professional Development (Posters) (National Earth Science Teachers Association; National Association of Geoscience Teachers, Teacher Education Division)</td>
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<td>264</td>
<td>9 a.m.</td>
<td>T141. Use of Geoscience Data and Information Resources in Education and Research (Posters) (Geoscience Information Society; GSA Geoinformatics Division)</td>
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<td>265</td>
<td>9 a.m.</td>
<td>T93. Lacustrine Systems across Space and Time (Posters) (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM [Society for Sedimentary Geology])</td>
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<td>266</td>
<td>9 a.m.</td>
<td>T94. Limnogeology—Progress, Challenges, and Opportunities on Earth and Beyond: A Tribute to Beth Gierlowski-Kordes (Posters) (GSA Limnogeology Division; SEPM [Society for Sedimentary Geology]; Paleontological Society; International Association of Limnogeology; GSA Sedimentary Geology Division; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>267</td>
<td>9 a.m.</td>
<td>D33. Mineralogy/Crystallography (Posters)</td>
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<td>268</td>
<td>9 a.m.</td>
<td>T38. Cenozoic Paleoclimates and Ecosystems (Posters) (Paleontological Society; Geochemical Society; Paleontological Research Institution; Cushman Foundation for Foraminiferal Research; GSA Sedimentary Geology Division; GSA Limnogeology Division)</td>
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<td>269</td>
<td>9 a.m.</td>
<td>T45. Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System (Posters) (Paleontological Society; GSA Limnogeology Division)</td>
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<td>270</td>
<td>9 a.m.</td>
<td>T47. Recent Developments in Cyclostratigraphy (Posters) (Cushman Foundation for Foraminiferal Research; Geochemical Society; Geologic TimeScale Foundation; Winners Academic Solutions; YES Network; GSA Sedimentary Geology Division)</td>
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<td>271</td>
<td>9 a.m.</td>
<td>T56. Mass Extinctions: Past, Present, and Future? (Posters) (Paleontological Research Institution; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Cushman Foundation for Foraminiferal Research; Paleontological Society; Volcanic and Magmatic Studies Group)</td>
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<td>272</td>
<td>9 a.m.</td>
<td>D17. Paleontology, Paleoecology/Taphonomy (Posters)</td>
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### Sessions Calendar

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<td>273</td>
<td>9 a.m.</td>
<td>T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles (Posters) (GSA Geobiology &amp; Geomicrobiology Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Paleontological Society; GSA Limnogeology Division)</td>
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<td>274</td>
<td>9 a.m.</td>
<td>D35. Petrology, Igneous (Posters)</td>
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<td>275</td>
<td>9 a.m.</td>
<td>T162. The Dance of Arcs: Causes of Arc Migrations, Flare-Ups, and Magmatic Focusing (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>276</td>
<td>9 a.m.</td>
<td>T199. Basalt Weathering on Earth and Mars (Posters) (GSA Planetary Geology Division)</td>
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<td>277</td>
<td>9 a.m.</td>
<td>T206. Geomorphology and Landscape Evolution of Mars: The G.K. Gilbert Award Session (Posters) (GSA Planetary Geology Division)</td>
<td>WSCC, Halls 4EF</td>
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<td>278</td>
<td>9 a.m.</td>
<td>T175. Earthquakes, Faults, and Fault Systems in the Pacific Northwest (Posters) (Washington Division of Geology and Earth Resources; GSA Structural Geology and Tectonics Division)</td>
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<td>279</td>
<td>9 a.m.</td>
<td>T254. The Co-Evolution of Life and Its Environment during the Precambrian: The “Boring Billion” and Mid-Proterozoic Emergence of Complex Life (Posters) (Paleontological Society; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<tr>
<td>280</td>
<td>9 a.m.</td>
<td>T255. The Co-Evolution of Life and Its Environment during the Precambrian: The Late Proterozoic Rise of Animals; Climate, Tectonic, and Environmental Dynamics, and the Transition into the Early Paleozoic (Posters) (Paleontological Society; GSA Sedimentary Geology Division)</td>
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<td>281</td>
<td>9 a.m.</td>
<td>T176. Glacier-Landscape Interactions, Loess Paleoclimatology, and Interdisciplinary Quaternary Science: In Memory of Stephen C. Porter (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
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<td>282</td>
<td>9 a.m.</td>
<td>T177. Ice Streams of North American Ice Sheets and Their Stratigraphic and Sedimentary Record (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
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<td>283</td>
<td>9 a.m.</td>
<td>T168. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols (Posters) (GSA Sedimentary Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group)</td>
<td>WSCC, Halls 4EF</td>
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<td>284</td>
<td>9 a.m.</td>
<td>T169. Deciphering Climate Change and Climate Variability in the Geologic Record Using Palaeosols, Loess, Palaeoweathering Profiles, Pedosedimentary Sequences, and Polygenetic Soils: Their Applications and Limitations as Terrestrial Proxies in Understanding Impacts of Climatic Changes (Posters) (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
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<td>285</td>
<td>9 a.m.</td>
<td>T170. Rock Transforming to Soil—The Weathering Engine Intersects with the Carbon Cycle (Posters) (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology &amp; Geomicrobiology Division; Paleoeclimatography/Paleoceanography)</td>
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<td>286</td>
<td>9 a.m.</td>
<td>T208. Best Student Geologic Map Competition (Posters) (U.S. Geological Survey–National Cooperative Geologic Mapping Program; Association of American State Geologists; GSA Foundation; American Geosciences Institute; American Institute of Professional Geologists; Journal of Maps; GSA Environmental and Engineering Geology Division)</td>
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<td>287</td>
<td>9 a.m.</td>
<td>T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle (Posters) (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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<td>288</td>
<td>9 a.m.</td>
<td>T211. Folds: Causes and Consequences (Posters) (GSA Structural Geology and Tectonics Division)</td>
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<td>289</td>
<td>9 a.m.</td>
<td>T213. Integrated Approaches to Deciphering Major Crustal Boundaries in Polyphase Orogenic Settings (Posters) (GSA Structural Geology and Tectonics Division; Society of Economic Geologists; GSA Geophysics Division)</td>
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<td>291</td>
<td>9 a.m.</td>
<td>T218. Understanding the Interplay of Structural, Metamorphic, and Magmatic Processes in the Evolution of Convergent Margins: Lessons from the Proterozoic to Present-Day South American Andean Margin (Posters) (GSA Structural Geology and Tectonics Division; GSA Mineralogy; Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)</td>
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<td>292</td>
<td>9 a.m.</td>
<td>D43. Tectonics I (Posters): Advances in Tectonics from Mineralogy and Geochronology</td>
<td>WSCC, Halls 4EF</td>
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<td>293</td>
<td>9 a.m.</td>
<td>D56. Tectonics II (Posters): Advances in Tectonics from Crust/Mantle Structure</td>
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<td>294</td>
<td>9 a.m.</td>
<td>T231. Subduction Top to Bottom 2 (ST2B-2), Cascadia and Beyond (Posters) (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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**Wednesday, 25 October**

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<td>295</td>
<td>8 a.m.</td>
<td>D22. From Processes to Stratigraphy</td>
<td>WSCC, Ballroom 6C</td>
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<td>296</td>
<td>8 a.m.</td>
<td>D34. Magma to Volcano</td>
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<td>297</td>
<td>8 a.m.</td>
<td>P6. Earth Anatomy Revealed: Geologic Mapping for Our Future (GSA Geology and Society Division; GSA Geology and Public Policy Committee; GSA Geoinformatics Division; Association of American State Geologists; American Geosciences Institute; American Institute of Professional Geologists; American Geophysical Union)</td>
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<td>298</td>
<td>8 a.m.</td>
<td>T9. Groundwater Flow in Coastal and Marine Settings: From the Intertidal Zone to the Deep Seafloor (GSA Hydrogeology Division; GSA Mineralogy; Geochemistry, Petrology, and Volcanology Division; GSA Geobiology &amp; Geomicrobiology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>299</td>
<td>8 a.m.</td>
<td>T16. Novel Approaches to Mine Remediation: Addressing the Legacy of Hardrock Mining through Innovative and Practical Methods (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>300</td>
<td>8 a.m.</td>
<td>T19. Springs: Providing Insights on Critical Groundwater Quality and Quantity Issues (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
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<td>301</td>
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<td>T35. Urban Geochemistry (International Association of GeoChemistry; GSA Hydrogeology Division; GSA Karst Division)</td>
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<td>302</td>
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<td>T44. Insights from Microfossils, from Traditional to Novel Approaches (Cushman Foundation for Foraminiferal Research; Paleontological Research Institution; Paleontological Society; GSA Limnogeology Division; Geochemoical Society)</td>
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<td>303</td>
<td>8 a.m.</td>
<td>T48. The Timing and Causes of Jurassic–Cretaceous Biological, Climatic, and Tectonic Transitions in North America (GSA Sedimentary Geology Division; Paleontological Research Institution)</td>
<td>WSCC, Room 611</td>
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<td>304</td>
<td>8 a.m.</td>
<td>T52. Biotic Revolutions Recorded in the Trace Fossil Record, Neoproterozoic to Recent I (Paleontological Society; Paleontological Research Institution)</td>
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<td>305</td>
<td>8 a.m.</td>
<td>T54. Impact of Extinction Events on the Ecological and Geochemical Functioning of Marine Ecosystems (Paleontological Society)</td>
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<td>306</td>
<td>8 a.m.</td>
<td>T62. Ancient Environments of South America (Paleontological Research Institution; Paleontological Society; GSA Sedimentary Geology Division)</td>
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<td>307</td>
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<td>T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes (Paleontological Society; SEPM [Society for Sedimentary Geology]; Paleontological Research Institution)</td>
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<td>308</td>
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<td>T80. Geothermal Energy (Washington Division of Geology and Earth Resources; GSA Environmental and Engineering Geology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>309</td>
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<td>T96. Understanding African Environmental History through Continental Scientific Drilling: Past Successes and Future Opportunities (GSA Limnogeology Division; GSA Sedimentary Geology Division)</td>
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<td>310</td>
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<td>T121. Natural History Museums in the 21st Century—Programming for the Future While Preserving the Past I (GSA Geoscience Education Division; Paleontological Society; GSA Geoinformatics Division)</td>
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<td>311</td>
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<td>T131. Translating Professional Development Experiences into the Classroom I (GSA Geoscience Education Division; National Association of Geoscience Teachers)</td>
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<td>312</td>
<td>8 a.m.</td>
<td>T133. Victor Porter Memorial Session—Climbing out of the Fishbowl: Hands-On Public Engagement in the Geosciences (GSA Geoscience Education Division)</td>
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<td>313</td>
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<td>T136. Discovery and Preservation of Geoscience Data and Information Resources (Geoscience Information Society; GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)</td>
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<td>314</td>
<td>8 a.m.</td>
<td>T154. Imaging the Rock and Fluid Interactions of Geologic Carbon Sequestration (GSA Hydrogeology Division; GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)</td>
<td>TCC, Skagit 2</td>
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<td>315</td>
<td>8 a.m.</td>
<td>T169. Deciphering Climate Change and Climate Variability in the Geologic Record Using Palaeosols, Loess, Palaeoweathering Profiles, Pedosedimentary Sequences, and Polygenetic Soils: Their Applications and Limitations as Terrestrial Proxies in Understanding Impacts of Climatic Changes (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)</td>
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<td>316</td>
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<td>T173. Change Detection Photogrammetry in Earth Science (GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)</td>
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<td>317</td>
<td>8 a.m.</td>
<td>T179. New Concepts in Glaciation of the Western Cordillera of North America (GSA Quaternary Geology and Geomorphology Division)</td>
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<td>318</td>
<td>8 a.m.</td>
<td>T190. Linking Physical and Ecological Processes from Source-to-Sink to Investigate Multi-Scale Response to Restoration (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)</td>
<td>TCC, Chelan 5</td>
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<tr>
<td>319</td>
<td>8 a.m.</td>
<td>T206. Geomorphology and Landscape Evolution of Mars: The G.K. Gilbert Award Session II (GSA Planetary Geology Division)</td>
<td>TCC, Tahoma 1</td>
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<td>320</td>
<td>8 a.m.</td>
<td>T210. Challenges in Tectonics: Beyond Steady State: New Developments in Understanding Strain Localization Processes and the Rheology of the Lithosphere (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>TCC, Tahoma 2</td>
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<tr>
<td>321</td>
<td>8 a.m.</td>
<td>T229. Paleocene-Eocene Tectonic and Magmatic Evolution of the Pacific Northwest (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)</td>
<td>TCC, Tahoma 4</td>
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<td>322</td>
<td>8 a.m.</td>
<td>T230. Polygenetic Mélanges: A Glimpse on Tectono-Sedimentary Recycling in Convergent Margins (GSA International/International Interdisciplinary Interest Group; IGCP 640 program S4SLIDE [Significance of Modern and Ancient Submarine Slope Landslides]; GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division)</td>
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<td>323</td>
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<td>T240. Structure and Evolution of the North Atlantic–Arctic Realm (International Lithosphere Program)</td>
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<td>324</td>
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<td>T254. The Co-Evolution of Life and Its Environment during the Precambrian: The “Boring Billion” and Mid-Proterozoic Emergence of Complex Life (Paleontological Society; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>D51. Geophysics/Geodynamics Session</td>
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<td>326</td>
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<td>T1. 21st Century Rock Flow Properties and Processes: 3D Printing, Digital Rock Physics, and Hydrogeophysics (GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Karst Division)</td>
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<td>327</td>
<td>1:30 p.m.</td>
<td>T18. Remote Sensing Applications in Hydrology and Geology (GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Geophysics Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)</td>
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<td>328</td>
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<td>T21. Using Natural and Anthropogenic Tracers to Determine Recharge and Residence Times within Arid to Semi-Arid Inter-Montane Aquifer Systems (GSA Hydrogeology Division)</td>
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<td>329</td>
<td>1:30 p.m.</td>
<td>T36. Asthenosphere to Atmosphere: Tectonics, Topography, and Climate (GSA Structural Geology and Tectonics Division)</td>
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<td>330</td>
<td>1:30 p.m.</td>
<td>T52. Biotic Revolutions Recorded in the Trace Fossil Record, Neoproterozoic to Recent II (Paleontological Society; Paleontological Research Institution)</td>
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<td>331</td>
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<td>T57. Mercury in the Geologic Record (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)</td>
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<td>332</td>
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<td>T65. Eco-Evolutionary Dynamics in the Fossil Record (Paleontological Research Institution; Paleontological Society)</td>
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<td>333</td>
<td>1:30 p.m.</td>
<td>T73. Geoscience and the Law: Exploring the Legal and Ethical Issues of Geologic Research and Practice (GSA Geology and Society Division; GSA Academic and Applied Geoscience Relations Committee; GSA Environmental and Engineering Geology Division)</td>
<td>WSCC, Room 611</td>
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<td>334</td>
<td>1:30 p.m.</td>
<td>T110. Engaging Students through Course-Based Undergraduate Research Experiences (CURE) across the Geoscience Curriculum (GSA Geoscience Education Division; Council on Undergraduate Research Geosciences Division)</td>
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<td>335</td>
<td>1:30 p.m.</td>
<td>T121. Natural History Museums in the 21st Century—Programming for the Future While Preserving the Past II (GSA Geoscience Education Division; Paleontological Society; GSA Geoinformatics Division)</td>
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<td>336</td>
<td>1:30 p.m.</td>
<td>T131. Translating Professional Development Experiences into the Classroom II (GSA Geoscience Education Division; National Association of Geoscience Teachers)</td>
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<td>T160. Coupled Evolution of Magmatic and Sedimentary Systems (GSA Sedimentary Geology Division)</td>
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<td>338</td>
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<td>T170. Rock Transforming to Soil—The Weathering Engine Intersects with the Carbon Cycle (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology &amp; Geomicrobiology Division; Paleoclimatology/Paleoceanography)</td>
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<td>339</td>
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<td>T183. Advances and Challenges in Quantifying Sediment Budgets for River Systems (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)</td>
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<td>340</td>
<td>1:30 p.m.</td>
<td>T186. Heterogeneity in Landscape Evolution: Geomorphic Response to Spatially and Temporally Variable Forcings (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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<td>341</td>
<td>1:30 p.m.</td>
<td>T192. Mountain Glaciation and Climate Change of the Past and Present in the Western Americas (GSA Quaternary Geology and Geomorphology Division)</td>
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<td>342</td>
<td>1:30 p.m.</td>
<td>T199. Basalt Weathering on Earth and Mars (GSA Planetary Geology Division)</td>
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<td>343</td>
<td>1:30 p.m.</td>
<td>T214. Late Paleozoic and Early Mesozoic Tectono-Stratigraphy and Biostratigraphy of the NW Pangea Margin: In Dedication to Jim Trexler (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division)</td>
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<td>344</td>
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<td>T225. New Perspectives on Cordilleran Tectonics, Paleogeography, and Metallogeny (GSA Sedimentary Geology Division; SEPM [Society for Sedimentary Geology]; Society of Economic Geologists; GSA Structural Geology and Tectonics Division)</td>
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<td>T233. Tectonics, Geohazards, and Morphodynamics from High-Resolution Topography and Imagery (GSA Quaternary Geology and Geomorphology Division; GSA Environmental and Engineering Geology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>346</td>
<td>1:30 p.m.</td>
<td>T255. The Co-Evolution of Life and Its Environment during the Precambrian: The Late Proterozoic Rise of Animals; Climate, Tectonic, and Environmental Dynamics, and the Transition into the Early Paleozoic (Paleontological Society; GSA Sedimentary Geology Division)</td>
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<td>T79. Geologic Energy Research (Posters) (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T80. Geothermal Energy (Posters) (Washington Division of Geology and Earth Resources; GSA Environmental and Engineering Geology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>D7. Environmental Geoscience (Posters)</td>
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<td>T33. Intersections of Sustainability and Geosciences (Posters) (GSA Geology and Society Division; GSA Karst Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T150. Chemical Scene Investigations of Large Igneous Provinces II (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)</td>
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<td>T155. Improvements and Challenges in Geochronology: Organizing the Past while Planning for the Future (Posters)</td>
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<td>T143. Curating Physical Samples in a Digital World (Posters) (GSA Geoinformatics Division; Paleontological Society; Society for the Preservation of Natural History Collections; Paleontological Research Institution; Cushman Foundation; GSA Geobiology &amp; Geomicrobiology Division; Association of American State Geologists)</td>
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<td>354</td>
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<td>T144. Drones in Geoscience (Posters) (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)</td>
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## Sessions Calendar

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<td>T147. What Can You Do with Geoinformatics? (Posters) (GSA Geoinformatics Division; Geoscience Information Society; American Geosciences Institute; American Geophysical Union; GSA Environmental and Engineering Geology Division; GSA Geoscience Education Division; Association of American State Geologists; GSA Karst Division)</td>
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<td>T186. Heterogeneity in Landscape Evolution: Geomorphic Response to Spatially and Temporally Variable Forcings (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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<td>T188. Interrelationship between Tectonic Uplift and Quaternary Glaciations on the Tibetan Plateau and Its Surrounding Mountains (Posters)</td>
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<td>T189. Landscapes in the Anthropocene (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Sedimentary Geology Division; GSA Limnogeology Division)</td>
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<td>T101. Better Together: Partnerships That Facilitate or Enhance Experiential Learning in Undergraduate Geoscience Education (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers)</td>
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<td>363</td>
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<td>T105. Building an Inclusive Geoscience Community Today for Tomorrow (Posters) (GSA Geoscience Education Division; GSA Diversity in the Geosciences Committee; GSA Geology and Society Division; National Association of Black Geoscientists)</td>
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<td>364</td>
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<td>365</td>
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<td>T114. Getting It Done: Experiences of Implementing the Framework and NGSS in Earth and Space Science (Posters)</td>
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<td>T4. Approaches to Applied Modeling for Industry and the Public (Posters) (GSA Hydrogeology Division; GSA Geology and Society Division; National Ground Water Association (NGWA); GSA Environmental and Engineering Geology Division)</td>
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<td>T9. Groundwater Flow in Coastal and Marine Settings: From the Intertidal Zone to the Deep Seafloor (Posters) (GSA Hydrogeology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geobiology &amp; Geomicrobiology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T10. Groundwater Influenced Ecosystems: Springs, Gaining Streams, and Terrestrial Ecosystems (Posters) (GSA Hydrogeology Division; GSA Karst Division; GSA Geobiology &amp; Geomicrobiology Division)</td>
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<td>T11. Hydrogeology of Island Environments in a Changing Climate (Posters) (GSA Hydrogeology Division)</td>
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<td>T12. Hydrogeology, Geochemistry, and Wetland Processes: A Session in Honor of the Career of Donald I. Siegel (Posters) (GSA Hydrogeology Division)</td>
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<td>T15. Monitoring the Complex Nature of Water Balances and Solute Transport at the Groundwater–Surface Water Interface (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T18. Remote Sensing Applications in Hydrology and Geology (Posters) (GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Geophysics Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)</td>
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<td>T19. Springs: Providing Insights on Critical Groundwater Quality and Quantity Issues (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
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<td>T20. The Critical Zone As Heterogeneous Media: Implications for Physical, Chemical, and Biological Processes (Posters) (GSA Hydrogeology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology &amp; Geomicrobiology Division; GSA Karst Division)</td>
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<td>T96. Understanding African Environmental History through Continental Scientific Drilling: Past Successes and Future Opportunities (Posters) (GSA Limnogeology Division; GSA Sedimentary Geology Division)</td>
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<td>T251. Tsunami Hazards: Innovations in Mapping, Modeling, and Outreach (Posters) (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geoinformatics Division)</td>
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<td>T44. Insights from Microfossils, from Traditional to Novel Approaches (Posters) (Cushman Foundation for Foraminiferal Research; Paleontological Research Institution; Paleontological Society; GSA Limnogeology Division; Geochemical Society)</td>
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<td>T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present (Posters) (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)</td>
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<td>T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes (Posters) (Paleontological Society; SEPM [Society for Sedimentary Geology]; Paleontological Research Institution)</td>
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<td>T161. Petrology Across the Inner Solar System: In Honor of Roebbing Medalist Ed Stolper (Posters) (Mineralogical Society of America; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division)</td>
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<td>T181. The Geological Signature of Natural Hazard Events (Posters) (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)</td>
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<td>D41. Structural Geology (Posters): Analysis of Faulting, Deformation and Flow</td>
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<td>T210. Challenges in Tectonics: Beyond Steady State: New Developments in Understanding Strain Localization Processes and the Rheology of the Lithosphere (Posters) (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
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<td>T212. Geologic Mapping in the Pacific Northwest and Beyond: Recent Maps, Advances, and New Insights: In Memory of Russell C. Evarts and his Extensive Contributions to Pacific Northwest Geologic Mapping (Posters) (Washington Division of Geology and Earth Resources; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Environmental and Engineering Geology Division; GSA Geology and Society Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)</td>
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<td>T219. Challenges in Tectonics: Dynamic Interactions among Earth-Surface Processes, Landscape Evolution, and Tectonics (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; SEPM [Society for Sedimentary Geology]; Future of Tectonics Initiative)</td>
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<td>T165. Recent Advances in Understanding Volcanism of the Yellowstone Hotspot (Posters)</td>
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Technical Sessions

Meeting policy prohibits the use of cameras or sound-recording equipment at technical sessions and poster sessions.

A no-smoking policy has been established by the Program Committee and will be followed in all meeting rooms for technical sessions.

NOTICE

In the interest of public information, the Geological Society of America provides a forum for the presentation of diverse opinions and positions. The opinions (views) expressed by speakers and exhibitors at these sessions are their own and do not necessarily represent the views or policies of the Geological Society of America.

NOTE INDEX SYSTEM

Numbers (3-4, 15-4) indicate session and order of presentation within that session.

* denotes speaker

* Industry Tracks

Look for these icons to identify sessions relevant to applied geoscientists:

Economic Geology

Energy

Engineering Geology

Hydrogeology & Environmental Geology

Technical Sessions

SUNDAY, 22 OCTOBER 2017

ORAL TECHNICAL SESSIONS

SESSION NO. 1

D13. Paleontology, Phylogenetic/Morphological Patterns: Invertebrates

8:00 AM, Washington State Convention Center, Room 604

James C. Lamsdell and Melanie J. Hopkins, Presiding

1-1 8:00 AM Hopkins, Melanie J.*; Lamsdell, James C.: NO CHANGE IN MORPHOLOGICAL DISPARITY IN LICHID TRILOBITES ACROSS THE END-ORDOVICIAN EXTINCTION

1-2 8:15 AM Lamsdell, James C.*; Hopkins, Melanie J.: PHYLOGENY AND EVOLUTIONARY HISTORY OF LICHID TRILOBITES

1-3 8:30 AM Roberson, R. Philip*; Casey, Michelle M.: MORPHOMETRIC VARIABILITY WITHIN ASTARTE FROM THE PLIOCENE OF THE ATLANTIC COASTAL PLAIN

1-4 8:45 AM Jacobs, Gabriel*; Carlucci, Jesse R.: GEOMETRIC MORPHOMETRIC ONTOGENY OF CALYPTAULAX: PATTERNS OF PHYSIOLOGICAL CHANGE AT THE MERASPID-HOLASPID TRANSITION IN PHACOPIDS

1-5 9:00 AM LaVine, Rhiannon J.*; Webster, Mark: ASSESSING THE STRUCTURE OF INTEGRATION IN THE CEPHALON OF THE MIDDLE CAMBRIAN AGNOSTINE ARTHROPOD PERONOPSIS BRIGHAMENSIS

1-6 9:15 AM Schwimmer, David R.*; Montante, William M.: A CAMBRIAN MERASPID CLUSTER: EVIDENCE OF TRILOBITE EGG DEPOSITION

1-7 9:30 AM Robins, Cristina M.*; Klompmarker, Adiël A.: THE MOST DIVERSE FOSSIL SQUAT LOBSTER ASSEMBLAGE IN THE WORLD

1-8 9:45 AM Garcia, Elvira A.*; Molinaro, Darrin J.; Leighton, Lindsey R.: TESTING THE FUNCTION OF PRODUCTIDE BRACHIOPOD SPINES ON ARENACEOUS SUBSTRATES USING 3D PRINTED MODELS

1-9 10:00 AM Carlson, Sandra J.*; Bapst, David W.; Robinson, Jeffrey H.; Rudman, Eli A.; Lopez-Carranza, Natalia: TEREBRATULA: IS 81 SPECIES TOO MANY?

1-10 10:15 AM Plotnick, Roy E.*; Hagadorn, James W.; Young, Graham A.: THE MAZON CREEK CNIDARIAN ESSEXELLA: THE WORLD TURNED UPSIDE DOWN

1-11 10:30 AM Sprinkle, James*; Guensburg, Thomas E.: THE CONVOLUTED HISTORY OF PARACRINIOIDS AND RHIPIDOCYSTIDS (BLASTOZOAN ECHINODERMS) DURING THE ORDOVICIAN RADIATION

1-12 10:45 AM Smith, Nicholas S.*; Nardin, Elise; Nonejová, Martina; Deline, Bradley: THE EVOLUTION OF BLASTOZOAN MORPHOLOGY: EXPLORING THE DISPARITY OF EOCRINIOIDS

1-13 11:00 AM Swisher, Robert*; Webster, Mark: MORPHOLOGICAL VARIATION, ONTOGENY, AND ORIGIN OF ZACANTHOID TRILOBITES: A GEOMETRIC MORPHOMETRIC ANALYSIS OF THE EARLY CAMBRIAN GENUS ZACANTHOPSIS

SESSION NO. 2

D29. Investigations in Economic Geology

SESSION NO. 3

D49. Recent Advances in Precambrian Geology

SESSION NO. 4

T5. Arsenic and Other Geogenic Contaminants in Groundwater Resources: Linking Water Quality, Food Security, and Treatment I

INTRODUCTORY REMARKS

8:00 AM

INTRODUCTORY REMARKS

8:00 AM

INTRODUCTORY REMARKS

8:00 AM
DISSOLUTION AND ARSENIC MIGRATION UNDER GEOLOGIC CARBON STORAGE CONDITIONS

4-5 9:10 AM Ramsey, Ashley*; Sznikiewicz, Anna: ASSESSMENT OF ARSENIC AND TRACE METAL CONTAMINATIONS IN RIVERINE WATER AND SEDIMENTS RESULTED FROM THE COAL ASH SPILL IN KINGSTON, TENNESSEE

4-6 9:25 AM Shepherd, Forrest*; Knappett, Peter; Hettiarachchi, Ganga; Li, Yannai; Rodriguez, Rodrigo; Gonzalez, Viridiana; Torres, Dulce; Jasso, Manuel; Thurston, William; Datta, Saugata: GEOCHEMICAL MECHANISMS EXPLAINING TOXIC CONCENTRATIONS OF DISSOLVED ARSENIC AND FLUORIDE IN THE INDEPENDENCE AQUIFER

4-7 9:55 AM Harkness, Jennifer S.*; Mathewson, Paul; Cook, Tyson; Darrah, Thomas; Moore, Myles T.; Whyte, Colin; Vengosh, Avner: THE ORIGIN OF ELEVATED MOLYBDENUM IN SOUTHEAST WISCONSIN GROUNDWATER

4-8 10:15 AM Sherif, M.I.*; Sturchio, N.C.: GEOLOGICAL AND HYDROGEOCHEMICAL CONTROLS ON RADIUM AND URANIUM ISOTOPES IN GROUNDWATER OF THE EASTERN DESERT OF EGYPT

4-9 10:30 AM Aguilar-Carrillo, Javier*: Herrera Garcia, Lidya: THALLIUM(I) SEQUESTRATION BY MN- AND FE-BEARING SECONDARY MINERALS: STRUCTURAL INCORPORATION VS SURFACE SORPTION

4-10 10:45 AM Avasar, Ozgur; Arslan, Sebnem*: HEAVY METAL POLLUTION IN KOCYGIZ-DALYAN COASTAL LAGOON WATERSHED (MUGLA) SW TURKEY: AN INDEXING APPROACH

4-11 11:00 AM Ijumulana, Julian*: Bhattacharya, Prosun; Mtalo, Felix: SPATIAL STATISTICS: A TOOL FOR SPATIAL ANALYSIS OF GEOCONTAMINANTS IN GROUNDWATER

4-12 11:15 AM Ijumulana, Julian; Luca, Enrico*: Bhattacharya, Prosun; Mtalo, Felix: MINERAL SOLUBILITY CONTROLS ON DRINKING WATER QUALITY IN THE AREAS OF GOLD MINING IN GEITA AND MARA REGIONS OF NORTHERN TANZANIA

11:30 AM DISCUSSION

SESSION NO. 5

T13. In Honor of John M. (Jack) Sharp Jr.: Celebrating over 40 Years of Science, Students, and Stewardship I (GSA Hydrogeology Division; International Association of Hydrogeologists)

8:00 AM, Washington State Convention Center, Room 615/616/617

Marcus O. Gary, Wendy M. Robertson, Brad David Wolaver and Todd Hallihan, Presiding

8:00 AM INTRODUCTORY REMARKS

5-1 8:15 AM Hallihan, Todd*: Sharp, Carol E.: GROUNDWATER STUDENT INTERACTIONS: THE FLOWPATH OF JOHN M. SHARP, JR


5-3 8:45 AM Bahr, Jean M.*; Gellasch, Christopher A.; Sellwood, Stephen M.; Olson, Joshua C.: URANIAN HYDROGEOLOGY OF THE UPPER MIDWESTERN CAMBRIAN-ORDOVICIAN SANDSTONE AQUIFER (Invited Presentation)

5-4 9:05 AM Gellasch, Christopher A.*; Cintron, Nicole M.; Honey, Jonathan; Fisher, Andmorgan: EVALUATING SOURCES OF SURFACE WATER CONTAMINATION IN A MIXED-USE WATERSHED NEAR WASHINGTON, D.C

5-5 9:20 AM Carsillo, Vince*: Nyquist, Jonathan; Wong, Tyler; Toran, Laura: MAPPING WATER INFLTRATION OF URBAN SOILS USING ELECTROMAGNETIC INDUCTION AND TIME-LAPSE ELECTRICAL RESISTIVITY TOMOGRAPHY

5-6 9:35 AM Rogers, Daniel T.*: ADVANCEMENTS IN URBAN HYDROGEOLOGICAL INVESTIGATIONS

5-7 10:05 AM Bobeck, Patricia Ann*: PARAMELLE, DARCY, AND THEIR APPROACHES TO HYDROGEOLOGY

5-8 10:20 AM Simmons, Craig T.*: VARIABLE DENSITY GROUNDWATER FLOW: HISTORICAL ACHIEVEMENTS AND FUTURE CHALLENGES (Invited Presentation)

5-9 10:40 AM Setlur, Neeraja*: Valdez, Bianca; De Luna, Amy; Crocifry, Roger; Houpt, Hayden; Rempe, Daniella M.; Cardenas, M. Bayani; O’Connor, Michael T.; Kaufman, Matthew H.; Carlson, Peter E.; Ferenz, Stephen B.; Roback, Robert; Perkins, George; Gomez-Velez, Jesus D.: INVESTIGATING MORPHOLOGICAL CONTROLS ON HYPOHEIRCE EXCHANGE IN A MEANDERING RIVER

5-10 10:55 AM Grannemann, Norman G*: GROUNDWATER FROM GLASSGOW TO THE GREAT LAKES

5-11 11:10 AM Brock-Hon, Amy L.*; Hon, Kevin D.: A GEOPHYSICAL INVESTIGATION OF THREE CLOSED TOPOGRAPHIC DEPRESSIONS AROUND THE CUMBERLAND PLATEAU, TENNESSEE

5-12 11:25 AM Tagne, G.; Dowling, Carolyn B.: INFERRING GROUNDWATER FLOW AND RECHARGE FROM STORM RESPONSES IN THE CUMBERLAND PLATEAU SINKHOLE PLAIN OF SOUTHEASTERN KENTUCKY

11:40 AM DISCUSSION

SESSION NO. 6

T14. Lead Them to Water: Teaching Innovative Hydrogeology (GSA Hydrogeology Division; GSA Geoscience Education Division)

8:00 AM, Washington State Convention Center, Room 613/614

Peter E. Riemersma, Laura S. Ruhl and Thomas Darrah, Presiding

6-1 8:00 AM Arthurs, Leilani*: DRAWING ON STUDENTS’ PRIOR KNOWLEDGE OR (MIS)CONCEPTIONS DURING CLASSROOM INSTRUCTION TO FACILITATE THEIR DEVELOPMENT OF DEEPER UNDERSTANDINGS ABOUT GROUNDWATER AND AQUIFERS

6-2 8:15 AM Larson, Erik B.*: TEACHING GROUNDWATER HYDROLOGY PRINCIPLES INEXPENSIVELY: PERMEAMETERS AND DARCY’S LAW

6-3 8:30 AM Ruhl, Laura S.; Shroat-Lewis, René A.: INCORPORATING SERVICE LEARNING INTO A HYDROGEOLOGY COURSE

6-4 8:45 AM Ward, James W.*; Lagmanson, Markus; Lehto, Heather: INCLUDING STAKEHOLDERS IN HYDRO-GEOPHYSICS EDUCATION: ASU INDUSTRY APPRECIATION DAYS 2016

6-5 9:00 AM Riemersma, Peter E.*: EXPLORING HYDROGEOLOGICAL ENVIRONMENTS USING THE UNITED STATES GEOLOGICAL SURVEY’S HYDROLOGIC INVESTIGATIONS ATLASES

6-6 9:15 AM Lee, David Robert*: USING SEEPAGE METERS AND MINI-PIEZOMETERS TO TEACH HYDROGEOLOGY

9:30 AM BREAK

6-7 9:45 AM Isiorho, K. Solomon A.*: IMMERGING STUDENTS INTO WATER RESEARCH: UTILIZING OVER A DECADE WELL FIELD DATA

6-8 10:00 AM Vulava, Vijay M.*; Callahan, Timothy J.: EXPLORING WATER RESOURCES IN A FIELD EXPERIENCES SETTING: A STUDY ABROAD COURSE IN NORTHERN INDIA

6-9 10:15 AM Knappett, P.S.K.: FIELD-BASED RESEARCH AND INFORMAL COMMUNITY ENGAGEMENT IN DEVELOPING COUNTRIES

6-10 10:35 AM Reeves, Donald M.*; Hampton, Duane R.; Howe, Thomas; Greene, Daniel G.: APPLIED HYDROGEOLOGY FIELD
Sunday, 22 October 2017

TRAINING: AN EXAMPLE FROM THE WMU AQUIFER TESTING MODULE

6-11 10:50 AM Kneeshaw, Tara*; Howe, Thomas: AN ALL-INCLUSIVE FIELD-BASED APPROACH TO TEACHING GROUNDWATER SAMPLING AND MONITORING

6-12 11:05 AM Brame, Scott*; Murdoch, Lawrence C.: AN ON-LINE, HANDS-ON HYDROGEOLOGY FIELD CAMP

11:20 AM DISCUSSION

SESSION NO. 7

T17. Polar and Alpine Changes (GSA Hydrogeology Division; GSA Geobiology & Geomicrobiology Division; GSA Limnogeology Division)

8:00 AM, Washington State Convention Center, Room 612

W. Berry Lyons, Presiding

8:00 AM BREAK

7-1 8:15 AM Melton, Sierra M.; Natali, Susan M.; Schade, John D.; Holmes, Robert Max; Mann, Paul James; Fiske, Gregory J.: RESPONSE OF CARBON FLUXES TO SOIL MOISTURE VARIABILITY ACROSS AN ALASKAN TUNDRA LANDSCAPE

7-2 8:30 AM DeFranco, Karyn*: RADIONUCLIDE PROFILES AND CARBON ACCRUAL IN PERMAFROST SOIL AT TOOLIK LAKE, ALASKA

7-3 8:45 AM Zipper, Samuel C.; Lamontagne-Halle, Pierrick; Rocha, Adrian V.; McKenzie, Jeffrey M.: GROUNDWATER-PERMAFROST INTERACTIONS FOLLOWING FIRE: WATER AND ENERGY BALANCE EFFECTS

7-4 9:00 AM Loisel, Julie*; Yu, Zicheng; Beilman, David W.; Kaiser, Karl; Parnikoza, Ivan: PAST AND PRESENT PEATLAND DEVELOPMENT IN ANTARCTICA UNDER WARM CLIMATES

7-5 9:15 AM Gooseff, Michael*: Cozzetto, Karen; McKnight, Diane M.; Hawes, Ian; Howard-Williams, Clive; Castendyk, Devin; Rajagopalan, Balaji; Lyons, W. Berry; WHAT DOES THE NEARLY 50-YEAR RECORD OF STREAMFLOW ON THE ONYX RIVER, ANTARCTICA TELL US ABOUT RECENT CLIMATE DYNAMICS?

7-6 9:30 AM Lyons, W. Berry*; Welch, Kathleen A.; Priscu, John C.; Orsi, Peter: PHYSICAL AND GEOCHEMICAL CHANGES IN TWO ANTARCTIC FRESHWATER LAKES THROUGH TIME

9:45 AM BREAK

7-7 10:00 AM Evans, Sarah G.; Ge, Shemin; Voss, Clifford I.; Molotch, Noah P.: POTENTIAL SHIFTS IN GROUNDWATER DISCHARGE AS SNOWMELT-DOMINATED WATERSHEDS WARM

7-8 10:15 AM Fields, Jordan*; Dethier, David P.; Williams, Noah N.: FROM ON HIGH: THE GEOCHEMISTRY OF ALPINE SPRINGS, NIWOT RIDGE, COLORADO FRONT RANGE

7-9 10:30 AM Glade, Rachel C.*; Laska, Dylan J.; Anderson, Suzanne P.; Anderson, Robert S.: LEGIONS OF LOBES: SELF-ORGANIZATION AND MOVEMENT OF SOLIFLUCUTION FEATURES AT NIWOT RIDGE

7-10 10:45 AM Trombottto Llautad, Dario*; Bottegal, Estefania; Sileo, Noelia; Dafeha, Cristina: THAWING AND INCREASED RUNOFF IN THE ANDEAN ROCK GLACIERS DURING THE GLOBAL WARMING OF THE PAST DECADE

7-11 11:00 AM All, John*; Ali, John; Balgord, Elizabeth; Sofield, Ruth; Pratt, Jeff; Patel, Daksha; Bain, Ed; Wallis, Lindsay: HYDROLOGIC IMPACTS OF RAPID GLACIAL RETREAT IN THE CORDILLERA BLANCA, PERU

7-12 11:15 AM Kochel, R. Craig*; Jacob, Robert W.; Trop, Jeffrey M.; Lapzynski, Kim; Logan, Sandra: CRITICAL LIFELINES FOR ALPINE GLACIERS DECOUPLED FROM ICECAPS:

11:30 AM CONCLUDING REMARKS AND DISCUSSION

SESSION NO. 8

T42. Glacier and Ice Sheet Grounding Lines: Contemporary and Past Observations of Grounding Line Processes, Behavior, and Landforms

8:00 AM, The Conference Center, Yakima 1

Nicholas D. Holschuh, Lauren M. Simkins, Alexander Robel and John B. Anderson, Presiding

8:00 AM INTRODUCTORY REMARKS

8-1 8:05 AM Seroussi, Helene*: GROUNDING LINE PROCESSES AND ICE SHEET MODELS (Invited Presentation)

8-2 8:25 AM Damsgaard, Anders*: DISCRETE-ELEMENT SIMULATION OF SUBGLACIAL SEDIMENTS: GROUNDING-LINE PROXIMATE TILL MECHANICS AND SOFT-BED CHANNEL DYNAMICS (Invited Presentation)

8-3 8:45 AM Dowdeswell, Julian A.*: THE GEOMORPHIC SIGNATURE OF PAST ICE-SHEET GROUNDING LINES IN THE MARINE RECORD (Invited Presentation)

9:05 AM BREAK

8-4 9:20 AM Christ, Andrew J.; Marchant, David R.: A TERRESTRIAL PERSPECTIVE OF THE LGM IN MCMURDO SOUND, ANTARCTICA: IMPLICATIONS FOR MARINE ICE SHEET DYNAMICS, ICE FLOW, AND DEGLACIATION OF THE ROSS SEA EMBAYMENT

8-5 9:35 AM Anderson, John B.*; Simkins, Lauren; Greenwood, Sarah; Demet, Brian; Halberstadt, Anna Ruth; Prothro, Lindsay: ROLE OF GROUNDING ZONE WEDGES IN GROUNDING LINE STABILIZATION: CASE STUDY FROM ROSS SEA

8-6 9:50 AM Prothro, Lindsay O.*; Simkins, Lauren M.; Majewski, Wojciech; Anderson, John B.: SEDIMENTARY PROCESSES AT PALEO-GROUNDING LINES: GLACIAL AND OCEANOGRAPHIC INTERACTIONS DURING ICE-SHEET RETREAT

8-7 10:05 AM Cowan, Ellen A.; Zellers, Sarah D.; Gulick, Sean S.P.; Müller, Juliane; Caisse, Beth E.: AUTGENIC CONTROLS PROLONGED LAST GLACIAL MAXIMUM GROUNDING LINE RETREAT OF THE BERING ICE STREAM

8-8 10:20 AM Demet, Brian P.; Pittrover, Jeffrey A.; Anderson, John B.; Simkins, Lauren M.: SEDIMENTARY PROCESSES AT ICE SHEET GROUNDING-ZONE WEDGES: EXAMPLES FROM ANTARCTICA AND WASHINGTON STATE (U.S.A.)

SESSION NO. 9

T45. Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System (Paleontological Society; GSA Limnogeology Division)

8:00 AM, Washington State Convention Center, Room 609

Kevin Uno and Tammo Reichgelt, Presiding

8:00 AM INTRODUCTORY REMARKS


9-2 8:30 AM Dalton, Colleen A.; Herbert, Timothy D.: Carchedi, Christopher: LATE MIocene GLOBAL COOLING DRIVEN BY A DECLINE IN PLATE TECTONIC CO2 RELEASE

9-3 8:45 AM Burts, Natalie*; Fedorov, Alexey V.: WETTER SUBTROPICS IN A WARMER WORLD: CONTRASTING PAST AND FUTURE HYDROLOGICAL CYCLES

9-4 9:00 AM Ao, Hong*: MIocene–Pliocene CLIMATE TRANSITION IN EAST ASIA LINKED TO MOUNTAIN UPLIFT
SESSION NO. 10

T51. Biodiversity Dynamics in the Face of Environmental Change: Integrating Paleontological and Neontological Approaches to Macroevolution I (Paleontological Society; Paleontological Research Institution)

8:00 AM, Washington State Convention Center, Room 608
Shan Huang, Paul G. Harnik and Lee Hsiang Liow, Presiding

10-1 8:00 AM Harnik, Paul G.; Serb, Jeanne M.; Adams, Dean C.; Sherratt, Emma: MORPHOLOGICAL EVOLUTION FOLLOWING THE CLOSE OF THE CENTRAL AMERICAN SEAWAY

10-2 8:15 AM Collins, Katie S.; Edie, Stewart M.; Bieler, Rudiger; Roy, Kaustuv; Jablonski, David: COSMOPOLITAN COMPROMISES AND TROPICAL TRADE-OFFS – THE RELATIONSHIP BETWEEN LATITUDINAL AND MORPHOLOGICAL “RANGE” IN A DIVERSE BIVALVE FAUNA

10-3 8:30 AM Brombacher, Aniek*; Wilson, Paul A.; Bailey, Ian; Ezard, Thomas H.G.: VARIATION ACROSS SPACE DOES NOT PREDICT EVOLUTIONARY CHANGE THROUGH TIME

10-4 8:45 AM Liow, Lee Hsiang*; Di Martino, Emanuela; Reitan, Trond; Voje, Kjetil Lynse; Taylor, Paul D.: HOW DOES A WINNER EQUIP ITSELF? A TRAIT-BASED ANALYSIS OF COMPETITIVE OUTCOMES OVER 2 MILLION YEARS

10-5 9:00 AM Fenton, Isabel S.; Pearson, Paul N.; Ezard, Thomas H.G.; Purvis, Andy: TESTING THE CONCEPT OF SIMPSONIAN ADAPTIVE ZONES IN NEOGENE PLANKTONIC FORAMINIFERA

10-6 9:15 AM Ahrens, Heather E*: DIRECTIONAL SELECTION, MACROEVOLUTIONARY RATCHET, AND THE DIVERSIFICATION AND EXTINCTION OF NORTH AMERICAN CROMODONTA (MAMMALIA)

10-7 9:30 AM Price, Samantha A.; Barrett, Paul Z.; Perdue, Genevieve; Hopkins, Samantha S.B.: THE TOOTH OF THE MATTER: ECOMORPHOLOGY ELUCIDATES COMPLEX EVOLUTIONARY DYNAMICS ACROSS FOSSIL AND LIVING CARNIVORA (Invited Presentation)

10-8 9:50 AM DISCUSSION

10-9 10:00 AM Rolland, Jonathan*; Silvestro, Daniele; Schluter, Dolph; Guisan, Antoine; Broennimann, Olivier; Salamin, Nicolas: ENDOTHERMY, THERMAL Niche EVOLUTION AND THE DISTRIBUTION OF VERTEBRATE DIVERSITY

10-10 10:30 AM Geary, William*; McClain, Craig R.; Payne, Jonathan L.: ENERGETICS BOTH PROMOTE AND LIMIT AQUATIC MAMMAL GIANTISM

10-11 10:45 AM Ordonez, Alejandro*; Svenning, Jens-Christian: HISTORY SUPPLEMENTS CURRENT ENVIRONMENT IN DRIVING FUNCTIONAL DIVERSITY PATTERNS (Invited Presentation)

11:05 AM DISCUSSION

10-12 11:15 AM Carrier, Agathe*; Myers, Corinne: INVESTIGATING MOLLUSCAN SPECIES RESPONSES TO ENVIRONMENTAL CHANGE IN THE LATE CRETACEOUS USING PALEOENVIRONMENTAL RECORDS

10-13 11:30 AM Davis, Katie E.; Hill, Jon; de Graves, Sammy; Astrop, Tim; Delmer, Cyrille; Wills, Matthew: CLIMATE CHANGE AND EXTINCTION RISK IN AN IMPORTANT GROUP OF MARINE INVERTEBRATES (DECAPODA): INFERENCES FROM THE GEOLOGICAL PAST

10-14 11:45 AM Wang, Yue; Porter, Warren; Mathewson, Paul; Miller, Paul; Graham, Russell W.; Williams, John W.*: MECHANISTIC MODELING OF ENVIRONMENTAL DRIVERS OF WOOLLY MAMMOTH CARRYING CAPACITY AND EXTINCTION ON ST. PAUL ISLAND, AK

SESSION NO. 11

T58. Oxygen and Ecosystems from the Proterozoic to the Paleozoic (Paleontological Research Institution; Paleontological Society; GSA Geobiology & Geomicrobiology Division)

8:00 AM, Washington State Convention Center, Room 607
Noah J. Planavsky, Devon B. Cole and Christopher T. Reinhard, Presiding

11-1 8:00 AM Li, Fangbing*: Lang, Xianguo; Pei, Haoxiang; Shen, Bing: HYDROTHERMAL ACTIVITIES AFFECTING P/I/E RATIO OF IRONSTONE

11-2 8:15 AM Babos, Heidi B.*; Chappaz, Anthony: EXPLORING CHROMIUM SPECIATION IN ANCIENT SEDIMENTARY RECORDS

11-3 8:30 AM Sperling, Erik A.; Strauss, Justin V.; Fraser, Tiffani; Miller, Austin; Farrell, Üna C.; Planavsky, Noah J.; Cole, Devon B.; Bajjan, Liam; Torres Plaza, Stephanie; Malinowski, Joseph;
Monday, 23 October 2017

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<td>McDonald, Terrence Joseph%; Lenz, Alfred: AN EXCEPTIONAL RECORD OF EARLY-TO MID-PALEOZOIC REDOX CHANGE FROM THE RIVER RIDGE GROUP, YUKON, CANADA (Invited Presentation)</td>
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<td>12-6</td>
<td>9:15 AM</td>
<td>Shell, Leonora K.%; Gates, Terry A.: TEN KEYS TO SUCCESSFUL PUBLIC INVOLVEMENT IN YOUR SCIENCE</td>
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<td>DISCUSSION: APPROACHES TO BUILDING A PALEOCLIMATE RECORD IN YOUR LOCALITY</td>
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<td>DISCUSSION: APPROACHES TO BUILDING A PALEOCLIMATE RECORD IN YOUR LOCALITY</td>
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SESSION NO. 12

T64. Citizen Science in Paleontology: Harnessing Public Interest to Advance Research and STEM Education I (Paleontological Society; GSA Geology and Society Division; GSA Geoscience Education Division)

8:00 AM, Washington State Convention Center, Room 606

Laura C. Soul, Terry A. Gates and Eleanor E. Gardner, Presiding

12-1 | 8:00 AM | Soul, Laura C.; Barclay, Richard S.; Wing, Scott L.; Bolton, Amy; Magonigal, J. Patrick: FOSSIL ATMOSPHERES: PALEOBOTANICAL RESEARCH AND CLIMATE EDUCATION ON THE ZOONIVERSE |

12-2 | 8:15 AM | Westgaard, John%; Korf, Jason J.; Willingham, Steve: HILL ANNEX PALEONTOLOGY PROJECT: YEAR FOUR |

12-3 | 8:30 AM | Boessenecker, Robert W.; Boessenecker, Sarah J.: CITIZEN PALEONTOLOGY IN THE CAROLINA LOWCOUNTRY: A NEW MUSEUM EXHIBIT CELEBRATING SCIENTIFIC CONTRIBUTIONS BY NONSCIENTISTS |

12-4 | 8:45 AM | McCafferty, Jeff A.; Chandler, Richard: CITIZEN SCIENTIST PUBLISHING. HARNESING PALEONTOLOGICAL KNOWLEDGE – NORTH CAROLINA FOSSIL CLUB’S FOUR PART SERIES |

12-5 | 9:00 AM | Pankowski, Michael J.; Pankowski, Mary K.: CASE STUDY: HOW A FAMILY OF CITIZEN SCIENTISTS IS UNEARTHING SPECIMENS ONLINE, DONATING THEM TO MUSEUMS, AND HELPING PALEONTOLOGISTS DISCOVER NEW SPECIES |

12-6 | 9:15 AM | Shell, Leonora K.; Gates, Terry A.: TEN KEYS TO SUCCESSFUL PUBLIC INVOLVEMENT IN YOUR SCIENCE |

12-7 | 9:30 AM | DISCUSSION: APPROACHES TO BUILDING A PALEOCLIMATE RECORD IN YOUR LOCALITY |

12-8 | 9:45 AM | DISCUSSION: APPROACHES TO BUILDING A PALEOCLIMATE RECORD IN YOUR LOCALITY |

SESSION NO. 13

T74. Integrating Geohazards Data into Planning and Land-use Management Decisions (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geology and Society Division; GSA Geoinformatics Division; GSA Karst Division)

8:00 AM, Washington State Convention Center, Room 611

Katherine A. Mickelson, Dave Norman, Gregory R. Wessel and Stephen L. Slaughter, Presiding

13-1 | 8:00 AM | Grimm, William E.; Troost, Kathy Goetz; Llamas, Leah: LANDSLIDE HAZARD STUDY OF MERCER ISLAND, WA |

13-2 | 8:15 AM | Bethel, John P.; Bilir, Sevin: MAPPING OF POTENTIAL LANDSLIDE HAZARDS ALONG THE RIVER CORRIDORS OF KING COUNTY, WASHINGTON |

13-3 | 8:30 AM | Davis, Elizabeth%; Chang, Susan; Hou, Steve; Cowell, Kevin; Teal, Tammy: KNOWN SLIDE AREAS: UPDATING THE CITY OF SEATTLE’S CENTURY-OLD LANDSLIDE DATABASE |

13-4 | 8:45 AM | McDonald, Terrence Joseph%; SEATTLE’S PARTNERSHIP BETWEEN EMERGENCY MANAGEMENT AND GEOSCIENCE (Invited Presentation) |

13-5 | 9:05 AM | Corominas, Jordi%; Challenges in the management of rockfall risk: The Andorra experience |

13-6 | 9:20 AM | Burns, William J.; McArdy, Justin; Lahav, Marian; Sears, Tricia: THREE RECOMMENDATIONS FOR INCREASING WILLINGNESS OF COMMUNITIES TO WORK ON...
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**SESSION NO. 15**

**T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill I (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; SEPM (Society for Sedimentary Geology))**

Sunday, 22 October 2017

8:00 AM, Washington State Convention Center, Ballroom 6C

Eugene Szymbanski, Jacob A. Covault and Daniel F. Stockli, Presiding

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SESSION NO. 16

T90. Advancing Seismic and Sequence Stratigraphy: Insights from Testing the Fundamentals (GSA Environmental and Engineering Geology Division; GSA Energy Geology Division; GSA Sedimentary Geology Division)

11:45 AM CONCLUDING REMARKS

SESSION NO. 17

T102. Beyond the Road-Cut: Virtual, Local, and Nontraditional “Field” Teaching and Learning Experiences

11:40 AM CONCLUDING REMARKS
SESSION NO. 18

T127. Supporting Geoscience Student Transfer Between Institutions and Transitions into the Workforce: Pathways to Success (GSA Geology and Society Division; GSA Geoscience Education Division; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division)

8:00 AM, Washington State Convention Center, Room 2A
Norlene R. Emerson, Eric M.D. Baer, Allan Ludman and Katrien J. van der Hoeven Kraft, Presiding

18-1 8:00 AM Jones, M. Brandon*; Patino, Lina; Suiter, Marilyn J.: NSF’S IUSE:GEOPATHS PROGRAM - IMPROVING UNDERGRADUATE GEOSCIENCE EDUCATION (Invited Presentation)

18-2 8:15 AM Stofler, Kathryn*; Lannon, Heidi; Matyas, Corene; Judge, Jasmeet; Lanman, Brandon: MULTIPLE PATHWAYS: UNDERGRADUATE RESEARCH, COURSEWORK, AND ENGAGEMENT WITH THE PUBLIC ALL SUPPORT GEOSCIENCE CAREER PURSUIT

18-3 8:30 AM Chigbu, Paulinus*; Ishaque, Ali B.; Abazinge, Michael; Khanabivardi, Reza; Morris, Vernon; Zettler, Erik: GP-IMPACT: STRENGTHENING PATHWAYS INTO GEOSCIENCES THROUGH LINKAGES BETWEEN SUMMER BRIDGE AND UNDERGRADUATE TRAINING PROGRAMS

18-4 8:45 AM Nyquist, Jonathan; Kanaley, Chelsea; Burrell, Shondricka*; Toran, Laura; Davatzes, Alexandra K.; Brandt, Carol: A GEOPATH-FUNDED MATH MENTORING INITIATIVE FOR RETENTION

18-5 9:00 AM Tvelia, Sean*: ONE YEAR IN—AN UPDATE ON GEOPATHS EXTRA: GEO SCIENCE EDUCATIONAL OPPORTUNITIES & CAREER ORIENTED RESEARCH EXPERIENCES

18-6 9:15 AM Blake, Reginald*; Liou-Mark, Janet; Norouzi, Hamidreza; Vladutescu, Viviana; Yuen-Lau, Laura: UNDERGRADUATE CAREER DEVELOPMENT AND PREPARATION TO REPLENISH THE GEOSCIENCE WORKFORCE

18-7 9:30 AM Hannula, Kimberly A.*; van der Hoeven Kraft, Katrien J.; Evans, Veronica: FROM RESEARCH-BASED BEST PRACTICES TO REALITY IN SUPPORTING TRANSFER STUDENTS (Invited Presentation)

18-8 10:00 AM Murkowski, Ann J.*; Halverson, Marina: A YEARLONG, SKILL-FOCUSED, REU EXPERIENCE FOR COMMUNITY COLLEGE STUDENTS (Invited Presentation)

18-9 10:15 AM Walker, Becca; Moorfa, David D.: DEVELOPMENT OF A GEOTECHNICIAN CERTIFICATE PROGRAM FOR COMMUNITY COLLEGE STUDENTS: A POTENTIAL PATHWAY FOR THE RECRUITMENT AND RETENTION OF A DIVERSE GEO SCIENCE WORKFORCE

SESSION NO. 19

T157. Origin and Evolution of the Continental Crust: A Celebration of the Career of Paul Mueller (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

8:00 AM, The Conference Center, Skagit 2
David W. Mogk, David A. Foster and Robert Stern, Presiding


19-3 8:40 AM Frost, Carol D.*; Swapp, Susan M.; Vincent, Stephanie A.; McFarlane, Christopher R.M.; Frost, B. Ronald: ~2.6 GA TECTONISM IN THE SOUTHERN WYOMING PROVINCE: RECORD OF ACCRETIONARY OROGENESIS OR SUPERCONTINENT BREAKUP? (Invited Presentation)

19-4 9:00 AM Henry, Darrell J.*; Mogk, David W.; Wayt, Madison; Hall, Samantha: THE ROLE OF LATE FLUIDS IN THE TEXTURAL AND CHEMICAL EVOLUTION OF THE Meso-to Paleorock of the Beartooth MTNs, NORTHERN WYOMING PROVINCE, USA


19-6 9:30 AM Johnson, Simon P.; Korhonen, Fawna J.; Kirkland, Christopher L.; Cliff, John B.; Belousova, Elena; Sheppard, Stephen: AN ISOTOPIC PERSPECTIVE ON GROWTH AND DIFFERENTIATION OF PROTEROZOIC OROGENIC CRUST: FROM SUBDUCTION MAGMATISM TO CRATONIZATION
SESSION NO. 21 $\$$

**T163. Petrochronology: Advances and Applications to Petrogenesis and Tectonics**
(GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division; Mineralogical Society of America; Geochemical Society)

8:00 AM, The Conference Center, Skagit 4

Matthew J. Kohn, Pierre Lanari and Martin Engi, Presiding

8:00 AM **INTRODUCTORY REMARKS**

21-1 8:05 AM Hansman, Reuben Johannes*; Ring, Uwe; Thomson, Stuart N.; Albert, Richard; Gerdes, Axel; den Brok, Bas; Stübner, Konstanze: **LATE EOCENE UPLIFT OF THE AL HAJAR MOUNTAINS, OMAN, RECORDED BY LOW-TEMPERATURE THERMOCHRONOLOGY AND ABSOLUTE AGES OF BRITTLE STRUCTURES BY U-PB DATING OF CALCITE FIBERS**

21-2 8:20 AM Wang, Yu*; Zwingmann, Horst; Zhou, Liyun; Li, Guowu; Hao, Jinhua: **40Ar/39Ar DATING ON BRITTLE DEFORMATION: ANOTHER NEW APPROACH**

21-3 8:35 AM Gonzalez, Joseph P.*; Baldwin, Suzanne L.: **RE-EVALUATION OF PHENGITE PETROLOGIC DATA AND **40Ar/39Ar** AGE SPECTRA TO DETERMINE PRESSURE-TEMPERATURE-TIME PATHS**

21-4 8:50 AM Süssenberger, Annette*; Wemmer, Klaus; Schmidt, Susanne T.: **THE ZONE OF INCipient **40Ar** LOSS: INTRODUCING A NEW CONCEPT OF AR DEGASSING BEHAVIOR IN A CONTACT METAMORPHIC SETTING**

21-5 9:05 AM Cutts, Jamie*: Smit, Matthijs A.: **SLOW BURIAL OF CONTINENTAL CRUST IN COLLISIONAL OROGENS; INSIGHTS FROM SPATIALLY-RESOLVED LU-HF GARNET CHRONOLOGY IN THE WESTERN GNEISS COMPLEX, NORWAY**

21-6 9:20 AM Padget, Colin D.W.*; Pattison, David R.M.; Moynihan, David P.: **UPPER MANTLE AND LOWER CRUSTAL XENOLITHS FROM THE UPPER HYLAND RIVER REGION, SOUTHEAST YUKON TERRITORY**

21-7 9:35 AM Hacker, Bradley R.*; Shafer, Madeline; Ratschbacher, Lothar; Kylander-Clark, Andrew R.C.: **RECYCLING OF CONTINENTAL CRUST CAPTURED IN XENOLITHS**

9:50 AM **DISCUSSION**

**BREAK**
SESSION NO. 22

T174. Cordilleran Ice Sheet Outburst Floods: From Glacial Lake Missoula to the Hubbard Glacier (GSA Sedimentary Geology Division)

8:00 AM, The Conference Center, Chelan 5
Ingrid Hendy and Joel H. Gombiner, Presiding

22-1 8:00 AM Smith, Larry N.*; Sibbati, Reza; Buylaert, Jan-Pieter; Murray, Andrew; Jain, Mayank; Welk, Emily; CHRONOLOGY OF MONTANA’S GLACIAL LAKE MISSOULA: CURRENT STATUS (Invited Presentation)

22-2 8:20 AM Balkas, Andrea*; Barth, Aaron M.; Clark, Peter U.; Clark, Jorie; Caffe, Marc W.; O’Connor, Jim; Baker, Victor R.; Konrad, Kevin; Bjornstad, Bruce N.; NEW: INSIGHTS INTO THE TIMESCALES AND ROUTING HISTORY OF THE LATE PLEISTOCENE MEGAFLOODS IN THE PACIFIC NORTHWEST (Invited Presentation)

22-3 8:40 AM Larsen, Isaac J.*; Lamb, Michael P.; DISCHARGE RECONSTRUCTION OF CANYON-CARPVING OUTBURST FLOWS FROM THE CORDILLERAN ICE SHEET (Invited Presentation)

22-4 9:00 AM Gombiner, Joel H.*; Stone, John O.; Lemmon, Danielle; SURFACE EXPOSURE DATING OF LATE PLEISTOCENE MISSOULA FLOOD DEPOSITS IN THE WESTERN CHANNELED SCABLAND REGION, WASHINGTON

22-5 9:15 AM McCollum, Linda B.*; McCollum, Michael B.; FINALLY, IDENTIFICATION OF FLOOD DEPOSITS WITHIN GLACIAL LAKE COLUMBIA THAT ARE OF A MAGNITUDE WORTHY TO BE ATTRIBUTED TO GLACIAL LAKE MISSOULA OUTBURST MEGAFLOODS

22-6 9:30 AM Hendy, Ingrid*; Bervid, Heather D.; Carlson, Anders E.; GLACIAL LAKE MISSOULA OUTBURST FLOODS AND THE SOUTHWESTERND CORDILLERAN ICE SHEET

22-7 9:45 AM Walczak, Maureen H.*; Bervid, Heather D.; Carlson, Anders E.; Churchill, Alyson N.; Du, Jianghui; Freiberg, Benjamin; Glieder, Anna; Lavoie, Nicholas R.; Lopes, Cristinai; Mix, Alan; Pico, Tamara; Praetorius, Summer; Reilly, Brendan; Rex, Coquille O.; Robles Rivera, Angelica; Romo, Iris S.; Stoner, Joseph S.: DISCHARGE HISTORY OF THE COLUMBIA RIVER THROUGH THE LAST DEGLACIATION AND THE HOLOCENE: PRELIMINARY RESULTS FROM CRUISE OC1706B

SESSION NO. 23

T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest I (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)

8:00 AM, The Conference Center, Chelan 4
Scott R. Beason, Paul Kennard and Claire E. Todd, Presiding

23-1 8:05 AM Shean, David*; Whorton, Erin; Riedel, Jon; Arendt, Anthony; Fountain, Andrew G.: A HIGH-RESOLUTION DEM RECORD FOR MT. RAINIER AND CONUS GLACIERS: GEODETIC MASS BALANCE, GLACIER DYNAMICS, SNOW DEPTH, AND NATURAL HAZARDS (Invited Presentation)

23-2 8:25 AM Riedel, Jon; Larabee, Michael*: GLACIAL MASS BALANCE 2003-2016 ON MOUNT RAINIER

23-3 8:40 AM Stevens, C. Max*; Conway, Howard; Rasmussen, L.A.; Koutnik, Michelle; Greenberg, Harvey; Kennard, Paul; MODELING NISQUALLY GLACIER SURFACE-ELEVATION AND LENGTH CHANGES USING A MASS-BALANCE RECORD DERIVED FROM REANALYSIS AND WEATHER-STATION DATA

23-4 8:55 AM Fountain, Andrew G.*; Glenn, Bryce; Basagic, Hassan: GLACIER CHANGE ON MOUNT RAINIER IN THE CONTEXT OF OTHER VOLCANOES IN THE CASCADE RANGE OF THE PACIFIC NORTHWEST

23-5 9:10 AM Whorton, Erin*; Shean, David; O’Neill, Shad; Fagre, Daniel; McNeil, Christopher; Clark, Adam; Sass, Louis; Headman, Alex; Peitzsch, Erich; McGrath, Daniel; Baker, Emily H.: ASSESSING MASS BALANCE CHANGE AT SOUTH
Sunday, 22 October 2017

SESSION NO. 24

T194. The Aeolian Realm: Dunes, Dust, and Loess (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)
8:00 AM, The Conference Center, Chelan 2

Nick Lancaster, William Johnson and Mark Sweeney, Presiding

8:00 AM INTRODUCTORY REMARKS

24-1 8:05 AM Tsioar, Haim*: GSA QUATERNARY GEOLGY AND GEOMORPHOLOGY DIVISION FAROUK EL-BAZ AWARD FOR DESERT RESEARCH: ECO-GEOMORPHIC PROCESSES ACTING ON DESERT SAND DUNES

24-2 8:35 AM Day, Mackenzie D.*; Kocurek, Gary: HOW PERFECT IS PERFECT IN A DUNE-FIELD PATTERN?

24-3 8:50 AM Nield, Joanna M.*; Wiggs, Giles F.S.; Baddock, Matthew C.; Hipondoka, Martin H.T.: GRAINFALL AND GRAINFLOW DYNAMICS ON AEOLIAN DUNES (Invited Presentation)

24-4 9:10 AM Ewing, Ryan C.*; Lapotre, Mathieu G.A.; Lewis, Kevin; Day, Mackenzie D.; Stein, Nathaniel T.; Rubin, David M.; Sullivan, R.; Banham, Steven G.; Lamb, Michael P.; Bridges, Nathan T.; Gupta, Sanjeev; Fischer, Woodward W.: RELATING SEDIMENTARY PROCESSES IN THE BAGNOLD DUNES TO THE DEVELOPMENT OF CRATER BASIN AEOLIAN STRATIFICATION (Invited Presentation)

24-5 9:30 AM Bowen, Mark W.*; Johnson, W.C.; Goldade, Melissa: DISTRIBUTION AND GEOMORPHOLOGY OF LUNETTE DUNES ON THE KANSAS HIGH PLAINS

24-6 9:45 AM Gaylord, David R.*; Rittenour, Tammy M.; Link, Paul K.; Kuntz, Mel A.; Grant, Caleb A.; Gunnell, Nathan V.; Coleman, Angela J.: GHOST DUNE HOLLINGS: MID-LATE PLEISTOCENE TO HOLOCENE CLIMATE FLUCTUATIONS AND LANDSCAPE EVOLUTION ON THE EASTERN SNAKE RIVER PLAIN, IDAHO, USA

10:00 AM BREAK

24-7 10:15 AM Ellerton, Daniel*: Shulmeister, James; Rittenour, Tammy M.; Gontz, Allen; Welsh, Kevin; Hesp, Patrick A.; Miot da Silva, Grazia; Santini, Taliatha: OSL AGES AND FORMATION
SESSION NO. 27

T220. Challenges in Tectonics: Planetary Evolution in Four Dimensions—The New Global Tectonics (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

8:00 AM, The Conference Center, Tahoma 2

John A. Hole, Andrew Laskowski and Robert Moucha, Presiding

27-1 8:00 AM Currie, Claire A.; Schaeffer, Andrew J.; Malyion, Deirdre; Chen, Yunfeng; Gu, Yu Jeffrey; Audet, Pascal: THE 4D STRUCTURE OF THE CORDILLERA-CRATON TRANSITION IN WESTERN CANADA (Invited Presentation)

27-2 8:20 AM Guenther, William R.; DeLucia, Michael S.; Marshak, Stephen; Reiners, Peter W.; Drake, Henrik; Thomson, Stuart N.; Ault, Alexis K.; Tillberg, Mikael: ZIRCON (U/TH-HE DATA REVEALS DEEP-TEMPORAL THERMAL HISTORIES OF CRATONS AND THE GREAT UNCONFORMITY SURFACE

27-3 8:35 AM Thacker, Jacob O.; Karlstrom, Karl E.; Kendall, Jerry; Kelley, Shari A.; Crow, Ryan S.; Schmandt, Brandon: ELUCIDATING THE REGIONAL SPATIOTEMPORAL CHARACTERISTICS OF LARAMIDE DEFORMATION THROUGH LOW-TEMPERATURE THERMOCRONOLOGY

27-4 8:50 AM Orme, Devon A.; Graham, Stephan A.: A FOUR-DIMENSIONAL MODEL OF CRETACEOUS DEPOSITIONAL GEOMETRY AND SEDIMENT FLUX IN THE NORTHERN GREAT VALLEY FOREARC, CALIFORNIA

27-5 9:05 AM Williams, Michael L.; Jeremic, Michael J.: CONSTRAINING THE 4D CHARACTER AND EVOLUTION OF CONTINENTAL CRUST (Invited Presentation)

27-6 9:25 AM Friedrich, Anke M.: STRATIGRAPHIC FRAMEWORK FOR THE PLUME MODE OF MANTLE CONVECTION

27-7 9:40 AM Lom, Nalan*: Sunal, Gursel; S uptake, Nurbike; Shengor, A.M. Celâl: THE PROTOGONUS: A LONG LIVED MAMMOT EXITING ALONG THE NORTHERN MARGIN OF GONDWANA-LAND AND ITS DISRUPTION DURING THE HERCYNIAN OROGENY

27-8 9:55 AM Davidson, Peter*: Koppers, Anthony A.P.: HIGH PRECISION 40Ar/39Ar AGES OF BASALTIC BASALMENT FROM IODP HOLE U1365E NEAR OOSBURNE TROUGH: IMPLICATIONS FOR THE BREAKUP OF ONONG JAVA NU

27-9 10:10 AM Okuda, Keiichi.: McQuarrie, Nadine: INTEGRATION OF GEOMETRY, KINEMATICS, BURIAL TIMING, AND EXHUMATION TIMING TO UNDERSTAND 4-D THRUST BELT EVOLUTION: AN EXAMPLE FROM THE HIMALAYAN OROGEN IN BHUTAN (Invited Presentation)

27-10 10:45 AM He, John*: Chapman, James B.; Kapp, Paul; Gadoev, Mustafa; Olmstead, Ilhomin: DETRITAL ZIRCON GEOCHRONOLOGY OF THE PALEOZOIC TO
Sunday, 22 October 2017

PALEOGENE STRATA OF THE CENTRAL PAIR UPPER CRUST

27-11  11:00 AM Chatterjee, Sankar*; Scotese, Christopher R.: THE BALLET OF INDIAN PLATE DURING THE ASSEMBLY AND BREAKUP OF THE PROTEROZOIC SUPERCONTINENTS

27-12  11:15 AM Pavlis, Terry L.: INTEGRATION OF 3D VISUALIZATION AND GEOCHRONOLOGY AS A FOUNDATION TO 4D EARTH MODELS

SESSION NO. 28

T221. Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogenes (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)

8:00 AM, The Conference Center, Tahoma 3

Karsten Piepjohn, Justin V. Strauss, Shawn J. Malone and William C. McClelland, Presiding

8:00 AM INTRODUCTORY REMARKS

28-1  8:05 AM Majka, Jaroslav; Kosminka, Karolina*: MAGMATIC AND METAMORPHIC EVENTS RECOGNIZED WITHIN SOUTHWESTERN SVALBARD`S CRYSTALLINE BASEMENT – A REVIEW


28-4  8:55 AM Alonso-Torres, Daniel*: Beauchamp, Benoit; Matthews, William A.; Hadlari, Thomas: A BACKARC TO RETROARC REGIME FOR THE SVERDRUP BASIN DURING THE LATE PALEozoIC

28-5  9:10 AM Reinhardt, Lutz*; von Gosen, Werner; Piepjohn, Karsten; Lucke, Andreas; Schmitz, Mark D.: IDENTIFICATION OF THE EOCENE THERMAL MAXIMUM 2 (ETM-2) IN A TERRESTRIAL SECTION OF THE HIGH ARCTIC BASED ON NEW U-PB ZIRCON AGES AND CARBON ISOTOPE RECORDS (STENKUL FIORD, ELLESMERE ISLAND, CANADA)

28-6  9:25 AM Piepjohn, Karsten*: Dewing, Keith; Galloway, Jennifer; Smith, Rod: STRUCTURAL GEOLOGY OF BANKS ISLAND - IMPLICATIONS TO THE STRUCTURE OF THE NORTH AMERICAN CONTINENTAL MARGIN

9:40 AM BREAK

28-7  9:55 AM von Gosen, Werner*; Piepjohn, Karsten; Gilotti, Jane A.; McClelland, William C.; Reinhardt, Lutz: EVIDENCE FOR A SOUTHERN EXTENSION OF THE WEGENER FAULT IN NARES STRAIT, ARCTIC CANADA (Invited Presentation)


28-9  10:30 AM Colpron, Maurice*; McClelland, William C.; Strauss, Justin V.: DETRITAL ZIRCON U-PB GEOCHRONOLOGICAL AND HF ISOOTIC CONSTRAINTS ON THE GEOLOGICAL EVOLUTION OF NORTH YUKON

28-10 10:45 AM McClelland, William C.; Strauss, Justin V.; Colpron, Maurice; Faehrnhich, Karol: THE PORCUPINE SHEAR ZONE: A FUNDAMENTAL LINK BETWEEN THE ARCTIC AND CORDILLERAN MARGINS OF LAURENTIA

SESSION NO. 29

T223. Intraplate Earthquake Sources, Processes, and Hazards in Central and Eastern North America (GSA Structural Geology and Tectonics Division; GSA Geophysics Division; GSA Environmental and Engineering Geology Division; GSA Quaternary Geology and Geomorphology Division; EarthScope National Office)

8:00 AM, The Conference Center, Tahoma 5

J. Wright Horton Jr., Christine A. Powell and Robert A. Williams, Presiding

29-1  8:00 AM Marshall, Stephen*; Pavlis, Gary; Hamburger, Michael W.; Gilbert, Hersh; Yang, Xiaotao; Chen, Chen; DeLucia, Michael S.; Larson, Timothy; Rupp, John: INSIGHTS INTO MIDCONTINENT (USA) TECTONICS AND SEISMICITY FROM THE CHINK EARTHSOPE FLEXARRAY EXPERIMENT (Invited Presentation)

29-2  8:20 AM Liu, Lin; Gao, Stephen S.; Liu, Kelly H.; Mickus, Kevin L.; Song, Jianguo; Yu, Youqiang: CRUSTAL STRUCTURE AND VERTICAL MOVEMENTS OF THE UPPER MISSISSIPPI EMBAYMENT AND OZARK UPLIFT

29-3  8:35 AM Van Arsdale, Roy B.: GEOLOGY OF THE NEW MADRID SEISMIC ZONE REGION OF THE CENTRAL UNITED STATES REVEALS SLEEPING GIANTS

29-4  8:50 AM Powell, Christine*; Saxena, Arushi; Choi, Eunsheo: POSSIBLE CAUSES OF LOW VELOCITY IN THE UPPER MANTEL BENEATH THE MISSISSIPPI EMBAYMENT

29-5  9:05 AM Sears, Mindi*; Filina, Irla; Burberry, Caroline M.; Quartoroli, Evan: MIDCONTINENT RIFT STRUCTURES IN S NEBRASKA

29-6  9:20 AM Shah, Anjana K.*; Crain, Kevin: NEW AIRBORNE MAGNETIC AND GRAVITY DATA USED TO IMAGE FAULTS AND CONTACTS IN THE CRYSTALLINE BASEMENT OF NORTH-CENTRAL OKLAHOMA

29-7  9:35 AM Thomas, William A.*; Powell, Christine A.: CONCENTRATED CRUSTAL DEFORMATION AND THE DISTRIBUTION OF INTRAPLATE EARTHQUAKES

9:50 AM BREAK

29-8  10:05 AM Long, Maureen D.*; Benoit, Margaret H.: STRUCTURE OF THE CRUST AND MANTLE LITHOSPHERE BENEATH THE CENTRAL APPALACHIANS: RESULTS FROM THE MAGIC EXPERIMENT (Invited Presentation)

29-9  10:25 AM Horton, J. Wright*; Carter, Mark W.; Chapman, Martin C.; Wu, Qimin; Shah, Anjana K.; Witt, Anne C.: INFLUENCE OF BEDROCK STRUCTURE ON SHALLOW AFTERSHOCKS IN THE CENTRAL VIRGINIA SEISMIC ZONE

29-10 10:40 AM Gates, Alexander E.*; Kalczynski, Michael J.: EARTHQUAKE CYCLICITY IN THE NEW YORK METROPOLITAN AREA

29-11 10:55 AM Calais, Eric*; Carmelbeeck, Thierry; Stein, Seth; Liu, Mian; Craig, Timothy: A NEW PARADIGM FOR LARGE
EARTHQUAKES IN STABLE CONTINENTAL PLATE INTERIORS (Invited Presentation)

29-12 11:15 AM Şengör, A.M. Celâl*; Lom, Nalan; Sağdic, Nurbige G.: THE EUROPEAN PLATE BOUNDARY ZONE: HOW RELIABLE ARE THE EUROPEAN SEISMIC HAZARD MAPS?

29-13 11:30 AM Stein, Seth*; Vanneste, Kris; Camelbeek, Thierry; Viemnickx, Bart: HOW GOOD SHOULD WE EXPECT EARTHQUAKE HAZARD MAPS FOR CONTINENTAL INTERIORS TO BE?

29-14 11:45 AM Brooks, Edward M*; Stein, Seth; Spencer, Bruce D.; Saidlich, Leah: PERFORMANCE OF USGS ONE-YEAR EARTHQUAKE HAZARD MAP FOR NATURAL AND INDUCED SEISMICITY IN THE CENTRAL AND EASTERN UNITED STATES

SESSION NO. 30

T249. New Voices in Geobiology I (GSA Geobiology & Geomicrobiology Division; GSA Karst Division)

8:00 AM, Washington State Convention Center, Room 602/603

Victoria A. Petryshyn, Marc Lafframme, Lydia S. Tackett, Rowan C. Martindale, Simon A.F. Darroch and Carie M. Frantz, Presiding

8:00 AM INTRODUCTORY REMARKS

30-1 8:05 AM Reinhard, Christopher T.: THE EVOLUTIONARY GEOBIOLOGY OF EARTH’S OXYGEN CYCLE (Invited Presentation)

30-2 8:25 AM Eiloart, Kate*: Wacey, David; Saunders, Martin: NANOSCALE CHARACTERISATION OF THE 1.9 GA GUNFLINT CHERT MICROFOSSIL ASSEMBLAGE

30-3 8:40 AM Bernau, Jeremiah A.; Benison, Kathleen C.: MICROORGANISMS IN THE NEOPROTEROZOIC BROW FORMATION HALITE OF AUSTRALIA?

30-4 8:55 AM Anderson, Ross P*; MacDonald, Francis A.; Jones, David S.; McManus, Sean; Briggs, Derek E.G.: A LATEST EDIACARAN DOUSHANTUO-TYPE LAGERSTÄTTE FROM NORTHERN MONGOLIAN PHOSPHORITES


30-6 9:25 AM Johnston, Paul A.*; Johnston, Kimberley J.; Keith, Stanley B.: DEPOSITIONAL ENVIRONMENT AND PALEOECOLOGY OF THE MIDDLE CAMBRIAN BURGESS SHALE RECONSIDERED—MUD VOLCANISM, SYNGENETIC FAULTING, AND PALEOBATHYMETRY

30-7 9:40 AM Lau, Kimberley V.; Hancock, Leanne G.; Maher, Kate; Severmann, Silke; Kuzminov, Amy; Behl, Richard J.; Lyons, Timothy W.: CONSTRAINTS ON URANIUM ISOTOPE FRACTIONATION AND RELATED RECONSTRUCTIONS OF PAST MARINE REDOX CONDITIONS FROM THE MIOCENE MONTEREY FORMATION (Invited Presentation)

10:00 AM BREAK

30-8 10:15 AM Junium, Christopher K.*; Uveges, Benjamin Thornton Iglar; Ivany, Linda C.; Martindale, Rowan C.; Cohen, Phoebe; Das, Shibajyoti; Hickey, Alaina N.; King Phillips, Ezekiel J.: NEW APPROACHES TO ACCESSING HIGH-RESOLUTION BIOGEOCHEMICAL SIGNALS FROM ANCIENT ORGANIC MATERIALS

30-9 10:30 AM Tornabene, Chiara; Martindale, Rowan C.; Wang, Xingchen T.; Schaller, Morgan F.: NITROGEN ISOTOPES IN FOSSIL SCLERACTINIAN CORALS: EVIDENCE OF PHOTOSYMBIOSIS AND NUTRIENT CYCLING IN DEEP TIME

30-10 10:45 AM Myers, Corinne*; Bergmann, Kristin; Sun, Chang-Yu; Tamre, Erik; Marcus, Matthew; Boekeretheide, Nicholas; Knoll, Andrew H.; Gilbert, P.U.P.A.: EXCEPTIONAL PRESERVATION OF GLYCINE-RICH PROTEINS AND SHELL ULTRASTRUCTURE IN PINNID BIVALEVS

30-11 11:00 AM Plaza-Torres, Stephanie*; Davidhideer-Kroll, Brett; Chin, Karen; Wing, Boswell: UNTANGLING THE DIET OF HERBIVOROUS DINOSAURS FROM THE MINERALIZATION OF THEIR DUNG: A STABLE ISOTOPE ANALYSIS OF COPROLITES

30-12 11:15 AM Gray, Katelyn E.*; Pagani, Mark; Henkes, Gregory A.; Blake, Ruth E.: A CARBONATE CLUMPED ISOTOPE CALIBRATION OF GAR SCALE APATITE

30-13 11:30 AM Kokesh, Broc S.*; Anderson, Laurie C.; Engel, Annette Summers: GEOMETRIC MORPHOMETRIC ANALYSES OF CTENA ORICULATA (LUCINIDAE:BIVALVIA) FROM MARINE LAKES OF SAN SALVADOR ISLAND, THE BAHAMAS, AND SURROUNDING COASTAL ENVIRONMENTS

30-14 11:45 AM Oakes, Rosie L.*; Peck, Victoria L.; Mann, Clara; Bralower, Timothy J.: DEGRADATION OF INTERNAL ORGANIC MATTER IS A MAJOR CONTROL ON PTEROPOD SHELL DISSOLUTION AFTER DEATH

AFTERNOON ORAL TECHNICAL SESSIONS

SESSION NO. 31

T245. Subduction Zone Coseismic Landslides (GSA Environmental and Engineering Geology Division; GSA Quaternary Geology and Geomorphology Division)

1:30 PM, The Conference Center, Tahoma 2

William J. Burns, Joshua Roering, Alison R. Duvall and Kevin M. Schmidt, Presiding

31-1 1:30 PM Burns, William J.; Calhoun, Nancy; Roering, Joshua; Strube, William: INVESTIGATION OF CASCADIA EARTHQUAKE TRIGGERED LANDSLIDES

31-2 1:45 PM Jibson, Randall W.: LANDSLIDE HAZARDS ASSOCIATED WITH SUBDUCTION-ZONE EARTHQUAKES (Invited Presentation)

31-3 2:05 PM Clark, Marin K.*; Zekkos, Dimitrios; Medwedeff, William; Townsend, Kirk F.; Gallen, Sean Francis: RECENT INSIGHTS ON THE RELATIONSHIP BETWEEN LANDSCAPE FORM AND LANDSLIDING DURING EARTHQUAKES (Invited Presentation)

31-4 2:25 PM Wartman, Joseph*; Grant, Alex R.: COSEISMIC LANDSLIDES IN SUBDUCTION EVENTS: INSIGHTS FROM THE 2011 M9 TOHOKU JAPAN INVENTORY (Invited Presentation)

31-5 2:45 PM Malick, Geoffrey*; Clark, Douglas H.: GEOLOGIC DEVELOPMENT AND ONGOING ACTIVITY OF THE VAN ZANDT LANDSLIDE COMPLEX, NORTHWEST WASHINGTON

31-6 3:00 PM Zhiqiang, Yin*: DISTRIBUTION CHARACTERISTICS OF GEOHAZARDS INDUCED BY THE LUDIAN EARTHQUAKE ON 3 AUGUST, 2014 AND A COMPARISON TO THE JINGGU AND YINGJIANG EARTHQUAKES

31-7 3:15 PM Medwedeff, William*; Clark, Marin K.: LANDSLIDES ARE SCALE SPECIFIC

Sunday, 22 October 2017

22–25 October • Seattle, Washington, USA
SESSION NO. 32

**D3. The Geochemistry, Biogeochemistry, and Ecology of Cave and Karst Settings**

1:30 PM, Washington State Convention Center, Room 612

James R. Garey, Joseph Asante and Skyler Sorsby, Presiding

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<td>32-2</td>
<td>1:50 PM Garey, James*; Menning, Damian M.; Wynn, Jonathan G.; Scharping, Robert J.: DOUBLE KEYHOLE: AN ACTIVE SPRING-FED KARST ESTUARY IN THE GULF OF MEXICO</td>
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<tr>
<td>32-3</td>
<td>2:05 PM Moss, Christina J.*; Petralia, Salvatore; Messina, Marianna; Garey, James R.: MICROBIAL TEMPORAL DYNAMICS OF A NOVEL GYPSUM KARST SULFIDIC SPRING</td>
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<td>32-4</td>
<td>2:20 PM Turner, Autumn B.: MEASURING INORGANIC CARBON FLUXES FROM CARBONATE MINERAL WEATHERING FROM LARGE RIVER BASINS: THE OHIO RIVER BASIN</td>
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<td>32-5</td>
<td>2:35 PM Méndez-Pérez, Roberto; Rosales Lagarde, Laura*; Gómez-Cruz, Rodolfo; Boston, Penelope J.: CHARACTERIZATION OF THE AIR SPACE AT CUEVA DE VILLA LUZ, TABASCO, MEXICO</td>
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<td>32-6</td>
<td>2:50 PM Asante, Joseph*; Dotson, Samuel; Hart, Evan; Kreamer, David K.: WATER CIRCULATION IN KARST AQUIFERS: COMPARING PHYSICO-CHEMICAL AND ENVIRONMENTAL ISOTOPIC DATA INTERPRETATION</td>
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<td>32-7</td>
<td>3:05 PM BREAK</td>
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<td>32-8</td>
<td>3:20 PM Jackson, Leah*; Polk, Jason: EPICARST HYDROGEOCHEMICAL CHANGES AND CARBON SOURCING IN TELOGENETIC KARST SYSTEMS IN SOUTH-CENTRAL KENTUCKY</td>
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<tr>
<td>32-9</td>
<td>3:35 PM Gouzie, Douglas*: EVALUATING BARIUM CONCENTRATIONS IN CAVE SEDIMENTS - INTERPRETING AND UNDERSTANDING THE BARIUM DATABASES</td>
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<td>32-10</td>
<td>3:50 PM Paylor, Randall*: EVALUATING SIGNIFICANCE OF PARTICULATE CARBONATE TRANSPORT TO THE KARST CARBON SINK AND COMPARISON OF KARST LANDSCAPE DENUDATION RATES USING DISSOLVED LOAD VS. TOTAL LOAD CALCULATIONS</td>
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<td>32-11</td>
<td>4:05 PM Casey, Anne E.*; Zorn, Matija; Ticar, Jure; Lipar, Matej; Welch, Susan A.; Lyons, W. Berry: CHEM OST RATIG RAPHY OF KARST ICE, PARADANA CAVE, SLOVENIA</td>
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<tr>
<td>32-12</td>
<td>4:20 PM Ćalli, Süleyman Selim*; Arslan, Şebnem; Karakaş, Zehra Semra; Çelik, Mehmet: AN APPROACH TO IDENTIFY KARSTIFICATION BASEMENT: ANALYSIS OF SPRING SEDIMENTS MINERALOGY</td>
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SESSION NO. 33

**D25. Geoscience Education Session: International Field Experiences in the Digital Age and Adapting Mental Models by Using Food for Teaching**

1:30 PM, Washington State Convention Center, Room 3A

Mindy A. Kimball, Anita M. Marshall and Ivan G. Carabajal, Presiding

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<td>1:30 PM</td>
<td>INTRODUCTORY REMARKS</td>
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<td>33-1</td>
<td>1:35 PM Feely, Martin*: US GEOLOGY FIELD CAMPS IN AN IRISH SETTING: A TWENTY-YEAR RETROSPECTIVE OF TRANS-ATLANTIC TEACHING COLLABORATIONS IN THE WEST OF IRELAND</td>
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<tr>
<td>33-2</td>
<td>1:50 PM Pitts, Alan*; Kysar-Mattietti, Giuseppina; McBride, Randolph A.; Di Celma, Claudio; Tondi, Emanuele: GEOLOGY FIELD CAMP IN ITALY: A NEW INTERNATIONAL FIELD EXPERIENCE IN GEOLOGIC MAPPING AND GEOLOGIC HAZARDS</td>
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SESSION NO. 34

**D46. Marine/Coastal Science Session**

1:30 PM, Washington State Convention Center, Room 604

J. Andrew G. Cooper and David Mallinson, Presiding

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<tr>
<td>1:30 PM</td>
<td>Mallinson, David J.*; Culver, Stephen J.; Leori, Eduardo; Mulligan, Ryan: WHAT COMES NEXT? THE FINAL PUSH TO THE FUTURE LATE HOLOCENE SEA-LEVEL HIGHS TAND</td>
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<td>1:45 PM</td>
<td>Mulligan, Ryan: WHAT COMES NEXT? THE FINAL PUSH TO THE FUTURE LATE HOLOCENE SEA-LEVEL HIGHS TAND</td>
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<td>1:45 PM</td>
<td>Weir, John: WHAT COMES NEXT? THE FINAL PUSH TO THE FUTURE LATE HOLOCENE SEA-LEVEL HIGHS TAND</td>
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<td>2:00 PM</td>
<td>Oakley, Bryan A.*; Murphy, Cody J.; Hollis, Robert J.: SPATIAL EXTENT AND VOLUME OF SAND ON THE UPPER SHOREFACE OF THE GLACIATED RHODE ISLAND SOUTH SHORE; RELATIONSHIP TO DECADAL SCALE SHORELINE CHANGE AND LONGSHORE SEDIMENT TRANSPORT</td>
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<td>2:15 PM</td>
<td>Borrelli, Mark*: Love, Heath; Giess, Graham: UPRIFT INLET MIGRATION OR SHIFTING NODAL POINT? RECENT AND ONGOING TIDAL INLET EVOLUTION AT NAUSSET INLET, CAPE COD, MASSACHUSETTS USA</td>
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<tr>
<td>2:30 PM</td>
<td>Cooper, J. Andrew G.*: SEISMIC STRATIGRAPHY AND EVOLUTION OF SANTA CATARINA ISLAND AND FLORIANOPOLIS BAY, BRAZIL IN THE CONTEXT</td>
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SESSION NO. 35

T5. Arsenic and Other Geoenic Contaminants in Groundwater Resources: Linking Water Quality, Food Security, and Treatment II (GSA Hydrogeology Division; GSA Geology and Health Division; GSA International/International Interdisciplinary Interest Group; International Society of Groundwater for Sustainable Development (ISGSD); International Medical Geology Association; GSA Environmental and Engineering Geology Division; GSA Geobiology & Geomicrobiology Division)

1:30 PM, Washington State Convention Center, Room 618/619/620

Prosun Bhattacharya, Abhijit Mukherjee, Saugata Datta, Mohammad Alauddin, Karen Johannesson, Jochen Bundschuh and Arslan Ahmad, Presiding

1:30 PM INTRODUCTORY REMARKS

35-1 1:35 PM Van de Wetering, Stephane*: Ahmad, Arslan: HOW TO REMOVE METALS FROM GROUNDWATER FOR HIGH QUALITY DRINKING WATER PRODUCTION: PRINCIPLES, PRACTICES AND DRIVERS FOR RESEARCH (Invited Presentation)

35-2 1:55 PM Ahmad, Arslan; Bhattacharya, Prosun: GROUNDWATER TREATMENT FOR ARSENIC REMOVAL

35-3 2:10 PM Ling, Florence T.*; Hunter, Heather A.; Ffits, Jeffrey P.; Lanzirotti, Antonio; Acero, Alvin; Peters, Catherine A.: ARSENIC REMOVAL FROM HIGH SALINITY WASTEWATER THROUGH BARITE CO-PRECIPITATION

35-4 2:25 PM Batool, Shehla*; Ali, Naveed; Farooqi, Abida: MODIFIED HYBRID LOW COST WATER TREATMENT SYSTEM FOR SIMULTANEOUS REMOVAL OF ARSENIC AND FLUORIDE

35-5 2:40 PM Perry, Eric F.; Nezat, Carmen A.: ANALYZING DISCOLORED TAP WATER FOR ELEMENTS LEACHED FROM AGING PIPES

35-6 2:55 PM Saha, Indranil*; Bhattacharya, Prosun; Ghosh, Abir; Ghosh, Uday Chand; Chatterjee, Debasis: TARGETED SYNTHESIS, IN-DEPTH CHARACTERIZATION AND POTENTIAL APPLICATION OF BETA CYCLODEXTRIN FUNCTIONALIZED HYDROUS IRON-ZIRCONIUM HYBRID OXIDE FOR ARSENIC (III) REMOVAL FROM AQUEOUS SOLUTION

35-7 3:10 PM Xiong, Yongliang*: A Pitzer Model for Hydrolysis of Lead to High Ionic Strength: Applications to Low Temperature Geochemical Processes

3:25 PM BREAK

35-8 3:40 PM Chakraborty, Madhumita*; Mukherjee, Abhijit; Ahmed, Kazi Matin: UNDERSTANDING THE INFLUENCE OF HYDROSTRATIGRAPHY ON GROUNDWATER ARSENIC DISTRIBUTION IN THE GANGETIC DELTA AQUIFERS OF BANGLADESH AND INDIA

35-9 3:55 PM Bhattacharya, Prosun*; Ahmed, Kazi Matin; von Brossmussen, Mattias; Gunnar: TUBEWELL INSTALLATION FOR ACCELERATING SAFE DRINKING WATER ACCESS

SESSION NO. 36

T6. Fate, Effects, and Mitigation of Chemical and Fuel Releases in Surface and Subsurface Environments (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Energy Geology Division)

1:30 PM, Washington State Convention Center, Room 613/614

Michelle M. Lorah, Isabelle M. Cozzarelli and Madeline E. Schreiber, Presiding

1:30 PM INTRODUCTORY REMARKS

36-1 1:35 PM Bekins, Barbara A.*; Baedecker, Mary Jo; Cozzarelli, Isabelle M.; Eganhouse, Robert P.; Ng, G.-H. Crystal; Trost, Jared J.; Ostertag, Sarah A.; Podgorski, David C.; Zito, Phoebe: THE LEGACY OF SPILLED OIL AND FUEL IN GROUNDWATER: SOURCE ZONE PERSISTENCE AND PLUME GROWTH (Invited Presentation)

36-2 1:55 PM Ziegler, Brady A.*; Schreiber, Madeline E.; Ng, G.-H. Crystal; Cozzarelli, Isabelle M.; Dunshee, Aubrey: REACTIVE TRANSPORT MODELING OF ARSENIC CYCLING IN A PETROLEUM-CONTAMINATED AQUIFER

36-3 2:10 PM Hassan, Ali*; Sali, Ranjdar; Sali, Namam Muhammed: TRANSPARENCY AND STEWARDSHIP IN EXPLORING OIL AND GAS, KURDISTAN REGION-IRAQ


36-5 2:40 PM Mohsen, Mohammad*: REVERSE PARTICLE TRACKING FOR LIABILITY ALLOCATION

36-6 2:55 PM Roussel, Stephanie A.*; A METAL SORPTION SIEVE PROCESS IN THE ALBERTA OIL SANDS (Invited Presentation)

36-7 3:10 PM Kamo, Cynthia; Cray, John E.: EVALUATING CONTAMINATION POTENTIAL OF SURFACE SPILLS ASSOCIATED WITH UNCONVENTIONAL OIL AND GAS DEVELOPMENT ABOVE AN ALLUVIAL AQUIFER

36-8 3:25 PM Lorah, Michelle M.*; Cozzarelli, Isabelle M.; Akob, Denise M.: EFFECT OF INCREASED INUNDATION ON BIOGEOCHEMICAL PROCESSES AND FATE OF CHLOROBENZENES IN A FRESHWATER WETLAND

3:40 PM BREAK
Sunday, 22 October 2017

36-9  3:55 PM  Allen-King, Richelle M.*; Kiekhaefer, Rebecca L.; Brotsch, Jonathan; Pugnetti, Michele: FIELD MEASUREMENTS TO QUANTIFY TRICLOROETHENE DIFFUSION, DEGRADATION, AND SORPTION IN FRAGMENTED SEDIMENTARY ROCK

36-10  4:10 PM  Pickens, Cullen†; Halihan, Todd: FIELD EVALUATION OF CONTAMINANT MASS REMOVAL IN DOLOMITE KARST


36-12  4:45 PM  Mitra, Siddhartha*; Benfield, Beau: SORPTION OF IBUPROFEN TO COASTAL PLAIN SOILS

36-13  5:00 PM  Frederick, Logan†; Fernandez, Diego P.; Cerling, Thure; Johnson, William P.: SOURCE IDENTIFICATION FOR PARTICLE-BOUND METALS IN THE SAN JUAN RIVER SYSTEM

36-14  5:15 PM  Schreiber, Madeline E.*; Fernandez, Ricardo P.; Shockley, Caleb: TRACE ELEMENTS IN DAN RIVER SEDIMENTS AFTER THE 2014 COAL ASH SPILL

SESSION NO. 37  ❀

T13. In Honor of John M. (Jack) Sharp Jr.: Celebrating over 40 Years of Science, Students, and Stewardship II (GSA Hydrogeology Division; International Association of Hydrogeologists)

1:30 PM, Washington State Convention Center, Room 615/616/617

Marcus O. Gary, Wendy M. Robertson, Brad David Wolaver and Todd Halihan, Presiding

1:30 PM INTRODUCTORY REMARKS

37-1  1:40 PM  Smith, Brian A.*; Hunt, Brian B.: JACK SHARP AND THE AQUIFERS OF CENTRAL TEXAS

37-2  1:55 PM  Sharp, John M.*: EVOLUTION OF EDWARDS AQUIFER MODELS (Invited Presentation)

37-3  2:15 PM  Green, Ronald T.*; Fratesi, Beth; Toll, Nathaniel; Nunu, Rebecca: PARING OUT SMALLER HYDRAULIC PROVINCES FROM REGIONAL AQUIFER SYSTEMS

37-4  2:30 PM  Mace, Robert E.*: DOES RECHARGE MATTER? HOW GROUNDWATER RESOURCES IN TEXAS RESPONDED TO THE STATEWIDE DROUGHT OF 2011–2015

37-5  2:45 PM  Budge, Trevor*: DELINEATING CONTRIBUTING AREAS TO KARST SPRINGS USING NEKRAD PRECIPITATION ESTIMATES AND CROSS-CORRELATION ANALYSIS

37-6  3:00 PM  Green, Ronald T.*; Gary, Marcus O.; Bertetti, F. Paul; Fratesi, Beth; Toll, Nathaniel J.: USE OF FIELD MEASUREMENT, FIELD-SCALE EXPERIMENTS, AND WATER-BUDGET ANALYSES TO DETERMINE DIFFUSE RECHARGE AND INfiltrATION ON KARST TERRAINS

3:15 PM BREAK

37-7  3:30 PM  Gary, Marcus*; Smith, David V.: CORRELATION OF AIRBORNE ELECTROMAGNETIC GEOPHYSICAL DATA WITH KARST VADOSE PERMEABILITY

37-8  3:45 PM  Caldwell, Todd G.*; Bongianni, Tara; Young, Michael H.; Gary, Marcus: QUANTIFYING DIFFUSE RECHARGE TO THE EDWARDS AQUIFER USING MICRO-METEOROLOGY AND REMOTE SENSING

37-9  4:00 PM  Schwartz, Benjamin F.*; Schwinning, Susan; Hiler, Mark: RECHARGE AND WATER BALANCE STUDIES AT CAVE WITHOUT A NAME, TEXAS: WHAT WE LEARN FROM INTERDISCIPLINARY METHODS

37-10  4:15 PM  Hackett, Caroline Croft*; Gary, Marcus; Rempe, Daniella M.: QUANTIFYING ALLUVIUM EFFECTS ON KARST AQUIFER RECHARGE: SHALLOW GROUNDWATER AND SURFACE WATER EXCHANGE IN THE UPPER NUECES RIVER, TEXAS

37-11  4:30 PM  Wong, Stephanie S.*; Yelderman, Joe C.; Byars, Bruce: SPATIAL VARIABILITY IN PRECIPITATION: CLUES TO DIFFUSE RECHARGE IN SHALLOW KARST AQUIFERS

37-12  4:45 PM  Darling, Bruce K.*; Hibbs, Barry J.; Sharp, John M.: INTEGRATION OF CARBON-14 AND OXYGEN-18 AS A BASIS FOR DIFFERENTIATING BETWEEN LATE PLEISTOCENE AND POST-PLEISTOCENE GROUNDWATER AGES ALONG FLOW PATHS OF TWO WEST TEXAS BOLSON AQUIFERS

5:00 PM CONCLUDING REMARKS

SESSION NO. 38

T43. High-Resolution Investigations of the Permain-Triassic Transition (GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); Paleontological Society; Paleontological Research Institution)

1:30 PM, Washington State Convention Center, Room 611

Thomas J. Algeo, Hugo Buscher and Kimberly V. Lau, Presiding

38-1  1:30 PM  Algeo, Thomas J.*: THE PERMAIN-TRIASSIC BOUNDARY CRISIS: CURRENT STATE OF KNOWLEDGE AND FUTURE RESEARCH DIRECTIONS

38-2  1:45 PM  Bernardi, Massimo; Petti, Fabio Massimo*: Kustatscher, Evelyn; Franz, Matthias; Hartkopf-Fröder, Christoph; Labandeira, Conrad C.; Wappler, Torsten; van Konijnenburg-van Cittert, Johanna H.A.; Peecook, Brandon R.; Angielczyk, Kenneth D.: LATE PERMIAN (Lopingian) TERRESTRIAL ECOSYSTEMS: A GLOBAL COMPARISON WITH NEW DATA FROM THE LOW LATITUDE BLETTERBACH BIOTA

38-3  2:00 PM  Hautmann, Michael*: ECOLOGY OF THE EARLY TRIASSIC POST-EXTINCTION WORLD (Invited Presentation)

38-4  2:20 PM  Penn, Justin Leonard*; Deutsch, Curtis; Payne, Jonathan L.; Sperling, Erik A.: TEMPERATURE-DEPENDENT HYPOXIA EXPLAINS END-PERMIAN MASS EXTINCTION IN THE OCEANS

38-5  2:40 PM  Shen, Jun*: Algeo, Thomas J.; Planavsky, Noah J.; Feng, Qingle; Chen, Zhong Qiang; Yu, Xianxin; Chen, Jibin; Yuan, Shengliu; Zhou, Lian: MERCURY ENRICHMENT PROVIDES EVIDENCE OF GLOBAL VOLCANIC EFFECTS DURING THE PERMAIN-TRIASSIC BOUNDARY CRISIS (Invited Presentation)

3:00 PM DISCUSSION

38-6  3:05 PM  Zhang, Feifei*: Algeo, Thomas J.; Romaniello, Stephen; Anbar, Ariel D.: QUANTITATIVE CONSTRAINTS ON END-PERMIAN AND EARLY TRIASSIC OCEANIC ANOXIA USING HIGH-RESOLUTION 238U RECORDS (Invited Presentation)

3:25 PM DISCUSSION

3:30 PM BREAK

38-7  3:45 PM  Pomer, Maxwell*: PALEOENVIRONMENTAL DYNAMICS IN THE MIDDLE PERMIAN PHOSPHORIA SEAWAY: A RECORD FROM ISOTOPIC AND BIOCHEMICAL TRENDS, ROCKY MOUNTAIN REGION, USA

38-8  4:00 PM  Liu, Dongdong*: Zhang, Chen: GEOCHEMISTRY AND PROVENANCE OF THE MID-PERMIAN SUCCESIONS IN THE SOUTHERN JUNGGAR BASIN AND TURPAN BASIN: IMPLICATIONS FOR THE PALEOCALIMATE AND PALEOGEOGRAPHY

38-9  4:15 PM  Spieth, Volker*: KUPFERSCHIEFER UPPER PERMIAN BLACK SHALE - HOT HYDROTHERMAL HIGH ENERGY GENESIS AND GEOMETALLURGY AT THE SOUTHERN RIM OF THE KUPFERSCHIEFER SEA

38-10  4:30 PM  Gastaldo, Robert A.*; Neveling, Johann; Geissman, John W.; Kamo, Sandra L.: A LITHOSTRATIGRAPHIC AND MAGNETOSTRATIGRAPHIC FRAMEWORK IN A GEOCHRONOLOGIC CONTEXT FOR A PURPORTED
PERMIAN–TRIASSIC BOUNDARY SECTION AT OLD (WEST) LOOTSBERG PASS, KAROO BASIN, SOUTH AFRICA

38-11 4:45 PM Rowinski, Kyle William*: VARIANCE IN DOLomite MINERALOGY WITHIN THE PERMIAN-TRIASSIC LYKINS FORMATION, NORTHERN COLORADO: IMPLICATIONS FOR CONSTRAINING REGIONAL DEPOSITIONAL PROCESSES THROUGHOUT THE LATE PERMIAN

SESSION NO. 39

T45. Miocene–Pliocene Terrestrial Ecosystem Response to the Climate System II (Paleontological Society; GSA Limnogeology Division)

1:30 PM, Washington State Convention Center, Room 609

Kevin Uno and Tammo Reichgelt, Presiding

39-1 1:35 PM Novello, Alice*: Strömberg, Caroline A.E.; Jacobs, Bonnie F.; McNulty, Kieran P.; Michel, Laurent A.: PHYTOLITH EVIDENCE FOR THE ROLE OF GRASSES IN EARLY MIocene VEGETATION OF EAST AFRICA (Invited Presentation)

39-2 1:55 PM Kinyanjui, Rahab N.; Peppe, Daniel J.; MacLachty, Laura M.; Kingston, John D.; Cote, Susanne; Driese, Steven G.; Fox, David L.; Jacobs, Bonnie F.; Lehmann, Thomas; Lukens, William E.; Rossie, James B.; McNulty, Kieran P.: EARLY MIocene VEGETATION ACROSS EASTERN AFRICA AS RECONSTRUCTED FROM PHYTOLITH DATA (Invited Presentation)

39-3 2:15 PM Driese, Steven G.; Peppe, Daniel J.; Kingston, John D.; Fox, David L.; Lukens, William E.; Deino, Alan; MacLachty, Laura: PALEOPEDOLOGY AND PALEOCLIMATE SIGNIFICANCE OF EARLY MIocene FLUVIAL-LACUSTRINE PALEOSOLS FROM MOROTO II SITE IN UGANDA

39-4 2:30 PM Michel, Laurent A.: Cheng, Kimberly; Lehmann, Thomas; McNulty, Kieran P.; Driese, Steven G.; Fox, David L.; Peppe, Daniel J.: PALEOClimatic Variability and the Role of Seasonality from the Early Miocene deposits on Rusinga and Mfangano Islands, Lake Victoria, Kenya

39-5 2:45 PM Peppe, Daniel J.; Deino, Alan L.; Driese, Steven G.; Fox, David L.; Kingston, John D.; Kinyanjui, Rahab N.; Lukens, William E.; Lutz, James A.; Michel, Laurent A.; Oginga, Kennedy Ogonda; Cote, Susanne; Lehmann, Thomas; MacLachty, Laura; McNulty, Kieran P.; Miller, Ellen; Nengo, Isaiah; Rossie, James B.: EARLY MIocene PALEOClimate and PALEOenvironments Across East Africa

39-6 3:15 PM Currano, Ellen D.; Jacobs, Bonnie F.: ECOLOGICAL PERSISTENCE IN A CLOSED FOREST ECOSYSTEM FROM THE EARLY NEogene MUSh VALLEY LAGERSTÄTTE, NORTH-CENTRAL ETHIOPIA

39-7 3:30 PM Jacobs, Bonnie F.; Currano, Ellen D.; Pan, Aaron D.: AFRICA’S MIocene TECTONIC, PHYSIOGRAPHIC, AND CLIMATE EVOLUTION LED TO ITS LOW SPECIES RICHNESS AND ITS STATUS AS THE “ODD MAN OUT” AMONG THE WORLD’S TROPICAL REGIONS

39-8 3:45 PM Beck, Catherine C.; Langworthy, Mary; Feibiel, Craig S.; Beverly, Emily J.; Horgan, Julianna S.: LOWER MIocene PALEOenvironment and PALEOClimate as recorded by the Locherangan formation, Turkana Basin, Kenya

39-9 4:00 PM Hock, Devra*: Second, Ross: VERTEBRATE SPECIES RICHNESS CHANGE FROM THE LATE MIOCENE TO EARLY PILOCENE OF LOTHAGAM, TURKANA BASIN, KENYA

SESSION NO. 40

T51. Biodiversity Dynamics in the Face of Environmental Change: Integrating Paleontological and Neontological Approaches to Macroevolution II (Paleontological Society; Paleontological Research Institution)

1:30 PM, Washington State Convention Center, Room 608

Shan Huang, Paul G. Harnik and Lee Hsiang Liow, Presiding

40-1 1:30 PM Marshall, Charles R.: FIVE PALEOBIOLOGICAL LAWS NEEDED TO UNDERSTAND THE EVOLUTION OF THE LIVING BIOTA: TRYING TO GET BIOLOGISTS TO APPRECIATE THE Pervasiveness of Extinction and Its Implications

40-2 1:45 PM Cole, Selina R.: HIERARCHICAL CONTROLS ON EXTINCTION SELECTIVITY: TESTING THE EFFECT OF ENVIRONMENTAL AND ECOLOGICAL FACTORS ACROSS THE DIPLOBATHRID CRINOID PHYLOGENY

40-3 2:00 PM Edie, Stewart M.; Huang, Shan; Roy, Kaustuv; Jablonski, David: DIVERSIFICATION THROUGH GLOBAL COOLING: DECOUPLED RESPONSES OF MARINE BIVALVE ORIGINATION AND EXTINCTION TO CHANGES IN CENOZOIC TEMPERATURE

40-4 2:15 PM Strotz, Luke C.; Sauge, Erin E.; Kimmig, Julien; Lieberman, Bruce S.: RELATING ECOLOGY TO MACROEvOLUTION USING METABOLIC RATES OF NEogene MOLLUSc COMMUNITIES

40-5 2:30 PM Jablonski, David*: Edie, Stewart M.; Valentine, James W.: CONTRASTING RESPONSES OF FUNCTIONAL DIVERSITY TO DROPS IN TAXONOMIC DIVERSITY: MODERN CLIMATE GRADIENTS VS PAST Mass EXTINCTIONS

40-6 2:55 PM Di Martino, Emanuela; Jackson, Jeremy B.C.; Taylor, Paul D.; Johnson, Kenneth G.: DIFFERENCES IN EXTINCTION RATES EXPLAIN CONTRASTING REGIONAL DIVERSITY PATTERNS IN MODERN TROPICAL BRYOZOANS

40-7 3:10 PM Zaffos, Andrew*: Peters, Shanahan E.: REASSESSING OUR EXPECTATIONS FOR MARINE LATITUDINAL BIODIVERSITY GRADIENTS IN MODERN AND ANCIENT SYSTEMS

40-8 3:25 PM Spalding, Christopher*: Doering, Charles R.; Flierl, Glenn R.: A MINIMUM POPULATION EXTINCTION TIME DRIVEN BY STOCHASTIC ENVIRONMENTAL FORCING

40-9 3:40 PM Silvestro, Daniele; Warnock, Rachel C.M.; Gavryushkina, Alexandra;毕业, Tenja: CLOSING THE GAP BETWEEN PALEONTOLOGICAL AND NEONTOLOGICAL SPECIATION AND EXTINCTION RATE ESTIMATES

Sunday, 22 October 2017
SESSION NO. 41

T55. Life and Times in the Early Paleozoic (Paleontological Society)

1:30 PM, Washington State Convention Center, Room 607
Erik A. Sperling, Stephen Leslie and Matt Saltzman, Presiding

41-1 1:30 PM Ng, Tin-Wai*; Huang, Kuo-Fang; Liu, Hou-Chun; You, Chen-Feng; Lin, Wei-Chen: THE UPPER CAMBRIAN NORTH CHINA SPICE EVENT: NEW STRON'TIUM ISOTOPE DATA AND ITS IMPLICATIONS

41-2 1:45 PM Taylor, John F.; Strauss, Justin V.; Repetski, John E.: A NEW TRILOBITE FAUNA AND ASSOCIATED CARBON ISOTOPIC EXCURSION AT THE TOP OF THE PYCHASPID BIOMERE IN EASTERN ALASKA: WHITTLING DOWN A GAP IN THE LATE CAMBRIAN TIME SCALE

41-3 2:00 PM Gill, Benjamin C.; LeRoy, Matthew A.; Gerhardt, Angela; Them, Theodore R.; Owens, Jeremy D.: DECIPHERING THE RECORD OF BIOLOGIC AND ENVIRONMENTAL CHANGE DURING THE LATER CAMBRIAN STEPTOEAN POSITIVE CARBON ISOTOPE EXCURSION (Invited Presentation)


41-5 2:40 PM Ahm, Anne-Sofie C.; Jones, David S.; Fike, David A.; Bjerrum, Christian J.; Higgins, John A.: QUANTIFYING EARLY MARINE DIAGENESIS IN SHALLOW-WATER CARBONATE SEDIMENTS DURING THE LATEST ORDOVICIAN GLACIATION (Invited Presentation)

41-6 3:00 PM Mikulic, Donald G.; Klussendorf, Joanne: SEQUENCES, EXTINCTIONS AND δ13C EXCURSIONS IN THE SILURIAN THORNTON REEF OF ILLINOIS

41-7 3:30 PM Bowman, Chelsie N.; Young, Seth A.; Owens, Jeremy D.; Kaljo, Dimitri; Hints, Ola; Martina, Tonu: OCEANOGRAPHIC REDOX CHANGES ASSOCIATED WITH THE LATE SILURIAN LAU EXTINCTION EVENT: NEW GEOCHEMICAL EVIDENCE FROM THE PRIEKULE-20 DRILL CORE, LATVIA

41-8 3:45 PM Liu, Tian; Wang, Mingkun: PRECISE TISSUE BOUNDARY FORMATION AND THE GROWTH PATTERN OF THE EARLY ANIMALS

41-9 4:00 PM Letsch, Dominik*; Large, Simon; von Quadt, Albrecht; Winkler, Wilfried; Bernasconi, Stefano M.; Klug, Christian: NW AFRICA’S OLDEST KNOWN SKELETAL FOSSILS: A NEW CAMBRIAN SMALL SHELLY FOSSIL FAUNA FROM SOUTH MOROCCO

41-10 4:15 PM Parsley, Ronald L.; Zhao, Yuanlong; Sumrall, Colin D.: EARLY GOGIDI (ECHINODERMATA) EVOLUTION IN CAMBRIAN STAGES 4 AND 5 ON THE SOUTH CHINA (YANGTZE) PLATE COMPARED TO THAT IN WESTERN LAURENTIA

41-11 4:30 PM Wittmer, Jacalyn M.; Guensburg, Thomas E.; Stock, Carl W.; Darrough, Guy; Brett, Carlton E.: EXTRAORDINARY STROMATOPOROID-ECHINODERM BUILDUPS IN THE LATE ORDOVICIAN (KATIAN) KIMMSWICK LIMESTONE OF EAST-CENTRAL MISSOURI

41-12 4:45 PM Li, Qijian*; Kershaw, Steve; Li, Yue; Yu, Shenyang: FIRST REEF RECOVERY AFTER THE END-ORDOVICIAN EXTINCTION IN SOUTH CHINA: MID-AERONIAN CORAL-STROMATOPOROID REEFS FROM NORTHERN GUIZHOU

SESSION NO. 42

T64. Citizen Science in Paleontology: Harnessing Public Interest to Advance Research and STEM Education II (Paleontological Society; GSA Geology and Society Division; GSA Geoscience Education Division)

1:30 PM, Washington State Convention Center, Room 606
Laura C. Soul, Terry A. Gates and Eleanor E. Gardner, Presiding

42-1 1:30 PM Gates, Terry A.*: SHARK TOOTH FORENSICS: A PALEONTOLOGY CITIZEN SCIENCE PROJECT DESIGNED FOR K-12 CLASSROOMS

42-2 1:45 PM Bourne, Nathaniel W.*; Gates, Terry A.: DIGGING SCIENCE EDUCATION: SHARK TOOTH FORENSICS AS A CASE STUDY FOR STUDENTS DOING REAL SCIENCE (Invited Presentation)

42-3 2:00 PM Ryder, Erik*; Hairston, Neal; Simpson, Jamila; Gates, Terry A.: COMBATING STEREOTYPE THREAT AND INTERNALIZED SCIENTIFIC PHOBIAS IN UNDERREPRESENTED STUDENT POPULATIONS USING GEOSCIENCE EDUCATION AND CITIZEN SCIENCE


42-6 3:00 PM Hovatter, Brody*; Wilson, Gregory P.: THE DISCOVERIES IN GEO SCIENCES (DIG) FIELD SCHOOL: TEACHER AND STUDENT INVOLVEMENT WITH REAL RESEARCH IN THE CLASSROOM

42-7 3:15 PM Santos, Gabriel-Philip*; Schmitz, Lars: CITIZEN SCIENCE AT THE RAYMOND M. ALF MUSEUM OF PALEONTOLOGY: PROVIDING ENGAGING STEM OPPORTUNITIES FOR HIGH SCHOOL STUDENTS, COLLEGE STUDENTS, AND THE GREATER COMMUNITY

42-8 3:30 PM Estes-Smargiassi, Kathryn*; Hendy, Austin J.W.; Villalobos, Margarita; Ellwood, Elizabeth; Lindsey, Emily; Novie, Agnes: PROJECT PALEO: CITIZEN CURATION AT THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

42-9 3:45 PM Discussion: PALEONTOLOGY CITIZEN SCIENCE PROJECT

42-10 4:00 PM SPEAKER Q&A AND CONCLUDING REMARKS

SESSION NO. 43

T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and fill II (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; SEPM (Society for Sedimentary Geology))

1:30 PM, Washington State Convention Center, Ballroom 6C
Eugene Szymanski, Jacob A. Covault and Daniel F. Stockli, Presiding

43-1 1:30 PM Sharan, Glenn R.; Covault, Jacob A.; Stockli, Daniel F.; Sickmann, Zachary; Malkowski, Matthew A.; Johnstone, Sam: UNMIXING EUSTATIC AND TECTONIC SIGNALS IN SEDIMENTARY SYSTEMS FROM DETRITAL GEOCHRONOLOGY (Invited Presentation)

43-2 1:55 PM Malkowski, Matthew A.*; Barth, Ginger A.; Scheirer, Daniel S.; Sli ter, Ray W.; Scholl, David W.; Chaytor, Jason D.: DETRITAL ZIRCON GEOCHRONOLOGY OF THE BERING
SESSION NO. 44

T92. Tectonics and Sedimentation, Avulsion, and Experimental Stratigraphy, and History of Western North America: A Celebration of Paul Heller's Career (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; SEPM (Society for Sedimentary Geology))

1:30 PM, Washington State Convention Center, Room 307/308

Brady Z. Foreman, Majie Fan and Elizabeth Hajek, Presiding

 SESSION NO. 45

T99. Augmented and Virtual Reality in Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers; GSA Geoinformatics Division)

1:30 PM, Washington State Convention Center, Room 2A

Rachel M. Atkins, Christine M. Clark and Shelley J. Whitmeyer, Presiding

44-1 1:30 PM Paola, Chris*: PAUL HELLER AND THE GROWTH OF ANALYTICAL STRATIGRAPHY

44-2 1:50 PM Chang, Ching; Liu, Lijun*: REPRODUCING THE CRETACEOUS WESTERN INTERIOR SEAWAY USING COUPLED MANTLE-LANDSCAPE EVOLUTION MODELING

44-3 2:05 PM Li, Lin*: Fan, Majie; Hanneman, Debra L.: STABLE ISOTOPE EVIDENCE (818O AND 8D) FOR LATE EOCENE–LATE MIOCENE TOPOGRAPHY AND CLIMATE IN THE NORTHERN ROCKY MOUNTAINS, SOUTHWESTERN MONTANA

44-4 2:20 PM Noda, Atsushi*: INTERACTIONS BETWEEN FOREAR CASKIN SITE STRATIGRAPHY AND ACCRETIONARY WEDGE GROWTH UNDER THE CRITICAL TAPER THEORY

44-5 2:35 PM Sturmer, Daniel M.*: USING GEOSTRATIGRAPHY TO UNRAVEL THE COMPLEX HISTORY OF LATE PALEOZOIC BASINS AND TECTONICS IN SOUTHWESTERN LAURENTIA

44-6 2:50 PM Asian, Andres*; Boraas-Connors, Marisa; Sprinkel, Douglas A.; Becker, Thomas P.; Lynds, Ranie; Karlstrom, Karl E.; Heizler, Matthew T.: CENOZOIC COLLAPSE OF THE EASTERN UINTA MOUNTAINS AND DRAINAGE EVOLUTION OF THE UINTA MOUNTAIN REGION

44-7 3:05 PM Dorsey, Rebecca J.*; Wells, Ray E.; Grove, Marty; Bruttzhus, Pamela; Mortimer-Lamb, Megan; Humphreys, Eugene D.: CRUSTAL DEFORMATION, BASIN SUBSIDENCE, AND PALEO-RIVER RESPONSE TO EOCENE ACCRETION OF SILETZIA, SW OREGON (Invited Presentation)

44-8 3:40 PM Chamberlin, Ellen P.*; Spranger, Annabel; Hajek, Elizabeth: FINE-GRAINED SEDIMENT STORAGE IN ANCIENT DEPOSITS: AN EXAMPLE FROM THE BLACKHAWK-CASTLEGATE FORMATION BOUNDARY (CRETACEOUS, UTAH, USA)

44-9 3:55 PM Sutherland, Grace M.*; Foreman, Brady Z.; Lai, Steven; Limaye, Ajay; Grimaud, Jean-Louis; Komatsu, Yuhei: BRAIDING MECHANISMS AND BAR GEOMETRIES IN RIVERS AND SUBMARINE DENSITY CURRENT CHANNELS

44-10 4:10 PM Rasmussen, Dirk*: Foreman, Brady Z.; Fricke, Henry: EARLY PALEOGENE SHIFTS IN FLUVIAL DEPOSITION WITHIN THE HUERFANO BASIN, COLORADO, USA: EVALUATION OF TECTONIC AND CLIMATIC CONTROL

44-11 4:25 PM Hajek, Elizabeth*: Greenberg, Evan; Chamberlin, Ellen P.; Baisden, Tramond: RECONSTRUCTING PALEOCHANNEL MOBILITY CHANGES IN RESPONSE TO THE PALEOECENE EOCENE THERMAL MAXIMUM

44-12 4:40 PM Trampush, Sheila*; Hajek, Elizabeth; Straub, Kyle; Chamberlin, Ellen P.: ADVANCES IN MEASURING AUTOGENIC DYNAMICS IN FLUVIO-DELTAIC STRATIGRAPHY

44-13 4:55 PM McElroy, Brandon*: ARCHITECTURAL BIMODALITY IN FLUVIAL STRATIGRAPHY OF THE MORRISON FORMATION, USA

44-14 5:10 PM Mohrig, David*: Swartz, John M.: RIO GRANDE SHELF-EDGE DELTA AND SUBMARINE SLOPE SYSTEM, OFFSHORE TEXAS, USA: TARANTIAN – EARLY HOLOCENE SEDIMENTATION OVERWHELMS TECTONICS (Invited Presentation)
TO CREATE AN IMMERSIVE VIRTUAL FIELD EXPERIENCE

3:00 PM BREAK

46-7 3:20 PM Anbar, Ariel D.; Bentley, Callan; Semken, Steven:
PROPOSING A DIGITAL TEACHING NETWORK FOR VIRTUAL FIELD EXPERIENCES

46-8 3:35 PM Bentley, Callan*: DIGITAL SAMPLES FOR ONLINE LABS AND VIRTUAL FIELD EXPERIENCE

46-9 4:10 PM Cooper, Gene*: Bentley, Callan; Rohrbach, Robin: NEW EMERGING HIGH RESOLUTION IMAGING CURRICULUM CONTENT AND PRACTICES

SESSION NO. 47

1:30 PM, The Conference Center, Skagit 2
Shanaka de Silva, James Beard, Marjorie Wilson, Valbone Memeti and John A. Wolf, Presiding

1:30 PM INTRODUCTORY REMARKS

47-1 1:45 PM Garrison, Jennifer M.*; Sims, Kenneth W.W.; Yogodzinski, Gene; Hall, Minard L.; Mothes, Patricia A.; Sandford, Mike: GEOCHEMISTRY OF LAVAS FROM SUMACO VOLCANO; A STEP TOWARD RESOLVING THE SLAB-MELTING DEBATE IN ECUADOR (Invited Presentation)

47-2 2:05 PM Dungan, Michael A.*: THE NEAR-UBIQUITY OF OPEN-SYSTEM MAGMATIC PROCESSES (Invited Presentation)

47-3 2:25 PM Tepley, Frank*: THE DEVELOPMENT OF COMPONENTRY ISOTOPIC MICRO SAMPLING: THE DAVIDSON YEARS (Invited Presentation)

47-4 2:45 PM Beard, James S.; Scott, Sean Ross: A MODEL FOR THE HIGH-TEMPERATURE ORIGIN AND PARADOXICAL DISTRIBUTION OF PEGMATITIC LAUGHER AND SEAMISTIC PLATFORMS, SMARTVILLE COMPLEX, CALIFORNIA

47-5 3:00 PM Memeti, Val*: Oppenheim, Louis; Werts, Kevin; Williams, Dustin; Barnes, Calvin G.; Paterson, Scott R.; Barnes, Melanie A.: TRACKING STAGES OF MAGMATIC EVOLUTION BY COMPARISON OF TRACE ELEMENTS AND ISOTOPES IN DIFFERENT MINERAL POPULATIONS IN THE TUOLUMNE INTRUSIVE COMPLEX

3:15 PM JON DAVIDSON GSA CITATION

47-6 3:45 PM Zou, Haibo*; Fan, Qi-Cheng; Zhang, Hongfu; Schmitt, Axel K.: URANIUM-SERIES DATING OF ZIRCONS FROM MULTIPLE ERUPTIONS OF THE CHANGBAI VOLCANO, CHINA/NORTH KOREA BORDER

47-7 4:15 PM Varekamp, Johan C.; Camfield, Lauren M.: EXCESS VOLATILES AT COPAHUE VOLCANO, ARGENTINA

47-8 4:30 PM Barnes, Calvin G.; Werts, Kevin; Barnes, Melanie A.: COMPLEX Magma MIXING IN THE LOWER CRUST RECORDED BY MAJOR AND TRACE ELEMENT ZONING IN HIGH-PRESSURE AMPHIBOLE: Klamath Mountain Province, Northern California

4:45 PM TOM SHEA CITATION
SESSION NO. 48

T159. Teasing New Information out of (Old) Zircon: In Honor of Dustin Trail, 2017 MSA Recipient (Mineralogical Society of America; Collaborative for Research in Origins (CRIO), the John Templeton Foundation–FfAME Origins Program)

1:30 PM, The Conference Center, Skagit 3

Stephen J. Mojzsis, E. Bruce Watson, Calvin F. Miller and T. Mark Harrison, Presiding

48-1 1:30 PM Carley, Tamara L.*; Miller, Calvin F.; Claiborne, Lily L.; Kelly, Nigel M.: ESTIMATING HADEAN MAGMA COMPOSITIONS USING IMPROVED ZIRCON/MELT KOS: COOL PETROGENESIS, ARCHEAN CONNECTIONS? (Invited Presentation)

48-2 1:50 PM Kelly, Nigel M.*; Metcalf, James R.; Flowers, Rebecca M.; Mojzsis, Stephen: NEW INFORMATION FROM OLD LUNAR ZIRCON – INTEGRATING U-PB AND (U-TH)/HE CHRONOMETRY

48-3 2:05 PM Bauer, Ann*; Horstwood, Matthew: SMALL-VOLUME LU-HF AND U-PB ISOTOPE DETERMINATION OF COMPLEX ZIRCONS BY SOLUTION AND LASER ABLATION MC-ICP-MS

48-4 2:20 PM Bell, Elizabeth Ann*; Boehnke, Patrick; Harrison, Mark; Wielicki, Matthew: MINERAL INCLUSION ASSEMBLAGE AND COMPOSITION FOR DETRITAL ZIRCON PROVENANCE (Invited Presentation)

2:40 PM BREAK

2:55 PM DISCUSSION

48-5 3:10 PM Kohn, Matthew J.*; Kelly, Nigel M.: ON THE TRAIL OF METAMORPHIC ZIRCON GROWTH (Invited Presentation)

48-6 3:30 PM Mojzsis, Stephen*; Greer, Jennika; Kelly, Nigel M.; Caro, Guillaume; Bleeker, W.: COMBINED ZIRCON MINERAL CHEMISTRY AND U-PB GEOCHRONOLOGY OF ARCHEAN GRANITOID GNEISSES AND SUPRACRUSTAL ENCLAVES OF THE SOUTHERN INUKJUAK DOMAIN, QUEBEC (CANADA)

48-7 3:45 PM Kent, Adam J.R.*; Cooper, Kari M.: CAN ZIRCONS REALLY RECORD THE THERMAL HISTORY OF MAGMAS?

48-8 4:00 PM Aleinikoff, John N.; Walsh, Gregory J.; McAleer, Ryan J.: ZIRCONOLOGY IN THE MARCY ANORTHOSITE, ADIRODACK MOUNTAINS, NY: DISTINGUISHING INHERITED, IGNEOUS, AND METAMORPHIC COMPONENTS

48-9 4:15 PM Robinson, Paul T.; Yang, Jingsui; Li, Jianwei; Duan, Zhang; Tian, Yazu; Huang, Zhu; Xiong, Fahu: THE TECTONIC SIGNIFICANCE OF (OLD) ZIRCON IN OCEANIC MANTEL PERIDOTITES AND CHROMITITES

4:30 PM BREAK

48-10 4:45 PM Frey, Holli M.*; Manon, Matthew R.F.; Kittross, Sarah; Brehm, Sarah; Babia, Rebecca; Pope, Mollie: THE ZIRCON RECORD IN DOMINICA: FROM SOUTH AMERICA TO EXPLOSIVE ERUPTIONS

48-11 5:00 PM Ayers, John C.*; Wang, Xiaomei; Katsiaficas, Nathan J.; Liu, Xiaoming: USE OF ZIRCON U-PB AGES AND BULK TRACE ELEMENT AND ND AND HF ISOTOPE COMPOSITIONS TO DETERMINE SOIL PROVENANCE IN A LIMESTONE TERRANE, MIDDLE TN, USA

48-12 5:15 PM Ackerson, Michael*; Mysen, Bjorn; Watson, E. Bruce: LOW-TEMPERATURE CRYSTALLIZATION OF QUARTZ IN GRANITIC ROCKS FROM THE TUOLUMNE INTRUSIVE SUITE
SESSION NO. 50
T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest II (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)

1:30 PM, The Conference Center, Chelan 4
Scott R. Beason, Paul Kennard and Claire E. Todd, Presiding

1:30 PM INTRODUCTORY REMARKS

50-1 1:35 PM Driedger, Carolyn L.∗; Schroedel, Richard; Lokey, William: HAZARD-MITIGATION PARTNERSHIPS EMERGE FIRST AT MOUNT RAINIER

50-2 1:50 PM Cartaya, Eduardo; Riggs, David; Cavendish, Tabitha∗; Florea, Lee J.; Piltsch, Andreas; Boston, Penelope J.: EXPLORATION AND STUDY OF THE GLACIER FUMAROLE CAVES IN THE SUMMIT CRATER OF MOUNT RAINIER, WASHINGTON STATE, U.S.A

50-3 2:05 PM Beyeler, Jonathan D.∗; Montgomery, David R.: COARSE SEDIMENT AGGRADATION EXACERBATED BY IN-CHANNEL WOOD ACCUMULATIONS ALONG HEADWATER REACHES OF THE CARBON AND NISQUALLY RIVERS WITHIN MOUNTAIN RAINIER NATIONAL PARK, WA

50-4 2:20 PM Hinshaw, Sarah∗; Kennard, Paul; Mauch, James; Beyeler, Jonathan; LOCATION, EVOLUTION, AND MOVEMENT OF SEDIMENT BULGES IN THE MUDY FORK OF THE COWLITZ RIVER, MOUNT RAINIER NATIONAL PARK

50-5 2:35 PM Magirl, Christopher S.∗; Czuba, Jonathan A.; Czuba, Christiana R.; Curran, Chris A.: SEDIMENT FROM MOUNTAIN RAINIER, WASHINGTON, USA: GENERATION, TRANSPORT, AND IMPACT ON DOWNSTREAM RIVERS

50-6 2:50 PM Czuba, Jonathan A.; Czuba, Christiana R.; Magirl, Christopher S.; Cui, Yantao: SIMULATED SPATIAL AND TEMPORAL EVOLUTION AND DOWNSTREAM EFFECT OF SEDIMENT PULSES IN RIVERS DRAINING MOUNT RAINIER, WASHINGTON (Invited Presentation)

3:10 PM BREAK

50-7 3:25 PM Anderson, Scott W.∗; Konrad, Christopher P.: TRANSLATING BED WAVES IN RESPONSE TO CLIMATE-DRIVEN VARIABILITY IN SEDIMENT SUPPLY FROM MOUNT BAKER, WASHINGTON STATE

50-8 3:40 PM Bard, Joseph A.: FINDING HIGH GROUND: SIMULATING AN EVACUATION UNDER THE THREAT FROM A LARGE LAHAR

50-9 4:00 PM George, David L.∗; Iverson, Richard M.; Cannon, Charles M.: MODELING THE DYNAMICS OF DEBRIS-AVALANCHE LAHARS THAT ORIGINATE ON CASCADE VOLCANOES

50-10 4:15 PM Abbe, Tim∗; Kennard, Paul; Diaz, Benjamin: GEOMORPHIC STUDY OF THE OHANAPECOSH RIVER: ESTIMATING ANADROMOUS FISH DISTRIBUTION UP TO 8,000 YA TO AID ARCHAEOLOGICAL INVESTIGATIONS, MOUNT RAINIER NATIONAL PARK

4:45 PM DISCUSSION

SESSION NO. 51
T191. Looking to the Past to Understand the Future: Glacial Chronology and Process (GSA Quaternary Geology and Geomorphology Division)

1:30 PM, The Conference Center, Chelan 2
Lee B. Corbett, Paul R. Bierman and P. Thompson Davis, Presiding

51-1 1:30 PM Shakun, Jeremy D.; Corbett, Lee B.; Bierman, Paul R.; Zimmerman, Susan H.: PLOIocene GREENLAND ICE SHEET GROWTH RECORDED BY IN SITU 10BE DECREASE IN MULTIPLE MARINE SEDIMENT CORES (Invited Presentation)

51-2 1:50 PM Spector, Perry∗; Stone, John O.; Hillebrand, Trevor R.; Gombiner, Joel H.: SELECTING ANTARTIC SITES FOR SUBGLACIAL BEDROCK RECOVERY TO TEST FOR PAST ICE SHEET COLLAPSE, AN EXAMPLE FROM THE PIRRIT HILLS

51-3 2:05 PM Corbett, Lee B.; Bierman, Paul R.; Neumann, Thomas A.; Graly, Joseph A.; Shakun, Jeremy D.; Caffee, Marc W.; Dunai, Tibor; Zimmerman, Susan H.: ANALYSIS OF THREE COSMOGENIC ISOTOPES IN SUBGLACIAL COBBLES HELPS UNRAVEL GREENLAND’S EXPOSURE AND EROSION HISTORY

51-4 2:20 PM Nair, Jennifer N.; Hoke, Gregory D.; Corbett, Lee B.; Bierman, Paul R.: THE COSMOGENIC ISOTOPE CONCENTRATION OF A DEVONIAN SANDSTONE AS MEASURE OF GLACIAL EROSION ON THE NORTHERN EDGE OF THE APPALACHIAN BASIN

51-5 2:35 PM Barth, Aaron M.; Marccot, Shaun A.; Horvath, Alex; Shakun, Jeremy D.; Licardi, Joseph M.: EARLY DEGLACIAL THINNING OF THE LAURENTIDE ICE SHEET FOLLOWED BY RAPID REGIONAL DEGLACIATION

51-6 2:50 PM Koester, Alexandria J.; Shakun, Jeremy D.; Bierman, Paul R.; Davis, P. Thompson; Corbett, Lee B.; Goehringer, Brent M.; Vickers, Anthony; Zimmerman, Susan H.: RAPID THINNING OF THE LAURENTIDE ICE SHEET AT MT. WASHINGTON, NH, DURING THE BOLLING WARMING, CONSTRAINTED BY ANALYSIS OF COSMOGENIC 10C AND 10BE

51-7 3:05 PM Young, Nicolas E.; Miller, Gifford; Briner, Jason P.; Schaefer, Joerg M.; Crump, Sarah E.; Lesnek, Alla J.; Pendleton, Simon L.: EARLY HOLOCENE EVOLUTION OF THE LAURENTIDE AND GREENLAND ICE SHEETS

3:20 PM BREAK

51-8 3:35 PM Balter, Alexandra∗; Bromley, Gordon; Balco, Greg; Thomas, Holly; Jackson, Margaret: A MIDDLE HOLOCENE THROUGH MIDDLE MIocene MORaine SEQUENCE IN THE CENTRAL TRANSANTARCTIC MOUNTAINS, ANTARCTICA

51-9 3:50 PM Ceperley, Elizabeth G.; Marcott, Shaun A.; Reusche, Melissa M.; Barth, Aaron M.; Brook, Edward J.; Mix, Alan C.; Caffee, Marc W.: DEGLACIATION OF NARES STRAIT AND WASHINGTON LAND, NORTHWEST GREENLAND

51-10 4:05 PM Stansell, Nathan D.; Licardi, Joseph M.; Rodbell, Donald T.; Mark, Bryan G.: OCEAN-ATMOSPHERIC FORCING OF LATE GLACIAL AND HOLOCENE GLACIER FLUCTUATIONS IN THE EASTERN AND WESTERN CORDILLERA OF THE TROPICAL PERUVIAN ANDES

51-11 4:20 PM Miller, Gifford H.; Pendleton, Simon L.; Litton, Nathaniel A.; Lehman, Scott; Souton, John: THE DEAD SPEAK: TRACKING THE CRYOSPHERIC RESPONSE TO CONTEMPORARY WARMING IN ARCTIC CANADA WITH ENTOIMBED VEGETATION AND IN SITU 10C IN ADJACENT ROCKS (Invited Presentation)

51-12 4:40 PM Flowers, Gwenn E.; Gilbert, Adrien; Miller, Gifford H.: REMNANT OF THE ICE AGE MEETS 21ST CENTURY CLIMATE: MODELING OF THE FORM, FLOW, AND
SUNDAY PM 52-11 4:15 PM Voorheis, Brennan M.*; Farthing, Dori J.:
52-10 3:45 PM Speir, Laura E.*; Bassett, Damon J.:
52-9 3:30 PM Thatcher, Sean*:
52-8 3:15 PM Dolcimascolo, Alexander*; Hollocher, Kurt; Frey, Holli M.:
52-7 2:45 PM Zhang, Tianran*; Williams, Shaun P.; Chagué, Catherine; Hampton, Samuel J.; Borella, Josh W.; Merriman, Jesse: GEOCHEMICAL CHARACTERISTICS OF DEPOSITS LAID DOWN BY THE 2016 KAIAKURA TSUNAMI AT LITTLE PIGEON BAY, NEW ZEALAND
3:00 PM BREAK
52-6 2:45 PM Zhou, Tianran*; Williams, Shaun P.; Chagué, Catherine; Hampton, Samuel J.; Borella, Josh W.; Merriman, Jesse: GEOCHEMICAL CHARACTERISTICS OF DEPOSITS LAID DOWN BY THE 2016 KAIAKURA TSUNAMI AT LITTLE PIGEON BAY, NEW ZEALAND
3:00 PM BREAK
52-7 3:15 PM Dolcimascolo, Alexander*; Hollocher, Kurt; Frey, Holli M.: UNION COLLEGE TESTS FOR HEAVY METAL CONTAMINANTS IN DRINKING WATER (Invited Presentation)
52-8 3:30 PM Thatcher, Sean*: COASTAL STABILITY ON THE EASTERN AND SOUTHERN COASTLINES OF SATEEN ISLAND, NEW YORK
52-9 3:45 PM Speir, Laura E.*; Bassett, Damon J.: HIGH-RESOLUTION CONDONOT BIOSTRATIGRAPHY OF THE EARLY CARBONIFEROUS, TOURNAISIAN STAGE, CHESNUT RIDGE SECTION IN SOUTHWEST MISSOURI
52-10 4:00 PM Miles, Maraina*; Burkhart, Patrick; Baldauf, Paul: A SYNTHESIS OF HOLOCENE CLIMATE PROXY RECORDS, NORTHERN AND CENTRAL GREAT PLAINS, USA
52-11 4:15 PM Voorheis, Brennan M.*; Farthing, Dori J.: UTILIZING REFLECTANCE SPECTROMETRY TO DEFINE THE HUE, VALUE, AND CHROMA OF COLORS
52-12 4:30 PM Elmore, Stephanie Nicole*: THE ALPINE, TEXAS EARTHQUAKE OF 1995

SESSION NO. 53

T197. No Dates: No Rates—Utilizing Geochronometers to Quantify Rates of Geomorphic Processes or Archaeological Development over a Wide Range of Temporal and Spatial Scales (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Karst Division)
1:30 PM, Washington State Convention Center, Room 3B
Shannon A. Mahan, Ronald Counts, James K. Feathers, Amanda Kean-Zebert, Kenneth Lepper, Michelle Summa Nelson, Christina Neudorf and Joel Q.G. Spencer, Presiding
53-1 1:30 PM Morgan, Daniel*; Balco, Greg; Cribb, Alison; Cribb, J. Warner, Doane, Tyler; Sams, Sarah E.; Forbush, David J.; Roering, Joshua: SEDIMENT ACCUMULATION RATES QUANTIFIED WITH COSMOGENIC NEON-21 ON A GLACIAL MORAINE, BLOODY CANYON, CA
53-2 1:45 PM Schmidt, Amanda H.*; Bierman, Paul R.; Sosa-Gonzalez, Veronica; Neidson, Thomas B.; Rood, Dylan H.; Campbell, Mary K.; Hill, Marcus: TRACERS DERIVED IN SITU REPPLICATE AND MIX BETTER THAN FALLOUT TRACERS INCORPORATED INTO GRAIN COATINGS (Invited Presentation)
53-3 2:05 PM Paces, James B.*; Hulen, Steven R.; Deméré, Thomas A.: DATING THE CERUTTI MASTODON: U-TH ISOPO ANALYSES OF BONE TO DERIVE A 130-KA AGE SUPPORTING AN EARLY HOMININ SITE IN THE AMERICAS
53-4 2:20 PM Loewy, Staci L.*; Valdes, Jessica; Yanny, Sierra J.W.; De La Cruz, Karla; Banner, Jay L.; Kappelmann, John; Todd, Lawrence: MORE ACCURATE U-TH AGES OF OSTRICH EGGSHELLS (OES) WITH IMPROVED SAMPLE PROCESSING
53-5 2:35 PM Feathers, James K.*; Moore, Christopher R.: LUMINESCENCE DATING ON THE ATLANTIC COASTAL Plain of the Southeastern United States
53-6 2:50 PM Garcia, Antonio F.*; Dean, Daniel; Mahan, Shannon A.: DEDUCING GEOMORPHIC PROCESS AND THE CHARACTER OF PALEOClimATE FROM SURFICIAL GEOLOGY AND GEOCHRONOLOGY BASED ON OPTICALLY STIMULATED LUMINESCENCE (OSL) DATING (Invited Presentation)
3:10 PM BREAK
53-7 3:25 PM Neudorf, Christina M.*; Lian, Olav B.; Biln, Libby C.M.; Bryce, Jordan K.; Eamer, Jordan B.R.; Smith, Nicole; Shugar, Dan H.; Walker, Ian J.; Clague, John: OPTICAL DATING SEDIMENTS FROM COASTAL BRITISH COLUMBIA: SUCCESSES, CHALLENGES, AND PLANS FOR THE FUTURE
53-8 3:40 PM Rader, Mikaela A.*; Spencer, Joel Q.G.; Fitzgerald, Victoria T.: INVESTIGATION OF PHYTOLITHS AS AN OSL CHRONOMETER: CAN PHYTOLITHS BE USED AS A VIABLE TOOL TO DETERMINE SEDIMENTARY DEPOSITIONAL AGE?
53-9 3:55 PM Rodrigues, Kathleen*; Keen-Zebert, Amanda; Huot, Sebastian; Adams, Ken: TESTING THE POTENTIAL OF THERMOLUMINESCENCE DATING OF VOLCANIC GLASS WITH KNOWN-AGE SAMPLES
53-10 4:10 PM Ideker, Carlie J.*; Finley, Judson Byrd; Rittenour, Tammy; Nelson, Michelle: ILLUMINATING THE PAST: UTILIZING SINGLE-GRAIN OSL TO DATE PREHISTORIC INTERMOUNTAIN WARE CERAMICS FROM NORTHEASTERN WYOMING, USA

SESSION NO. 52

T195. Undergraduate Research Talks: The Next Step in Student Research Projects (GSA Geoscience Education Division; GSA Geoinformatics Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Hydrogeology Division; GSA Limnogeology Division; GSA Archaeological Geology Division; GSA Karst Division)
1:30 PM, The Conference Center, Chelan 5
Jacqueline A. Smith, Bradley G. Johnson and Edward C. Hansen, Presiding
52-1 1:30 PM Samuelson, Willa Jean*; Whitney, Donna L.: CRYSTALLIZATION SEQUENCE AND TECTONIC SIGNIFICANCE OF ANDALUSITE, KYANITE, AND SILIMILANITE “TRIPLE POINT” LOCALITIES (Invited Presentation)
52-2 1:45 PM Young, Pinkie L.*; Rusmore, Margaret E.; Woodworth, Glenn J.; Cecil, M. Robinson; Stowell, Harold H.: NEW AL-IN-HORNBLende CRYSTALLIZATION PRESSURES FROM THE SOUTHERN COAST MOUNTAINS BATHOLITH, BRITISH COLUMBIA
52-3 2:00 PM Roy, Derick*; Whittington, Alan G.; Hofmeister, Anne; Merriman, Jesse: NON-MAGMATIC THERMAL EFFECTS OF INTRUSIONS
52-4 2:15 PM Brock, Jonathan E.*; Holmes, Ann E.: EVIDENCE FOR A REINSTATEMENT OF THE DIXON HILL MEMBER TO THE GROTTO BEACH FORMATION, SAN SALVADOR, BAHAMAS
52-5 2:30 PM Smith, Everett*; Daniller-Varghese, Max; Mohring, David; Myrow, Paul; Buttle, James; Prakocki, Eric; Kim, Junwoo: DEPOSITING COMBINED-FLOW TURBIDITES BELOW WAVE BASE: EXPERIMENTAL EVIDENCE FOR TELECONNECTION OF SURFACE WAVES AND THE DEEP SEAFOOT BY TURBIDITY CURRENTS
52-6 2:45 PM Zhang, Tianran*; Williams, Shaun P.; Chagué, Catherine; Hampton, Samuel J.; Borella, Josh W.: GEOCHEMICAL CHARACTERISTICS OF DEPOSITS LAID DOWN BY THE 2016 KAIAKURA TSUNAMI AT LITTLE PIGEON BAY, NEW ZEALAND
3:00 PM BREAK
52-7 3:15 PM Dolcimascolo, Alexander*; Hollocher, Kurt; Frey, Holli M.: UNION COLLEGE TESTS FOR HEAVY METAL CONTAMINANTS IN DRINKING WATER (Invited Presentation)
52-8 3:30 PM Thatcher, Sean*: COASTAL STABILITY ON THE EASTERN AND SOUTHERN COASTLINES OF SATEEN ISLAND, NEW YORK
52-9 3:45 PM Speir, Laura E.*; Bassett, Damon J.: HIGH-RESOLUTION CONDONOT BIOSTRATIGRAPHY OF THE EARLY CARBONIFEROUS, TOURNAISIAN STAGE, CHESNUT RIDGE SECTION IN SOUTHWEST MISSOURI
52-10 4:00 PM Miles, Maraina*; Burkhart, Patrick; Baldauf, Paul: A SYNTHESIS OF HOLOCENE CLIMATE PROXY RECORDS, NORTHERN AND CENTRAL GREAT PLAINS, USA
52-11 4:15 PM Voorheis, Brennan M.*; Farthing, Dori J.: UTILIZING REFLECTANCE SPECTROMETRY TO DEFINE THE HUE, VALUE, AND CHROMA OF COLORS

Sunday, 22 October 2017
SESSION NO. 54

T202. Experimental Planetary Geology: Using Laboratory and Other Experiments to Advance Our Understanding of Geology on Planetary Bodies (GSA Planetary Geology Division; GSA Geophysics Division; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Tahoma 1
Devin M. Burr and Danielle Wyrick, Presiding

1:30 PM INTRODUCTORY REMARKS

54-1 1:35 PM Dyar, M. Darby*; Helbert, Jörn; Maturilli, Alessandro; Ferrari, Sabrina; Müller, Nils; Smrekar, Suzanne: EMISSIVITY MEASUREMENTS FOR HOT PLANETARY SURFACES

54-2 1:50 PM McCubbin, Francis M.*; Barnes, Jessica J.; Vander Kaaden, Kathleen E.; Boyce, Jeremy W.; Ustenisik, Gokce; Whitson, Eric S.: EXPERIMENTAL CONSTRAINTS ON THE PARTITIONING BEHAVIOR OF F, CL, AND OH BETWEEN APATITE AND BASALTIC MELT

54-3 2:05 PM Barnes, Jessica J.*; Thompson, Michelle; McCubbin, Francis M.; Boyce, Jeremy W.; Messenger, Scott R.; Rahman, Zia; Keller, Lindsay P.; Zega, Tom: COORDINATED MICROANALYSIS OF THE CHEMICAL COMPOSITION, MICROSTRUCTURE, AND VOLATILE INVENTORY OF APATITE IN HIGH-TI MARE BASALTICS FROM THE MOON

54-4 2:20 PM Hsu, Leslie*: THE SEDIMENT EXPERIMENTALIST NETWORK (SEN): ADVANCING THE TRANSPARENCY AND REPRODUCIBILITY OF LABORATORY EXPERIMENTS (Invited Presentation)

54-5 2:40 PM Wyrick, Danielle Y.; Patterson, Ruby V.; Murphy, Ashley; Baillie, Rachel: THE ROLE OF GRAIN SHAPE IN REGOLITH PROCESSES: EXPERIMENTAL RESULTS

54-6 2:55 PM Patterson, Ruby V.*; Wyrick, Danielle Y.; Murphy, Ashley; Baillie, Rachel: GEOMECHANICAL TESTING OF REGOLITH SIMULANTS

3:10 PM BREAK

54-7 3:25 PM Byrne, Paul K.*; Wyrick, Danielle Y.: SCALED ANALOG MODELING AS A POWERFUL TOOL FOR EXPERIMENTAL PLANETARY GEOLOGY (Invited Presentation)

54-8 3:45 PM Gross, Juliane*; Klaser, Michael; Tindall, Sarah: JUPITER’S MOON EUROPA: NEW INSIGHTS INTO GIBAL RESURFACING PROCESSES AND PLANETARY ICE TECTONICS FROM PHYSICAL EXPERIMENTS (Invited Presentation)

54-9 4:00 PM Hanley, Jennifer*: SPECTRAL, GEOCHEMICAL, AND GEOPHYSICAL LABORATORY STUDIES RELEVANT TO PLANETARY GEOLOGY (Invited Presentation)

54-10 4:20 PM Thelting, Bethany P.*; Major, Jonathan D.: ISOTOPIC MIXING MODELS OF EUROPA SEAWATER BRINES FROM LABORATORY SIMULATIONS

54-11 4:35 PM Levy, Joseph; Burr, Devon M.*; Maue, Anthony D.*: THE TITAN TUMBLER: INITIAL RESULTS FROM LABORATORY SIMULATION OF ICY SEDIMENT COMMINUTION AND ROUNDING

54-12 4:50 PM Schultz, Peter H.*: DETERMINING IMPACTOR CONDITIONS FROM OBLIQUE IMPACTS: INSIGHTS FROM EXPERIMENTS

SESSION NO. 55

T224. Multi-Proxys for Large-Scale Translation and Vertical Strain along Active and Ancient Strike-Slip Fault Systems (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Tahoma 3
Jeff Benowitz, Jeremy Hourigan and Paul J. Umhoefer, Presiding

1:30 PM INTRODUCTORY REMARKS

55-1 1:35 PM Mcdermott, Robert G.*; Ault, Alexis K.; Caine, Jonathan Saul; Reiners, Peter W.; Thomson, Stuart N.: EVOLUTION OF EXHUMATION FROM MULTI-METHOD THERMOCHRONOMETRY IN THE EASTERN KLUGE RANGES, YUKON, CANADA

55-2 1:50 PM Schartman, Anna*; Einkemlmann, Eva; Garver, John I.; Davidson, C.: TEMPORAL AND SPATIAL PATTERN OF DEFORMATION AT THE NORTHERN END OF THE FAIRWEATHER TRANSFORM BOUNDARY, SOUTHEAST ALASKA

55-3 2:05 PM Fitzgerald, Paul G.*; Benowitz, Jeffrey A.; Ridgway, Kenneth D.; Wartel, Thomas S.; Allen, Wai K.: THE ROLE OF TERRANE RHEOLOGY VS FAULT GEOMETRY FOR MOUNTAIN FORMATION AND EXHUMATION ALONG THE DENALI FAULT OF SOUTH-CENTRAL ALASKA


55-5 2:35 PM Reitmabn, Nadine G.*; Wang, Yu; Lin, Nina; Lindsey, Eric; Mueller, Karl: INSAR TIME SERIES ANALYSIS OF DEXTRAL STRAIN PARTITIONING ACROSS THE BURMA PLATE


55-7 3:10 PM Blisniuk, Kimberly*; Fosdick, Julie C.; Balco, Greg; Stone, John O.: RE-EVALUATING FAULT ZONE EVOLUTION, GEOMETRY, AND SLIP RATE ALONG THE RESTRAINING BEND OF THE SOUTHERN SAN ANDREAS FAULT ZONE (Invited Presentation)

55-8 3:30 PM BREAK

55-9 4:05 PM Bar, Neta*: Steely, Alex N.; Brandon, Mark T.; Hourigan, Jeremy: MODE OF DEFORMATION ASSOCIATED WITH RISE OF THE SANTA LUCIA RANGE, AS CONSTRAINED BY NEW THERMOCHEMNOLOGIC DATA AND THERMOKINEMATIC MODELING

SESSION NO. 56

T226. New Perspectives on Processes of Subduction Initiation and Termination (GS A Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geophysics Division)

1:30 PM, The Conference Center, Tahoma 4

Sarah Roeske, Nancy Riggs, Susanne Buter and Douwe van Hinsenberg, Presiding

1:30 PM INTRODUCTORY REMARKS

56-1 1:35 PM Billen, Magali I.*: A SYNTHESIS OF RECENT RESULTS FROM GEO_DYNAMIC MODELS OF SUBDUCTION INITIATION AND TERMINATION (Invited Presentation)


2:15 PM DISCUSSION

56-3 2:25 PM Encarnacion, John*: Keenan, Timothy E.: CONSTRAINTS ON SUBDUCTION INITIATION FROM PROTOLITH AND METAMORPHIC AGES OF METAMORPHIC SOLES

56-4 2:40 PM Stewart, Eric D.; Newman, Julie*; Tikoff, Basil; Miller, Brent; Lamb, William M.; German, Lindsey: MANTEL DEFORMATION RECORDING SUBDUCTION INITIATION, RED HILLS, NEW ZEALAND

56-5 2:55 PM Coulthard, Daniel A.; Reagan, Mark K.; Almeve, Renat; Pearce, Julian A.; Ryan, Jeffrey; Sakuyama, Tetsuya; Shervais, J.W.; Shimizu, Kenji: FORE-ARC BASALT TO BONINITE MAGMATISM: CHARACTERIZING THE TRANSITION FROM DECOMPRESSION TO FLUID FLUX MELTING AFTER SUBDUCTION INITIATION

3:10 PM COFFEE BREAK

56-6 3:25 PM Cecil, M. Robinson*; Ferrer, Mary Ann; Riggs, Nancy R.; Marsaglia, Kathleen: PERMIAN MAGMATISM IN THE NORTHERN MOJAVE REGION AND CONSTRAINTS ON THE TIMING AND TECTONICS OF SUBDUCTION INITIATION ALONG THE SOUTHWEST LAURENTIAN MARGIN (Invited Presentation)

56-7 3:45 PM Lodes, Emma*; Riggs, Nancy; Stone, Paul; Reynolds, Stephen J.: SEDIMENTATION AND GEOCHRONOLOGY OF PERMIAN STRATA, INYO MOUNTAINS, CA, AND RELATION TO ONSET OF SUBDUCTION

56-8 4:00 PM Riggs, Nancy R.*; Reynolds, Stephen J.; Cecil, M. Robinson; Sanchez, Taylor B.; Barth, Andrew P.: SOUTHWEST LAURENTIAN LOWER-MIDDLE TRIASSIC SEDIMENTARY STRATA AND THE RECORD OF EARLIEST CORDILLERAN ARC MAGMATISM

56-9 4:15 PM Fowler, Gary D.*; Farris, David W.: MANTEL INFLUENCES ON MIOCENE MAGMATISM IN CENTRAL PANAMA

56-10 4:30 PM Tate, Garrett W.*; McQuarrie, Nadine; Tiranda, Herwin; van Hinsbergen, Douwe J.J.; Harris, Ron; Zacheriasse, Willem Jan; Fellin, Maria Giuditta; Reiners, Peter W.; Willett, Sean D.: SYNCHRONOUS LATE MIocene ARC-CONTINENTAL COLLISION ACROSS TIMOR: FIELD CONSTRAINTS ON PLATE BOUNDARY REORGANIZATION

SESSION NO. 57 $

T228. Origin, Accretion, and Translation of Mesozoic-Cenozoic Terranes along the Pacific Margin of North America (GS A Structural Geology and Tectonics Division)

1:30 PM, The Conference Center, Tahoma 4

David T. Katoody, Mark T. Brandon and Bernard Housen, Presiding

57-1 1:30 PM Mihalynuk, Mitchell G.*; Sigloch, Karin: TOMOTECTONIC CONSTRAINTS ON ASSEMBLY OF CORDILLERAN NORTH AMERICA SINCE PANGAEA BREAKUP (Invited Presentation)

57-2 1:45 PM Rarefoot, John*: Nadine, Elisabeth S.; Newberry, Rainer: ROCK AND AGE RELATIONSHIPS OF THE TALKEETNA FOREARC SUBDUCTION COMPLEX IN THE NELCHINA AREA, SOUTHERN ALASKA

57-3 2:00 PM Mitchell, Ross*: Ward, Peter D.: INTRAFORMATIONAL CLASTIC DIKES OF THE UPPER CRETACEOUS NANAIMO GROUP (BRITISH COLUMBIA, CANADA): EVIDENCE FOR TERRANE DOCKING

57-4 2:15 PM Boivin, Marie-Pier*: Matthews, William A.; Guest, Bernard; Hubbard, Stephen M.: REFINING THE PROVENANCE OF THE NANAIMO BASIN, BRITISH COLUMBIA, CANADA BY LA-ICP-MS DEPTH PROFILING


57-6 2:45 PM Cordova, Jeremy L.*; Schermer, Elizabeth; Mulcahy, Sean R.; Webb, Laura E.: INITIATION AND EARLY EVOLUTION OF A SUBDUCTION ZONE: TTO HISTORY OF THE EASTON METAMORPHIC SUITE, NORTHWEST WASHINGTON STATE

3:00 PM BREAK

57-7 3:15 PM Dorsev, Malcolm S.*; Matthews, William A.; Guest, Bernard: TESTING THE CORRELATION OF ROCKS EAST AND WEST OF THE HARRISON LAKE SHEAR ZONE USING DETRITAL ZIRCON GEOCHRONOLOGY

57-8 3:30 PM Davis, Peter*: Stubbs, Michael: PERSPECTIVE ON LATERAL TERRANE TRANSLATION FROM SYNTECTONIC EMBEDMENT OF THE HICKS BUTTE PLUTON IN THE CENTRAL CASCADES OF WASHINGTON STATE


57-10 4:00 PM Johnston, Scott M.*; Jacobson, C.E.; Chapman, Alan D.; Kylander-Clark, Andrew: NEW CONSTRAINTS ON MODELS FOR FOREARC SHORTENING ALONG THE SUR–NACIMIENTO FAULT, CENTRAL CALIFORNIA COAST

4:15 PM BREAK

57-11 4:30 PM Attia, Snir*: Paterson, Scott R.; Saleeby, Jason; Chapman, Alan D.: NATIVE MESOZOIC SIERRA NEVADA ARC
SESSION NO. 58

T236. Characterizing Cascadia’s Earthquakes—Reexamining Open Questions about Cascadia Seismic and Tsunami Hazards (GSA Geophysics Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division)

1:30 PM, The Conference Center, Yakima 1

Robert C. Witter, Lydia Staisch and Joan Gomberg, Presiding

58-1  1:30 PM
Engelhart, Simon E.*; Cahill, Niamh; Hawkes, Andrea; Horton, Benjamin P.; Kemp, Andrew C.; Milker, Yvonne; Nelson, Alan R.; Padgett, J. Scott; Wang, Kelin; Witter, Robert C.: THE TIMING AND DEFORMATION OF CASCADIA SUBDUCTION ZONE EARTHQUAKES FROM COASTAL MARSH RECORDS OF OREGON (Invited Presentation)

58-2  1:50 PM
O’Donnell, Robert J.*; Hawkes, Andrea D.; Lane, Chad S.; Engelhart, Simon E.; Horton, Benjamin P.; Bobrowsky, Peter; Sawai, Yuki; Witter, Robert C.; Nelson, Alan R.; Tanigawa, Koichiro: ASSESSING THE UTILITY OF U-Pb AND BULK GEOCHEMISTRY IN ESTUARIES ALONG THE CASCADIA SUBDUCTION ZONE FOR COASTAL PALEOSEISMOLOGY

58-3  2:05 PM
Garrison-Laney, Carrie*: THE CASCADIA SUBDUCTION ZONE EARTHQUAKE(S) FROM ABOUT 600 CAL YR BP: A FULL SUBDUCTION ZONE RUPTURE, A SERIES OF RUPTURES, OR A NORTHERN SEGMENT RUPTURE?

58-4  2:20 PM
Dura, Tina*: Horton, Benjamin P.; Milker, Yvonne; Wang, Kelin; Bridgeland, W.T.; Brophy, Laura; Ewald, M.; Khan, Nicole S.; Engelhart, Simon E.; Nelson, Alan R.; Witter, Robert C.: MICROFOSSIL MEASURES OF SUBSIDENCE DURING PAST PLATE-BOUNDARY EARTHQUAKES: THEIR ACCURACY REVEALED BY A SUDDEN TIDAL-FLOODING EXPERIMENT IN CASCADIA

58-5  2:35 PM

58-6  2:50 PM
Patton, Jason Robert*: Leroy, Thomas H.; Williams, Todd Brian; Hempfling-Hailey, Mark A.; McPherson, Robert; Anderson, Jeffrey K.: PERPLEXING RECORDS OF COSEISMIC SUBSIDENCE: EVALUATION OF SOURCES FOR COSEISMIC SUBSIDENCE IN THE SOUTHERN CASCADIA SUBDUCTION ZONE, NORTHERN CALIFORNIA

58-7  3:05 PM
BREAK

58-8  3:20 PM

SESSION NO. 59


1:30 PM, The Conference Center, Skagit 5

Peter Bobrowsky, David H. Huntley, Michael Hendry and Renato Macciotta, Presiding

59-1  1:30 PM
INTRODUCTORY REMARKS

59-2  1:45 PM
Falorni, Giacomo*: Baldeon, Geidy; Rucci, Alessio: ADVANCES IN INSAR LEADING TO CONTINUOUSLY UPDATED GROUND DEFORMATION MEASUREMENTS

59-3  2:00 PM
Macciotta, Renato*: Martin, Derek; Stewart, Tom; Marsh, Julia: CHALLENGES OF DEPLOYING GROUND-BASED INSAR IN NORTHERN REMOTE AREAS IN CANADA

59-4  2:30 PM
Bouali, El Hachemi Y.*; Oommen, Thomas; Escobar Wolf, Rubidger: SLOW LANDSLIDE IDENTIFICATION USING INSAR TO UPDATE THE CALIFORNIA LANDSLIDE INVENTORY ON THE PALOS VERDES PENINSULA

59-5  2:45 PM
Giordan, Daniele*: Lollino, Giorgio; Allasia, Paolo; Wrzesniak, Aleksandra: RECENT ADVANCES IN LANDSLIDE MONITORING: FROM TERRESTRIAL REMOTE SENSING APPLICATIONS TO MONITORING RESULTS DISSEMINATION

59-6  3:00 PM
DISCUSSION

59-7  3:15 PM
BREAK

59-8  3:30 PM
Tofani, Veronica*: Catani, Filippo; Casagli, Nicola: FIELD PARAMETRIZATION FOR REGIONAL PHYSICALLY BASED LANDSLIDE EARLY WARNING MODELS

59-9  3:45 PM
Keaton, Jeffrey R.*; Roth, Richard J.: WHAT IS NEEDED FOR SLOPE MONITORING TO INFORM LOSS MODELS IN MEANINGFUL TERMS?

59-10  4:00 PM
De Graff, Jerome V.*: REAL-TIME MONITORING FOR EMERGENCY RESPONSE: THE CONUNDRUM OF ACTION THRESHOLDS

59-11  4:15 PM
Legorreta Paulin, Gabriela*: Bursik, Marcus I.; Contreras, Trevor; Polenz, Michael: AN OVERVIEW OF A GIS METHOD FOR LANDSLIDE MAPPING, ASSESSING LANDSLIDE SUSCEPTIBILITY, AND ESTIMATION OF
SESSION NO. 60

T249. New Voices in Geobiology II (GSA Geobiology & Geomicrobiology Division; GSA Karst Division)
1:30 PM, Washington State Convention Center, Room 602/603
Victoria A. Petryshyn, Marc Lalanne, Lydia S. Tackett, Rowan C. Martindale, Simon A.F. Darroch and Carie M. Frantz, Presiding

60-1 1:30 PM Huang, Tianzheng*; Sun, Yuanlin; Zhao, Zhouqiao; Li, Chao; Zhao, Hong; Nie, Ting; Xu, Jizhuang; Shen, Bing: RECONSTRUCTION THE WEATHERING DURING THE EARLY DEVELOPMENT OF VOLCANIC LANDPLANTS

60-2 1:45 PM Barclay, Richard S.*; Soul, Laura C.; Bolton, Amy; Wilson, Jonathan P.; Megonigal, J. Patrick; Wing, S.L.: FOSSIL ATMOSPHERES: AN ELEVATED CO2 EXPERIMENT UTILIZING OPEN-TOP CHAMBERS TO EVALUATE THE GINKGO PALEO-CO2 BAROMETER

60-3 2:00 PM Telus, Rose G.*; Schubert, Brian A.: IDENTIFICATION OF EXTREME RAINFALL EVENTS USING HIGH-RESOLUTION CARBON ISOTOPE MEASUREMENTS ACROSS TREE-RINGS

60-4 2:15 PM Srivastava, Shreya*; Dong, Haiilang; Briggs, Brandon R.: EFFECT OF MOLYBDENUM AND ENVIRONMENTAL FACTORS ON ABUNDANCE AND TAXONOMIC AFFILIATION OF GENES THAT TRANSPORT OR USE MO

60-5 2:30 PM Wittkop, Chad*; Swanner, Elizabeth; Lambrecht, Nicholas; Katsev, Sergei; Grengs, Ashley; Widman, Duncan: CONTROLS ON IRON- AND MANGANESE-MINERAL SOLUBILITY IN FERRUGINOUS LAKES

60-6 2:45 PM Fournier, Gregory P.*: ESTABLISHING STRATIGRAPHIC PRINCIPLES OF MICROBIAL GENOME EVOLUTIONARY HISTORY

60-7 3:00 PM Silverman, Shaelyn N.*; Kopf, Sebastian; Som, Sanjoy; Bebout, Brad M.; Gordon, Richard: MEASURING N2 PRESSURE USING CYANOBACTERIA

60-8 3:15 PM Masiello, Caroline A.*; Silberg, Jonathan J.; Cheng, Hsiao-Ying; Del Valle, Ilene; Fulk, Emily; Gao, Xiaodong; Bennett, George: SPIES AND BLOGGERS: NEW SYNTHETIC BIOLOGY TOOLS TO UNDERSTAND MICROBIAL PROCESSES IN THE EARTH SYSTEM

60-9 3:30 PM Silverman, Shaelyn N.*; Kopf, Sebastian; Som, Sanjoy; Bebout, Brad M.; Gordon, Richard: MEASURING N2 PRESSURE USING CYANOBACTERIA

60-10 3:45 PM Wawrusek, Karen*; Drogos, Donna; Urynowicz, Michael; Nye, Charles; Quilliman, Scott: MICROBIAL COMMUNITIES IN OIL AND GAS PRODUCED WATER OF THE POWDER RIVER AND GREEN RIVER BASINS IN WYOMING

60-11 4:00 PM Som, Sanjoy*; Rempert, Kaitlin; Hoehler, Tori M.; Templeton, Alexis S.: SIMULATED HYDROGEN CONCENTRATIONS IN LOW-TEMPERATURE TYPE I AND TYPE II SERPENTINIZED FLUIDS PREDICTED FROM MEASURED SOURCE WATERS AT THE OMANI OPHIOLITE

60-12 4:20 PM Enright, Allison*; Parsons, Chris; Glamoclija, Mihaela: LONG-RANGE TIME DOMAIN CORRELATION: AN EMERGING BIOGEOCHEMICAL SYSTEM

SESSION NO. 61

P1. The Changing Face of Geoscience in the 21st Century: Increasing Diversity and Inclusion to Solve Complex Problems (GSA Geology and Society Division; GSA Committee on Diversity in the Geosciences; Earth Science Women’s Network; International Association for Geoscience Diversity; Geoscience Alliance; Association for Women Geoscientists)
2:00 PM, Washington State Convention Center, Ballroom 6A
Barbara P. Nash and Carol B. de Wet, Presiding

61-1 2:00 PM WELCOME AND INTRODUCTION BY GSA PRESIDENT ISABEL MONTANEZ

61-2 2:10 PM Taylor, Dorecta*: WHY DIVERSITY? KEYNOTE PRESENTATION

61-3 2:35 PM BREAK

61-4 2:50 PM HOW DIVERSITY? KEYNOTE PRESENTATION

61-5 3:05 PM HOW DIVERSITY? MODERATOR MARILYN SUITER: PANELISTS INCLUDE SUZANNE O’CONNELL; LISA WHITE; CHRISTOPHER ARCHISON

61-6 3:20 PM TAKE HOME MESSAGE

61-7 3:35 PM CONCLUDING REMARKS

SESSION NO. 62

T217. Challenges in Tectonics: Synergies between Meeting Societal Needs and Advancing Interdisciplinary Research in Tectonics and Structural Geology (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)
3:45 PM, The Conference Center, Tahoma 2
Kim Blisniuk, Richard W. Briggs, Frederick M. Chester, Alison R. Duvall, Peter Eichhubl and Katharine Huntington, Presiding

62-1 3:45 PM INTRODUCTORY REMARKS

62-2 3:50 PM Eichhubl, Peter*; Laubach, Stephen E.: STRUCTURAL DIAGENESIS OF NATURAL FRACTURES: IMPLICATIONS FOR WATER, ENERGY, ENVIRONMENT, AND HAZARDS

62-3 4:05 PM Osmond, Johnathon L.*; Hennings, Peter H.: DIGITAL FAULT DATA COLLECTION METHODS AND 3D SUBSURFACE MODELING WORKFLOWS USED FOR INDUCED SEISMICITY RESEARCH IN THE FORT WORTH BASIN, TEXAS

62-4 4:20 PM Bilham, Roger*; Bendick, Rebecca: A FIVE YEAR FORECAST FOR INCREASED GLOBAL SEISMIC HAZARD (Invited Presentation)

62-5 4:35 PM Witter, Robert C.*; Butler, Robert F.; Suleiman, Elana; Nicholas, Dmitry; West, Michael E.; Witter, Jennifer P.; Belanger, Dan; Fremeuiller, Jeffrey; Kelly, Laura; Pratt-Sitaula, Beth; Smith, Ted; Wood, Nathan J.: SYNERGY IN TSUNAMI SCIENCE AND OUTREACH TO BUILD RESILIENT COMMUNITIES IN ALASKA (Invited Presentation)
SESSION NO. 63

T196. Advances in Geoarchaeology (Posters) (GSAP. Archaeological Geology Division; GSAP. Soils and Soil Processes Interdisciplinary Interest Group; GSAP. Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

63-1 1 Fadem, Cynthia M.; Dongol, Anisha*; Egeland, Charles; Dominguez Rodrigo, Manuel: ONGOING TOPP GEOARCHAEOLOGICAL INVESTIGATIONS AT OLDUVAI GORGE, TANZANIA

63-2 2 Murray, Bridget M.*; Ranhorn, Kathryn L.; Colarossi, Debra; Mavuso, Silindokhule S.; Dogandzic, Tamara; Ziegler, Michael J.; Warren, Shannon L.; Braun, David R.; Harris, John W.K.: MULTISCALAR APPROACH TO ARCHAEOLOGICAL SITE FORMATION AT GAJU17, EAST JUKAGIRI, KENYA

63-3 3 Buck, Paul E.*; Sabol, Donald Edwin: SUB PIXEL DETECTION OF OBSIDIAN AND POTTERY BY NASA SATELLITE AND AIRCRAFT DATA

63-4 4 Day, Stephanie S.*: UNSUPERVISED CLASSIFICATION TO IDENTIFY SETTLEMENT AREAS IN AMERICAN SAMOA

63-5 5 Gates, David J.*: GEOPHYSICAL AND GEOLOGICAL SURVEY OF TEL SHIMRON, ISRAEL

63-6 6 Kopcznski, Karen A.*; Buynevich, Ilya V.; Rankin, Jennifer; Perry, Gabrielle; Stewart, Michael; West, Logan A.; Saporito, Christopher A.; Choi, Chong Seok; Ranciere, Anthony J.; Hansell, Patricia K.: MULTI-MODE GPR SURVEYS INFORM AND BENEFIT FROM ARCHAEOLOGICAL EXCAVATIONS: DELAWARE RIVER MARGIN, NEW JERSEY

63-7 7 Sica, Chelsea*: GROUND PENETRATING RADAR INVESTIGATION OF TYUONYI PUEBLO IN BANDELLER NATIONAL MONUMENT, NEW MEXICO

63-8 8 Burds, Luke Thomas*; Jol, Harry M.; Mataitis, Richard James; Beck, Joseph F.; Freund, Richard A.; Bauman, Paul; McLemore, Atalastor N.; Reeder, Philip P.: THE MASS GRAVE AT KAUNAS FORT VII, LITHUANIA

63-9 9 Shurr, George*: Henning, Dale R.*: GEOSCIENCE ASPECTS OF BLOOD RUN NATIONAL HISTORIC LANDMARK (NHL), IOWA AND SOUTH DAKOTA

63-10 10 Silverman, Shari*: CO-SEISMIC ACTIVITY AND ARCHAEOLOGY IN SOUTHERN BAY, WASHINGTON

63-11 11 Dickey, Caroline E.*; Nicolaysen, Kirsten P.; Loopesko, Lydia L.; Deacon, Emily M.; Hatfield, Virginia; Savinetsky, Arkady; West, Dixie L.; Persico, Lyman P.; Krylovich, Olga; Bader, Nick E.; Okuno, Mitsuru: REVEALING UNANAGHX HISTORY AND RESILIENCE IN THE ISLANDS OF FOUR MOUNTAINS, ALASKA USING GEOCHEMICAL AND GRAIN SIZE ANALYSES

63-12 12 Perry, Gabrielle*; Rankin, Jennifer; Buynevich, Ilya V.; Stewart, Michael: ANALYSIS OF SITE STABILITY USING MAGNETIC SUSCEPTIBILITY AND GRANULOMETRY, CENTRAL DELAWARE RIVER BASIN

63-13 13 Feldman, Howard R.*: A UNIQUE PETROGLYPH CARVING ON THE SHAWANGUNK RIDGE, LOWER HUDSON VALLEY, NEW YORK

SESSION NO. 64

T197. No Dates: No Rates—Utilizing Geochronometers to Quantify Rates of Geomorphic Processes or Archaeological Development over a Wide Range of Temporal and Spatial Scales (Posters) (GSAP. Quaternary Geology and Geomorphology Division; GSAP. Archaeological Geology Division; GSAP. Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

64-1 24 Curley, Allison*: Thibodeau, Alyson M.; Kaplan, Emily; Howe, Ellen: LEAD ISOTOPES AS CHRONOLOGICAL MARKERS FOR COLONIAL-PERIOD CEREMONIAL DRINKING VESSELS IN THE ANDES

64-2 25 Pober, Rachel*; Huot, Sebastien; Davis, Loren G.; Keen-Zebert, Amanda: COMPARISON OF CORRECTIONS FOR ANOMALOUS FADING IN POTASSIUM FELDSPAR: A LUMINESCENCE DATING CASE STUDY

64-3 26 Softa, Mustafa*; Spencer, Joel G.*; Emre, Tahir; Szobst, Hasan; Turan, Mehmet: LATE QUATERNARY RAPID UPLIFT DEDUCED FROM MARINE TERRACES IN EASTERN PONTIDES, TURKEY

64-4 27 Ataei, Nina*: Spencer, Joel G.*; Huot, Sebastien; Martin, Loic; Alghamdi, Abdulaziz: PRESLEY, DeAnn: MODELING ACCUMULATION IN BETA AND GAMMA DOSE RATE FOR VERY THIN LAYERS: IMPLICATIONS FOR LUMINESCENCE DATING OF DUST DEPOSITS

64-5 28 Gray, Harrison*: Mahan, Shannon A.*: TESTING AGE PREDICTIONS MADE WITH PORTABLE OSL MEASUREMENTS IN SOUTHERN NEVADA

64-6 29 Mahan, Shannon A.*; Sammeth, David; Rasmussen, Craig; Gray, Harrison: VALLES CALDERA, NEW MEXICO, USA: DATING
SESSION NO. 65

D30. Investigations in Economic Geology (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

65-1 42 Takasavas, Tadatsune*: PETROGRAPHIC ANALYSIS OF BONANZA EPITHERMAL VEIN TEXTURES AT BUCKSKIN NATIONAL AND FIRE CREEK DEPOSITS, NORTHERN NEVADA


65-3 44 Pugh, Andrew*: Ressell, Michael W.: EXAMINING THE SPATIAL AND TEMPORAL RELATIONSHIPS BETWEEN IGNIMBRITE-RELATED INTRUSIONS THROUGH TIME AND SEDIMENT-HOSTED GOLD OCCURRENCES IN NEVADA

AND DEFINING THE RATE OF FORMATION OF SOILS AND WILDFIRE ACTIVITY USING LUMINESCENCE

64-7 30 Last, George V.; Amara, Mark S.; Foit, Franklin F.; Neill, Owen K.; Rittenour, Tammy; Dodd, Jessica L.; Tonnemaker, Kole; Tonnemaker, Luke: TEPHRA AND OSL RESULTS FROM THE FRENCHMAN HILLS – TONNEMAKER MAMMOTH SITE, ROYAL CITY, GRANT COUNTY, WASHINGTON

64-8 31 Stahleck, Tara E.; Persico, Lyman P.: GETTING BACK TO BASICS: REAFFIRMING TWO IMPORTANT THEORETICAL UNDERPINNINGS RELEVANT TO OSL DATA ANALYSIS

64-9 32 Tremblay, Tommy*: Hardy, Francois; Forget-Brisson, Laurence; Lamotte, Michel: BELLGLACIAL CHRONOLOGY IN COLD-BASED TERRAIN WITH IRSL SINGLE GRAIN DATING OF GLACIALACUSTRINE DELTIC SAIDENTS ON BAPFIN ISLAND

64-10 33 Lepper, Kenneth*: ASSESSING THE RELIABILITY OF QUATERNARY SEDIMENT PROPERTIES AND LATE PLEISTOCENE PALEOCLIMATE AT LAPA DO PICAREIRO, PORTUGAL

64-11 34 Tunno, Irene*: Zimmerman, Susan H.; Brown, Tom; Hassel, Christine A.: RADIOCARBON DATING POLLEN GRAINS SORTED BY FLOW CYTOMETRY FROM LAKE SEDIMENTS OF MONO LAKE (CALIFORNIA)

64-12 35 Schmuck, Nicholas*: Baichtal, James F.: QUANTIFYING THE MARINE RESERVOIR EFFECT FOR EARLY HOLOCENE SOUTHEAST ALASKA

64-13 36 Pringle, Patrick T.: SUBFOSSIL FORESTS AS RECORDS OF PAST EARTHQUAKES, VOLCANIC ERUPTIONS, AND LANDSLIDES IN THE PACIFIC NORTHWEST—AN OVERVIEW OF DATING TECHNIQUES, SELECTED SITES, AND RECENT RESEARCH

64-14 37 Benedetti, Michael M.; Haws, Jonathan A.: CORRELATING CAVE SEDIMENT PROPERTIES AND LATE PLEISTOCENE PALEOCLIMATE AT LAPA DO PICAREIRO, PORTUGAL

64-15 38 Muhs, Daniel R.; Simmons, Kathleen R.: TAPHONOMIC PROBLEMS IN RECONSTRUCTING SEA-LEVEL HISTORY FROM THE LATE QUATERNARY MARINE TERRACES OF BARBADOS

64-16 39 Gold, Peter*: Behr, Whitney M.: ASSESSING THE RELIABILITY OF QUATERNARY GEOREMETERS BY COMPARING INDEPENDENT DATES FROM ALLUVIAL AND FLUVIAL SURFACES

64-17 40 Blackwell, Bonnie A.B.; Korobar, Lijijana S.; Huang, Clara L.C.; Zhuo, Jialin; Kitanovski, Blagoja; Vasilevski, Saako; Blinkstein, Joel; Florentin, Jonathan A.: ESR DATING TEETH FROM GOLEMA PÉST: ABSOLUTE DATES FOR MACEDONIA'S ONLY MIDDLE PALEOLITHIC SITE

64-18 41 Williams, John W.; Grimm, Eric; Goring, Simon; Singer, Brad S.: THE NEOTOMA PALEOEOLOGY DATABASE: REPRESENTATIONS OF GEOLOGICAL TIME AND GEOCHEMICAL DATA HOLDINGS

SESSION NO. 65
SESSION NO. 66

T78. Environmental Impact Studies for Energy Geology (Posters)
(GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)

Authors will be present from 3:30 to 5:30 PM
9:00 AM, Washington State Convention Center, Halls 4EF

SESSION NO. 67

T83. Unconventional Energy Resources: Advances and Evolution in Tight Reservoir Assessment and Production (Posters) (GSA Energy Geology Division; GSA Sedimentary Geology Division)

Authors will be present from 3:30 to 5:30 PM
Booth #
SESSION NO. 68

T243. Environmental and Engineering Division Geology Student Research Competition (Posters) (GSA Environmental and Engineering Geology Division; Association of Environmental & Engineering Geologists)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

68-1 88 Wampler, Peter J.; Molla, Azizur R.; Cain, Connor J.*: GEOSPATIAL ANALYSIS OF HOUSEHOLD RADON LEVELS, BEDROCK, AND SURFICIAL GEOLOGY IN MICHIGAN

68-2 89 Pinzon, Gerardo J.; Ren, Jianhong: IMPROVING THE IMPACT ANALYSIS OF SHALE OIL AND NATURAL GAS PRODUCTION IN THE CITY OF COTULLA USING INDUSTRIAL AND ENVIRONMENTAL ENGINEERING TECHNIQUES

68-3 90 Rihl, Grace*: Franklin, Andrew; Odhiambo, Ben K.; Giancarlo, Leanna; Clark, Elyse: SEDIMENT ACCUMULATION RATES AND TRACE METAL INPUT HISTORY IN LAKE MANASSAS AND THE OCOCOQUA RESERVOIR, VIRGINIA, USA

68-4 91 Grant, Alex R.*; Wartman, Joseph; Duvall, Alison R.; LaHusen, Sean Richard: CASCADIA SUBDUCTION ZONE LANDSLIDE HAZARD FORECASTING

68-5 92 Ritterskamp, Megan M.*; Durbin, James M.; Maria, Anton H.: XRF ANALYSIS OF TRACE ELEMENTS IN SOILS SURROUNDING A COAL-FIRED POWER PLANT, POSEY COUNTY, SOUTHWESTERN INDIANA

68-6 93 Riggs, Tyler J.; Earman, Sam*: VOID DETECTION VIA MAGNETOMETRY AT A HISTORICAL SILVER MINE SITE

68-7 94 Rosen, Madison Lilith*: Villeneuve, Marlene C.; Hampton, Samuel J.: THE INFLUENCE OF MEGACRYSTONS WITHIN GRANITES ON ROCK STRENGTH AND PHYSICAL PROPERTIES

68-8 95 Westrop, Jeffrey P.*; Nolan, Jason P.; Healy, Olivia M.; Bone, Sharon; Bargan, John R.; Kohtz, Anthony; Weber, Karrie A.: MOBILIZATION OF NATURALLY OCCURRING URANIUM IN RESPONSE TO THE INFUX OF NITRATE INPUTS INTO SUBSURFACE SEDIMENTS

68-9 96 Bender, Will M.*; Becker, Udo: COMPUTATIONAL INVESTIGATION OF THE KINETICS OF AQUEOUS PLUTONYL (PUO₂²⁺) REDOX REACTIONS WITH HYDROXYL RADICAL

68-10 97 McCarrney, Justin*: Booth, Adam M.; Shaw, Susan: USING TERRESTRIAL LIDAR AND PHOTOGRAMMETRY TO MEASURE DISPLACEMENT OF A WESTERN CASCADE COMPLEX LANDSLIDE

68-11 98 Martin, Katherine*: Harris, Lora; Heyes, Andrew; Gonsior, Michael: SEPTIC IMPACT ON STREAM WATER QUALITY: EVALUATING EMERGING CONTAMINANTS AS EFFLUENT TRACERS

68-12 99 Balogun, Fatai O.*; Tchokossa, Pascale: POTENTIAL OCCUPATIONAL RADIATION EXPOSURE DUE TO NATURALLY OCCURRING RADIOACTIVE MATERIALS (NORM) ARISING FROM EXPLOITATION OF RARE-METAL PGEMMITATES OF THE IBADAN-OSSHOGBO FIELDS, OLODE, IBADAN, SOUTHWESTERN NIGERIA

SESSION NO. 69

D32. Geochemistry (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 3:30 to 5:30 PM

Booth #

69-1 100 Collins, William J.*; Martin, Erin; Murphy, J. Brendan; Mitchell, Ross N.; Spencer, Christopher J.: GIGAYEAR REPETITION OF MANTLE CONVECTION MODES AND ITS RELATION TO SUPERCONTINENT CYCLES

69-2 101 Tappa, Michael J.*; Baxter, Ethan F.: THE DETERMINATION OF REPRESENTATIVE OXYGEN ISOTOPE COMPOSITIONS FOR NEOODYMIUM OXIDE TIMS MEASUREMENTS

69-3 102 Steenberg, Luke*; Boroughs, Scott; Knaack, Charles: ESTIMATION OF ACCURACY AND PRECISION FOR TRACE ELEMENTS ANALYZED BY INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (ICP-MS) AT THE PETER HOOPER GEOANALYTICAL LABORATORY, WASHINGTON STATE UNIVERSITY

69-4 103 Kelly, Daniel*; Boroughs, Scott; Knaack, Charles: ESTIMATION OF THE MAXIMUM INFLUENCE OF SAMPLE PREPARATION ON LONG TERM ANALYTICAL PRECISION, PETER HOOPER GEOANALYTICAL LAB

69-5 104 Evart, Lucas L.*; Pritchard, Chad J.; Drake, B. Lee: CONSTRAINING ERRORS IN FIELD AND LAB GEOCHEMICAL ANALYSES USING A PXRF CALIBRATION FOR COLUMBIA RIVER FLOOD BASALT

69-6 105 Stauffer, Eric A.*; Cassel, Elizabeth J.: GLASS-WATER HYDROGEN ISOTOPE FRACTIONATION IN RECENT VOLCANIC GLASSES

69-7 106 Jesmok, Greg*; Upadhyay, Deepshikha; Davila, Nathaniel; Clough, Cassie; Bricker, Hayley; Mitsunaga, Bryce A.; Deflische, William F.; Elliott, Ben; Tripati, Aradnna K.: LONG-TERM REPRODUCIBILITY OF STANDARDS FOR CLUMPED ISOTOPE MEASUREMENTS

69-8 107 Birdwell, Justin E.*; Wilson, Stephen A.: DEVELOPMENT OF NEW SHALE GEOCHEMICAL REFERENCE MATERIALS: RESULTS FROM BOQUILLAS SHALE INTERLABORATORY TESTING AND OTHER STATUS UPDATES


69-10 109 Phillips, Niomi J.*; Key, Marcus M.; Smith, Abigail M.; Forrester, Jeffrey S.: TO PRETREAT OR NOT TO PRETREAT: REMOVAL OF ORGANIC MATERIAL FOR STABLE ISOTOPE ANALYSIS IN TEMPERATE SKELETAL CARBONATE

69-11 110 Limbeck, Maggie R.*; Szynekiewicz, Anna; Faia, Anthony M.; Sumrall, Colin D.: CARBON AND OXYGEN ISOTOPIC VARIABILITY WITHIN THE SKELETON OF THE SEA URCHIN ECHINOMETRA LUCENTER

69-12 111 Pilewski, John D.*; Sharma, Shikha; Agrawal, Vikas: ANALYSIS OF ORGANIC COMPOUNDS PRODUCED FROM HIGH TEMPERATURE AND PRESSURE FLUID-ROCK REACTIONS

69-13 112 Wei, Lin*: CATALYTIC GENERATION OF METHANE AT 60 TO 100 °C AND 0.1 TO 300 MPA FROM SOURCE ROCKS CONTAINING KEROGEN TYPES I, II, AND III

69-14 113 Zhang, Tianjiao*; Zhang, Shanwen: CAUSATION OF CARBONATE CEMENTS IN SANDSTONES NEAR THE OVERPRESSURED TOP SEAL IN NIUZHUANG SAG OF BOHAI BAY CHINA

69-15 114 Hunt, Andrew*: Dhar, Upasana: DIAGENETICALLY FORMED VIVIANITE (Fe₃(PO₄)₂ · 8H₂O) PRESENT IN URBAN POND SEDIMENT: A POTENTIAL MARKER OF ANTHROPOGENIC CONTAMINATION

69-16 115 Herleman, Katherine C.*: GEOCHEMICAL VARIABILITY WITHIN THE MARCELLUS FORMATION OF THE NORTHERN APPALACHIAN BASIN AND ITS IMPLICATIONS FOR PRODUCED WATER COMPOSITION OF UNCONVENTIONAL NATURAL GAS WELLS

69-17 116 Yin, Runsheng*: Xu, Lingang; Lehrman, Bernd; Lepak, Ryan F.; Hurley, James P.; Mao, Jingwen; Feng, Xinbin; Hu, Ruizhong: ANOMALOUS MERCURY ENRICHMENT IN EARLY CAMBRIAN BLACK SHALES OF SOUTH CHINA: MERCURY ISOTOPES INDICATE A SEAWATER SOURCE

69-18 117 Smith, Benjamin Paul*: Kerans, Charles: GUADALUPEAN/ LOPINGIAN CHEMOSTRATIGRAPHY OF THE DELAWARE BASIN: UNRAVELLING REGIONAL VERSUS GLOBAL FACTORS

22–25 October • Seattle, Washington, USA 169
SESSION NO. 71 $T145. Geologic Maps and Their Derivatives (Posters) (Association of American State Geologists; GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division) 9:00 AM, Washington State Convention Center, Halls 4EF Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM 

Booth #

71-1 154 Cox, Simon; Siddoway, Christine S.; Millikin, Alexie*; Smith-Lyttle, Belinda: DIGITAL GEOLOGICAL DATASET FOR THE ROSS SEA REGION, ANTARCTICA, AND OTHER MAPPING INITIATIVES OF THE ANTARCTIC GEOMAP PROJECT

71-2 155 Asch, Kristine E.Ch.*: BUILDING THE GIS OF THE INTERNATIONAL QUATERNARY MAP OF EUROPE (iQUAME 2000): SUMMARY OF THE CURRENT STATUS OF EUROPEAN QUATERNARY GEOLOGICAL RESEARCH

71-3 156 Rosensaat, Marcelo*: Katz, Oded: LANDSLIDE HAZARD MAPPING IN THE SOUTH OF ISRAEL

71-4 157 Rauch, Anna*: Sartori, Mario; Castellfort, Sebastien: A TOOL TO ANALYSE THE DISTRIBUTION AND CONSISTENCY OF STRUCTURAL AND BEDROCK DATA IN GEOLOGICAL MAPS

71-5 158 Stoll, Emily J.*; Cook, Rachel L.; Austin, Robert: SPATIALLY CLASSIFYING SOILS AND INFLUENTIAL GEOLOGY FOR FORESTRY MANAGEMENT

71-6 159 Haugrud, Ralph A.*; Soller, David R.: ANNOUNCING GEMS—A STANDARD FORMAT FOR DIGITAL PUBLICATION OF GEOLOGIC MAPS, VERSION 2.0

71-7 160 Soller, David R.*; Stamm, Nancy R.: THE NATIONAL GEOLOGIC MAP DATABASE — RESOURCE FOR MAPPERS AND THE PUBLIC

71-8 161 Belitz, Kenneth*: Johnson, Tyler D.; Watson, Elise: MINOR AQUIFER REGIONS OF THE CONTIGUOUS UNITED STATES: A HYDROGEOLOGIC FRAMEWORK FOR ASSESSING GROUNDWATER RESOURCES IN AREAS OUTSIDE OF PRINCIPAL AQUIFERS

71-9 162 Webb, Brian M.*; McClaughry, Jason D.; Hairston-Porter, Robert; Madin, Ian P.: STRUCTURE-FROM-MOTION PHOTOGRAMMETRY TECHNIQUES AND DIGITAL SURFACE MODEL CREATION FOR GEOCOSMIC APPLICATIONS

71-10 163 Yager, Richard M.*; Soller, David; Haj, Adel; Kauffman, Leon J.; Reddy, James: MAPS OF PROPERTIES OF QUATERNARY SEDIMENTS AND AQUIFERS IN THE GLACIATED CONTERMINOUS UNITED STATES

71-11 164 Keith, Mackenzie K.*; Burns, Erick; Sherrod, David R.; Gannett, Marshall W.; Siler, Drew L.: AN UPDATED GEOLOGIC MAP TO IDENTIFY GROUNDWATER FLOW PATTERNS IN THE CENOZOIC VOLCANIC ROCKS OF THE PACIFIC NORTHWEST VOLCANIC AQUIFER SYSTEM STUDY AREA

71-12 165 Brady, Sharon Marie*; Roberts, Philip; Riedel, Jon: RESULTS OF A SOILS INVENTORY AND LANDFORM MAPPING AT MOUNT RAINIER NATIONAL PARK


71-14 167 Johnson, Samuel V.*; Watt, Janet; Davenport, Clifton W.; Wills, Christopher J.; Hartwell, Stephen R.: SEAMLESS ONSHORE-OFFSHORE GEOLOGIC MAPPING FOR THE CALIFORNIA SEAFLOOR AND COASTAL MAPPING PROGRAM

71-15 168 Mních, Marísa E.*; Condit, Christopher D.: BASALTIC MAGMATIC MAPPING: A SUGGESTED METHODOLOGY AND RESULTS FROM THE SPRINGERVILLE VOLCANIC FIELD

71-16 169 Coyan, Joshua A.*; Zientek, Michael L.; Mihalasky, Mark J.: SPATIOTEMPORAL ANALYSIS OF LODE MINING ACTIVITY AROUND THE MCDERMITT CALDERA, NORTHERN NEVADA, USA

SESSION NO. 72

D39. Surface Processes and Geomorphic Evolution, from the Coastlines to the Glaciers (Posters) 9:00 AM, Washington State Convention Center, Halls 4EF Authors will be present from 3:30 to 5:30 PM 

Booth #

72-1 177 Adojo, Onema C.*; Oboh-Ikuenobe, Francisca E.; Marret-Davies, Fabienne; Zobaa, Mohamed K.; Osterloff, Peter L.; Jaramillo, Carlos A.; Cardenas, Damian L.: CONTROLS ON FLUVIAL PALEODISCHARGE AND SEDIMENT INFLUX: CURRENT PARADIGMS AND POTENTIAL FUTURE SCENARIOS FROM PASSIVE (GULF OF GUINEA) AND ACTIVE (CENTRAL AMERICA) MARGINS

72-2 178 Osleyer, Dillon J.*; Simms, Alexander R.: ESTUARINE RESPONSE TO DISTURBANCES: A HOLOCENE RECORD OF STORM EPISODES, TECTONICS, AND CLIMATIC SIGNALS AS PRESERVED IN COASTAL SYSTEMS IN SOUTHERN CALIFORNIA

72-3 179 Smart, Nicholas Hunter*; Tuttle, Larry; Taylor, Dawan; Ferguson, Bri; Lehner, Jacob; Wernette, Philippe A.: INTERACTIONS BETWEEN VEGETATION AND GEOLOGIC FRAMEWORK IN BARRIER ISLAND EVOLUTION

72-4 180 El-ashkar, Shadya*: Hubeny, J.; Bradford; Knudstrup, Renee; Ebel, John E.: ASSESSMENT OF A HOLOCENE HIGH ENERGY DEPOSIT AND ITS IMPACT ON CARBON SEQUESTRATION WITHIN A NEW ENGLAND SALT MARSH

72-5 181 Seidman, Gabriel L.*; Hampton, Samuel J.; Borella, Josh W.: GEOMORPHIC EVOLUTION OF A PROGRADATIONAL POCKET BEACH AND ESTUARY SYSTEM, OKAINS BAY, BANKS PENINSULA, NEW ZEALAND

72-6 182 Tuttle, Larry*; Mohkami, Cassie; Wernette, Philippe A.; Houser, Chris: INVESTIGATING BARRIER ISLAND EVOLUTION THROUGH SEDIMENT CORE ANALYSIS AND GEOPHYSICAL SURVEYS

72-7 183 Bergman, Nathaniel*: Greenbaum, Noam; Be’er-Shlevin, Yaron; Rimmer, Alon; Glazman, Hillel: THE MORPHOLOGICAL AND
SESSION NO. 73

T194. The Aeolian Realm: Dunes, Dust, and Loess (Posters)
(GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will present from 3:30 to 5:30 PM

Booth #

73-1 201 Lancaster, Nicholas*; Hesse, Paul; Telfer, Matt: MAPPING THE WORLD’S INLAND SAND DUNES – A PROGRESS REPORT
73-2 202 Johnson, W.C.*; Hanson, P.R.; Halfen, A.F.: DUNE SYSTEMS OF THE CENTRAL AND SOUTHERN GREAT PLAINS, USA
73-3 203 McCarter, Ross; Kohfeld, Karen E.*; Gill, Thomas E.; Schepanski, Kerstin: COMPARATIVE ANALYSIS OF SURFACE WINDS IN THE MID-CONTINENTAL UNITED STATES DURING SEVERE DROUGHTS IN THE 1950s AND 2010s
73-4 204 Baldauf, Paul*; Burkart, Patrick; Hanson, P.R.; Miles, Maraina; Larsen, Ashley K.; Libonatti, Lucca: EPISODIC REACTIVATION OF QUATERNARY AEOLIAN DEPOSITS, WHITE RIVER BADLANDS, SOUTH DAKOTA, NORTHERN GREAT PLAINS
73-5 205 Spuller, Kerri E.*; Wilkins, David; Rittenour, Tammy; Pierce, Jennifer L.; Ford, Richard L.: PRELIMINARY GEochronology of Sand Ramps, Coral Pink Sand Dunes, Utah
73-6 206 Cornachione, Harriet S.*; Rittenour, Tammy M.; Nelson, Michelle S.: HOLOCENE CHRONOSTRATIGRAPHY AND PALEOClimatic IMPLICATIONS OF Dune Fields ACROSS Southern Utah
73-7 207 Roskin, Joel*; Bookman, Revital; Freisem, David; Vardi, Jacob: A TERMINAL PLEISTOCENE LINEAR DUNE DAM RECORD OF AEOliAN-FLUVIAL DYNAMICS AT THE FRINGES OF THE NORTWESTERN NEGEV DUNEFIELD
73-8 208 Zimpelman, James R.*; Valdez, Andrew D.: MONITORING MOVEMENT OF ACTIVE SAND DUNES WITHIN GREAT SAND DUNES NATIONAL PARK AND PRESERVE
73-9 209 Carson, Robert J.*; Hagen, Rachael; Mazzoleni, Caitlin: TEPHRA AS A MARKER FOR DUNE MIGRATION
73-10 210 Ellerton, Daniel; Shulmeister, James; Gontz, Allen: THE TRUTH IS IN HERE - APPLICATIONS OF HIGH RESOLUTION LIDAR, GROUND PENETRATING RADAR AND GIS FOR GEOMORPHIC MAPPING OF THE COOLOOLA SAND MASS DUNE UNITS
73-11 211 Gontz, Allen*; Ellerton, Daniel; Shulmeister, James; Kelly, Joshua T.; McCallum, Adrian; Hesp, Patrick A.; Minot da Silva, Grazia; Santini, Talitha; Welsh, Kevin; Rittenour, Tammy: STRATIGRAPHIC ARCHITECTURE OF THE FRASER ISLAND DUNE COMPLEX, SOUTHEAST QUEENSLAND, AUSTRALIA USING HIGH-RESOLUTION GROUND PENETRATING RADAR
73-12 212 Shulmeister, James*; Ellerton, Daniel; Welsh, Kevin; Santini, Talitha; Moss, Patrick; Bowyer, Helen; Macalalad, Joan; Hesp, Patrick A.; Mot da Silva, Grazia; Rittenour, Tammy; Gontz, Allen; Kelly, Joshua T.; McCallum, Adrian: THE SANDS OF TIME - MAPPING FRASER ISLAND: ONE OF THE OLDEST COASTAL DUNEFIELDS IN THE WORLD
73-13 213 Smith, Shane V.*: DIFFICULTIES DETERMINING PALEOWIND DIRECTION FROM EOLIANITES ON AN ISLAND: AN EXAMPLE FROM PLEISTOCENE AND HOLOCENE EOLIANITES ON SAN SALVADOR, BAHAMAS
73-14 214 Gorgenson, Ian*; Yurk, Brian; DeVries-Zimmerman, Suzanne J.; Hansen, Edward: DUNE DISTRIBUTION ALONG THE LAURENTIAN GREAT LAKES: THE EFFECTS OF WIND AND WAVES
73-15 215 Nielsen, Pål Ringkjeb; Dahl, Svein Olaf; Jansen, Henrik Loseth; Lynse, Eirik Skjerdel: HOLOCENE AEOlIAN ACTIVITY AND STORMINESS ON ANDØYA, NORTHERN NORWAY

SEDIMENTOLOGICAL CHARACTERISTICS OF THE SEA OF GALILEE NORTHERN DELTA, NE ISRAEL

72-8 184 Scott, Kailly A.*; Gani, Nahid D.: NEOTECTONICS RECORDS IN THE GREEN RIVER BASIN: A NEW MORPHO-TECTONIC ANALYSIS OF TRANSIENT CHANNELS DRAINING ACROSS THE ROUGH CREEK GRABEN, WESTERN KENTUCKY

72-9 185 Andrews, William*: MODERN ANALOGS OF PLEISTOCENE LACUSTRINE SHORELINE DEPOSITS IN NORTHERN AND WESTERN KENTUCKY

72-10 186 Boyd, Rebecca*; Leesburg, Jessica N.; Shoemaker, Kurt A.: STREAM PIRACY IN THE TEAYS RIVER SYSTEM PRIOR TO THE IMPROVEMENT OF PLEISTOCENE LAKE TIGHT: THE EVOLUTION OF THE TYGARTS CREEK AND LITTLE SANDY RIVER DRAINAGE BASINS OF NORTH EASTERN KENTUCKY

72-11 187 Dillon, Jeremy S.*; Stolze, Susann; Larsen, Ashley K.: LAST GLACIAL MAXIMUM POLLEN AND PLANT MACROFOSSILS FROM THE PLATTE RIVER VALLEY IN SOUTH-CENTRAL NEBRASKA, USA

72-12 188 Henderson, Stacy*; Rivera, Tiffany A.; Lippert, Peter C.; Icha, Brian R.: A QUATERNARY RECORD OF VOLCANISM, LAKES, AND SEISMICITY IN SWAN VALLEY, IDAHO

72-13 189 Spangle, Chynna J.*; Haschenburger, J.K.: EXTENT OF ARMOR LAYER DEVELOPMENT IN THE SAND-DOMINATED SAN ANTONIO RIVER

72-14 190 Hempel, Laura A.*; Grant, Gordon; Lewis, Sarah L.: CHANNEL MORPHOLOGY AND WOODY DEBRIS ARCHITECTURE IN MOUNTAIN STREAMS REFLECT DIFFERENCES IN HYDROLOGIC REGIME

72-15 191 Ouchi, Shunji*: EFFECTS OF PERMEABILITY ON THE COMBINATION OF FLUVIAL EROSION AND SLOPE FAILURES AS THE MAIN PROCESS OF EROSION IN THE DEVELOPMENT OF EXPERIMENTAL LANDFORM

72-16 192 Oldham, Steven Shay*; Burns, Diane M.; Riley, James D.: INVESTIGATING THE EFFECTS OF BRIDGE PIERS ON STREAM MORPHOLOGY USING A STREAM TABLE

72-17 193 Landry, Kameko R*; Harbor, David Jorgensen: FLOW IN FRACTURED BEDROCK CRACK NETWORK AND ITS ROLE IN PLUCKING

72-18 194 Haake, Sade*; Guo, Junhua; Krugh, William C.: BURN SEVERITY AND ITS IMPACT ON SOIL PROPERTIES: 2016 ERSKINE FIRE IN THE SOUTHERN SIERRA NEVADA

72-19 195 Kamal, Smit*; Mackenzie-Helwein, Peter; Hallet, Bernard: EXAMINING THE ORIENTATION OF SOLAR-INDUCED STRESSES IN BOULDERS USING 3D NUMERICAL SIMULATIONS

72-20 196 Easterbrook, Don J.*: CAUSE OF THE ICE AGES AND CLIMATE CHANGES: EVIDENCE FROM GLOBAL TEMPERATURES, SUN SPOTS, SOLAR IRRADIANCE, SOLAR MAGNETISM, COSMIC RAYS, AND ^3C AND ^18O PRODUCTION RATES

72-21 197 Cripps, Jonathan E.*; Brennand, Tracy A.: LATE-GLACIAL GROUNDING LINE PROCESSES, LAKE-ICE INTERACTIONS AND MARGIN DYNAMICS OF THE LAST CORDILLERAN ICE SHEET, SOUTH CENTRAL BRITISH COLUMBIA

72-22 198 Lehniig, Karin E.*; Larsen, Isaac J.: CONSTRAINTS ON MEGAFLOOD DISCHARGE THROUGH UPPER GRAND CULLE IN THE CHANELED SCABLAND OF EASTERN WASHINGTON

72-23 199 McCollum, Michael B.*; McCollum, Linda B.: HYDRODYNAMIC FLOW REGIME BEDFORMS WITHIN THE IMMENSE MEGAFLOOD HYPERPYCNAL DEPOSITS FILLING THE UPPER REACHES OF GLACIAL LAKE COLUMBIA BETWEEN 17 AND 16 KA


Sunday, 22 October 2017
SESSION NO. 74

D45. Geophysics/Geodynamics (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

74-1 221 Chen, Kuang-Jung*: USING COMPLEX DEMODULATION TO RESOLVE P WAVE ACCELERATION SOURCE FUNCTION TIME DEPENDENCY IN THE MID-ATLANTIC RIDGE


74-3 223 Akay, Gozdje*: Dare, Peter; Langley, Richard B.: NOISE CHARACTERISTICS OF GPS COORDINATES IN A VOLCANIC REGION

74-4 224 Gochenour, Jacob Alexander*: Suranovic, Ben S.; Gosselin, Greg; Mogary, R. Shane: CHARACTERIZING SUBSURFACE VOID SPACES AND WATER DISTRIBUTION AND FLOW PATTERNS IN CAVE HILL KARST USING RESISTIVITY

74-5 225 Foroutan, Marzieh*: Marshall, Shawn J.; Menounos, Brian: LIDAR-BASED CREVASSE MAPPING, HAIG GLACIER, CANADIAN ROCKIES

74-6 226 Ziwu, Felix*: Mickus, Kevin L.; Doser, Diane I.: INVESTIGATING SERPENTINIZATION WITHIN THE COOK INLET BASIN, ALASKA FROM THE INVERSION OF MAGNETIC DATA

74-7 227 Duba, Kinzang*: Mickus, Kevin L.: GRAVITY MODELING FOR CRUSTAL STRUCTURE WITHIN THE BHUTANESE HIMALAYAS

74-8 228 Nandi, Sourav Krishna*: Mickus, Kevin L.; McKay, Matthew P.: GRAVITY TRANSECTS ACROSS THE SALMON RIVER SUTURE ZONE, WESTERN IDAHO

74-9 229 Frilita, Nesrine*: Mickus, Kevin L.; Zargouni, Faoud: GRAVITY CONTRIBUTION TO THE GEOLOGICAL STUDY OF GRABENS IN THE NORTHWESTERN REGION OF TUNISIA INCLUDING THE KEF BASIN REGION

74-10 230 Park, Isaeul; KIM, Ki Young*: Byun, Jongmo: VARIATION IN THICKNESS OF THE LITHOSPHERE IN SOUTHERN KOREAN PENINSULA INFERRRED FROM TELESEISMIC P-WAVE TRAVELTIMES

74-11 231 Mcfarland, Phillip K.*: Bennett, Richard A.: THE UTILITY OF 2D ELASTIC SCREW AND EDGE DISLOCATIONS FOR MODELING CRUSTAL DEFORMATION ASSOCIATED WITH SHEAR ZONES

74-12 232 Guthrie, Kris*: Filina, Iritna; Searsr, Mind; Burberry, Caroline: IMPROVED MAP OF SUBSURFACE STRUCTURES IN SOUTHEASTERN NEBRASKA FROM INTEGRATED ANALYSIS OF EARTHQUAKE AND POTENTIAL FIELDS DATASETS

74-13 233 Rodrigez Padilla, Alba M.*: Onwuemeka, John; Liu, Yajing; Harrington, Rebecca: EARTHQUAKE SOURCE PARAMETER AND FOCAL MECHANISM ESTIMATES FOR THE WESTERN QUEBEC SEISMIC ZONE IN EASTERN CANADA

SESSION NO. 75

T74. Integrating Geohazards Data into Planning and Land-use Management Decisions (Posters) (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geology and Society Division; GSA Geoinformatics Division; GSA Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Booth #

75-1 235 Andrews, William*: COUNTY-SCALE SOIL MAPS FOR EXPLORATION-MITIGATION AND SEISMIC-HAZARD PLANNING IN KENTUCKY

75-2 236 Kress, Michael; Benimoff, Alan I.; Fritz, William J.; Gordon, Cameron: GO TO HIGH GROUND: A COASTAL EVACUATION PLAN FOR STATEN ISLAND, NY

75-3 237 Cowell, Kevin James*: Davis, Elizabeth; Chang, Susan; Hou, Steve: CITY OF SEATTLE: UPDATE OF THE ECA CODE “KNOWN LANDSLIDE AREAS” GEOSPATIAL LAYER

75-4 238 Tunnelle, Alyssa*: Troost, Kathy Goetz; Chang, Susan: EVALUATING LIQUEFACTION SUSCEPTIBILITY OF QUATERNARY DEPOSITS IN SEATTLE, WASHINGTON

SESSION NO. 76

T102. Beyond the Road-Cut: Virtual, Local, and Nontraditional “Field” Teaching and Learning Experiences (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Booth #

76-1 239 Smith, Matthew*: Olcott-Marshall, Alison: PEDAGOGICAL EFFICACY AND STUDENT SPATIAL ABILITY CONCERNING THE AR SANDBOX: A STUDY DESIGN

76-2 240 Hups, Kent Michael*: USING AUGMENTED REALITY IN HIGH SCHOOL CLASSROOMS TO COMPREHEND SURFACE GEOLOGICAL MAP FEATURES

76-3 241 Houghton, Jacqueline J.*, Gordon, Clare E.; Robinson, Annabeth; Morgan, Daniel J.; Lloyd, Geoffrey E.: ASSESSING THE EFFECTIVENESS OF VIRTUAL LANDSCAPES IN FIELD SKILLS TRAINING

76-4 242 Garcia, William J.: A FIELD-BASED METHOD FOR TEACHING THE SCIENTIFIC METHOD AND UNIFORMITARIAN PRINCIPLES USING TRACKWAY RECONSTRUCTIONS

76-5 243 Wurtz, Michael J.*; Jones, Allison D.; Burmeister, Kurtis C.; Rademacher, Laura K.: USING JOHN MUIR’S ARCHIVES IN THE FIELD TO ENHANCE OBSERVATIONAL SKILLS AND ESTABLISH A SENSE OF PLACE

76-6 244 Michelfelder, Gary S.*; Sundell, Tyler; Benz, Brooke E.; Zerilli, Matthew: FIELD VOLCANOLOGY IN THE CENTRAL ANDES: A CAPSTONE VOLCANOLOGY AND IGNEOUS PETROLOGY FIELD COURSE

76-7 245 Neiztke Adamo, Lauren*: Irizarry-Barreto, Patricia: FROM BASIC OBSERVATIONS INTO MODERN TECHNOLOGY: A HANDS-ON APPROACH TO TEACHING TAXONOMIC CLASSIFICATION

Sunday, 22 October 2017
SESSION NO. 77

T118. Integration of Field and Laboratory-Based Experience toward Designing Pedagogically Sound Curriculum Enhancement Activities in the Geosciences (Posters) (GSA Hydrogeology Division; GSA Sedimentary Geology Division; National Association of Geoscience Teachers; American Institute of Professional Geologists; GSA Environmental and Engineering Geology Division; GSA Geoscience Education Division; National Earth Science Teachers Association; GSA Quaternary Geology and Geomorphology Division; Council on Undergraduate Research Geosciences Division; GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM
Booth #

77-1 246 Hassan, Muhammad Qumrul*: GLOBAL CLIMATE CHANGE AND BANGLADESH ENVIRONMENTAL ISSUES: CHALLENGES AND OPPORTUNITIES

77-2 247 Kroeger, Timothy J.*; Livingston, Colleen: A SIMPLE STOKE'S LAW LABORATORY ACTIVITY FOR USE IN MULTIPLE STEM DISCIPLINE COURSES

77-3 248 Wheatley, David Fairchild*: Chan, Marjorie A.: INTEGRATION OF FIELD AND "SYNTHETIC" DATA FOR A SIMULATED RESERVOIR CHARACTERIZATION STUDENT TEAM COMPETITION

77-4 249 Carlson, Charles*: Georgen, Jennifer: TEACHING COASTAL GEOLOGY USING INTERACTIVE GOOGLE TECHNOLOGY

77-5 250 Khandaker, Nazrul I.*; Skidler, Arif M.; Alvey, Robert; Schleifer, Stanley; Liu, Xin-Chen; Londono, Carlos E. Castano; Turner, Joseph B. McGee: RARITAN FORMATION (UPPER CRETACEOUS), LONG ISLAND, NEW YORK: SEDIMENTOLOGICAL AND GEOCHEMICAL ASSESSMENT

77-6 251 Aghedo, Ality*: Dhari, Ratan; Schleifer, Stanley: ASSESSING THE SOURCE AND FATE OF NITRATE IN GROUNDWATER ASSOCIATED WITH UPPER GLACIAL AQUIFER, SOUTH-EAST QUEENS, NEW YORK CITY

77-7 252 Escobar-Burciaga, Ricardo Daniel*: Wolin, Jeff; Meyer, Herbert W.: DESIGNING A CURRICULUM-BASED K-12 (4TH AND 5TH GRADE) GEOLOGY/PALeONTOLOGY CAMP FOR FLORISSANT FOSSIL BEDS NATIONAL MONUMENT, COLORADO

77-8 253 Khandaker, Nazrul I.*; Khargie, Matthew; Siddique, Shuayb; De Leon, Sol; Singh, Katina; Wills, Newrence; Mahabir, Krishna: EXPERIENTIAL LEARNING OPPORTUNITY (ELO) AND UTILIZATION OF FIELD-AND-DATA- BASED INFORMATION OBTAINED THROUGH THE INFUSION OF TECHNOLOGY: HIGHLIGHTS ON NASA STEM AND EARTH SCIENCE CURRICULA

77-9 254 Bevis, Kenneth A.*; Neace, Sydney D.; Redmon, Meagan; Slover, Hannah: IN THE PLAYGROUND OF GIANTS: A GEOEDUCATIONAL WEBSITE FOR ANY AUDIENCE

77-10 255 McGary, R. Shane*: Baedke, Steve J.; Henry, Tiernan: BUILDING A TIME-DISTRIBUTED GEOPHYSICAL RESEARCH COMPONENT INTO THE HYDROGEOLOGY PROJECT AT JAMES MADISON UNIVERSITY’S SUMMER FIELD COURSE IN IRELAND

77-11 256 Soldati, Arianna*: SCIENCE ON WHEELS: SOWING INTEREST IN SCIENCE IN RURAL MISSOURI

77-12 257 Niemi, Tina M.*; Bursby, Cathy J.: THE BAJA BASINS RESEARCH EXPERIENCE FOR UNDERGRADUATES: SPLITTING FIELDWORK AND LABORATORY COMPONENTS IN AN INTERNATIONAL REU

77-13 258 Schleifer, Stanley*; Khandaker, Nazrul I.: FURTHER STUDY OF GARNET XENOCRYSTS IN NEW YORK CITY MIGMATITIC

77-14 259 Uglesich, Jessica; Gay, Robert J.*: BRINGING ANCIENT BEASTS INTO THE CLASSROOM AND THE CLASSROOM TO THE ANCIENT BEASTS

SESSION NO. 78

T127. Supporting Geoscience Student Transfer Between Institutions and Transitions into the Workforce: Pathways to Success (Posters) (GSA Geology and Society Division; GSA Geoscience Education Division; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM
Booth #

78-1 260 Wilson, Carolyn*: Keane, Christopher: A PRELIMINARY INVESTIGATION OF THE TRANSITION INTO THE WORKFORCE BY EARLY-CAREER GEOSCIENTISTS

78-2 261 McCoy, Deana H.*; Lautz, Laura K.; Driscoll, Charles T.; Kahan, Tara F.; Scholz, Christopher A.; Torrance, Donald; Johnson, Chris E.; Junium, Christopher K.; Siegel, Donald I.; Wilcoxen, Peter J.; Fiorenza, Patrick: CAREER DEVELOPMENT AT THE WATER-ENERGY NEXUS: PREPARING GRADUATES FOR MULTIPLE CAREER PATHS

78-3 262 Halling, Marc C.*; Blount, Karen: SUCCESSFULLY TRANSITIONING STUDENTS FROM HIGH SCHOOL TO COLLEGE

78-4 263 Hoppe, Kathryn A.*; DeMar, David G.; Wilson, Gregory P.: USING VERTEBRATE MICROFOSSIL SAMPLES FROM THE UPPER CRETACEOUS HELL CREEK FORMATION TO INVOLVE INTRODUCTORY (100-LEVEL) EARTH SCIENCE STUDENTS IN ORIGINAL SCIENTIFIC RESEARCH

78-5 264 Rosser, Suzanne*: Sparks, David W.; Newman, Julie: A FIRST-SEMESTER SEMINAR HELPS TRANSFER STUDENTS THRIVE

78-6 265 Guidry, Michael*: USING CURRICULAR APPROACHES TO SUPPORT TRANSFER STUDENT SUCCESS IN UNDERGRADUATE RESEARCH

78-7 266 Gonzalez, Juan L.; Cheng, Chu-Lin*; Kang, Jihoon; Cintra-Buenrostro, Carlos; Benavides, Jude; Heise, Elizabeth A.; Hinthorne, James; Dirrlik, Frank: STIMULATING HISPANIC PARTICIPATION IN THE GEOSCIENCES (SHIP-GEO) AT RIO GRANDE VALLEY IN SOUTH TEXAS: FINDINGS FROM YEAR ONE

78-8 267 Kortz, Karen M.*; Cardace, Dawn; Savage, Brian; Rieger, Duayne: FACTORS DURING FIELD RESEARCH THAT AFFECT STUDENTS’ DECISIONS TO BECOME OR REMAIN GEOSCIENCE MAJORS

78-9 268 Billigun, Solomon*; Schimmel, Keith A.; Mekonnen, Ademe; Lin, Yuh-Lang; Zhang, Jing; Burt, Melissa; Denning, Scott; Jha, Manoj; Banks, Bahby: GP-EXTRA: PATHWAYS TO ATMOSPHERIC SCIENCE THROUGH IMMERSION IN GEOSCIENCES RESEARCH

78-10 269 Smith, Lesley; Gold, Anne U.*; Anderson, Suzanne P.; Taylor, Jennifer L.; Luna, Lorena Medina; Batchelor, Rebecca: RESEARCH EXPERIENCE FOR COMMUNITY COLLEGE STUDENTS IN CRITICAL ZONE SCIENCE: SMOOTHING THE PIPELINE FOR 2YC STUDENTS INTO GEOSCIENCE PROGRAMS AT 4YCS

78-11 270 Carter, Deron T.*; de Silva, Shanaka; Eriksson, Susan C.: LBOS GEOBRIDGE: AN EXTRA-CURRICULAR PROGRAM BRIDGING GEOSCIENCE STUDENTS FROM LINN-BENTON COMMUNITY COLLEGE TO OREGON STATE UNIVERSITY

78-12 271 Schmidt, Nancy*; Fay, Noah P.; Flessa, Karl W.; Bellavance, Bailey; Cowles, Ashlee; Dougherty, Patrick; Patterson, Sarah; Purdy, Sean; Shiratori, Yu; Speaks, Natalie; Widener, Brandon; Zech, Stephanie: GEOPATHWAYS - A UNIVERSITY OF ARIZONA – PIMA COMMUNITY COLLEGE PARTNERSHIP AND INTERNSHIP PROGRAM FOR TRANSFER STUDENTS: YEAR 2

78-13 272 Garza, Edgar*: Ellins, Katherine K.; Hofer, Matthew; Mote, Alison; Wright, Vashan; Arratia, Michael; Oefinger, Lauren; Maye, Cynthia; Reyes, Enrique; Gomez, Kiara; Hibbits, Marla: A COMPARISON OF TWO PEDAGOGICAL APPROACHES,
TRADITIONAL LECTURE VS. PROJECT-BASED, AND HOW THEIR APPROACH AFFECTS STUDENT ENGAGEMENT

SESSION NO. 79

T132. Undergraduate Research Posters Showcasing Research by 2YC and 4YCU Geoscience Students (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division; International Association for Geoscience Diversity)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

79-1 273 Fuentes, Adam Ernesto*; Mrofka, David D.: SURVEY OF NONPOINT SOURCE AGRICULTURAL AND URBAN RUNOFF POLLUTION INFLOW INTO THE SALTON SEA FROM MAJOR TRIBUTARIES

79-2 274 Brower, Katelyn*; Weer, Christine; Dahl, Robyn Mieko: DIGITIZING THE NATURAL HISTORY COLLECTIONS OF WESTERN WASHINGTON UNIVERSITY

79-3 275 Nordin, Alexandra*; van der Hoeven Kraft, Katrien J.; Dahl, Robyn M.: POTENTIAL CORRELATION BETWEEN NATURE INTERACTION IN YOUTH AND UNDERSTANDING OF EARTH PROCESSES LATER IN LIFE

79-4 276 Robertson, Westan A*; McConkie, Spencer: VOLCANICLASTIC DIKE OF THE SOUTHEASTERN UINTA BASIN

79-5 277 Proulx, Michelle*; McGary, R. Shane: RECLAIMING HISTORY WITH GEOPHYSICS: USING GROUND-PENETRATING RADAR TO CONFIRM THE LOCATIONS OF ANTEBELLUM AFRICAN-AMERICAN CEMETERIES

79-6 278 Hall, Lauren*; Sanchez, Veronica: COMPASS COMPARISON IN THE FIELD


79-8 280 Roberts, Benjamin Steven*; Michalak, Melanie J.: PROVENANCE ANALYSIS OF THE Plio-Pleistocene Prairie Creek Formation, Humboldt County, CA

79-9 281 Christensen, Dana J.*; Chandler, Elijah J.; Michalak, Melanie J.: USING QUALITATIVE CLAST, SAND, AND SOIL DESCRIPTIONS TO INVESTIGATE TERTIARY GRAVELS OF THE KLAMATH PENEPLAIN EROSIONAL SURFACE IN HUMBOLDT COUNTY, NORTHWESTERN CALIFORNIA

79-10 282 Ollito, Desiree*; Michalak, Melanie: NEW PETROLOGY AND GEOCHRONOLOGY OF THE WEST CHINA PEAK COMPLEX OF THE IRONSIDE MOUNTAIN BATHOLITH, Klamath Mountains, CA

79-11 283 Sabo, Michelle N.*; Hughes, Christopher G.*: CAN YOU USE SPACEBORNE THERMAL INFRARED SENSORS TO PREDICT EARTHQUAKES?

79-12 284 St. Denny, John Russell*; Toraman, Erkan: DECIPHERING DEFORMATION CONDITIONS ALONG THE CARTHAGE-COLTON MYLONITE ZONE, NW ADIRONDACKS, BASED ON FELDSPAR MICROSTRUCTURES

79-13 285 Berry, Katherine G.*; King, M. Ryan; Smith, Joshua A.; Zanno, Lindsay: CLOSING THE TURONIAN-CENACIAN GAP IN THE GLOBAL RECORD OF IGUANODONTIDAE: NEW SPECIMENS FROM THE CREVASSE CANYON FORMATION, MCKINLEY COUNTY, NEW MEXICO

79-14 286 Smart, Holley Elaine*; King, M. Ryan; Smith, Joshua A.; Zanno, Lindsay: THE INFLUENCE OF HYDRODYNAMIC FORCES ON TRACK MORPHOLOGY: TURTLE TRACKS FROM THE LATE CRETACEOUS CREVASSE CANYON FORMATION, NEW MEXICO

79-15 287 Mongovin, Daniel D.: CALCULATING VERTICAL OFFSET OF THE BORAH PEAK FAULT SCARP USING CONTEMPORARY DIGITAL METHODS

SESSION NO. 80

T137. Geoheritage Matters (Posters) (GSA Geology and Society Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

80-1 298 Calder, John H.*: GEOHERITAGE IN NOVA SCOTIA: A SUCCESS STORY IN PUBLIC ENGAGEMENT AND ECONOMIC DEVELOPMENT

80-2 299 Chan, Marjorie A.; Kamola, Diane L.: GEOHERITAGE OF CLASSIC GEOLOGICAL LOCALITIES: PRESERVATION AND FUTURE ACCESSIBILITY

80-3 300 Carttar, Sally P.; Hampton, Samuel J.: CONSTRUCTING AN ACCESSIBILITY FRAMEWORK FOR A DEVELOPING GEOPARK: TOURISM, IMPACT, AND PRESERVATION

80-4 301 Robbins, Liesel, Sue*: Hampton, Samuel: THE FORTITUDE OF FORTIFIED MAORI SETTLEMENT EARTHWORKS: ANALYSIS OF PĀ SITE PRESERVATION

80-5 302 Crider, Juliet G.*; Gray, Mary Beth; Needle, Mattathias D.; Weil, Arlo Brandon: ENHANCING SCIENTIFIC AND EDUCATIONAL RESOURCES AT THE WHALEBACK ANTICLINE, BEAR VALLEY, PENNSYLVANIA

80-6 303 Matthews, Jack J.*; McMahon, Sean: EXOGEOCONSERVATION: PROTECTING GEOLOGICAL HERITAGE ON CELESTIAL BODIES

80-7 304 Meyer, Herbert W.*: MANAGING GEOHERITAGE ASSETS FOR RESEARCH, CONSERVATION, AND EDUCATION AT FLORISSANT FOSSIL BEDS NATIONAL MONUMENT, COLORADO: A TEXTBOOK EXAMPLE FOR NORTH AMERICA
SESSION NO. 81

**T140. New Tools in the Geologist’s Toolbelt: Using Technology to Educate and Inspire Others about Geology (Posters)**

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

**Booth #**

81-1 305 Drobniaik, Agnieszka*; Mastalerz, Maria; Johnson, Matthew; Meyer, Rebecca: ILLUSTRATING GEOLOGY OF INDIANA WITH ESRI STORY MAPS

81-2 306 Proctor, Sian H.*; Wilson, Merry: STUDENT SCREENCAST VIDEOS: A NEW WAY TO INCREASE ENGAGEMENT, UNLEASH CREATIVITY, AND COMMUNICATE UNDERSTANDING

81-3 307 Davies, N.*: INTRODUCTORY VIDEO PROJECT: FRESHENING THE SYLLABUS SINCE EARLY 2017

81-4 308 Rose, Cassandra A.*; Mandler, Benjamin; Gonzales, Leila M.; Boland, Maeve A.: A NOVEL WAY TO ACHIEVE BROADER IMPACTS WITH LARGE AUDIENCES: AGI’S CRITICAL ISSUES WEBINARS

81-5 309 Saltus, Richard*; Morine, Anjelique; Nair, Manoj: CROWDMAG AS AN INTRODUCTION TO GEOPHYSICAL DATA COLLECTION AND ANALYSIS

81-6 310 Roberts, Lauren C.*; Pyle, Eric J.; Whitmeyer, Steven; Pavlia, Terry L.: THE ADVENT OF DIGITAL COMPASSES: STATISTICAL EVALUATION AND COMPARISON WITH ANALOGUE COMPASSES

81-7 311 Pritchard, Caroline E.*; Bertl, Claudio; Anastasio, David: CREATING A MODULAR SYSTEM TO INCREASE ACCESSIBILITY OF DIGITAL EDUCATIONAL ASSETS AT GEOLOGIC SITES OF INTEREST

81-8 312 Triantafyllou, Antoine*; Watlet, Arnaud; Ba, Antoine: COMMUNICATE YOUR GEOSCIENCE WITH SMARTPHONE-BASED VIRTUAL REALITY

81-9 313 Piatek, Jennifer L.*; Whitmeyer, Steven; Atchison, Christopher; Marshall, Anita M.; Pyle, Eric J.; Eriksson, Susan C.; Crompton, Helen; Collins, Trevor; Carabajal, Ivan G.: FOSTERING INCLUSION AND INTEREST IN GEOSCIENCE COURSES USING PANORAMIC AND 3D VISUALIZATIONS

81-10 314 Martin, Anthony J.*; Page, Michael; Bransford, Stephen; Kruppel, Anandi Silva; Tullos, Allen: “BIRDSEYE VIEWS” AND OTHER MULTIMEDIA TOOLS FOR COMMUNICATING AND TEACHING ABOUT COASTAL GEOLOGY: THE GEORGIA COAST ATLAS PROJECT

81-11 315 McClellan, Elizabeth*; Watts, Chester F.: ENGAGING STUDENTS AND COLLEAGUES IN GEOLOGIC MAPPING USING COMPACT UNMANNED AERIAL SYSTEMS - (TINY DRONES)

81-12 316 Kish, Stephen*; Dominguez, Daniel: AN INEXPENSIVE TERRESTRIAL LASER SCANNER FOR CAVE AND MINE MAPPING

81-13 317 Schuyler, Andrew J.*; Farthing, Dori J.: BRINGING GEOLOGICAL COLLECTIONS INTO THE ONLINE WORLD

SESSION NO. 82

**T2. A Showcase of Undergraduate Research in Hydrogeology (Posters) (GSA Hydrogeology Division; Council on Undergraduate Research Geosciences Division)**

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

**Booth #**

82-1 318 Wittek, Maximilian M.*; Granados-Aguilar, Raquel; Giardino, John R.; Everett, Mark E.; Ramsey, Cameron E.; Mmasa, Dennis; Rodriguez, Rodrigo; Pondthai, Potpreecha: GEOMORPHOLOGICAL CHARACTERIZATION OF THE UPPER CAMP BIRD III ROCK GLACIER IN THE SAN JUAN MOUNTAINS, COLORADO

82-2 319 Denham, Samantha M.*; Wilcox, Tarka: POTENTIAL EXTENTS AND VOLUME SCENARIOS OF LANDSLIDE INDUCED IMPOUNDMENT LAKES WITHIN DEER CREEK DRAINAGE, WASHINGTON

82-3 320 Mindich, Amelia D.*; Obidi, Ifunanya B.; Howes, Riley M.; Richter-Sanchez, Andrea; Paola, Chris; Ito, Eri: ASSESSMENT OF WAVE PROCESSES AFFECTING THE EROSION OF SPIRIT ISLAND

82-4 321 Cole, Adam*; Taaffe, Patrick; Kaufman, Quinn; Kraal, Erin; Sewall, Jacob: QUANTIFYING SEDIMENT TRANSPORT IN A SMALL STREAM SETTING

82-5 322 Spangler, Ellis Y.*; Macpherson, G.L.: TESTING DUST COLLECTION AND RECOVERY METHODS FOR GEOCHEMICAL ANALYSIS: IMPLICATIONS TO LANDSCAPE EVOLUTION AND GROUNDWATER CHEMISTRY

82-6 323 DeWeerd, Danielle J.*; Wampler, Peter J.; Vannier, Ryan G.; Beelen, Maria P.; Kraft, Mackenzie: COMMUNITY OUTREACH, WATER RESOURCES ASSESSMENT, AND SAWYER FILTER EVALUATION NEAR DESCHAPELLLES, HAITI

82-7 324 Brady, Allyson*; GROUNDWATER CONTAMINATION CAUSED BY SERENDIPITOUS EVENTS AT ELKHART, INDIANA

82-8 325 Shaughnessy, Andrew R.*; Lockmiller, Kayla A.; Deeba, Emily Ann; Buckley, Camille E.; Hasenmueller, Elizabeth A.: GROUNDWATER INPUTS AND WATER QUALITY DURING A RECORD-SETTING FLOOD ON THE MERAMEC RIVER, EAST-CENTRAL MISSOURI

82-9 326 Suess, Timothy G.*; Riemersma, Peter E.: THE EFFECT OF ROAD SALT ON THE HYDROLOGIC SYSTEM IN 2017 AT ALLendale MIDDLE SCHOOL, MICHIGAN

82-10 327 Tiemeyer, Amy E.*; Kneeshaw, Tara A.; Driver, Erin M.: USING MICROCMSMS TO EVALUATE IRON AND SULFATE REDUCTION RATES UNDER VARYING BIOGEOCHEMICAL CONDITIONS

82-11 328 Cistaro, Virginia L.*; Kiekhaefer, Rebecca L.; Allen-King, Richelle M.: QUANTIFYING THE RELATIVE REACTION RATES AND PATHWAYS OF TRICHLOROFUOROETHENE DEGRADATION BY PYRITE IN COMPARISON TO TRICHLOROETHENE

82-12 329 Dishman, Rory*; Kimmey, Kassandra; Brotach, Jonathan; Allen-King, Richelle M.: TRICHLOROETHYLENE ADSORPTION IN SEDIMENTS FROM THE NEW JERSEY NAVAL AIR WARFARE CENTER

82-13 330 Soothornrangsan, Jenny*; Lowry, Christopher S.; Allen-King, Richelle M.; Glose, Thomas J.; daSilva, Alexander; Dishman, Rory; Beck, Melanie: TRACKING NUTRIENT FLUXES IN GROUNDWATER AND SURFACE WATER ON THE EASTERN SHORE OF LAKE ERIE

82-14 331 Goodin, John*; Robertson, Wendy: DOES EMERALD ASH BORER RELATED WHITE ASH MORTALITY DRIVE NITROGEN CYCLING AND CHANGES IN SOIL ORGANIC CARBON?

82-15 332 Whitman, Loren; Voglesonger, Kenneth; Lenczewski, Melissa; Leal Bautista, Rosamaria; Olson, Breanna: CENOTES OF THE YUCATÁN PENINSULA: AN AQUEOUS GEOCHEMICAL STUDY

82-16 333 Thielman, Rebekah*; Madsen, Andrew; Smidt, Samuel J.: A CONDUCTIVITY AND DISSOLVED OXYGEN SUITE FOR IDENTIFYING SURFACE WATER-GROUNDWATER INTERACTIONS

82-17 334 Shonnard, Christine*; Swanson, Susan: CONDUCTIVITY OF SPRING WATER AS AN INDICATOR OF LAND USE AND GEOLOGIC CONDITIONS IN WISCONSIN

82-18 335 Krann, Ava*; Swanson, Susan: AN EXPLORATION OF SPRING FLUXES TO CLASSIFY WISCONSIN’S SPRINGS

82-19 336 Warix, Sara R.*; Meyers, Zachary P.; Box, Carolyn; Friel, Ariel; Hedlund, Brian; Frisbee, Marti D.; Rademacher, Laura K.: MINERAL WEATHERING AND GROUNDWATER FLOW IN OWENS VALLEY SPRINGS
SESSION NO. 83

T55. Life and Times in the Early Paleozoic (Posters) (Paleontological Society)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

83-1 346 Kono, Sena*; Iezsaki, Yuko; Sato, Tomohiko; Zhang, Xingliang; Liu, Wei: THE LOWERMOST CAMBRIAN AND SSFS OF THE XIAOLANTIAN SECTION IN THE CHENGJIANG AREA, YUNNAN, SOUTH CHINA

83-2 347 Zhang, Ziqiu*; Tosca, Nicholas; Pruss, Sara B.: FOSSILS PRESERVED BY IRON-BEARING MINERALS IN THE LOWER-MIDDLE CAMBRIAN CARRARA FORMATION

83-3 348 Hildenbrand, Anne*; Austermann, Gregor; Bengtson, Peter; AGNOSTID TRILOBITES AND SMALL SHelly FOSSILS (SSFS) FROM THE DRUMIAN (MIDDLE CAMBRIAN) MANUELS RIVER FORMATION, CONCEPTION BAY SOUTH, NEWFOUNDLAND, CANADA - IMPLICATIONS FOR BIOSTRATIGRAPHY, PALEOBIOGEOGRAPHY AND PALEOECOGRAPHY

83-4 349 Stockey, Richard G.*; Loydell, David K.; Fryda, Jiri; Sperling, Erik A.: A TRANSIENT REDOX PERTURBATION IN THE EARLY SILURIAN

83-5 350 Benayoun, Emily*; Young, Seth A.; Owens, Jeremy D.; Eriksson, Mats E.; Hints, Olle; Martma, Tonna: EXPANSION OF ANOXIA/ EUXINIA AS DRIVER FOR EARLY SILURIAN EXTINCTION EVENTS: NEW SEDIMENTARY AND GEOCHEMICAL PROXY DATA FROM BALTICA

83-6 351 Funderburk, Randall*; Young, Seth A.: DOUBLE TROUBLE: TRACKING (LATE WENLOCK) SILURIAN SULFUR AND CARBON CYCLE PERTURBATIONS ASSOCIATED WITH THE MULDE EVENT FROM TENNESSEE AND NEVADA

83-7 352 Richbourg, Claudia Gail*; Bowman, Chelsie N.; Young, Seth A.: NEW LATE SILURIAN (LUDLOWIAN) δ13C AND δ18S ANALYSES FROM WESTERN TENNESSEE: AN OUTER RAMP PERSPECTIVE ON THE LAU CIE AND EXTINCTION EVENT

SESSION NO. 84

D18. Paleontology, Phylogenetic/Morphological Patterns (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

84-1 353 Chin, Courtney T.*: BIOINVENTORY OF DIADEMA ANTILLARUM IN SAN SALVADOR, THE BAHAMAS

84-2 354 Qualls, Logan M.*; Bauer, Jennifer E.; Sumrall, Colin D.: REASSESSMENT OF BLASTOID (ECHINODERMATA) PHYLOGENY WITH INTERNAL CHARACTER DATA

84-3 355 Lester, Rachel*; Hanson, Kathryn E.; Deline, Bradley: THE CONTRIBUTION OF CRINIDS TO EARLY PALEOZOIC ECHINODERM MORPHOLOGIC DIVERSITY

84-4 356 Ausich, William I.*; Cole, Selina R.; Wright, David F.: DESCRIPTIVE VERSUS HOMOLOGOUS TERMINOLOGY: DESCRIBING THE CRINOID

84-5 357 Veitch, Margaret A.*: INVESTIGATING OTOGENY IN THE EOCENE CRINOID CONOCRINUS THORENTI

84-6 358 Alley, Heather N.*; Rahman, Imran A.; Kallmeyer, Jack W.; Deline, Bradley: FUNCTIONAL MORPHOLOGY OF COiled ANAL SACS IN LATE ORDOVICIAN CRINIDS

84-7 359 Thompson, Jeffrey R.*; Bottjer, David J.: SUBSTRATE AFFINITY IN CARBONIFEROUS ECHINODIDS

84-8 360 Grun, Tobias B.*; von Scheven, Malte; Bischof, Manfred; Nebelsick, James H.: CLYSTEATER UNDER PRESSURE: STRENGTHENING STRUCTURES AND VIRTUAL MODULATIONS OF AN ECHINOID'S TEST

84-9 361 Sheffield, Sarah L.*; Sumrall, Colin D.: THE PHYLOGENY OF THE DIPLOPORITA

84-10 362 Kehmeiss, Belkasim*: Fluegeman, Richard; Moore, Elizabeth; Hastings, Alexander: FOSSIL CORALS FROM THE LOWER-UPPER MIocene FROM ATLANTIC DEPOSITS IN DELAWARE AND FLORIDA, USA

84-11 363 Pidel, Martin A.*; Bartholomew, Alex J.: A NEW CYSTHIALYSITES SPECIES IDENTIFIED IN THE ROSENDALE/KINGSTON, NY AREA

84-12 364 Selly, Tara*; Smith, Emily F.; Nelson, Lyle L.; Thater, Casey A.; Schiffbauer, James D.: TAXONOMY OF THE TERMINAL EDIACARAN VERMIFORM BIOTA, WOOD CANYON AND DEEP SPRING FORMATIONS, NEVADA

84-13 365 Dorward, Rebecca Ashley*; Selden, Paul A.: ELDONIDS AND ASSOCIATED TRACe FOSSILS FROM THE MIDDLE CAMBRIAN SPENCE SHALE, UTAH

84-14 366 Ritterbush, Linda Anita*: AGNOSTID TEST VOLUME INCREASES IN THE LATE CAMBRIAN PRELUDE TO THE Gobe


84-16 368 Shirley, Bryan*; Jarochowska, Emilia: TESTING EUCONODONT GROWTH MODELS USING A COLLECTION OF PATHOLOGICAL SPECIMENS

84-17 369 WITHDRAWN

84-18 370 Overy, Adrian S.*; Klompmaker, Adiël A.; Finnegan, Seth: ARE THERE TRENDS IN BIVALVE ORNAMENTATION THROUGHOUT THE CRETACEOUS?

84-19 371 Pietsch, Carlie*; Anderson, Brendan M.; Maistros, Lauren M.; Agelvis, Mariana; Allmon, Warren D.: EVALUATING ECOLOGICAL FUNCTION AND CONVERGENT EVOLUTION OF EXTREME PARIETAL CALLUS IN MARINE GASTROPODS

84-20 372 Zimmerman, Alexander N.*; Johnson, Claudia C.; Phillips, George E.; Ehret, Dana J.: TAXONOMY OF RUDIST BIVALVES FROM UPPER CRETACEOUS STRATA, MISSISSIPPI EMBAYMENT, USA
84-21 373 Aziz, Javaria*; Hendy, Austin J.W.; Estes-Smargiassi, Kathryn: BIODIVERSITY AND PALEEOECOLOGY OF PLIO-PLEISTOCENE MARINE MOLLUSCS, CARPINTERIA, SANTA BARBARA COUNTY, CALIFORNIA

84-22 374 Conrad, Macy A.*; Taylor, Paul D.; Wilson, Mark A.: ENCRUSTING SCLEROBIOTIC PALEOECOLOGY IN THE TYPE CAMPAIGNIAN (UPPER CRETACEOUS) OF SOUTHWESTERN FRANCE

84-23 375 Philipp, Daniel*; Schwestler, Carrie E.; Feldmann, Rodney M.: UTILITY OF NODEXL IN INVESTIGATING PALEOECOLOGY AND PALEOBIOGEOGRAPHY OF FOSSIL DECAPOD CRUSTACEANS

84-24 376 Langley, Cortney B.; Kimmig, Julien*; Legg, David Alexander; Bader, Kenneth S.: ONTOGENY OF THE PENNSYLVANIAN HORSESHOE CRAB PALEOLIMULUS SIGNATUS (BEECHER) FROM THE PONY CREEK SHALE KONSERVAT-LAGERSTÄTTE, EASTERN KANSAS

84-25 377 Downen, Matthew R.*; Selden, Paul A.: FOSSIL SPIDERS IN PALEOGENE LACOSTRIUNE DEPOSITS

84-26 378 Ransom, Steven A.*; Hunt, A.M.: SURFACE FIELD RECONNAISSANCE FOR BURIED LARGE VERTETE FOSSILS AND DETERMINATION OF PETROPHYSICAL CHARACTERISTICS DIFFERENTIATED BY GEOPHYSICAL INSTRUMENTS SUCH AS A MAGNETOMETER: EXAMPLES FROM THE LANCE FORMATION OF EASTERN WYOMING


84-28 380 Zoba, Mohamed K.*; Oboh-Ikuenobe, Francisca E: TAXONOMY OF STRATIGRAPHICALLY IMPORTANT MID-CRETACEOUS TERRESTRIAL PALYNFLORAL SPECIES IN THE NORTH WESTERN DESERT, EGYPT

84-29 381 Moretti, John A.*; Johnson, Eileen: THE LATEST PLEISTOCENE VERTEBRATE FAUNA AND STRATIGRAPHY OF MACKENZIE COUNTY FROM THE SOUTHERN HIGH PLAINS, TEXAS

84-30 382 Villegas-Garin, Franco Aaron*: ENVIRONMENTAL DISTRIBUTION OF MESOZOIC PARAVIALIANES

84-31 383 Moretti, John A.*; Johnson, Eileen: LATE BLANCAZ HORSER NAMINNUS PENINSULATUS (MAMMALIA, EQUIDAE) FROM SCURRY COUNTY, TEXAS, WITH IMPLICATIONS FOR BIOCHRONOLOGY

84-32 384 Adams, Betty L.*; Bax, R.; Kleinhecht, Gary C.; Last, George V.; Mauldin, Bill; Mauldin, Kim; Austin, Curtis J.; Detrick, King; Mara, Neil: A LATE ICE AGE CAMEL FROM THE COYOTE CANYON/SOUTH HILL-MAULDIN SITE, BENTON COUNTY, WASHINGTON

84-33 385 O'Connor, Jingma*: THE TROPHIC HABITS OF EARLY BIRDS

84-34 386 Biedron, Eva M.*; DeSantis, Larissa R.G.: STABLE ISOTOPE ECOLOGY OF EXTANT MOUNTAIN AND COMMON BRUSHTAIL POSSUMS

84-35 387 George, Christian O.*: EVALUATING THE GEOGRAPHIC DISTRIBUTION OF QUATERNARY SHREWS: THE POTENTIAL FOR PALEOECOLOGIC INTERPRETATIONS ABOVE THE SPECIES LEVEL

84-36 388 Lehrmann, Asmara*; Blake, Elliot; Sun, Kexin; Welch, Bailey; Ray, Christopher J.; Suarez, Marina B.; Godet, Alexis; Adams, Thomas; Lehrmann, Daniel: GEOCHEMISTRY AND ENVIRONMENTAL ANALYSIS OF A LOWER CRETACEOUS DINOSAUR TRACK SITE, HERITAGE MUSEUM OF THE TEXAS HILL COUNTRY, COMAL COUNTY, CENTRAL TEXAS

84-37 389 Hunt, Adrian P.*; Lucas, Spencer G.: ON THE PROBABLE RARITY OF SMALL DINOSAUR COPROLITES

84-38 390 Smith, Gregory J.*; Gibson, Michael A.; Gibson, Brandt M.: SEASONALITY OF MAMMUT AMERICANUM FROM THE LATE PLEISTOCENE OF WEST TENNESSEE

84-39 391 Rowland, Stephen M.*; Parry, Lauren E.: A NEW MAMMOTH SITE IN AMARGOSA VALLEY, NEVADA

84-40 392 Delplanche, Rémy A.*; Orcutt, John D.: LARGE MAMMALS FROM THE HEMPHILLIAN OF MCKAY RESERVOIR, OREGON

84-41 393 Lichtig, Asher*: Lucas, Spencer G.: A REVISED VIEW OF THE TURTLE FAUNA OF THE UPPER CRETAEOUS FRUITLAND-KIRTLAND SUCCESION IN NEW MEXICO

84-42 394 Kuo, Pei-Chen*; Wang, Chun-Chieh; Chiang, Cheng-Cheng; Song, Sheng-Rong; Löwemark, Ludvig; Song, Yen-Fang: APPLICATION OF NANO-TRANSMISSION X-RAY IN PALEONTOLOGY: A CASE STUDY ON MOSASAURS TEETH

84-43 395 Vietri, Claire Belen*; Pratt, Emilie C.; Orcutt, John D.: RECENT DISCOVERIES OF SMALL VERTERATE FOSSILS FROM MCKAY RESERVOIR

84-44 396 Toews, Natalie J.; Peng, Amanda W.*: AN ONTOGENETIC INVESTIGATION OF A CRETAEOUS NORTH AMERICAN MAMMAL, DIELPHODON VORAX (METATHERIA: MARSUPIALIFORMES: STAGODONTIDAE), THROUGH QUANTITATIVE AND DESCRIPTIVE ANALYSIS OF THE DENTARY

84-45 397 Forst, Tyler*; Vasylenko, Klavdiya; Buynevich, Ilya V.: HIGH-ACTION LAKE FLOOR: A VERTEBRATE ICHNOSASSEMBLAGE ON A MOBILE SUBSTRATE, LOCKATONG FORMATION, SE PENNSYLVANIA

84-46 398 Lippincott, Jessica L.*; Wahl, William R.; D’Souza, Ian: EVIDENCE OF OSTEOMYELITIS IN A SAUROPOD RIB CAUSED BY A POTENTIAL BITE

84-47 399 Lakeram, Scott*; Bennington, J. Bret; Radcliffe, Dennis: GEOCHEMICAL AND SEM ANALYSES REVEAL NO CONCLUSIVE EVIDENCE THAT MORRISON FORMATION SILICIFIED MASSES ARE HERBIVORE COPROLITES

84-48 400 Snyder, Keith; McLaren, Matthew A.*; Chadwick, Arthur V.: DISCOVERY OF A UNIQUE MULTITAXIC DINOSAUR BONEBED FROM THE LANCE FORMATION (MAASTRICHTIAN) OF WYOMING

84-49 401 Siviero, Bethania T.*; McLaren, Matthew A.; Nelsen, David; Brand, Leonard R.; Chadwick, Arthur V.: REFINEMENT OF TOOTH TRACE CRITERIA THROUGH EXPERIMENTATION AND LITERATURE REVIEW

84-50 402 Wallace, Jenelle*; Crowley, Brooke; Miller, Joshua H.: RECONSTRUCTING EQUID MOBILITY IN MIOCENE FLORIDA

84-51 403 Haught, Ryan J.*; Clementz, Mark T.: DENTAL MICROWEAR TEXTURE COMPARISONS OF EXTINCT CARNIVORANS TO EXTANT SOCIAL HYERCARNIVORES, SOLITARY CARNIVORES, AND SOLITARY HYERCARNIVORES

84-52 404 Prothero, Donald*: REVIEW OF THE PLOIocene PECCARIES (ARTIODACTyla: TAYASSUIDAE) OF NORTH AMERICA

84-53 405 Rodwell, Ben W.*; Nichols, Kimberly A.: DENTAL TOPOGRAPHIC ANALYSIS OF DIETARY ADAPTATIONS IN EARLY EOCENE EUPRIMATEs

84-54 406 Scarpetta, Simon George*: A NEW MIOCENE GERRHONOTINE FROM THE CALIENTE FORMATION, CALIFORNIA

84-55 407 Beightol, Charles V.*; Gee, Bryan M.; Parker, William G.: HISTOLOGICAL COMPARISON OF TEMNOSPONDYL TEETH TO TAXONOMICALLY PLACE NOVEL TEMNOSPONDYL TEETH FROM THE LATE TRIASSIC CHINLE FORMATION AT PETRIFIED FOREST NATIONAL PARK, ARIZONA

84-56 408 Birnbaum, David M.*; Keller, Jonathan S.; Fox, David L.: PREDICTING BODY MASS IN RODENTS USING NON-TRADITIONAL 3D DENTAL SHAPE DESCRIPTORS

84-57 409 Belock, Jacqueline Y.*: PHYLOGENETIC SUPPORT FOR NEW PEDIOMYIDAE (MAMMALIA: METATHERIA) SPECIES FROM THE UPPER CRETAEOUS FOX HILLS OF SOUTH DAKOTA

84-58 410 Abbott, Caroline P.*; Sues, Hans-Dieter; Lockwood, Rowan: THE DIMETRODON DILEMMA: REASSESSING POSTURE IN SPHENACODONTs
SESSION NO. 85

D52. Petrology, Metamorphic (Posters)

Authors will be present from 3:30 to 5:30 PM

Booth #

85-1 420 Wolfe, Oliver M.*; Spear, Frank S.: TEXTURAL CONSTRAINTS ON THE P-T CONDITIONS OF GARNET NUCLEATION AND APPEARANCE OF RUTILE IN CONNECTICUT VALLEY SYNCLINORIUM, VT METAMETAPLITES, AND COOLING RATES FROM PEAK T

85-2 421 Tuazon, Veronica O.*; Webster, James D.; Verbeek, Earl R.: ZNRICH MINERALS OF THE STERLING HILL AND FRANKLIN ORE DEPOSITS, NEW JERSEY

85-3 422 Kerrigan, Ryan J.: PETROGENESIS OF ULTRAMAFIC BODIES IN THE PENNSYLVANIAN PIEDMONT

85-4 423 Rodemer, Franklin E.*; Smith, Michael S.: A PETROGRAPHIC AND GEOCHEMICAL EAST VERSUS WEST ANALYSIS OF THE NEOPROTEROZOIC CATOCITN FORMATION IN THE BLUE RIDGE ANTICLINORIUM, CENTRAL VIRGINIA

85-5 424 Djajak, John J.*; Peterson, Virginia L.: PRESERVED LARGE GARNET ZONING, PSEUDOSECTION THERMOBAROMETRY, AND LOCALIZED DEFORMATION CONSTRAINT P-T PATH AND EXTEND GRANULITE FACIES REGION IN THE SOUTHERN APPALACHIAN CENTRAL BLUE RIDGE, NORTH CAROLINA

85-6 425 Smith, Douglas*: TRACE ELEMENTS IN CR-PYROPE FROM THE NAVAJO FIELD OF THE COLORADO PLATEAU: EVIDENCE FOR MIXING IN THE MANTLE WEDGE DURING LOW-ANGLE SUBDUCTION

85-7 426 Patton, Jake C.*; Lazar, Codi: PETROLOGICAL ANALYSES OF OPAQUE MINERAL ASSEMBLAGES TO CONSTRAN THE FORMATION CONDITIONS OF SERPENTINIZITIED PORTIONS OF THE JOSEPHINE PERIDOTITE

85-8 427 Lehman, Miranda R.*; Mattinson, Chris G.; Hernández-Uribe, David: MULTISTAGE HISTORY RECORDED BY ZIRCONS FROM A KYANITE ELCOGITE, NORTH QAIDAM UHP TERRANE, CHINA

SESSION NO. 86

D53. Sediments, Carbonates (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

86-1 433 Salih, Namam Muhammed*; Kolo, Kamal; Mansurbeeg, Howei: Gerdes, Axel; Otthman, Rushdy; Prat, Alain: DIRECT DATING OF CALCRETIZATION AND MICROBIAL DIAGNOSTIC EVENTS IN THE UPPER CRETACEOUS B Karen FORMATION, KURDISTAN REGION OF IRAQ, BY THE U-PB SMALL SCALE ISOCHRON METHOD

86-2 434 Vicens, Estefania*: Hughes, K. Stephen; Joyce, James; Ramirez, Wilson: THE ONSET OF EXTENSIONAL FAULTING IN WESTERN PUERTO RICO AT 15 MA

86-3 435 O'Malley, Katherine E.*; Whalen, Michael T.; Morgan, Joanna; Gulick, Sean S.P.; Howey, Christopher; Bralower, Timothy; Jones, Heather L.; Smit, Jan; Rodriguez-Tovar, Francisco J.: POST-IMPACT EVOLUTION OF CHICXULUB CRATER: SEDIMENTOLOGICAL ANALYSIS OF THE CRETACEOUSPALEOGENE IMPACT, MEXICO

86-4 436 Broussard, Joshua*: Testa, Maurice P.; Garner, Brittany M.; Kirkland, Brenda L.: USING CONFOCAL MICROSCOPY TO ATTEMPT TO IMAGE AND UNDERSTAND POSE NETWORKS

86-5 437 Griffin, David H.*; Glumac, Bosiljka; Curran, H. Allen; Kortright, Skylar; Beckham, Abigail: DEPOSITIONAL HISTORY OF EEMIAN REEF DEPOSITS (COCKBURN TOWN MEMBER, GROTTO BEACH FORMATION) ON SAN SALVADOR ISLAND, BAHAMAS

86-6 438 Grisi, Kate C.*; Giles, Katherine A.; DeMeo, Kyle T.: A COMPARISON OF THE FISHER VALLEY AND GYPSUM VALLEY MEGAFLAPS, PARADOX BASIN, UTAH/COLORED: IMPLICATIONS FOR MODE OF FORMATION

86-7 439 Holly, Cody D.*; Bersaw, John; Bachtel, Steven L.: ASSESSING THE IMPACT OF DIAGENESIS ON ISOPTIC COMPOSITION OF PALEOSOL CARBONATES FROM THE CHU BASIN, KURGYZSTAN

86-8 440 Pole, Laura G.*; Potter-McIntyre, Sally L.; Williams, Jason; Knuth, Jordan M.: FACIES ANALYSIS AND COMPARISON OF JURASSIC, QUERNARY, AND MODERN CARBONATE LAKE AND SPRING DEPOSITS OF TEN MILE GRABEN, EAST CENTRAL UTAH

86-9 441 Haines, Forest*: STUDIES IN THE BRANSON HOUSE SPRING AREA OF MISSOURI SHOW LOWER MISSISSIPPIAN STRATOTYPE OF THE COMPTON, PIERS, ROSALEA, AND FERN GLEN MEMBERS MATCH THOSE IN EXSHAW, AB, MINGUS MT, AZ AND BOWDEN, W. VA
SESSION NO. 87

D23. Sediments, Clastic (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

87-1 443 Knight, John A.; Suarez, Marina B.; Ludvigson, Greg A.; QUANTIFYING CLIMATE CHANGE OVER THE EARLY CRETACEOUS RUBY RANCH MEMBER OF THE CEDAR MOUNTAIN FORMATION, EAST-CENTRAL UTAH

87-2 444 Rinke-Hardekopf, Lucian*; Dashtgard, Shahin E.; MacEachern, James A.; STRATIGRAPHIC SIGNIFICANCE OF LOWER MCMURRAY COAL DEPOSITS: ATHABASCA OILSANDS, ALBERTA, CANADA

87-3 445 Ames, Carlyn; Finzel, Emily S.; Enkelmann, Eva; Thomson, Stuart N.; INSIGHTS FOR PROVENANCE ANALYSIS FROM U/PB GEOCHRONOLOGY APPLIED TO MODERN WATERSHEDS – TALKHEETNA MOUNTAINS, SOUTHCENTRAL ALASKA

87-4 446 Ma, Baquan*; NEW IDENTIFICATION METHOD OF LOW-PERMEABILITY RESERVOIR DIAGENETIC FACES — A CASE STUDY OF YANWU AREA YANCHANG B' IN ORDOS BASIN

87-5 447 Sun, Ningliang*; Zhong, Jianhua; Liu, Chuang; Cao, Mengchun; Yang, Guanqun; Hao, Bing; DIAGENESIS AND PHYSICAL PROPERTIES EVOLUTION OF GRAVITY FLOW TIGHT RESERVOIR OF YANCHANG FORMATION IN THE SOUTHERN ORDOS BASIN

87-6 448 Wesolowski, Lindsey John-Nicholas*; Buatois, Luis A.; Mangano, Maria Gabriela; Ponce, Juan Jose; Carmona, Noelia B.; TRACE FOSSILS, SEDIMENTARY FACES AND PARASEQUENCE ARCHITECTURE FROM THE LOWER CRETACEOUS MULICHINCO FORMATION OF ARGENTINA: THE ROLE OF FAIR-WETHER WAVES IN SHOREFACE DEPOSITS

87-7 449 Brand, Leonard R.*; Mathel, Sarah A.; SOFT-SEDIMENT DEFORMATION FEATURES IN THE PERMIAN COCONINO SANDSTONE, ARIZONA, POSSIBLY PRODUCED BY SEISMIC ACTIVITY

87-8 450 Hannon, Jeffrey S.*; STRONTIUM ISOTOPIC ANALYSIS OF TEPHRA: A CASE STUDY FROM THE WESTERN INTERIOR SEAWAY

87-9 451 Asai, Hitomi*; Saneyoshi, Mototaka; Nishido, Hirotugu; Toyoda, Shin; Tsogbaatar, Khishigjav; STRATIGRAPHIC ASSIGNMENT OF EOLIAN AND FLUVIAL SEDIMENTS IN UDYN SAYR, GOBI DESERT, MONGOLIA USING AN INDICATOR OF DEFECT CENTERS IN QUARTZ COMPOSED OF SAND PARTICLE

87-10 452 Elick, Jennifer M.; POSSIBLE MECHANISMS FOR ROCK FALL EVENTS ALONG PA STATE ROUTE 11/15, SOUTH OF LIVERPOOL, PA

87-11 453 Juntunen, Kristopher Lee*; Morgan, Ryan; THE LION MOUNTAIN SANDSTONE AS AN EXEMPLAR OF COMPLEXITY IN TRANSITIONAL ENVIRONMENTS

87-12 454 Scott, Ashley Brooke*; Morgan, Ryan; Ronck, Catherine; TROPICAL POOLS AND COLD-WATER SEEPS: FORMATION AND DIAGENESIS OF A SHORELINE-TO-LAGOON SYSTEM IN THE CRETACEOUS

87-13 455 Scott, Ashley Brooke*; Juntunen, Kristopher Lee*; Morgan, Ryan; PENNSYLVANIAN PLACID SHALE: TRANSITIONAL MEMBER OF THE BRAD FORMATION

87-14 456 Heydari, Ezat*; Calef, Fred J.; Schroeder, Jeffrey F.; Van Beek, Jason; Parker, Timothy; Rowland, Scott; Fairen, Alberto G.; Hallet, Bernard; A MAGNIFICENT OUTCROP IN THE KIMBERLEY REGION OF GALE CRATER, MARS

87-15 457 Miller, D.E.*; Montepo, Carlos; Gallagher, Tony; Scanlon, Darby P.; Sarti, Ethan; Moreno, Jesus; Rodriguez, Virginia; Spreti, Jacob; USING MULTI-CYCLIC QUARTZITES IN FLUVIAL CONGLOMERATES TO TRACK LATE CRETACEOUS-CENOZOIC PALEODRAINAGE EVOLUTION IN THE MOJAVE DESERT, SOUTHERN SAN JOAQUIN VALLEY, AND COAST RANGES, CALIFORNIA

87-16 458 Klopfenstein, Trey*; Nadon, Gregory C.; HIGH FREQUENCY SEQUENCES WITHIN THE UPPER MISSISSIPPIAN ALLENSVILLE MEMBER, LOGAN FORMATION, SOUTH-CENTRAL OHIO

87-17 459 James, Robert N.; Miller, D.E.; Sarti, Ethan; Watson, Kenneth; Buehler, Jeff; McKinney, Sam; Rodriguez, Virginia; Spreti, Jacob; Jackson, Jake; EVIDENCE FOR EARLY MIOCENE SYNXTENSIONAL CONGLOMERATE SEDIMENTATION IN THE TUNS HALF-GRABEN, SOUTHERN SAN JOAQUIN VALLEY, CALIFORNIA

87-18 460 Stubbs, Dreadnaught G.; Nadon, Gregory C.; A SEQUENCE STRATIGRAPHIC INTERPRETATION OF THE ALLEGHENY GROUP (LATE MOSCOVICIAN) IN THE DISTAL APPALACHIAN BASIN

87-19 461 Monami, Shifat*; Uddin, Ashraf; SEDIMENTATION AND TECTONICS OF LOWER PENNSYLVANIAN POTTSVILLE FORMATION FROM WESTERN BITUMINOUS FIELD OF PENNSYLVANIA

87-20 462 McKinney, Samuel*; Buehler, Jeffrey; Watson, Kenneth; Miller, D.E.; James, Robert N.; Moreno, Jesus; Sarti, Ethan; DIFFERENTIATING BEACH AND FLUVIAL CONGLOMERATES BY SIZE AND SHAPE CHARACTERISTICS OF QUARTZITE CLASTS IN THE CENOZOIC TECUYA AND KERN RIVER FORMATIONS, SOUTHERN SAN JOAQUIN VALLEY, CA

87-21 463 McCarthy, Andrew L.; COMPARATIVE GEOCELLULAR MODELING OF FLUVIAL POINT BARS: LEVERAGING OUTCROP STATISTICS TO ENHANCE GEOLOGIC REALISM

87-22 464 Sarti, Ethan*; Moreno, Jesus; Miller, D.E.; James, Robert N.; Jackson, Jake; Rodriguez, Virginia; Epuna, Favour; Herrera, Peyton; PROVENANCE OF FLUVIAL AND SHALLOW MARINE CONGLOMERATES IN THE LATE EOCENE(?) EARLY MIOCENE TECUYA FORMATION, SOUTHERN SAN JOAQUIN VALLEY, CALIFORNIA

87-23 465 Mathel, Sarah A.; Brand, Leonard R.; Whitmore, John H.; ALONG-DIP TEXTURAL TRENDS IN THE PERMIAN COCONINO SANDSTONE FROM THIN SECTION AND LASER DIFFRACTION PARTICLE ANALYSIS

87-24 466 Mery, Augusta*; Thomburg, Jesse D.; Seminack, Christopher T.; Oest, Christopher; Kopczynski, Karen A.; Peterson, Stephen; Davis, Timothy; PETROGRAPHIC AND GEOCHEMICAL EVALUATION OF THE UPPER ORDOVICIAN JUNIATA FORMATION IN CENTRAL PENNSYLVANIA: IMPLICATIONS FOR CHANGES IN SEDIMENTATION RATE

87-25 467 Griffe, Neil*; Mantahez, Isabel P.; Fedorchuk, Nicholas D.; Isbell, John L.; Mundil, Roland; Veselý, Fernando; Weinschütz, Luiz; Iannuzzi, Roberto; Gulbranson, Erik L.; Taboada, Arturo César; Pagani, M.; Yang, Guanqun; Hao, Bing; USING MULTI-CYCLIC QUARTZITES IN FLUVIAL CONGLOMERATES TO TRACK LATE CRETACEOUS-CENOZOIC PALEODRAINAGE EVOLUTION IN THE MOJAVE DESERT, SOUTHERN SAN JOAQUIN VALLEY, AND COAST RANGES, CALIFORNIA

87-26 468 Pro沃, Ashley W.*; Newell, Dennis L.; Mahan, Kevin H.; Yonké, Adolph; Pulsipher, Mikaela A.; Ault, Alexis K.; Dehler, Carol M.; DOCUMENTING THE NATURE AND TIMING OF FLUID-ROCK INTERACTION IN NEOPROTEROZOIC SILICICLASTIC ROCKS OF NORTHERN UTAH

Sunday, 22 October 2017
SESSION NO. 88

D24. Stratigraphy (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 3:30 to 5:30 PM

Booth #

88-1 469 Steele, Peter A.*; STRATIGRAPHIC EVOLUTION OF THE JURASSIC NAVAJO SANDSTONE ERG, SAN RAFAEL SWELL, CENTRAL UTAH

88-2 470 Kupfer, Kate L.*; Shimer, Grant; Kaiser, Jason F.; Gardner, Kevin; PETROGRAPHIC ANALYSIS OF SANDSTONES AND CONGLOMERATES FROM THE NANUSHUK AND TOROK FORMATIONS, SLOPE MOUNTAIN, ALASKA

88-3 471 Fenton, Nicole C.*; Kimbrough, David L.; Behl, Richard J.; Nelson, Demain; LASER ABLATION ICP-MS ZIRCON U-PB DATING OF MONTEREY FORMATION TUFF IN THE LOS ANGELES AND SANTA BARBARA BASINS

88-4 472 Nunez, Carlos E.*; SAND PETROLOGY AS A PROXY FOR EXTREME WAVE EVENTS, A CASE STUDY FROM ANEGADA, BRITISH VIRGIN ISLANDS

88-5 473 Bush, John H.*; Dunlap, Pamela; Reidel, Stephen P.; GEOLOGIC CROSS-SECTION FROM MOSCOW, IDAHO, TO WEST OF PULLMAN, WASHINGTON

88-6 474 Bush, John H.*; Dunlap, Pamela; MOICEAN EVOLUTION OF THE PULLMAN-PULLMAN BASIN, IDAHO AND WASHINGTON

88-7 475 Lynds, Ranie; Slattery, Joshua S.*; A NEW SPATIAL AND TEMPORAL CORRELATION OF WYOMING’S UPPER CRETACEOUS STRATIGRAPHY

88-8 476 Collins, Joe D.*; Miller, Trinity E.; Gill, Thomas E.; Langford, Richard P.*; STRATIGRAPHIC RELATIONSHIP AND HISTORY OF TWO LATE PLEISTOCENE AND HOLOCENE PLAYAS IN THE HARNEY BASIN, EASTERN OREGON, USA

88-9 477 Fulton, Michael*; McLaughlin, Peter P.*; STRATIGRAPHIC CORRELATION OF THE POTOMAC AND WASTE GATE FORMATIONS IN DELAWARE, POTENTIAL TARGETS FOR CARBON SEQUESTRATION

88-10 478 Lucas, Spencer G.*; Tanner, Lawrence H.; THE LATE TRIASSIC CARNIAN WET EPISTODE IN THE WESTERN USA AND THE DURATION OF THE NORIAN STAGE

88-11 479 Martinez-Sacristan, Hernando*; JURASSIC & CRETACEOUS BOUNDARY AN UNCONFORMITY IN NORTH & SOUTH AMERICA: FAR FROM RHEOTIC, CLOSER TO REALITY

88-12 480 Trayler, Robin B.*; Schmitz, Mark D.; Bargo, Susana; Cuitiño, Jaime I.; Kay, Richard F.; Kohn, Matthew J.; Strömberg, Caroline A.E.; Vizcaíno, Sergio F.; A NEW APPROACH FOR DEVELOPING CONTINUOUS AGE-DEPTH MODELS FROM DISPERSED CHRONOLOGIC DATA: APPLICATIONS TO THE MIOCENE SANTA CRUZ FORMATION, ARGENTINA

88-13 481 Buckley, Gregory A.*; Hartman, Joseph H.*; CONSTRAINING CHRONOSTRATIGRAPHIC BOUNDARIES WITHIN THE CRETACEOUS AND PALEOCENE FORMATIONS OF THE EASTERN CRAZY MOUNTAINS BASIN, MONTANA

88-14 482 Aguirre-Palafox, Luis Erick*; Alvarez, Walter; Schmitz, Birger; U-PB AGES OF DETRITAL ZIRCONS FROM PELAGIC LIMESTONES: APENNINE SAMPLES AND PROVENANCE ANALYSIS

88-15 483 Daniels, K. Sean*; THE PROVENANCE, SEDIMENTOLOGY, AND STRATIGRAPHY OF THE TABLE MOUNTAIN FORMATION

88-16 484 Wierigroch, Monica*; Bhattacharya, Janok P.; REGIONAL HIGH-FREQUENCY STRATIGRAPHIC CYCLICITY ANALYSIS OF THE UPPER CRETACEOUS JUANA LOPEZ MEMBER OF THE MANCOS SHALE, NEW MEXICO

88-17 485 Naujokaitis, Jone*; Garb, Matthew P.; Landman, Neil H.; Brophy, Shannon K.; Phillips, George E.; STRATIGRAPHIC IMPLICATIONS OF RHYTHMITES WITHIN THE UPPER MAASTRICHTIAN PRAIRIE BLUFF CHALK ALONG THE EASTERN MISSISSIPPI EMBAYMENT

88-18 486 McCann, Kieran A.*; Dorsey, Rebecca J.; Niemi, Tina M.; Jaime-Geraldo, Aldo Javier; STRATIGRAPHIC ANALYSIS OF THE LATE MIOCENE BOLEO FORMATION, SANTA ROSALIA BASIN, BAJA CALIFORNIA SUR, MEXICO

88-19 487Comea, Emily*; Bartholomew, Alex J.; da Silva, Anne-Christine; Brett, Carlton E.; Ver Straeten, Charles; OUTSTANDING LOWER DEVONIAN MILANKOVITCH CYCLOCITIES EXPOSED IN THE HUDSON VALLEY, NEW YORK STATE

88-20 488 Buchanan, Tyler J.*; McLaughlin, Peter P.*; STRATIGRAPHIC ANALYSIS OF A DEEP CORE RECORD THROUGH MIOCENE-AGE SANDY SHALLOW-MARINE DEPOSITS IN SOUTHERN DELAWARE

88-21 489 Wolfman, Ariel*; Mulligan, Suzanne R.; Wells, Michael; RESOLVING STRATIGRAPHIC COMPLEXITIES OF THE PAHRUMP GROUP AND MIGMATITE PROTOLOTH IN THE FUNERAL MOUNTAINS METAMORPHIC CORE COMPLEX USING U-PB DZ GEOCHRONOLOGY

88-22 490 Brooks, Nicolle*; Danilova, Anastasia; Garb, Matthew P.; Rodriguez, Stephanie C.; STRATIGRAPHIC INTERPRETATION OF THE TRANSITION FROM THE PRECAMBRIAN STERLING QUARTZITE TO LOWER WOOD CANYON FORMATION, EMIGRANT PASS, CALIFORNIA

88-23 491 Harris, R. Scott*; Schultz, Peter H.; Zarate, Marcelo Aристодес; IMPACTS AS AN AGENT OF ENVIRORNMENTAL UPHEAVAL IN THE ARGENTINE PAMPAS

88-24 492 Smith, Kyson Raymond*; Shimer; Grant: SOUTHERN UTAH ONLINE ROCK DATABASE

SESSION NO. 89

T216. Spatiotemporal Variations and the Role of Fluids in Fault-Zone Hydrogeomechanical Processes (Posters) (GSA Structural Geology and Tectonics Division; GSA Hydrogeology Division; GSA Energy Geology Division; Future of Tectonics Initiative)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

89-1 493 Bohrara, Krishna*; Bradbury, Kelly K.; Evans, James P.; CARBONACEOUS FAULT-RELATED ROCKS IN SAFOID PHASE III CORE: INDICATORS OF FLUID-ROCK INTERACTION AND STRUCTURAL DIAGENESIS DURING SLIP

89-2 494 Evans, James P.*; Lindvall, Scott; Kerwin, Scott; Ballard, Christopher; Williams, Randolph T.; Bradbury, Kelly K.; Tyson, Jeffrey; Rowe, Christie D.; Savage, Heathier M.; THE COMPOSITION AND STRUCTURE FROM DRILL CORE OF THE SHALLOW PORTION OF THE SAN ANDREAS FAULT, LAKE ELIZABETH TUNNEL, SOUTHERN CALIFORNIA

89-3 495 Moore, Diane E.*; Bradbury, Kelly K.; Evans, James P.; CHEMICAL CHARACTERIZATION OF SAFOID PHASE 3 CORE

89-4 496 Han, GilDon*; Han, WoonShik; Jeon, SoDam; Piao, Jihe; Kim, ChanYeong; Yun, TaeKwon; Park, JongGil; NUMERICAL SIMULATION FOR CO2 MIGRATION, DISTRIBUTION, AND GEYSERING PROCESSES AT LITTLE GRAND WASH AND SALT WASH FAULTS IN UTAH

89-5 497 Wang, Jordan W.*; Agosta, Fabrizio; Hodson, Keith R.; Crider, Christopher; Williams, Randolph T.; Bradbury, Kelly K.; EVIDENCE FOR FLUID PATHWAYS ALONG DETACHMENT FAULTS FROM INFRARED SPECTRA OF LAKE ELIZABETH TUNNEL, SOUTHERN CALIFORNIA

89-6 498 Lynch, Erin*; Lacroix, Brice; van der Pluijm, Ben; Vennemann, Torsten; CHARACTERIZING FAULT ZONE FLUIDS FROM CARBONATES USING STABLE ISOTOPES AND CLUMPED ISOTOPE PALEOTHERMOMETRY IN NORMAL FAULTS OF CENTRAL ITALY

89-7 499 Brikowski, Tom H.*; Providence, Terrence D.; LAZER ABLATION ICP-MS ZIRCON U-ПВ DATING OF THE MONTEREY FORMATION TUFF IN THE LOS ANGELES AND MONTEREY BASINS

Sunday, 22 October 2017
SESSION NO. 90
T221. Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 3:30 to 5:30 PM

Booth #

90-1 501 Allen, Tyler J.*; Cornish Morales, Ivan M.; Wallace, Vivian C.; Piepjohn, Karsten; Bergmann, Kristin; Halverson, Galen P.; Tosca, Nicholas J.; McClelland, William C.; Strauss, Justin V.: DETRITAL ZIRCON GEOCHRONOLOGY AND PROVENANCE OF THE HECLA HOEK SUCCESSION OF NORTHEASTERN SVALBARD, NORWAY

90-2 502 Wala, Virginia T.*; Ceaser, Iniko M.; Ziemniak, Grzegorz; Faehnrich, Karol; Meyer, Edward E.; Czerny, Jerzy; Majka, Jaroslav; McClelland, William C.; Strauss, Justin V.: NEOPROTEROZOIC STRATIGRAPHY AND PROVENANCE OF WEDEL JARLSBERG LAND, SVALBARD: NEW INSIGHTS INTO THE ORIGIN AND TRANSPORT HISTORY OF THE SOUTHWESTERN PROVINCE


90-4 504 Faehnrich, Karol*; Majka, Jaroslav; Schneider, David; Strauss, Justin V.; Ziemniak, Grzegorz; Manecki, Maciej; Wala, Virginia T.; Czerny, Jerzy: LATE CALEDONIAN SHEARING IN SW SPITSBERGEN – NEW AGE CONSTRAINTS FROM “U/Pb”/AR MUSCOVITE GEOCHRONOLOGY


90-6 506 Zhang, Xiaojing*: Pease, Victoria; Carter, Andrew: PALAEOZOIC & MESOZOIC TECTONIC EVOLUTION OF NOVAYA ZEMLIA: FROM GEOCHRONOLOGICAL AND THERMOCHELONIAL EVIDENCE

90-7 507 Robinson, Frank; Pease, Victoria*: Toro, Jaime: U-Pb AND O ISOPE CHARACTERISTICS OF TIMANIAN- AND CALEDONIAN-AGED DETRITAL ZIRCONS FROM THE BROOKS RANGE, ARCTIC ALASKA

90-8 508 Titus, Jason*: Vogl, James J.; Brandt, Collin: PRELIMINARY MAPPING AND DETRITAL ZIRCON GEOCHRONOLOGY FROM THE ERNIE LAKE REGION, CENTRAL BROOKS RANGE, ALASKA: IMPLICATIONS FOR PRE-MISSISSIPPIAN BASEMENT AND BROOKS RANGE ARCHITECTURE

90-9 509 O’Brien, Tim M.*; Miller, Elizabeth L.: EXHUMATION OF H/P/LT METASEDIMENTARY ROCKS OF THE SCHIST BELT, SOUTHERN BROOKS RANGE AS REVEALED BY THERMOBAROMETRY AND “U/Pb”/AR THERMOCHELONIAL

90-10 510 Skarupa, Karol; Piepjohn, Karsten*; von Goosen, Werner; Gaedicke, Christoph: STRUCTURAL RESTORATION OF GEOLOGICAL CROSS-SECTIONS OF NORTH-EASTERN ELLESMERES ISLAND (CANADIAN ARCTIC): INSIGHT INTO THE ELLESMERIAN AND EUREKAN DEFORMATIONS

SESSION NO. 91
D11. Paleontology, Paleoecology/Taphonomy

8:00 AM, Washington State Convention Center, Room 606

Lindsey R. Leighton and Gregory P. Dietl, Presiding

91-1 511 Gilotti, Jane A.*; McClelland, William C.; Piepjohn, Karsten; von Gosen, Werner: USING A PRECAMBRIAN TERRANE BOUNDARY TO ESTIMATE SLIP ON THE WEGENER FAULT, NAES STRAIT

MONDAY, 23 OCTOBER 2017
MORNING ORAL TECHNICAL SESSIONS

SESSION NO. 91
D11. Paleontology, Paleoecology/Taphonomy

8:00 AM, Washington State Convention Center, Room 606

Lindsey R. Leighton and Gregory P. Dietl, Presiding

91-1 511 Gilotti, Jane A.*; McClelland, William C.; Piepjohn, Karsten; von Gosen, Werner: USING A PRECAMBRIAN TERRANE BOUNDARY TO ESTIMATE SLIP ON THE WEGENER FAULT, NAES STRAIT
SESSION NO. 92
P2. Landscapes in the Anthropocene | GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; GSA Hydrogeology Division; GSA Geology and Public Policy Committee; Geology (journal)

8:00 AM, Washington State Convention Center, Ballroom 6A
José Antonio Constantine, J. Wesley Lauer and Rónadh Cox, Presiding

92-1  8:05 AM  Bierman, Paul R.; Corbett, Lee B.; Shakun, Jeremy D.; Schmidt, Amanda H.: COUNTING ATOMS TO PLACE HUMAN IMPACTS IN A GEOLOGIC CONTEXT

92-2  8:35 AM  Wuebbles, Donald J.: THE SCIENCE OF CLIMATE CHANGE: A LOOK AT OUR CHANGING LANDSCAPE

92-3  9:05 AM  Lettenmaier, Dennis*: THE CHANGING DYNAMICS OF SNOW PROCESSES IN THE MOUNTAINOUS WESTERN US

92-4  9:35 AM  Lundquist, Jessica D.: DO FOREST-SNOW FEEDBACKS MITIGATE OR EXACERBATE A MOUNTAIN’S HYDROLOGIC RESPONSE TO A WARMING WORLD?

92-5  10:05 AM  Montgomery, David R.*: BRINGING OUR SOIL BACK TO LIFE: SOLVING OUR OLDEST AND MOST RECENT PROBLEMS

92-6  10:30 AM  Foufoula-Georgiou, Efthymia**: TIME IS RUNNING OUT TO MEET WATER QUALITY OBJECTIVES IN MIDWESTERN AGRICULTURAL LANDSCAPES UNDERGOING RAPID ENVIRONMENTAL CHANGE: SOUND SCIENCE IS FUNDAMENTAL TO SOUND POLICY

92-7  11:05 AM  Vorosmarty, Charles*: THE STATE AND TRAJECTORY OF GLOBAL FRESH WATER: THE CASE FOR CAUTIOUS PESSIMISM

SESSION NO. 93
T6. Cross-Border Community Engagement Using Geoscience Research, Education, and Outreach | GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Karst Division

8:00 AM, Washington State Convention Center, Room 613/614
Peter S.K. Knappett, Kory Konsoer, Sarah Nagorsen and Peter J. Wampler, Presiding

93-1  8:05 AM  Zhan, Hongbin**: CROSS-COUNTRY ENGAGEMENT IN HYDROGEOLOGY RESEARCH AND EDUCATION: EXPERIENCES IN CHINA AND USA (Invited Presentation)

93-2  8:25 AM  Mullins, Melissa L.; Nesmith, Doug M.; Nesmith, Suzanne M.; Wong, Stephanie S.; Yelderman, Joe C.: FOCUSING ON THE FUTURE IN UGANDA AND TEXAS: HOW ON-GOING COMMUNITY COLLABORATION COMBINED WITH INTERDISCIPLINARY EDUCATION AND RESEARCH MAY ENHANCE STEWARDSHIP ACROSS CONTINENTS

93-3  8:40 AM  Siegel, Malcolm*: PEACEBUILDING ACROSS THE ISRAELI/PALESTINIAN BORDER THROUGH ENVIRONMENTAL EDUCATION

93-4  8:55 AM  Wampler, Peter J.: POTHOLES AND PITFALLS ALONG THE ROAD TO RESEARCH AND STUDYING ABROAD IN HAITI

93-5  9:10 AM  Sanquini, Anne*: INCREASING GEOHAZARD AWARENESS AND REDUCING RISK IN SOUTH ASIA VIA CROSS-BORDER INITIATIVES (Invited Presentation)

93-6  9:30 AM  Burns, Robert C.*; Cardozo Moreira, Jasmine; Robison, Daniel; Schaney, Mitzy: US GEO Park HERITAGE: RIVERS, RAIL, KARST, COAL AND PEOPLE AT THE APPALACHIAN GEO PARK OF WEST VIRGINIA

SESSION NO. 94
T12. Hydrogeology, Geochemistry, and Wetland Processes | GSA Hydrogeology Division

8:00 AM, Washington State Convention Center, Room 618/619/620
Jeffrey M. McKenzie and Laura K. Lautz, Presiding

94-1  8:05 AM  Andersen, C. Brannon; Lewis, Gregory P.: THE ROLE OF BEAVER PONDS IN MAINTAINING RIPARIAN VEGETATION HEALTH DURING DROUGHTS: A CASE STUDY AT SUSIE CREEK AND MAGGIE CREEK, NV

94-2  8:20 AM  Briggs, Martin A.*; Day-Lewis, Frederick D.; Mahmood Poor Dehkordy, Farzaneh; Zarnetske, Jay; Singha, Kamini; Harvey, Judson W.; Rosenberry, Donald O.; Boutt, David F.; Hare, Danielle K.; Lane, John W.; EVALUATING THE ECOLOGICAL AND BIOGEOCHEMICAL IMPLICATIONS OF PREFERENTIAL FLOW PROCESSES AT THE GROUNDWATER/SURFACE WATER INTERFACE

94-3  8:45 AM  Harvey, Charles F.; Hoyt, Alison; Cobb, Alexander R.; Gandois, Laure; Pangala, Sunita: LATERAL ADVECTION

94-4  9:00 AM  pathway, C. Brannon; Lewis, Gregory P.: PAVEMENT, PASTURE, PONDS, AND POOP: NITROGEN BIOGEOCHEMISTRY IN HUMAN TRANSFORMED LANDSCAPES OF THE SOUTHEASTERN PIEDMONT
LIMITS METHANE EMISSIONS FROM TROPICAL PEATLANDS

94-5 9:15 AM Kifer, Lydia H.*; Amirbahrman, Aria; Caihou, Aram; Norton, Stephen A.: IDENTIFYING ENVIRONMENTAL PREDICTORS AND QUANTIFYING METHANE AND CARBON DIOXIDE FLUX FROM FOUR VERNAL POOLS, MAINE USA

94-6 9:30 AM Boult, David F.: EXTREME PRECIPITATION EVENTS AND SUBSURFACE WATER STORAGE DYNAMICS OF GLACIATED LANDSCAPES

94-7 9:45 AM Gutchess, Kristina M.*; Jin, Li; Ledesma, José L.J.; Crossman, Jill; Kelleher, Christa; Lautz, Laura K.; Lu, Zunli: LONG-TERM INCA SIMULATIONS FAVOR CLIMATIC OVER ANTHROPOGENIC IMPACTS ON A REDUCTION OF STREAM WATER SALINITY IN NEW YORK STATE

10:00 AM BREAK

10:15 AM LIGHTNING TALKS

94-8 10:30 AM Smith, Jacqueline A.*; Hodge, James L.; Kurtz, Bradley H.; Garver, John L.: PERVERSIVE MICROPLASTIC POLLUTION FOUND IN THE MOHAWK RIVER, NEW YORK STATE

94-9 10:45 AM Glas, Robin*; Burns, Douglas A.; Lautz, Laura K.: CHANGING STREAMFLOW REGIMES IN NEW YORK STATE: TRENDS, PATTERNS, AND ATtribution

94-10 11:00 AM Parizek, Richard R.*; Parizek, Katarin A.: GROUNDWATER DEVELOPMENT WITHIN HIGH VALUE TRIBUTARIES, ARE THESE COMPATIBLE?

11:15 AM Hart, Dave*; Streiff, Carolyn M.: APPLICATION OF GEOPHYSICS TO BETTER UNDERSTAND WETLAND HYDROGEOLOGY

94-12 11:30 AM Alexander, Scott C.*; Tipping, Robert G.: HIGH RESOLUTION MAPPING OF GLACIAL HYDROSTRATIGRAPHY USING LIDAR-BASED HILLSHADE IMAGES, ROTOSONIC CORE, AND GAMMA LOGS

SESSION NO. 95

T22. Water Resources and Management in Coastal and Inland Aquifers—Emphasis on Small Island Developing States of the Caribbean (GSA Hydrogeology Division; GSA International/International Interdisciplinary Interest Group; GSA Geology and Health Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Room 615/616/617

Arpita Mandal, Debbie Ann Gordon Smith, Saugata Datta and Katherine K. Ellins, Presiding

8:00 AM INTRODUCTORY REMARKS

95-1 8:05 AM Datta, Saugata*; Mandal, Arpita: CHALLENGES IN WATER RESOURCES AND IMPACT ON POPULATION IN THE KINGSTON BASIN

95-2 8:20 AM Mandal, Arpita*; Donk, Peter; Curtis, Melissa; Siddial, Johann: EXTREME EVENTS AFFECTING WATER RESOURCES IN THE HOPE RIVER WATERSHED IN JAMAICA: USE OF WETSPRO FOR BASEFLOW SEPARATION AND ITS LONG TERM TREND


95-4 8:50 AM Adamson, James K.*; LaVanchy, G. Thomas; Miner, William Javan; Stone, Brandon: HYDROGEOLOGICAL ASSESSMENT OF THE BRITO FORMATION, NICARAGUA

95-5 9:05 AM Christie, Mario O’Shane*; Rattray, Vaughn Robin; Mandal, Arpita: ASSESSING THE IMPACT OF WEATHER AND ANTHROPOGENIC FACTORS ON WATER QUALITY IN THE HOPE RIVER, JAMAICA (Invited Presentation)

95-6 9:20 AM Miner, Javana*; Adamson, James K.: MODELING THE SPATIAL DISTRIBUTION OF GROUNDWATER RECHARGE IN HAITI USING A GIS APPROACH

11:10 AM Prusty, Pintu*; Farooq, S.H.; Zimik, Horthing V.: BREAK

95-7 9:50 AM Gordon-Smith, Debbie-Ann D.S.*; Peterson, Richard N.; Peterson, Leigha E.; Paulino, Stivaly; Bokuniewicz, Henry: SUBMARINE GROUNDWATER DISCHARGE AND ASSOCIATED NUTRIENT FLUXES TO THE NORTH COAST OF JAMAICA (Invited Presentation)

95-8 10:10 AM Curtis, Melissa*; Mandal, Arpita: WATER RESOURCES OF THE RIO COBRE BASIN OF JAMAICA USING WEAP: IMPACT OF CLIMATE VARIABILITY

10:25 AM Stewart, Che Anthony*: A HYDROLOGICAL ANALYSIS OF THE RIO COBRE WATERSHED, JAMAICA

95-9 10:40 AM Rodrigues, Lisa J.*; Blemker, Samantha R.; Frangos, Sean; Goldsmith, Steven T.: METAL CONTAMINATION IN TWO OYSTER SPECIES FROM SOUTHWEST PUERTO RICO

95-10 10:55 AM Korman, Laura B.*; Wagner, Eric J.; Goldsmith, Steven T.; Rodrigues, Lisa J.: USING THE SOIL AND WATER ASSESSMENT TOOL (SWAT) TO MODEL DRY AND WET SEASON SEDIMENT YIELDS TO CORAL REEFS IN THE LOWER RIO LOCO WATERSHED

95-11 11:10 AM Paulino, Stivaly*; Bokuniewicz, Henry: THERMAL INFRARED INDICATIONS OF SUBMARINE GROUNDWATER DISCHARGE (SGD) IN THE NORTHERN COAST OF JAMAICA

95-12 11:25 AM Prusty, Pintu*; Farooq, S.H.; Zimik, Horthing V.: GEOMORPHIC CONTROL ON OCCURRENCE OF FRESH GROUNDWATER IN A SALTWATER INTRUDED COASTAL AQUIFER

11:40 AM CONCLUDING REMARKS

SESSION NO. 96

T31. GeoCorps and Geoscientists-in-the-Parks Internships on Public Lands: Providing Career Development Opportunities for Students and Recent Graduates (GSA Geology and Society Division; US Forest Service; National Park Service)

8:00 AM, Washington State Convention Center, Room 612

Johanna L. Kovarik, Lisa Norby and Matthew Dawson, Presiding

8:00 AM INTRODUCTION/OPENING REMARKS

96-1 8:10 AM Olson, Erika R.*; Meyer, Herbert W.; Slovacek, Mariah; Thorpe, Emily D.; Escobar-Burciaga, Ricardo Daniel; Allen, Sarah E.; Lowe, Alexander J.; O’Connor, Conni J.: DEVELOPING NEW GEOLOGIC TRAIL EXHIBITS AT FLORISSANT FOSSIL BEDS NATIONAL MONUMENT: A COLLABORATIVE PROJECT BY GIPS


96-3 8:40 AM Lanik, Amanda*; Hults, Chad P.; Kurtz, Deborah; Baker, Emily H.: MANAGING PALEONTOLOGICAL RESOURCES IN ALASKA’ S NATIONAL PARKS: CHALLENGES, NEW TOOLS, AND THE DISCOVERY OF PALEOZOIC FOSSILS IN KENAI FJORDS NATIONAL PARK

96-4 8:55 AM Kruptnik, Diana; Seiffert, Daniel: IMPACT OF GEOCORPS INTERNSHIP AT THE CUSTER GALLATIN NATIONAL FOREST: KARST INVENTORY, MINE RECLAMATION, AND PUBLIC OUTREACH

96-5 9:10 AM Wempner, Jenelle*; Pike, James Daniel; Baichtal, James F.: THE SPELUNKER’S STRETCH: 500 FEET OF INTERPRETIVE KARST EXPLORATION IN EL CAPITAN CAVE, SE ALASKA

96-6 9:25 AM Whitenack, Henry; Langstaff, John; Hobbis, Trevor: HIGH RESOLUTION AERIAL LIDAR MAPPING OF FOREST
SESSION NO. 97

T38. Cenozoic Paleoclimates and Ecosystems I (Paleontological Society; Geochemical Society; Paleontological Research Institution; Cushman Foundation for Foraminiferal Research; GSA Sedimentary Geology Division; GSA Limnogeology Division)

8:00 AM, Washington State Convention Center, Room 609

Alexis Licht, Caroline Stromberg, Gerard H. Roe, Guillaume Dupont-Nivet, Yannick Donnadieu and K. Christopher Beard, Presiding

8:00 AM, Washington State Convention Center, Room 609

Yann, Lindsey T.; DeSantis, Larisa R.G.; Deering as Potential Climatic Recorders through Time

9:00 AM, Washington State Convention Center, Room 609

Sheldon, Nathan D.; Smith, Selena Y.: Evolutionary Isotope Ecology of Modern Gymnosperms with Extensive Fossil Records Constrains Paleoclimatic and Paleoenvironmental Applications

9:15 AM, Washington State Convention Center, Room 609


9:30 AM, Washington State Convention Center, Room 609

Reid, Rachel E.B.; Jones, Mica; Marshall, Fiona; Brandt, Steven: Holocene Terrestrial Climate Change in Somalia Revealed through Bulk and Intra-Tooth Oxygen Isotope Analysis of Warthog and Dik-Dik Tooth Enamel

9:45 AM, Washington State Convention Center, Room 609

Hill, Christopher L.; Blackwell, Bonnie A.B.; Skinner, Anne R.; Blickstein, Joel; Florentin, Jonathan A.: ESR Dated Stratigraphic Sequences at Bir Tarfawi (Southern Egypt): Pleistocene Archaeological and Paleontological Occurrences Associated with Wet Climate Conditions during Isotope Stages 7 and 5

10:00 AM, Washington State Convention Center, Room 609

Kimbrough, David L.; Mahoney, J. Brian; Mescua, José F.; Giambiagi, Laura; Grove, Marty: The Choiyoi Silicic
Monday, 23 October 2017

SESSION NO. 99

T49. Advances in Computational Paleobiology: Reshaping Our Understanding of the Fossil Record

9:00 AM, Washington State Convention Center, Room 608

Rachel C.M. Warnock, Alexander M. Dunhill and Erin E. Sauge, Presiding

99-1 8:00 AM Wright, David F.: QUANTIFYING THE ECOLOGICAL COMPONENTS OF PHENOTYPIC DIVERSIFICATION DURING THE “AGE OF CRINOIDS” WITH PHYLOGENETIC COMPARATIVE METHODS

99-2 8:15 AM Wagner, Peter*: THE EFFECT OF STRATIGRAPHIC DATABASES ON PHYLOGENY-BASED TESTS OF MACROEVOLUTIONARY HYPOTHESES

99-3 8:30 AM Wang, Steve C.*; Lin, Jason Z.; Ngo Quy, Lan Anh: ACCOUNTING FOR DATING UNCERTAINTY IN PALEONTOLOGICAL ANALYSES

99-4 8:45 AM Landis, Michael James*; Freyman, Will; Baldwin, Bruce G.: DATING THE HAWAIIAN SILVERSWORD RADIATION IN THE FACE OF PHYLOGENETIC, BIOGEOGRAPHIC, AND PALEOECOLOGICAL UNCERTAINTY

99-5 9:00 AM Muscente, A. Drew*: Bykova, Natalia; Boag, Thomas H.; Butois, Luis A.; Eleish, Ahmed; Prabhu, Anirudh; Meyer, Michael; Schiffbauer, James D.; Fox, Peter; Hazen, Robert M.; Knoll, Andrew H.: NETWORK ANALYSIS OF FOSSIL CO-OCCURRENCE IN THE EDIACARAN AND PALEOZOIC

99-6 9:15 AM Klompmaker, Adiel A.; Finnegan, Seth: CO-OCCURRENCE PATTERNS SUGGEST THAT COMPETITIVE EXCLUSION IS RARE IN FOSSIL AND MODERN MARINE BENTHIC ECOSYSTEMS

99-7 9:30 AM Smits, Peter D.: MODELING CHANGES TO THE FUNCTIONAL COMPOSITION OF NORTH AMERICAN MAMMAL DIVERSITY: MULTI-LEVEL DYNAMICS OF A REGIONAL SPECIES POOL

99-8 9:45 AM Dick, Daniel*: Laflamme, Marc: ANNA – A FUZZY LOGIC-BASED MACHINE LEARNING APPROACH TO FUNCTIONAL ECOCLOGICAL MACROEVOLUTION

99-9 10:00 AM Scialfani, Judith A.; Roselle, Brooke; Christie, Max: STRUCTURE FROM MOTION AS A TOOL FOR 3D MORPHOMETRICS: A NEW PALEOBIOLOGICAL APPLICATION FOR A YOUNG GEOLOGICAL METHOD

SESSION NO. 100

T59. Studies in Paleobiology and Paleocology I: In Honor of Professor David J. Bottjer (GSA Geobiology & Geomicrobiology Division; Paleontological Society; SEPM (Society for Sedimentary Geology); Paleontological Research Institution)

8:00 AM, Washington State Convention Center, Room 607

Thomas J. Algeo, Pedro J. Marenco, Margaret L. Fraiser and Matthew E. Clapham, Presiding

100-1 8:00 AM Droser, Mary L.; Gehling, James G.; Evans, Scott D.; Tanhan, Lidya G.; Hall, Christine M.S.; Dzaugis, Mary E.; Dzaugis, Matthew P.; Dzaugis, Peter; Hughes, Ian Vincent; Hughes, Emily B.; Rice, Dennis: SNAPSHOTS AND LONG EXPOSURES: PICTURING LIFE IN THE EDIACARAN

100-2 8:15 AM Dececchi, Thomas Alexander*; Narbonne, Guy M.; Green-tree, Carolyn: WHO ARE YOU?: INVESTIGATING THE PHYLOGENETIC RELATIONSHIPS AMONG BILATERAL EDIACARAN TAXA

100-3 8:30 AM Oji, Tatsuo; Dornbos, Stephen O.*; Yada, Keigo; Hasegawa, Hitoshi; Gonchigdorj, Sermsmaa; Mochizuki, Taka-fumi; Takayanagi, Hideko; Iryu, Yasufumi: PENETRATIVE TRACE FOSSILS FROM THE LATE EDIACARAN OF MONGOLIA: EARLY ONSET OF THE AGRONOMIC REVOLUTION

100-4 8:45 AM Marenco, Pedro J.*; Oji, Tatsuo; Dornbos, Stephen Q.; Gonchigdorj, Sermsmaa: THU IN CARBONATES AS A TOOL FOR INTERPRETING CARBON ISOTOPIC EXCURSIONS: INSIGHTS FROM THE EDIACARAN-CAMBRIAN TRANSITION IN MONGOLIA

100-5 9:00 AM Cordie, David R.; Dornbos, Stephen Q.; Marenco, Pedro J.: PALEOECOLOGY AND GEOCHEMISTRY OF EARLY CAMBRIAN CALCIMICROBIAL-ARCHEEOCYATHAN REEFS FROM THE WESTERN BASIN AND RANGE, USA

100-6 9:15 AM Pratt, Brian R.; Kimming, Julien: MIDDLE CAMBRIAN COPROLITES FROM NORTHWESTERN CANADA: THE POOP ON BENTHIC PALEOECOLOGY AND PALEOECOLOGY

100-7 9:30 AM McAdams, Neo E.B.*; Cranmer, Bradley D.; Bancroft, Alyssa M.; Waid, Christopher B.: CONODONT DIVERSITY DYNAMICS AND IMPORTANCE OF A STANDARDIZED TAXONOMIC NOMENCLATURE

100-8 9:45 AM Thomka, James R.*; Brett, Carlton E.; Bissett, Donald L.: PARASITIC EMBEDMENT STRUCTURES (TREMICHIUS ISPP.) IN HEMICOSMITID RHOMBIFERANS:
SESSION NO. 101

T87. Fluvio-Deltaic Processes and Their Stratigraphic Record (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; SEPM (Society for Sedimentary Geology))

8:00 AM, Washington State Convention Center, Ballroom 6C

Brandon McElroy and Jeffrey A. Nittouer, Presiding

101-1 8:00 AM Chateau, Chloe C.F.; Dashtgard, Shahin E.; MacEachern, James A.: CHARACTERIZATION AND MAPPING OF PARASEQUENCES AND PARASEQUENCE SETS OF THE LOWER CRETACEOUS MCMURRAY FORMATION, ALBERTA, CANADA

101-2 8:15 AM Muhlauer, Jason G.; Fedo, Christopher M.; Moersch, Jeffrey E.: FLUVIAL ARCHITECTURE AND CYCLICITY IN CAMBRIAN BRIADPLAIN STRATIGRAPHY, MIDDLE MEMBER WOOD CANYON FORMATION, MARBLE MOUNTAINS, SOUTHEASTERN CA, USA

101-3 8:30 AM Czapiga, Matthew*; Fernandez, Roberto; Prokocki, Eric; Parker, Gary: DELTA ISLAND CONSTRUCTION – MATCHING GENERIC MORPHOLOGY METRICS TO SEDIMENTOLOGICAL REGIMES (Invited Presentation)

101-4 8:45 AM Fernandes, Anjali M.*; Martin, John; Pickering, Jennifer; Howes, Nick: THE IMPACT OF PERSISTENT BACKWATER DYNAMICS ON THE LITHOLOGY AND ARCHITECTURE OF FLUVIO-DELTAIC CHANNEL BELTS (Invited Presentation)

101-5 9:00 AM Zhang, Xin*; Lin, Changsong; Zhang, Zhongtao: SEQUENCE ARCHITECTURE AND DEPOSITIONAL EVOLUTION OF THE EARLY-MIDDLE MIOCENE SHELF DELTAS IN THE NORTHEASTERN SHELF-MARGIN OF SOUTH CHINA SEA: IMPLICATIONS FOR RELATIVE SEA-LEVEL CHANGES

101-6 9:15 AM Davis, Jr, Richard A.*: SEA-LEVEL CHANGE IN THE GULF OF MEXICO

101-7 9:30 AM Lumsden, David N.*; Van Arsdale, Roy B.: MISSISSIPPI RIVER SAND PETROLOGY: COMPARISON AMONG MODERN, MID-HOLOCENE, AND PLEISTOCENE DEPOSITS IN THE NORTHERN MISSISSIPPI EMBAYMENT

101-8 9:45 AM Trampush, Sheila*; Hajek, Elizabeth: UNDERSTANDING HOW DELTA DYNAMICS INFLUENCE PALEOENVIRONMENTAL PROXY RECORDS (Invited Presentation)

SESSION NO. 102

T93. Lacustrine Systems across Space and Time I (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM (Society for Sedimentary Geology))

8:00 AM, Washington State Convention Center, Room 307/308

Scott W. Starratt and Michelle F. Goman, Presiding

102-1 8:05 AM Zanazzi, Alessandro*; Peterson, Hannah; Sutterfield, David R.; Rakotoarisoa, Herintoiota; Andreini, Jeremy; Wang, Weihong: A STABLE ISOPE STUDY OF UTAH LAKE (UT, USA)

102-2 8:20 AM Leonard-Pingel, Jill S.*; Michelson, Andrew; Dannehl, John; Wahed, Alexander; Conaway, Andrew: ENVIRONMENTAL HISTORIES OF TWO WISCONSIN LAKES RECONSTRUCTED FROM GEOCHEMICAL AND GEOLGIOGRAPHICAL PROXIES

102-3 8:35 AM Campbell, Seth*; Nesbitt, Ian; Arcone, Steven; Smith, Sean M.: NEW ENGLAND LAKE BOTTOM GEOLOGY AND SEDIMENTATION RATES DERIVED FROM GROUND-PENETRATING RADAR

102-4 8:50 AM Lo, Edward L.*; McClue, Michael M.; Silva, Aquiaido; Bergier, Ivan; Yeager, Kevin M.; Macedo, Hudson de Azevedo; O’Dell, Meredith: THE LIMNOGEOLOGY OF LAKE UBERRABA: FLUVIO-LACUSTRIENE SEDIMENTARY PROCESSES ALONG THE DISTAL PARAGUAY MEGAFAN (PANTANAL WETLANDS, BRAZIL)

102-5 9:05 AM Doran, Peter*: LAKE BONNEY NARROWS: OVER A CENTURY OF DATA CREATES THE LONGEST DIRECT RECORD OF ENVIRONMENTAL CHANGE IN ANTARCTICA

102-6 9:20 AM Hatchett, Benjamin J.*: LATE HOLOCENE CLIMATE INFERENCES FROM A CLOSED BASIN LAKE IN THE LEE OF THE SIERRA NEVADA, USA (Invited Presentation)

102-7 9:40 AM Theissen, Kevin M.*; Brundrett, Ashley L.; Horns, Sarah E.; Hickson, Thomas A.: A 5600-YEAR RECORD OF PALEOHYDROCLIMATE FROM LOWER PAHRANAGAT LAKE, SOUTHERN GREAT BASIN

102-8 10:10 AM Starratt, Scott W.*; Wan, Elmina; Kusler, Jennifer; Briles, Christy E.: HOBART LAKE: A NEW DIATOM RECORD FROM SOUTHWESTERN OREGON, USA

102-9 10:25 AM Mihindukulasooriya, Lorita*; Ortiz, Joseph D.; Steinman, Byron A.; Abbott, Mark B.: IMPACT OF MID HOLOCENE MOUNT MAZAMA ERUPTION ON LAKE PALEOPRODUCTIVITY AND SEDIMENTOLOGY: A CASE STUDY FROM A CLOSED BASIN LAKE IN SOUTHWESTERN BRITISH COLUMBIA

102-10 10:40 AM Porinchu, David*; MacDonald, Glen M.; Rolland, Nicolas; Kremenetski, Kostantin; Moser, Katrina A.; Seppä, Heikki; Rühland, Kathleen: EVIDENCE OF ABRUPT CLIMATE CHANGE AT 9.3 KA AND 8.2 KA IN THE CENTRAL CANADIAN ARCTIC: CONNECTION TO THE NORTH ATLANTIC AND ATLANTIC MERIDIONAL OVERTURNING CIRCULATION

102-11 10:55 AM Stansell, Nathan D.*; Steinman, Byron A.; Lachniet, Matthew S.; Harvey, William; Feller, Jacob; Perdziola,
SESSION NO. 103

T100. Barriers, Misconceptions, and Progress in Improving Climate Literacy and Strategies for Communicating about Climate Change (GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research; National Association of Geoscience Teachers; Climate Literacy Network (CLEAN); GSA Geology and Society Division)

8:00 AM, Washington State Convention Center, Room 3A

Anne U. Gold, Mona Behl, Bonnie Murray, Don Duggan-Haas and Carey Stanton, Presiding

8:00 AM INTRODUCTORY REMARKS

103-1 8:05 AM Bentley, Andrew Phillip Keller*; Eklund, Peter R.; Petcovic, Heather L.: BELIEF IN DISSENTER MESSAGES VS. ANTHROPOGENIC CLIMATE CHANGE ACCEPTANCE: A HARD LESSON IN CLIMATE EDUCATION

103-2 8:20 AM Kirby, Caitlin K.*; Libarkin, Julie C.: UNDERSTANDING CLIMATE CHANGE BEHAVIORS USING A MODIFIED THEORY OF PLANNED BEHAVIOR

103-3 8:35 AM Herleman, Katherine C.*; Anderson, Brennan M.; Duggan-Haas, Don: TEACHING TECHNIQUES IN CLIMATE SCIENCE TELEVISION PROGRMMING: EVALUATING THE QUALITY OF LEARNING OUTCOMES IN "EUTAINMENT"

103-4 8:50 AM Trevizo, Ivy G.*; Pennington, Deana: ACTIVE LEARNING EFFECT ON THE PUBLIC'S PERCEPTION OF ANTHROPOGENIC GLOBAL CLIMATE Change

103-5 9:05 AM Bean, Jessica R.*; Zoethfled, Kathleen; Mitchell, Kristen; Oshry, Alezza; Menicucci, Anthony Joseph; Roque, Trish; White, Lisa D.; Marshall, Charles R.: UNDERSTANDING GLOBAL CHANGE: FRAMEWORKS AND SYSTEM MODELS FOR TEACHING, LEARNING, AND COMMUNICATING CLIMATE CHANGE

103-6 9:20 AM Harris, Sara E.*; Roll, Ido: IMPACTS OF DISPERSED PLACE-BASED ASSIGNMENTS, SEEDED FORUMS, AND MODIFIED PEER INSTRUCTION IN AN OPEN, ONLINE CLIMATE SCIENCE COURSE (Invited Presentation)

103-7 9:35 AM Libarkin, Julie C.*; Gold, Anne U.; Harris, Sara E.; McNeal, Karen S.; Bowles, Ryan: RELATING UNDERSTANDING AND RISK PERCEPTION WITH A VALIDATED MEASURE OF CLIMATE CHANGE CONCEPTIONS (Invited Presentation)

9:50 AM DISCUSSION

103-8 10:05 AM Ross, Robert M.*; Duggan-Haas, Don; Moore, Alexandra; Zabel, Ingrid H.H.: AT THE INTERSECTION OF INFORMAL AND FORMAL EDUCATION: THE TEACHER-FRIENDLY GUIDE TO CLIMATE CHANGE

103-9 10:20 AM Lepore, Taormina*: CLIMATE CHANGE INQUIRY: TECHNOLOGY APPLICATIONS IN THE HIGH SCHOOL CLASSROOM

103-10 10:35 AM Murray, Bonnie*: NASA EARTH SYSTEMS, TECHNOLOGY AND ENERGY EDUCATION FOR MINORITY UNIVERSITY AND RESEARCH EDUCATION PROGRAM PROMOTES CLIMATE LITERACY BY ENGAGING STUDENTS AT MINORITY SERVING INSTITUTIONS IN STEM

103-11 10:50 AM Blue, Stacie*: WORKING WITH K-12 TEACHERS TO INTEGRATE TRADITIONAL KNOWLEDGE OF THE LOCAL ECOSYSTEM AS A TOOL TO UNDERSTAND CLIMATE CHANGE

103-12 11:05 AM Kowalczak, Courtney C.*: EVALUATION OF INDIGENOUS CLIMATE LITERACY STEM CAMP AND MEASURING STUDENT IMPACT (Invited Presentation)

103-13 11:20 AM Phillips, Michael A.*; Duggan-Haas, Don: NAGT ADVOCACY: GROWING AN ORGANIZATION’S OUTREACH PROGRAM

103-14 11:35 AM Jay, Alexa*: Reidmiller, David; Lewis, Kristin; Reeves, Katie: THE FOURTH NATIONAL CLIMATE ASSESSMENT AND BEYOND: COMMUNICATING THE SCIENCE AND RISKS OF GLOBAL CHANGE

11:50 AM CONCLUDING DISCUSSION

SESSION NO. 104

T122. On the Cutting Edge: Fifteen Years of Impacts on Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers)

8:00 AM, Washington State Convention Center, Room 2A

David W. Mogk, Heather Macdonald and Michael E. Wyssession, Presiding

104-1 8:00 AM Manduca, Cathryn A.*; Macdonald, R. Heather; Mogk, David; Tewksbury, Barbara J.; Beane, Rachel J.; McConnell, David; Wiese, Kathryn; Wyssession, Michael E.: ON THE CUTTING EDGE: ENDURING LEARNING OPPORTUNITIES FOR GEOSCIENCE FACULTY (Invited Presentation)

104-2 8:20 AM Beane, Rachel J.*; Macdonald, R. Heather; Allen-King, Richelle M.; Hill, Tessa M.; Ormand, Carol J.; Penniston-Dorland, Sarah; Tewksbury, Barbara J.; Yuretich, Richard F.: WORKSHOP FOR EARLY CAREER GEOSCIENCE FACULTY: TEACHING, RESEARCH, AND MANAGING ONE’S CAREER

104-3 8:35 AM LeMay, Lyndsey E.; Dunbar, Robyn Wright; Ebanks, Sue C.; Gilbert, Lisa A.; Macdonald, R. Heather; Ormand, Carol J.; Rihimaki, Catherine*; Weissmann, Gary S.: PREPARING FOR AN ACADEMIC CAREER IN THE GEOSCIENCES WORKSHOP: A SUCCESS OF THE ON THE CUTTING EDGE PROGRAM

104-4 8:50 AM Tewksbury, Barbara J.; Macdonald, R. Heather: COURSE DESIGN AND ON THE CUTTING EDGE: CHANGING FACULTY APPROACHES TO COURSE DEVELOPMENT TO MAKE COURSES INNOVATIVE AND MORE EFFECTIVE

104-5 9:05 AM Mogk, David W.*; Kastens, Kim A.; Fox, Sean P.; Fredrick, Kyle C.; Tewksbury, Barbara J.; Wyssession, Michael E.: ON THE CUTTING EDGE: DEVELOPMENT OF A GEOSCIENCES COMMUNITY-GENERATED, PEER-REVIEWED TEACHING ACTIVITY COLLECTION

104-6 9:20 AM Wyssession, Michael E.*; Mogk, David W.; Manduca, Cathryn A.; Macdonald, Heather; Tewksbury, Barbara J.: ON THE CUTTING EDGE EMERGING THEME WORKSHOPS: A PATHWAY FOR GEOEDUCATION INNOVATION

104-7 9:35 AM McFadden, Rory R.*; Viskipur, Karen; Manduca, Cathryn A.; Egger, Anne E.; Iverson, Ellen: UNDERSTANDING THE USE OF QUANTITATIVE SKILLS AND DATA ANALYSIS IN THE TEACHING OF UNDERGRADUATE GEOSCIENCES

9:50 AM BREAK

188 2017 GSA Annual Meeting & Exposition
SESSION NO. 105

T129. The Challenge of Defining Student Success: Broadening Participation, Measuring Success, and Preparing 2YC and 4YC Students for a Variety of Transitions (GSA Geoscience Education Division; GSA Geology and Society Division; International Association for Geoscience Diversity; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division; National Earth Science Teachers Association)

8:00 AM, Washington State Convention Center, Room 2B
Brett S. Dooley, Callan Bentley, Wendi J.W. Williams, Katrien J. van der Hoeven Kraft, Peter J. Berquist and Joshua Villalobos, Presiding

8:00 AM INTRODUCTORY REMARKS

105-1 8:05 AM Macdonald, R. Heather*; Baer, Eric M.D.; Bragg, Debra; Eddy, Pamela; Emerson, Norlene R.; Hao, Yi; Hodder, Jan; Iverson, Ellen; McDarís, John R.; Ormand, Carol J.: STUDENT SUCCESS IN GEOSCIENCE: A SAGE 2YC PERSPECTIVE

105-2 8:20 AM Miller, Gretchen L.*; BUILDING STRONG PARTNERSHIPS TO SUPPORT 2YC GEOSCIENCE STUDENT SUCCES (Invited Presentation)

105-3 8:35 AM Pawloski, Jamie L.*; Shabram, Patrick L.; Charlevoix, Donna; Smith, Heidi; Morris, Aisha R.: BUILDING PATHWAYS TO STEM CAREERS THROUGH COMMUNITY COLLEGES

105-4 8:50 AM Voorhees, David H.*: FLIPPING OR FLOPPING IN A GENERAL EDUCATION EARTH SCIENCE CLASS

105-5 9:05 AM van der Hoeven Kraft, Katrien J.*; David, Diana M.; Chugg, Katie; Erickson, Justin: *BABEL*ING ABOUT STUDENT SUCCESS: IMPLICATIONS FOR WORKING WITH GEOCONODGE STUDENTS AT TWO-YEAR COLLEGES

105-6 9:20 AM Bell, Alessia; Smith, Nathan; Chiappe, Luis M.: PROYECTO DINOSAURIOS: HOW ONE-ON-ONE MENTORING, FIELD WORK, AND TRAVEL PROVIDE MINORITY UNDERGRADUATES WITH THE SKILLS NEEDED TO SUCCEED IN THE EARTH SCIENCES

105-7 9:35 AM Schmidt, Susanne T.*; Perroud, Pierre; Süssenberger, Annette: OPTICMIN: AN ONLINE TEACHING TOOL FOR MINERAL IDENTIFICATION IN THIN SECTION

9:50 AM BREAK

SESSION NO. 106

T149. Celebrating Dr. John W. Valley’s Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)

8:00 AM, The Conference Center, Skagit 2
Aaron J. Cavosie, Jade Star Lackey and William H. Peck, Presiding

8:00 AM INTRODUCTORY REMARKS

106-1 8:05 AM Mora, Claudia I.*: THE CAREER WISDOM OF JWV: BE INNOVATIVE, BE CAREFUL, BE PRODUCTIVE, BE HAPPY (Invited Presentation)


106-3 8:40 AM Morse, Stearns A.*; Hart, S.R.; Jercinovic, Michael J.; Hamilton, Michael A.; Brady, John B.: PARTITIONING OF STRONTIUM ISOTOPES IN FELDSPARS FROM A PROTEROZOIC SYENITIC MAGMA

106-4 8:55 AM Samson, Scott D.*; Moecher, David P.: RECYCLED AND REUSED OR HOT AND BOTHERED? EXPLORING THE EXTREME ZIRCON FERTILITY OF GRENVILLE (1.2 – 1.0 GA) GRANITES

106-5 9:10 AM Moecher, David P.; Burk, Samantha R.; Samson, Scott D.: TESTING THE “HOT GRANITE” HYPOTHESIS FOR HIGH-ZR GRENVILLE GRANITES FROM EASTERN LAURENTIA USING ZIRCON THERMOMETERS

106-6 9:25 AM Andico, S.*; Schwartz, Joshua J.; Tulloch, Andy; Turnbull, Rose; Klepeis, Keith; Miranda, Elena A.; Kitaizumi, Kouki; Ringwood, M.F.: OXYGEN ISOTOPE MAPPING REVEALS A CRUSTAL-SCALE STRUCTURE WITHIN THE MEDIAN BATHOLITH, FIO RDLAND, NEW ZEALAND

106-7 9:40 AM Price, Jason B.*; Cardello, Giovanni L.; Eiler, John M.: MODERATE CARBONATE CRYSTALIZATION
TEMPERATURES ON THE LOUTRAKI FAULT, GREECE: WHERE IS THE EVIDENCE FOR SHEAR HEATING?
9:55 AM BREAK

106-8 10:10 AM Bowman, John R.; Stearns, Michael A.; Bartley, John M.: EVOLVING PERSPECTIVES ON THE THERMAL BUDGETS AND TIMESCALES OF CONTACT METAMORPHISM (Invited Presentation)

106-9 10:30 AM Beno, Carl J.; Stearns, Michael A.; Bowman, John R.; Bartley, John M.; U/TH-PB MONAZITE AGE CONSTRAINTS ON THE TIMING AND DURATION OF CONTACT METAMORPHISM IN THE ALTA, UTAH, CONTACT AUREOLE

106-10 10:45 AM Clark, Chris*; Reddy, Steven; Taylor, Rich; Hand, Martin: THE BEHAVIOUR OF MONAZITE AT HIGH TEMPERATURE AND HIGH STRESS IN THE LOWER CRUST

106-11 11:00 AM Buzon, Marian E.; Gunter, Mickey E.; Larson, Peter B.: STABLE O AND H ISOTOPE APPLICATIONS FOR SOURCING COMMERCIAL TALC AND UNDERSTANDING ENVIRONMENTS OF TALC FORMATION


106-13 11:30 AM Dutrow, Barbara L.; Marger, Katharina; Putltiz, Benita; Henry, Darrell J.; Baumgartner, Lukas; Siron, Guillaume; Bouvier, Anne-Sophie: IN-SITU OXYGEN ISOTOPE STUDY OF TOURMALINE AND QUARTZ: INSIGHTS INTO THE PROGRADE TEMPERATURE HISTORY

106-14 11:45 AM Xu, Huifang*; Lee, Seungyeol; Xu, Hongwu; Jacobs, Ryan; Morgan, Dane: VALLEYTE: A NEW MAGNETIC MINERAL IN BASALTIC ROCKS

SESSION NO. 107 $

T162. The Dance of Arcs: Causes of Arc Migrations, Flare-Ups, and Magmatic Focusing I (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

8:00 AM, The Conference Center, Skagit 4

Scott R. Paterson, Vail Memeti, Joshua Schwartz, Katie E. Ardill and Anita Grunder, Presiding

8:00 AM INTRODUCTORY REMARKS

106-7 9:35 AM Field, Derek; Riggs, Nancy; Barth, Andrew: EPISODIC SIERRAN ARC MAGMATISM EXPRESSED IN VOLCANIC STRATA OF THE MOUNT MORRISON PENDANT, EAST-CENTRAL SIERRA NEVADA, CALIFORNIA

106-8 10:05 AM Miller, Elizabeth L.; Akinin, Vyacheslav V.: EPISODICITY AND THE DANCE OF MAGMATISM AND DEFORMATION ALONG THE NORTHERN CIRCUM-PACIFIC MARGIN: NE RUSSIA TO THE CORDILLERA (Invited Presentation)

106-9 10:20 AM Todd, Erin*; Jones, James V.: DISTINCT MAGMATIC STAGES ASSOCIATED WITHCRETACEOUS THROUGH PALEOGENE CRUSTAL FORMATION AND EVOLUTION OF THE SOUTHERN ALASKA MARGIN

Wednesday, 25 October 2017

106-10 10:35 AM Davis, Kailyn N.; Benowitz, Jeff; Layer, Paul W.; Trop, Jeffrey M.; Brueseke, Matthew E.: DATING THE LOST ARC OF ALASKA: CONSTRAINING THE TIMING OF INITIATION OF THE WRANGELL ARC WITH A NEW **AR/AR** DETRITAL GEOCHRONOLOGY APPROACH ON MODERN RIVER LITHIC GRAINS


106-12 11:05 AM Benowitz, Jeff A.*; Trop, Jeffrey M.; Brueseke, Matthew; Davis, Kailyn N.; Layer, Paul; Berkelhammer, Samuel E.; Bliss, Ben; Morter, Bethany K.: INVESTIGATING THE LOST ARC: GEOLOGIC CONSTRAINTS ON -29 MILLION YEARS OF CONTINUOUS MAGMATISM ALONG AN ARC-TRANSFORM JUNCTION, WRANGELL ARC, ALASKA

106-13 11:20 AM Trim, Charelle S.; Perlitz, Michael; Mueller, Paul A.: GEOCHEMICAL VARIABILITY AND U-PB DATING OF COEVAL PLUTONIC AND VOLCANIC ROCKS FROM UNALASKA ISLAND, ALASKA

11:35 AM DISCUSSION

SESSION NO. 108

T166. Great Maps in the History of Geology (GSA History and Philosophy of Geology Division; GSA Planetary Geology Division; GSA Structural Geology and Tectonics Division; History of Earth Sciences Society (Hess))

8:00 AM, The Conference Center, Skagit 3

Dorothy Sack and Renee M. Clary, Presiding

8:00 AM INTRODUCTORY REMARKS

108-1 8:05 AM Torrens, Hugh*: HOW DID WILLIAM SMITH CARRY OUT HIS PIONEERING GEOLOGICAL MAPPING? (Invited Presentation)


108-3 8:40 AM Aalto, K.R.: PHILIP TYSON'S 1849 STUDY OF CALIFORNIA GOLD PROSPECTS


108-5 9:10 AM Mikulic, Donald G.; Kluessendorf, Joanne*: FIRST GEOLOGIC MAP OF MILWAUKEE AND ITS ROLE IN THE DISCOVERY OF FOSSIL REEFS

9:25 AM DISCUSSION

108-6 9:35 AM Meyer, Herbert W.*: ARTHUR LAKES' 1878 MAP OF THE FLORISSANT FOSSIL BEDS, COLORADO
 SESSION NO. 109

T176. Glacier-Landscape Interactions, Loess Paleoclimatology, and Interdisciplinary Quaternary Science I: In Memory of Stephen C. Porter (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Limnogeology Division)

8:00 AM, The Conference Center, Chelan 4

Glenn D. Thackray, Richard B. Waitt and Zhisheng An, Presiding

8:00 AM IRRETROSPECTIVE ON STEPHEN PORTER’S LIFE AND CAREER

110-1 8:20 AM An, Zhisheng*; Zhou, Weijian; Li, Li; Cai, Yanjun: THE SCIENTIFIC LEGACY OF STEPHEN C. PORTER: FUTURE DIRECTIONS FOR RESEARCH ON CLIMATE DYNAMICS THROUGH REGIONAL AND GLOBAL CORRELATIONS

110-2 8:40 AM Conroy, Jessica L.*; Grimley, Dave A.; Nash, Thomas Andrew; Guenthner, William R.; Curry, B.B.: LOESS ACCUMULATION AND HYDROCLIMATE VARIABILITY IN ASSOCIATION WITH LAKE MICHIGAN LOBE FLUCTUATIONS DURING THE LAST GLACIAL MAXIMUM

110-3 8:55 AM Kehew, Alan E.; Esch, John M.; Curry, B. Brandon; Huot, Sebastien; Caron, Olivier J.; Yellich, John A.; Karki, Sita: MELTWATER SOURCE FOR THE KANKAKEE TORRENT

110-4 9:10 AM Clague, John; Roberts, Nicholas J.; Menounos, Brian; Goering, Brent: GEOMORPHIC AND GEOLoGIC EVIDENCE FOR A TERMINAL PLEISTOCENE MEGAFLOOD IN SOUTHWEST BRITISH COLUMBIA

110-5 9:25 AM Denlinger, Roger P.*; George, David L.; Cannon, Charles M.; Waitt, Richard B.; O’Connor, James E.: MODELING CATAclySMIC OUTBURST FLOODS FROM PLEISTOCENE GLACIAL LAKE MIssouLA

110-6 9:40 AM Waitt, Richard, B.*; MISSouLA mEGAFLOODS AND MICHIGAN-WISCONSItN AGE OF MOSES AND UPPER GRAND COULEES

9:55 AM BREAK

110-7 10:10 AM Stetten, Ronald S.*; Stone, John O.; Hallet, Bernard: CONSTRAINTING MATERIAL PROPERTIES AND AGE OF MIMA MOUNDS

110-8 10:25 AM Cai, Yanjun*; An, Zhisheng; Edwards, R. LV; Fung, Inez; Tan, Liangcheng; Wang, Xianfeng; Zhang, Haiwei: THE SPELEOTHEM RECORDS FROM ASIAN SUMMER MONSOON MARGINAL ZONE AND THEIR CLIMATIC IMPLICATIONS

110-9 10:40 AM Zhou, Weijian*; Wu, Zhenkun; Xian, Feng; Cheng, Peng; Lu, Xuefeng; Kong, Xianghui; Du, Yajuan; Xie, Xingjun: PROGRESS OF ENVIRONMENTAL TRACING USING...
### SESSION NO. 111

**TI93. Quantifying Geomorphic Processes and Rates of Landscape Evolution (GSA Quaternary Geology and Geomorphology Division)**

8:00 AM, The Conference Center, Chelan 2

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<td>111-1</td>
<td>8:00 AM Ben-Israel, Michal*; Matmon, Ari; Haviv, Itai; Niedermann, Samuel: QUANTIFYING RATES OF SURFACE PROCESSES IN THE DEEP GEOLOGICAL PAST (&gt;10^7 yr) USING STABLE COSMOGENIC NUCLIDES (HE AND NE) – POSSIBILITIES AND LIMITATIONS</td>
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<td>111-2</td>
<td>8:15 AM Stuewe, Kurt*; Dertnig, Florian; Wagner, Thomas; Stuart, Fin; Spoeli, Christoph: THE ENIGMATIC AUGENSTEIN LANDSCAPE OF THE EUROPEAN ALPS. THE KEY TO DECHHERING THE LANDSCAPE EVOLUTION OF THE WORLDS MOST STUDIED MOUNTAIN RANGE?</td>
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<td>111-3</td>
<td>8:30 AM Heimsath, Arjun M.*; Jungers, Matthew Cross; Whipple, Kelin X.; Foster, Marina Bravo: EVOLVING A SKY ISLAND: SOIL PRODUCTION, CATCHMENT MEASURE MENT EROSION RATES, AND PROCESSES IN THE PINALENO MOUNTAINS, ARIZONA</td>
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<td>111-4</td>
<td>8:45 AM Jungers, Matthew Cross*; Heimsath, Arjun M.; Amundson, Ronald; Balco, Greg; Shuster, David L.*; CONFOUNDINGLY COMPLEX EXPOSURE HISTORIES REVEALED BY 21NE AND 26Al ABUNDANCES IN ALLUVIAL DEPOSITS OF THE ATACAMA DESERT, NORTHERN CHILE (Invited Presentation)</td>
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<td>111-5</td>
<td>9:05 AM Sion, Brad D.*; Phillips, Fred M.; Axen, Gary: INTERROGATING CLIMATE RESPONSE MODELS OF TERRACE FORMATION IN THE RIO GRANDE RIFT USING 36Cl AND 39Cl DATING</td>
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<tr>
<td>111-6</td>
<td>9:20 AM Odorn, William E.*; Granger, Darryl E.: DATING TERRACE DEPOSITS ALONG THE TENNESSEE RIVER USING COSMOGENIC 26Al AND 10Be</td>
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<td>111-7</td>
<td>9:35 AM Francis, Sarah W.*; Clark, Doug; Farley, Ken A.; Amos, Colin B.; Bierman, Paul R.: QUANTIFYING THE MAGNITUDE AND SPATIAL VARIABILITY OF BEDROCK EROSION BENEATH THE SISTERS GLACIER, WASHINGTON, USING COSMOGENIC 3He CONCENTRATIONS</td>
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<td>111-9</td>
<td>10:20 AM Willett, Chelsea D.*; Ma, Keith; Shuster, David L.; Christeleit, Elizabeth; Brandon, Mark T.; Hourigan, Jeremy: ONSET OF GLACIATION CAUSES RAPID INCREASE IN EXHUMATION RATE BEFORE RELAXATION TOWARDS STEADY-STATE: DETRITAL APATITE (U-TH)/HE RECORD 6 MA TO PRESENT IN CENTRAL PATAGONIA</td>
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<td>111-10</td>
<td>10:35 AM Brown, Nathan D.*; Moon, Seulgi; Rhodes, Edward J.: USING LUMINESCENCE SIGNALS FROM BEDROCK FELDSPARS TO QUANTIFY RAPID COOLING IN THE SAN BERNARDINO MOUNTAINS, SOUTHERN CALIFORNIA</td>
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### SESSION NO. 112

**TI96. Advances in Geoarchaeology I (GSA Archaeological Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)**

8:00 AM, Washington State Convention Center, Room 3B

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<th>Time</th>
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<tr>
<td>112-1</td>
<td>8:00 AM Murphy, Laura R.*: ADVANCES IN GEOARCHAEOLOGY</td>
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<td>112-2</td>
<td>8:15 AM Cordova, Carlos E.*: GEOARCHAEOLOGY OF THE CONTEMPORARY PAST: APPLICABILITY AND INTELLECTUAL MERIT</td>
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<td>112-3</td>
<td>8:30 AM Kelley, Alice R.*; Spiess, Arthur; Kelley, Joseph T.; Miller, Jacquelyn F.: CULTURAL (GEOLOGICAL) RESOURCE HERITAGE: IT’S NOT JUST ARCHAEOLOGY ANYMORE!</td>
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<tr>
<td>112-4</td>
<td>8:45 AM Miller, Jacquelyn F.*; Kelley, Alice R.; Kelley, Joseph T.; Belknap, Daniel F.; Spiess, Arthur: MAKING RAPID CULTURAL RESOURCE MANAGEMENT DECISIONS USING GROUND-PENETRATING RADAR</td>
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<tr>
<td>112-5</td>
<td>9:15 AM McCloy, John*; Clarke, Jack; Abusamha, Mahmoud; Pearce, Carolyn; Weaver, Jamie; Sjöblom, Rolf; Hjartnær-Holter, Eva; Ogenhall, Erik; Vicenzi, Edward P.; Lam, Thomas; Feinberg, Joshua; Schweiger, Michael; Peeler, David; Kruger, Albert: RECONSTRUCTING VITRIFIED WALLBUILDING TECHNOLOGY FOR BROBORG HILLFORT SITE, SWEDEN</td>
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<td>112-6</td>
<td>9:30 AM Pike, Scott*; Card, Nick; Anderson-Whymark, Hugo: ASSESSING PORTABLE XRF DATA ANALYSES WITHIN A NEOLITHIC CONTEXT: COMPARING SEMI-QUANTITATIVE AND QUANTITATIVE XRF SPECTRAL DATA ANALYSIS OF YELLOW-CLAY FLOOR SAMPLES FROM STRUCTURE 14, NESS OF BRODGAR, SCOTLAND</td>
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<td>112-7</td>
<td>9:45 AM Cruse, Steffanie R.*; Powell, Wayne; Huska, Andrea; Bankoff, H. Arthur; Filipovic, Vojislav: GEOCHEMICAL PROSPECTING AT MT. PROSARA AND MOTAJICA, NORTHERN BOSNIA: EXAMINING POTENTIAL SITES OF BRONZE AGE PLACER TINE ORE MINING</td>
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<td>112-8</td>
<td>10:00 AM Renson, Virginia*; Neff, Hector; Cheetham, David; Blomster, Jeffrey; Guthrie, James; Glasscock, Michael D.: ABOUT THE USE OF LEAD AND STRONTIUM ISOTOPES AS TRACERS IN POTTERY PROVENANCE STUDIES</td>
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10:15 AM BREAK
112-9 10:30 AM Brooks, William E.; ICP ANALYSES FROM THE CINNABAR-MERCURY OCCURRENCE AT LOMA GUASHON (AZOGUES), ECUADOR

112-10 10:45 AM Glumac, Bosiljka; Howard, Susannah; Reyes Beattie, Sydney; Peraza Lope, Carlos; Masson, Marilyn A.; Russell, Bradley: LOCAL STONE UTILIZATION BY PRE-COLUMBIAN MAYA PEOPLE ON THE YUCATAN PENINSULA IN AND AROUND THE CITY OF MAVAPAN, MEXICO

112-11 11:00 AM Nicoll, Kathleen*: SOURCING RIVER ROCK AND MIDDLE STONE AGE ARTIFACTS DISCOVERED ALONG THE CUNENE RIVER, ANGOLA-NAMIBIA BORDER, SOUTHERN AFRICA

112-12 11:15 AM Blackwell, Bonnie A.B.; Qi, Justin K.*; Mihailović, Senka; Blickstein, Joel I.B.; Skinner, Anne R.; Daković, Gligor: ESR DATING TEETH FROM SALITRENA, SERBIA: IMPLICATIONS FOR THE FIRST “EUROPEAN HANDOVER” FROM NEANDERTHALS TO ANATOMICALLY MODERN HOMO SAPIENS

SESSION NO. 113
T205. Impact Cratering: From Fire to Ice—Cratering across the Solar System (GSA Planetary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

8:00 AM, The Conference Center, Tahoma 1

Christian Koeberl, Jeffrey B. Plescia, Philippe Claeyts and David A. Kring, Presiding

113-1 8:00 AM Minton, David A.*; Fassett, Caleb I.; Hirabayashi, Masatoshi; Howl, Bryan A.; Richardson, James E.: TOPOGRAPHIC DEGRADATION BY IMPACT CRATERING ON AIRLESS BODIES IS DOMINATED BY DIFFUSIVE EROSION FROM DISTAL EJEITA (Invited Presentation)

113-2 8:15 AM Runyon, Kirby D.*; Barnouin, Olivier S.: PRELIMINARY LABORATORY INVESTIGATIONS OF EJECTA EMPLACEMENT DYNAMICS AND MORPHOLOGY WITH PLANETARY APPLICATIONS (Invited Presentation)

113-3 8:30 AM Huang, Ya-Huei*; Minton, David A.; Zellner, Nicolle E.B.; Hirabayashi, Masatoshi; Richardson, James E.; Fassett, Caleb I.: NO CHANGE IN THE LUNAR IMPACT FLUX THROUGH THE COPERNICIAN PERIOD FROM MODELING IMPACT GLASS SPHERULE AGE DISTRIBUTION IN LUNAR REGOLITH

113-4 8:45 AM Plescia, Jeffrey*: IMPACT CRATER MELT RHEOLOGY

113-5 9:00 AM Stickle, Angela M.*; Patterson, G. Wesley; Cahill, Joshua T.S.: EXAMINING EJEITA PROPERTIES FOR YOUNG LUNAR CRATERS USING MINI-RF BISTATIC OBSERVATIONS

113-6 9:15 AM Snape, Joshua F.; Nemchin, A.A.; Thiessen, Fiona; Bellucci, Jeremy; Whitehouse, Martin J.: HOW MUCH CAN PHOSPHATES IN LUNAR BRECCIAS TELL US ABOUT THE IMPACT HISTORY OF THE MOON?

113-7 9:30 AM Kieffer, Susan W.*; Boyce, Joseph; Mougins-Mark, Peter J.; Best, James L.; Meib urg, Eckart; Austin, Joanna M.: FORMATION OF LINEAR GROOVES ON MARTIAN DOUBLE LAYERED EJEITA IMPACT CRATERS BY EROSI VE VORTICES

113-8 9:45 AM Schmitt, Harrison H.: DID LARGE IMPACTS SEED THE FIRST CONTINENTS?

113-9 10:00 AM Weisz, David G.*; Jacobsen, Benjamin; Weber, Peter; Koeberl, Christian: SEARCH FOR IMPAC TOR REMNANTS PRESERVED IN MICRO-SCALE DEPOSITION LAYERS IN AUSTRALASIAN MICROTEKTITES (Invited Presentation)

113-10 10:15 AM Koeberl, Christian*; Montanari, Alessandro; Schulz, Toni; Mougel, Berengere; Moinier, Frederic: LATE EOCENE IMPACT EJEITA IN ITALY: ATTEMPTS TO CONSTRAIN THE IMPACTOR COMPOSITION FROM ISOTOPIC ANALYSES OF SPINEL-RICH SAMPLES

113-11 10:30 AM de Graaff, Sietze J.*; Jansen, Max N.; Smit, Jan; Kyte, Frank T.: THE END-TRIASSIC EXTINCTION EVENT: THE CASE FOR AN EXTRATERRESTRIAL RATHER THAN TERRESTRIAL CAUSE

113-12 10:45 AM Harris, R. Scott*; Jaret, Steven J.: MARE-STYLE IMPACT-ASSISTED VOLCANISM AT THE TRIASSIC-JURASSIC BOUNDARY?

113-13 11:00 AM Renne, Paul R.*; Arenillas, Ignacio; Arz, José Antonio; Gilabert, Vicente; Bermúdez, Hermann D.: NEW 40Ar/39Ar AND PLANKTONIC FORAMINIFERAL DATA INDICATE A KBP AGE FOR THE CHICXULUB-LINKED SPHERULE BED AT GORGONILLA ISLAND, PACIFIC OF COLOMBIA

113-14 11:15 AM Bermúdez, Hermann D.*; Arz, José Antonio; Renne, Paul R.; Arenillas, Ignacio; Gilabert, Vicente; Rodríguez, Jose Vicente; Bolivar, Liliana; Bolivar, Luz Stella: EVIDENCE FOR CHICXULUB IMPACT SEISMICITY AT GORGONILLA ISLAND K/Pg SECTION, PACIFIC OF COLOMBIA

113-15 11:30 AM Smit, Jan; DePalma, Robert A.; Richards, Mark; Alvarez, Walter; Burnham, David A.; Manning, Phillip L.: TANIS, A MIXED MARINE-CONTINENTAL EVENT DEPOSIT AT THE KPG BOUNDARY IN NORTH DAKOTA CAUSED BY A SEICHE TRIGGERED BY SEISMIC WAVES OF THE CHICXULUB IMPACT

113-16 11:45 AM DePalma, Robert A.*; Burnham, David A.; Smit, Jan; Schmerge, Joshua; Manning, Phillip Lars; Larson, Peter L.; Gurne he, Loren; Richards, Mark; Alvarez, Walter: LIFE AFTER IMPACT: A REMARKABLE MAMMAL BURROW FROM THE CHICXULUB AFTERMATH IN THE HELL CREEK FORMATION, NORTH DAKOTA

SESSION NO. 114
T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle I (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

8:00 AM, The Conference Center, Tahoma 2

Randolph T. Williams, Alexis K. Ault and James F. Dolan, Presiding

114-1 8:00 AM Frieman, Ben M.*; Kuiper, Yvette D.; Monecke, Thomas; Kelly, Nigel M.: FIELD-BASED EVIDENCE FOR DILATIONAL BRECCIATION PRIOR TO DUCTILE LOCALIZATION AND FAULT-VALVE BEHAVIOR ALONG A GOLD-BEARING SPLAY OF THE ARCHEAN LARDER LAKE-CADILLAC DEFORMATION ZONE, ONTARIO, CANADA

114-2 8:15 AM Evans, James P.; Borhara, Krishna; Webb, Samuel M.: EARTHQUAKE PETROLOGY: INSIGHTS INTO FAULT SLIP LOCALIZATION AND FAULT HEATING VIA MICRO X-RAY FLUORESCENCE MAPPING AND X-RAY ABSORPTION NEAR EDGE SPECTROSCOPY

114-3 8:30 AM Klepeis, Keith*; Webb, Laura E.; Blatchford, Hannah J.; Schwartz, Joshua J.; Turnbull, Rose; Jongens, Richard: UNRAVELING A HISTORY OF REPEATED FAULT REACTIVATIONS AND DIFFERENTIAL UPLIFT ABOVE A YOUNG SUBDUCTION ZONE IN SW NEW ZEALAND

114-4 8:45 AM Toke, Nathan A.*; Phillips, Joseph: PRELIMINARY INVESTIGATION OF THE THOUSAND LAKES FAULT FROM THE MID MIocene TO LATE PLEISTOCENE: AN APPROACH FOR CHARACTERIZING LOW SLIP RATE NORMAL FAULTS USING GEOMORPHOLOGY AND PALEOSEISMOLOGY

114-5 9:00 AM Duvall, Allison R.*; Collett, Camille; Flowers, Rebecca M.; Tucker, Gregory E.; Upton, Phaedra: TIMING AND STYLE OF KAIKOURA RANGE DEVELOPMENT AND MARLBOROUGH FAULTING, SOUTH ISLAND, NEW ZEALAND, FROM LOW-TEMPERATURE THERMOCRONOLOGY (Invited Presentation)
Monday, 23 October 2017

114-6  9:20 AM  Calzolari, Gabriele*; Ault, Alexis K.; Rossetti, Federico; Lucci, Federico; Olivetti, Valerio: HEMATITE (U-Th)/HE THERMOCRONOMETRY CONSTRAINTS ON INTRAPLATE STRIKE-SLIP TECTONICS, THE KUH-E-FAGHAN FAULT, CENTRAL IRAN

114-7  9:35 AM  Hubbard, Mary S.*; Lageson, David; Bhattarai, Roshan Raj: MIGRATING EXHUMATION OF MID-CRUSTAL ROCKS IN COLLISIONAL OROGENS: PROPOSAL OF A NEW FAULT MODEL FROM THE SOLUKHUMBU HIMALAYA

114-8  9:50 AM  Mukul, Malay*; Srivastava, Vineet: NO UNIQUE MAIN FRONTAL THRUST IN THE HIMALAYA?

114-9  10:05 AM  Lynch, Erin*; Mulch, Andreas; van der Pluijm, Ben; Yoneke, Adolph: SYN-DEFORMATIONAL INFLTRATION OF SURFACE-DERIVED FLUIDS ALONG FAULT ZONES IN THE IDAHO-WYOMING SALIENT; SEVIER FOLD-THRUST BELT: CONSTRAINTS FROM PAIRED RADIOGENIC AND STABLE ISOTOPIC ANALYSIS OF AUTOGENIC CLAYS

114-10 10:35 AM  Hoar, Rachel M.*; Thigpen, J. Ryan; Brown, Sumner J.; Parks, Ryan D.: LOW-T THERMOCRONOLOGIC CONSTRAINTS FOR THE ONSET TIMING AND SLIP HISTORY OF THE SOUTHERNMOST PART OF THE TETON FAULT, WYOMING

114-11 10:50 AM  Ma, Debo*; He, Dengfa: STRIKE-SLIP FAULTS IN HALAHATANG AREA, NORTH TARIM BASIN, NW CHINA: INSIGHTS FROM 3D SEISMIC IMAGERY

114-12 11:05 AM  Titus, Sarah*; Chapman, William; Horst, Andrew J.; Brown, Maxwell: USING STATISTICAL TOOLS TO UNRAVEL THE DEVELOPMENT OF THE HUSAVIK-FLATEY FAULT, NORTHERN ICELAND


114-7  9:45 AM  Kawamura, Kiichiro*; Kuranaga, Mebae; Mochizuki, Kenta; Scientists, IODP Expedition362: EARLY DIAEGENESIS OF DEEP-SEA SEDIMENTS ON INCOMING PLATES: EXAMPLES FROM THE IZU-BONIN TRENCH AND THE SUNDA TRENCH

115-7  9:45 AM  Ernst, W. Gary*: MID-MESOZOIC-PALEOGENE EVOLUTION OF THE NORTHERN AND CENTRAL CALIFORNIAN ACCRETIONARY MARGIN

115-8  10:00 AM  DeBari, Susan M.*; Morris, Rebecca; Busby, Cathy J.; Medynski, Sarah: THE LIFE AND TIMES OF AN ACCRETED CRETACEOUS EXTENSIONAL ARC (ROSARIO SEGMENT OF THE ALISITOS ARC): AN OUTSTANDING ANALOG TO ACTIVE WESTERN PACIFIC EXTENSIONAL ARCS

115-10 10:45 AM  Dilek, Yildirim*: ORIGIN AND EMBRACEMENT OF MAFIC-ULTRAMAFIC ROCK ASSEMBLAGES FROM DOWINGING SLABS AT SUBDUCTION-ACCRETION COMPLEXES: PACIFIC RIM EXAMPLES AND ANCIENT ANALOGUES IN COLLISION ZONES

SESSION NO. 115

T227. Ophiolite and Ocean Plate Stratigraphy Records in Modern and Ancient Accretionary and Collisional Orogenic Belts in the Circum Pacific Region I (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geophysics Division; Geological Society of China; GSA Sedimentary Geology Division)

8:00 AM, The Conference Center, Tahoma 3

Yildirim Dilek and Jingsui Yang, Presiding

115-1  8:00 AM  Scholl, David William*: PACIFIC RIM ACCRETION, PAST AND UNDERWAY—THE IMPORTANCE OF FOREARC CRUSTAL UNDERPLATING (Invited Presentation)

115-2  8:25 AM  Kay, Suzanne Mahiburg*: FOREARC SUBDUCTION EROSION AND CONTRACTION IN THE EVOLUTION OF ACCRETIONARY AND NON-ACCRETIONARY STAGES IN THE CENTRAL ALEUTIAN AND CENTRAL ANDEAN ARCS (Invited Presentation)

115-3  8:45 AM  Ogawa, Yujirou*; Dilek, Yildirim: VARIATIONS OF DEFORMATION AND EMBRACEMENT TYPES IN ACCRETIONARY PRISMS: COMPARISON BETWEEN THE FRANCISCAN AND JAPANESE ON LAND AND SUBMERSIBLE EXAMPLES

115-4  9:00 AM  Waikta, Koji*: MISCELLANEOUS OCEAN PLATE STRATIGRAPHY: A KEY TO UNDERSTANDING CONTINUOUS VERSUS DISCONTINUOUS ACCRETIONERY COMPLEX FORMATION IN THE PALEOZOIC AND MESOZOIC RECORD OF SOUTHWEST JAPAN

115-5  9:15 AM  Raymond, Loren A.*: OPS CHERT CONJUNDRUM IN FRANCISCAN COMPLEX ACCRETIONARY UNITS

115-6  9:30 AM  Hirano, Naoto*: ACCRETIONARY RECORDS OF THE JAPANESE ARCHIPELAGO, NW PACIFIC RIM

115-7  9:45 AM  Kawamura, Kiichiro*; Kuranaga, Mebae; Mochizuki, Kenta; Scientists, IODP Expedition362: EARLY DIAEGENESIS OF DEEP-SEA SEDIMENTS ON INCOMING PLATES: EXAMPLES FROM THE IZU-BONIN TRENCH AND THE SUNDA TRENCH

115-8  10:00 AM  Ernst, W. Gary*: MID-MESOZOIC-PALEOGENE EVOLUTION OF THE NORTHERN AND CENTRAL CALIFORNIAN ACCRETIONARY MARGIN

115-9  10:30 AM  DeBari, Susan M.*; Morris, Rebecca; Busby, Cathy J.; Medynski, Sarah: THE LIFE AND TIMES OF AN ACCRETED CRETACEOUS EXTENSIONAL ARC (ROSARIO SEGMENT OF THE ALISITOS ARC): AN OUTSTANDING ANALOG TO ACTIVE WESTERN PACIFIC EXTENSIONAL ARCS

115-10 10:45 AM  Dilek, Yildirim*: ORIGIN AND EMBRACEMENT OF MAFIC-ULTRAMAFIC ROCK ASSEMBLAGES FROM DOWINGING SLABS AT SUBDUCTION-ACCRETION COMPLEXES: PACIFIC RIM EXAMPLES AND ANCIENT ANALOGUES IN COLLISION ZONES

115-11 11:00 AM  Tang, Limei*; Chen, Ling; Dilek, Yildirim: ORIGIN AND GEOCHEMICAL-ISOTOPIC FINGERPRINTING OF MARIANA TRENCH–PROXIMAL SEAMOUNT CLUSTERS IN THE WEST PACIFIC SEAMOUNT PROVINCE, 20°N LATITUDE

115-12 11:15 AM  Discussion

115-13 11:30 AM  Concluding Remarks

SESSION NO. 116

T234. What Are the Conditions That Lead to Detachment Faulting? (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

8:00 AM, The Conference Center, Tahoma 3

Thomas Hoisch, Michael L. Wells and John S. Singleton, Presiding

116-1  8:00 AM  Lavier, Luc*: BIEMILLER, James: MECHANICAL CONSTRAINTS ON LOW ANGLE NORMAL FAULT STRENGTH: LONG-TERM AND SECULAR NUMERICAL MODELING OF CORE COMPLEXES (Invited Presentation)

116-2  8:20 AM  Fletcher, John M.*; Oskin, Michael E.; Teran, Orlando: WHAT DO MULTIFAULT EARTHQUAKE RUPTURES TEACH US ABOUT THE MECHANICS OF DETACHMENT FAULTING?

116-3  8:35 AM  Anderson, Ernie*: MAGMATIC CONDITIONS LED TO DEVELOPMENT OF THE WATERMAN HILLS DETACHMENT FAULT, CENTRAL MOJAVE DESERT, CALIFORNIA

116-4  8:50 AM  Wooden, J.L.; Wright, J.E.; Howard, K.; Barth, A.P.; Anderson, J.L.*: IMPLICATIONS OF NEW SIMS ZIRCON AGES FOR MAGMATIC EVOLUTION OF THE WHIPPLE MOUNTAINS METAMORPHIC CORE COMPLEX

116-5  9:05 AM  Robinson, Peter*; Hollocher, Kurt; Lucas, Benjamin; Tucker, Robert D.; Schumacher, John C.; McEnroe, Suzanne A.: A MAJOR EARLIEST SILURIAN LOW-ANGLE DETACHMENT IN THE BRONSON HILL MAGMATIC ARC, MASSACHUSETTS AND SW NEW HAMPSHIRE

116-6  9:20 AM  John, Barbara E.*; Grimes, Craig; LaForge, Justin: WHAT ROLE DO FLUIDS PLAY AT INITIATION OF LOW-ANGLE NORMAL FAULTING? (Invited Presentation)

116-7  9:40 AM  Holk, Gregory J.*; Grove, Marty J.; Jacobson, C.E.; Hazel, Gordon B.: A TWO-STAGE FLUID HISTORY FOR THE OROCOPIA SCHIST AND ASSOCIATED ROCKS RELATED TO FLAT SUBDUCTION AND EXHUMATION, SOUTHEASTERN CALIFORNIA: A COLD AND DRY METAMORPHIC CORE COMPLEX
SESSION NO. 117

T241. Volcano-Tectonic Evolution of the East African Rift System (GSA International/International Interdisciplinary Interest Group; GSA Geophysics Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)

8:00 AM, The Conference Center, Yakima 1

Kevin L. Mickus and Cynthia J. Ebinger, Presiding

117-1 8:00 AM Mickus, Kevin L.∗; Bridges, David L.: CURIE DEPTH ANALYSIS OF THE AFAR REGION, ETHIOPIA

117-2 8:15 AM Demissie, Zelalem S.∗; Mickus, Kevin L.; Abdelsalam, Mohamed G.; Bridges, David L.; Atekwana, Estella A.: MAGNETIC AND GRAVITY IMAGING OF THE LITHOSPHERIC STRUCTURE BENEATH THE DOBI GRABEN, AFAR DEPRESSION

117-3 8:30 AM Polun, Sean G.∗; Horrell, David; Tesfaye, Alem; Gonzalez, Francisco: NEW KINEMATIC CONSTRAINTS ON THE QUATERNARY TECTONIC EVOLUTION OF THE AFAR TRIPLE JUNCTION

117-4 8:45 AM Mwangi, Anna∗; Mickus, Kevin L.; Serpa, Laura: MAGNETOTELLURIC ANALYSIS OF THE OLKARIA AND EBURRU GEOTHERMAL FIELDS-KENYAN RIFT, EAST AFRICAN RIFT SYSTEM

117-5 9:00 AM Xue, Liang∗: TITLE: VOLCANISM, TECTONIC UPLIFT AND DRAINAGE INCISION OF THE KENYA RIFT, EAST AFRICAN RIFT SYSTEM: MORPHO-TECTONIC ANALYSIS APPROACH


9:30 AM BREAK

117-7 9:45 AM Ebinger, C.J.∗; Oliva, S.J.; Drooff, Connor; Keir, Derek; Lavayssiere, Aude; Weinstei, Alexander; Shilllington, Donna J.; Galherty, James B.: LOWER CRUSTAL EARTHQUAKES IN MAGMATIC AND AMAGMATIC RIFT SECTORS, EAST AFRICA

SESSION NO. 118


8:00 AM, The Conference Center, Skagit 5

Peter Bobrowsky, David H. Huntley, Michael Hendry and Renato Macciotta, Presiding

118-1 8:00 AM Bayrd, Garrett∗; Gile, Josh; Clark, Rob: DATA ACQUISITION, DATA PREPARATION, NETWORKING, DATA PATH AUTOMATION, AND INSTRUMENT INSTALLATION FOR HILLSLOPE MONITORING IN THE CASCADE MOUNTAINS

118-2 8:15 AM Rutledge, F. Alex∗; Cannon, Robert; Gagnon, J. Hawkins; Pate, Kimberly; Snider, Fred: STABILIZATION OF A POTENTIAL ROCKSLIDE AT BOUNDARY DAM, WA

118-3 8:30 AM Bobrowsky, Peter∗; Huntley, David H.; Neelands, Peter; MacLeod, Roger; Mariampillai, Daniyal; Hendry, Michael; Macciotta, Renato; Reeves, Helen J.; Chambers, Jonathan E.: RIPPLE LANDSLIDE – CANADA’S PREMIER LANDSLIDE FIELD LABORATORY

118-4 8:45 AM Crawford, Matthew M.∗: USING ELECTRICAL RESISTIVITY TO ASSESS LANDSLIDES: EXAMPLES FROM KENTUCKY AND PENNSYLVANIA

118-5 9:00 AM Mirus, Benjamin B.∗; Becker, Rachel; Smith, Joel B.; Baum, Rex L.: REAL-TIME SUBSURFACE HYDROLOGIC MONITORING FOR IMPROVED LANDSLIDE EARLY WARNING ALONG SEATTLE-EVERETT RAILWAY CORRIDOR

118-6 9:15 AM Vilimek, Vit∗; Smoliková, Jana; Blahút, Jan: ANALYSIS OF RAINFALL THRESHOLDS OF DEBRIS FLOWS ON THE SMEDAVSKA HORA MT., JIZERSKE HORY MTS., CZECH REPUBLIC

118-7 9:30 AM Rodriguez, Jorge L.∗; Hendry, Michael: IMPLEMENTATION OF LOW-COST DIFFERENTIAL GPS NETWORKS TO MONITOR DISPLACEMENTS OF A LANDSLIDE

9:45 AM DISCUSSION
SESSION NO. 119

T248. Microbialite Textures and Chemical Signatures in Continental Settings: Forging the Link between the Modern and Ancient (GSA Geobiology & Geomicrobiology Division; GSA Limnogeology Division; GSA Karst Division)

8:00 AM, Washington State Convention Center, Room 602/603

Thomas A. Hickson and Julie K. Bartley, Presiding

INTRODUCTORY REMARKS

119-1 8:10 AM Hickson, Thomas A. *; Bartley, Julie K.: MICROBIALITE TEXTURES AND CHEMICAL SIGNATURES IN CONTINENTAL SETTINGS: SOME THOUGHTS ON DATA NEEDS

119-2 8:25 AM Sumner, Dawn Y. *; Krusor, Megan; Jungblut, Anne; Mackey, Tyler J.; Mizi, Jessica; Hawes, Ian: AN ANALOG TO ARCHEAN CYANOBACTERIAL CONTINENTAL COMMUNITIES IN MODERN LAKE FRYXELL, ANTARCTICA (Invited Presentation)

119-3 8:45 AM Vanden Berg, Michael D. *; Lindsay, Melody R.; Boyd, Eric S.; Chidsey, Thomas C.; Eby, David E.: THE MICROBIALITES OF UTAH’S GREAT SALT LAKE: GEOLOGY VS. BIOLOGY

119-4 9:00 AM Paradis, Olivia P. *; Corsetti, Frank A.; Bardsley, Audra; Hammond, Douglas E.; Xu, Xiaomei; Stamps, Blake W.; Stevenson, Bradley S.; Walker, Jennifer; Berelson, William M.: UNRAVELING RADIAL OOID FORMATION IN GREAT SALT LAKE (UTAH): INSIGHTS FROM RADIOCARBON CHRONOLOGY AND MOLECULAR BIOLOGY

119-5 9:15 AM Bernhard, Joan M. *; Fisher, Luke; Reilly, Megan; Bucklin, Ann; Questel, Jennifer; Le Roux, Veronique; Visscher, Pieter: CAN FRESHWATER FORAMINIFERA IMPACT STROMATOLITE FORMATION?

119-6 9:30 AM Melim, Leslie A. *; Spilde, Michael N.: ON THE ORIGIN OF ‘MICRITIC’ LAYERS IN SPELEOTHEMS: NOT OBVIOUS AND NOT SIMPLE

119-7 9:45 AM BREAK

10:00 AM LIGHTNING TALKS: POSTER PREVIEWS

119-8 10:10 AM Jacobacci, Kara E. *: BEYOND LIDAR: ALTERNATIVE TECHNOLOGIES FOR LANDSLIDE CHARACTERIZATION IN THE FIELD

119-9 10:25 AM Roberts, Nicholas J. *; Rabus, Bernhard; Guzmán, Marco-Antonio; Clague, John; Minaya, Estela; Herrmanns, Reginald L.; Fernandez, Gonzalo A.: PREDICTING RAPID URBAN LANDSLIDES IN LA PAZ, BOLIVIA, FROM LOCALIZED, MILLIMETRE-SCALE DEFORMATION DETECTED WITH ADVANCED SPACEBORNE INSAR (Invited Presentation)

119-10 10:40 AM Gbadebo, Adewole M. *; Adedeji, Oludare H.; Akinlabi, I.: DETAILED INVESTIGATION OF LANDSLIDE HAZARD USING GEOREPORTAL, GEOPHYSICAL, GEOTECHNICAL AND GIS TECHNIQUES IN EYINOKE HILLY AREA OF OKEIGBO, SOUTHWESTERN NIGERIA


SESSION NO. 120 $

T252. Cratonic Assembly in the Precambrian: Forming the Core of Modern and Ancient Landmasses (GSA Structural Geology and Tectonics Division)

8:00 AM, Washington State Convention Center, Room 604

Anthony F. Pivarunas, Joseph G. Meert and Scott R. Miller, Presiding

INTRODUCTORY REMARKS

120-1 8:15 AM Salerno, Ross A.: GOODGE, John W.; Vervoort, Jeff D.: THE GENERATION AND RAPID EVOLUTION OF NEOARCHEAN CRUST IN THE VERMILION GRANITIC COMPLEX, SUPERIOR PROVINCE OF NORTHERN MINNESOTA

120-2 8:30 AM Gong, Zheng: Evans, David: NEW PALEOMAGNETIC RESULTS FROM THE PALEOPROTEROZOIC KILOHIGOK BASIN, SLAVE CRATON, CANADA: IMPLICATIONS FOR THE INITIAL ASSEMBLY OF LAURENTIA


120-4 9:00 AM Stein, Carol A. *; Stein, Seth; Elling, Reese; Keller, G. Randy; Kley, Jonas: SHOULD THE “GRENVILLE FRONT” IN THE CENTRAL U.S. BE ERASED FROM GEOLOGIC MAPS?

120-5 9:15 AM Swanson-Hysell, Nicholas L. *; Fairchild, Luke M.; Ramezani, Jahandar; Rose, Ian: LATE MESOPROTEROZOIC TECTONIC HISTORY OF LAURENTIA AND THE ASSEMBLY OF RODINIA (Invited Presentation)

120-6 9:30 AM Geissman, John W. *: PRECAMBRIAN PALEOMAGNETISM; STILL A DAUNTING, BUT OFTEN A HIGHLY REWARDING ENDEAVOR (Invited Presentation)


120-8 10:25 AM Zhao, Yue; Wang, Wei-(RZ); Liu, Jian; Zhang, Shuanhong; Liu, Xiaochun: A PALEOARCHAEO CRATONIC NUCLEI NEIGHBORING THE ARCHEAN VESTFOLD BLOCK, EAST ANTARCTICA: IMPLICATION FOR RECONSTRUCTIONS OF COLUMBIA AND RODINIA

120-9 10:40 AM Goodge, John W.; Fanning, C. Mark; Fisher, Christopher M.; Vervoort, Jeff D.: AGE AND ISOTOPIC CONSTRAINTS FOR THE PROTEROZOIC EVOLUTION OF CENTRAL EAST ANTARCTICA AND RELATIONSHIP TO
SESSION NO. 121

D1. Recent Advances in Hydrogeology
1:30 PM, Washington State Convention Center, Room 615/616/617

Lee J. Florea and Sarah A. Vitale, Presiding

121-1 1:30 PM Long, Andrew J.*; Welch, Wendy: COMPLEX STRATIGRAPHY NEAR PUGET SOUND: BUILDING A 3D FRAMEWORK FOR GROUNDWATER FLOW

121-2 1:45 PM Vitale, Sarah A.*; Robbins, Gary A.: APPLYING THE DISSOLVED OXYGEN ALTERATION METHOD WITH HYDRAULIC ISOLATION TO MEASURE WATER QUALITY IN INDIVIDUAL FRACTURES IN OPEN WELLBORES

121-3 2:00 PM Lupton, Daniel M.*: USING BOREHOLE GEOPHYSICS TO IDENTIFY POTENTIAL BRACKISH PRODUCTION AREAS IN THE RUSTLER AQUIFER, WEST TEXAS

121-4 2:15 PM Udy, Nicholas D.*; Ostraff, Ashley A.; Allen, Sarah M.; Rakotaarisaona, Henintsoa; Gherasim, Janelle E.; Emerman, Steven H.: USE OF THE MANING EQUATION FOR ESTIMATING THE DISCHARGE OF HIGH-GRADE CANALS AND NATURAL STREAMS

121-5 2:30 PM Harp, Dylan R.*; Stauffer, Philip H.; Viswanathan, Hari; Bourret, Michelle; Kwicklis, Edward Michael; Anderson, Dale; Bradley, Christopher R.: ANALYSIS OF ENHANCED GAS TRANSPORT IN EXPLOSION DAMAGED ROCK DUE TO BAROMETRIC PRESSURE VARIATIONS

121-6 2:45 PM Simco, William A.*; Larsen, Daniel; Waldron, Brian; Schofernacker, Scott R.; Smith, Spencer; Eason, James: RECHARGE OF THE MEMPHIS AQUIFER IN AN INCISED URBAN WATERSHED

121-7 3:00 PM Wendland, Edson; Lin, Yu-Feng; Lowry, Christopher S.; Rosa, David; Alcántara, Gabriel de Miranda: MONITORING TEMPERATURE AS A TRACER AT THE GUARANI AQUIFER SYSTEM OUTCROP ZONE

121-8 3:15 PM Timms, Wendy*: David, Katarina; Barbour, Lee: IN SITU SPECIFIC STORAGE VALUES TO IMPROVE MODELLING OF GROUNDWATER DRAWDOWN

121-9 3:30 PM Aftab, Syed Mobasher*: HYDROGEOLOGY OF NIKSAR BASIN, TOKAT, TURKEY

SESSION NO. 122

D4. Paleoclimatology, Sedimentary, and Historical Studies in Caves and Karst Features
1:30 PM, Washington State Convention Center, Room 612

Joshua Feinberg, Monica Arienzo and Brendan Fenerty, Presiding

122-1 1:35 PM Arienzo, Monica*: Mehterian, Sevag; Swart, Peter K.; Broad, Kenneth; Clement, Amy; Pourmand, Ali; Kakuk, Brian: MULTI-PROXY EVIDENCE OF MILLENNIAL CLIMATE VARIABILITY FROM FOUR BAHAMIAN STALAGMITES

122-2 1:50 PM Batchelor, Cameron J.*; Orland, I.J.; Marcott, Shaun A.; Slaughter, Richard; Edwards, Lawrence: A HIGH-PRECISION U-TH CHRONOLOGY OF CALCITE DEPOSITION AT CAVE OF THE MOUNDS, WISCONSIN, AND ITS IMPLICATIONS FOR CLIMATE AND PERMAFROST IN THE LATE PLEISTOCENE

122-3 2:05 PM van Hengstum, Peter J.*; Maale, Gerhard E.; Sullivan, Richard M.; Winkler, Tyler S.; Kelley, Kevin; Donnelly, Jeffrey P.; Albury, Nancy A.; Onac, Bogdan P.: EVIDENCE FOR HOLOCENE HYDROCLIMATE VARIABILITY IN THE NORTHERN BAHAMAS (ABACO ISLAND) BASED ON SINKHOLE LAKE SEDIMENT RECORDS

122-4 2:20 PM Kite, J. Steven*: Tudek, John: MANY SIMILARITIES AND SOME NOTEWORTHY DIFFERENCES IN COLD-AIR TRAPPING MECHANISMS AT ALGIFIC TALUS SLOPES, ROCK CITIES, AND CAVE PASSAGES IN THE CENTRAL APPALACHIANS

122-5 2:35 PM Fenerty, B.*; Bourne, M.; Feinberg, J.; Halligan, J.; Waters, M.: INTEGRATED SURFACE DRAINAGE IN NORTHWEST FLORIDA’S KARSTIC GULF COASTAL LOWLANDS LINKED TO SHIFTING SUBTROPICAL STORM TRACKS IN RESPONSE TO HIGH-LATITUDE POST-GLACIAL CLIMATE CHANGE

122-6 2:50 PM Jenson, Aubri*: Schwartz, Benjamin F.; Li, Yuxia; Gao, Yongji: RE-EVALUATING PLEISTOCENE SEA LEVEL HISTORY AND SPULEOGENESIS IN THE YUCATAN PENINSULA: U-TH DATING OF POS FROM QUINTANA ROO, MEXICO

122-7 3:05 PM van Hengstum, Peter J.*; Cresswell, Jacque N.; Illiffe, Thomas M.: STRATIGRAPHIC EVIDENCE FOR HOLOCENE ENVIRONMENTAL CHANGE IN A BERMUDIAN COASTAL UNDERWATER CAVE (PALM CAVE SYSTEM): IMPLICATIONS FOR BERMUDA’S SEA LEVEL HISTORY

122-8 3:35 PM Carlson, Peter E.*; Banner, Jay; Breecker, Dan O.: HYDROLOGIC CONDITIONS AND CARBON CYCLING DYNAMICS RECORDED IN THE CARBON-ISOTOPE VARIATIONS OF A NEAR-ENTRANCE SPELEOTHEM

122-9 3:50 PM Hart, Evan*: A 200-YEAR RECORD OF CAVE SEDIMENTATION AND FLOODING, CAPSHAW CAVE, TENNESSEE, USA

122-10 4:05 PM Cao, Mengchun*: Zhong, Jianhua; Liu, Chuang; Sun, Ningliang: THE CHARACTERISTICS AND SIGNIFICANCE OF COATED GRAVEL OF THE ORDOVICIAN KARST CAVE IN NORTHERN TARIM BASIN, CHINA

122-11 4:20 PM Feinberg, Joshua M.*: ENVIRONMENTAL MAGNETISM OF CAVE DEPOSITS

SESSION NO. 123

D10. Paleontology, Paleoeocology/Paleobotany
1:30 PM, Washington State Convention Center, Room 604

Victoria E. McCoy and Cindy V. Looy, Presiding

123-1 1:30 PM Ullmann, Paul Victor*: Lacovara, Kenneth J.: ACTUALISTIC TESTING OF THE INFLUENCE OF GROUNDWATER CHEMISTRY ON DEGRADATION OF COLLAGEN I IN BONE
124-2 1:45 PM Rosbach, Stephanie A.*; Selly, Tara; Schifftbauer, James D.: INFLUENCE OF IONIC STRENGTH ON THE PRESERVATION POTENTIAL OF THE BLACK-BACKED LAND CRAB, GECECARINUS LATERALIS, SAN SALVADOR, BAHAMAS

124-3 2:00 PM McCoy, Victoria E.*; Penkmann, Kirsty; Preslee, Samantha; Collins, Matthew; Gabott, Sarah E.: EXPERIMENTAL DEGRADATION OF CHICKEN FEATHER PROTEINS IN RESIN

124-4 2:15 PM Solázano Kraemer, Mónica M.*; Peñalver, Enrique; Delclòs, Xavier: STICKY TRAPS VS RESIN: AN ACTUALISTIC APPROACH TO UNDERSTAND THE TAPHONOMY OF AMBER

124-5 2:30 PM Wang, Bo*: CRETAUCEOUS BURMESE AMBER BIOTA

124-6 2:45 PM Fang, Hui*: Labandeira, Conrad C.; Wong, Yongjie; Ren, Dong: INSIGHTS INTO MID-MESOZOIC POLLINATING INSECTS

124-7 3:00 PM Hastings, Alexander K.*; Treado, Lucy E.; James, Arianne L.: POTENTIAL HABITAT DIFFERENCES BASED ON INSECT FAUNAS WITHIN FOSSIL LAGERSTÄTTEN OF THE LATE TRIASSIC NEWARK SUPERGROUP (VIRGINIA-NORTH CAROLINA BORDER, USA)


124-9 3:30 PM McInerney, Francesca A.*; Hill, Robert S.; Birch, Benjamin; Tarran, Myall: CANOPY CLOSURE IN CENozoic FORESTS OF AUSTRALIA USING CARBON ISOPOE RATIOS OF FOSSIL CUTICLE

124-10 3:45 PM Romero, Ingrid; Kong, Shu; Fowlkes, Charles C.; Urban, Michael A.; D'Apolito, Carlos; Jaramillo, Carlos; Oboh-Ikuenobe, Francisca E.; Punyasena, Surangi W.*: NOVEL MORPHOLOGICAL ANALYSIS OF A FOSSIL FABACEAE POLLEN TYPE, STRATOPOLLI CATATUMBUS (TRIBE DETARIAE)

124-11 4:00 PM Senske, Ashley*: Marvet, Claire; Akbar, Sultan; Wong, Silshia; Hsu, Tingting; Jessett, Kari; Gallaher, Timothy J.; Strömberg, Caroline A.E.: 3D SHAPE EVOLUTION IN GRASS SILICA SHORT CELL PHYTOLITHS: TAXONOMIC PATTERNS IN BAMBUSIOIDEAE AND OTHER LINEAGES

124-12 4:15 PM Looy, Cindy V.*; Duijnste, Ivo A.P.; Chaney, Dan S.; Lucas, Spencer G.; Dimichele, William A.: A NEW CLUE FOR THE ORIGIN OF CONIFERS FROM THE BEEMAN FORMATION (KASIMOVian, NEW MEXICO)

SESSION NO. 124
D44. Geophysics to Solve Geological Problems and the Annual George P. Woollard Award Presentation

1:30 PM, The Conference Center, Yakima 1

Benjamin Drenth and Kevin L. Mickus, Presiding

124-1 1:30 PM Magnani, M. Beatrice*: Harder, Steven; Lizarrode, Daniel; Luckie, Thomas W.; Worthington, Lindsay Lowe: CRUSTAL SCALE SEISMIC IMAGING IN Densely POPULATED REGIONS: THE ENAM-CSE

124-2 1:45 PM Ducellier, Ariane*: Creager, Kenneth: SEISMIC WAVE VELOCITY IN THE SUBDUCED OCEANIC CRUST FROM AUTOCORRELATION OF TECTONIC TREMOR SIGNALS

124-3 2:00 PM Young, Dylan W.*: ARE CALIBRATIONS NEEDED FOR THE FUTURE DUNE DETECTOR? BACKGROUND RADIOACTIVITY AND GEONEUTRINO FLUX ESTIMATION, SURROUNDING THE HOMESTAKE GOLD MINE, IN LEAD, SOUTH DAKOTA, USA

124-4 2:15 PM Alamooti, Moones*: Aydin, Adnan: A COMPARATIVE CASE STUDY OF REFLECTION SEISMIC IMAGING METHOD
SESSION NO. 126

T12. Hydrogeology, Geochemistry, and Wetland Processes II: A Session in Honor of the Career of Donald I. Siegel (GSA Hydrogeology Division)

1:30 PM, Washington State Convention Center, Room 618/619/620

Jeffrey M. McKenzie and Laura K. Lautz, Presiding

126-1 1:30 PM Jin, Li*; Edmunds, W. Mike; Lu, Zunli; Ma, Jinzhu: GROUNDWATER RECHARGE AND WATER-ROCK INTERACTION FROM UNSATURATED ZONE OF BADAIN JARAN DESERT

126-2 1:45 PM McKenzie, Jeffrey M.; Siegel, Donald I.: GROUNDWATER FLOW AND PERMAFROST THAW: RECENT ADVANCES IN NUMERICAL MODELING IN CRYOHYDROGEOLOGY

126-3 2:00 PM Levy, Zeno F.: CLIMATIC CONTROLS ON THE POREWATER CHEMISTRY OF MID-CONTINENTAL WETLANDS: DON SIEGEL’S LAST DISSERTATION

126-4 2:15 PM Reeve, Andrew S.; Slater, Lee; Comas, Xavier; Terry, Niel; Wright, William: TWO DECADES OF HYDROGEOPHYSICAL MEASUREMENTS IN CARIBOU BOG (MAIN, USA) INVESTIGATING GROUNDWATER FLOW AND FREE-PHASE (METHANE) GAS

126-5 2:30 PM Lipson, David S.: OF TERNARY DIAGRAMS AND CONTAMINANT HYDROGEOLOGY: ONE PILLAR IN THE VAST LEGACY OF DON SIEGEL


3:00 PM BREAK

126-7 3:15 PM Bennett, Philip C.: PEAT BOGS AND OIL SPILLS: SILICATE WEATHERING RESEARCH IN THE SIEGEL LAB

126-8 3:30 PM Pfannkuch, Hans-Olaf*: ORIGINAL IDEAS, INNOVATIVE METHODS, SCIENTIFIC RIGOR, AND PERSISTENCE ARE THE BASIS FOR THE EARLY CONTRIBUTIONS OF DONALD I. SIEGEL TO HYDROGEOLOGY, GEOCHEMISTRY AND SURFACE HYDROLOGY DURING HIS MINNESOTA YEARS, 1974 TO 1982

126-9 3:45 PM Rosenberry, Donald O.*; Glaser, Paul H.: DON SIEGEL’S EARLY YEARS AS A GROUNDWATER-FLOW MODELER

126-10 4:00 PM Glaser, Paul H.; Chanton, Jeffrey; Reeve, Andrew S.; Rosenberry, Donald O.: DONALD SIEGEL AS A PIONEER INPEATLAND HYDROLOGY

126-11 4:15 PM Siegel, Donald I.: OUTLIERs: THE DRIVERS OF MY 40 YEARS OF BASIC RESEARCH IN HYDROGEOLOGY

4:35 PM CONCLUDING REMARKS

SESSION NO. 127

T15. Monitoring the Complex Nature of Water Balances and Solute Transport at the Groundwater–Surface Water Interface (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)

1:30 PM, Washington State Convention Center, Room 613/614

Mackenzie Cremeans and J.F. Devlin, Presiding

127-1 1:30 PM Rosenberry, Donald O.*, Glaser, Paul H.: EXPECT THE UNEXPECTED WHEN QUANTIFYING EXCHANGE BETWEEN GROUNDWATER AND SURFACE WATER (Invited Presentation)

127-2 1:50 PM Hayashi, Masaki*; Vogt, Tobias; Schirmer, Mario; Mächler, Lars: DIURNAL FLUCTUATIONS OF STREAM WATER CHEMISTRY CONTROLLED BY PHOTOSYNTHESIS AND GROUNDWATER EXCHANGE

127-3 2:05 PM Jones, Perry M.; Trost, Jared J.; Rosenberry, Donald O.: CHARACTERIZING GROUNDWATER AND SURFACE-WATER EXCHANGES IN WHITE BEAR LAKE,

MINNESOTA, USA, USING HYDROLOGIC, GEOPHYSICAL, AND WATER-QUALITY TECHNIQUES

127-4 2:20 PM Sun, Xiaoling*: ANALYSIS OF THE EFFECTS OF URBANIZATION ON RIVER AND GROUNDWATER INTERACTIONS USING THE SWAT-LUD MODEL

127-5 2:35 PM Cey, Edwin E.; Felske, Alanna; Hayashi, Masaki: WATER AND CHLORIDE MASS BUDGETS OF A PERMANENTLY FLOODED, SEASONALY FROZEN WETLAND IN THE CANADIAN PRAIRIES

127-6 2:50 PM Bjerg, Poul L.*; Rønde, Vinni; Balbarini, Nicola; Sonne, Anne Th.; Devlin, J.F.; Cremeans, Mackenzie; Annable, Michael; Binning, Philip J.; Mcknight, Ursula S.: ASSESSING THE IMPACT OF GROUNDWATER CONTAMINATION ON STREAM WATER QUALITY BY MULTIPLE APPROACHES AT THE GROUNDWATER-SURFACE WATER INTERFACE (Invited Presentation)

127-7 3:10 PM Cremeans, Mackenzie*; Devlin, J.F.; Mcknight, Ursula S.; Bjerg, Poul L.: APPLICATION OF A NEW POINT MEASUREMENT TO ESTIMATE GROUNDWATER-SURFACE WATER EXCHANGE

127-8 3:25 PM Harvey, Ronald W.; Underwood, Jennifer C.; Metge, David W.; Le Blanc, Denis; McCobb, Timothy: MONITORING MICROBIAL AND SOLUTE TRANSPORT ACROSS THE SURFACE WATER-GROUNDWATER INTERFACE INTO AN AQUIFER WITHIN THE LAKE SHADOW OF A KETTLE POND IN CAPE COD, MASSACHUSETTS

3:40 PM BREAK

127-9 3:55 PM Rudolph, David L.*; Frey, Steven K.: SEASONAL CLIMATIC INFLUENCES ON TILE DRAIN FLOW DYNAMICS AND IMPLICATIONS FOR AGRICULTURAL BMPs (Invited Presentation)

127-10 4:15 PM Wallace, Janae*; Jordan, J. Lucy; Hardwick, Christian; Hurlow, Hugh: DETERMINING SALINITY SOURCES VIA HYDROLOGIC MEASUREMENTS, GEOLOGIC MAPPING, AND TEM ANALYSIS IN THE LOWER SAN PITCH RIVER DRAINAGE, SANPETE COUNTY, UTAH

127-11 4:30 PM Newman, Connor P.; McCrea, Karl W.; Anderson, Salt; Zimmerman, Joshua; Burke, George: EFFLORESCENT SULFATE SALTS AND IMPACTS ON METAL LOADING FROM MINE-IMPACTED GROUNDWATER TO SURFACE WATERS

127-12 4:45 PM Kipnis, Evan L.; Bowen, Brenda B.; Liu, Tianqi; Harman, Ciaran J.: FROM MINE-IMPACTED GROUNDWATER TO SURFACE WATERS: THE IMPACT OF GROUNDWATER CONTAMINATION ON ASSSESSING EFFLORESCENT SULFATE SALTS AND IMPACTS ON METAL LOADING FROM MINE-IMPACTED GROUNDWATER TO SURFACE WATERS

127-13 5:00 PM King, Tyler V.; Neilson, Bethany T.: DETERMINING SALINITY SOURCES VIA HYDROLOGIC MEASUREMENTS, GEOLOGIC MAPPING, AND TEM ANALYSIS IN THE LOWER SAN PITCH RIVER DRAINAGE, SANPETE COUNTY, UTAH

127-14 5:15 PM Maharanj, Madan*; Donovan, Joseph J.: TEMPERATURE VARIATIONS IN IMMITTENTLY-PUMPED WELLS WITHIN UNCONFINED ALLUVIAL AQUIFERS

SESSION NO. 128

T38. Cenozoic Paleoclimates and Ecosystems II (Paleontological Society; Geochemical Society; Paleontological Research Institution; Cushman Foundation for Foraminiferal Research; GSA Sedimentary Geology Division; GSA Limnogeology Division)

1:30 PM, Washington State Convention Center, Room 609

Alexis Licht, Caroline Stromberg, Gerard H. Roe, Guillaume Dupont-Nivet, Yannick Donnadieu and K. Christopher Beard, Presiding

128-1 1:30 PM Stidham, Thomas A.: THE FOSSIL RECORD AND AVIAN INTERCONTINENTAL DISPERSALS DURING PERIODS OF CLIMATE CHANGE IN THE CENOZOIC

128-2 1:45 PM Zeebe, Richard*: ORBITAL FORCING OF EARLY CENOZOIC CLIMATE AND NEW ASTRONOMICAL SOLUTIONS
2017 GSA Annual Meeting & Exposition

1:45 PM Ma, Pengfei*; Ma, Chao; Wang, Chengshan; Zhao, Xixi; Li, 129-1

1:30 PM, Washington State Convention Center, Room 611

T47. Recent Developments in Cyclostratigraphy

1:45 PM Ma, Chao*; Ma, Chao; Wang, Chengshan; Zhao, Xixi; Li, Yalin: LATE OLIGOCENE-EARLY MIocene LACustrine RECORDS FOR THE TECTONIC, CLIMATIC, AND LAKE BASIN EVOLUTION IN CENTRAL TIBET

129-2 2:00 PM Sageman, Bradley B.*; Jones, Matthew M.; Selby, David: INTEGRATED CYCLOSTRATIGRAPHIC AND CHEMOSTRATIGRAPHIC ANALYSIS OF CENOMANIAN-TURONIAN DEPOSITS OF THE WESTERN INTERIOR BASIN


129-4 2:30 PM Li, Mingsong*: Zhang, Yang Wendy; Ogg, James G.; Huang, Chunji; Hinov, Linda A.; Chen, ZhongQiang: TRIASSIC TIME SCALE FROM ASTRONOMICAL-TUNED MAGNETOSTRATIGRAPHY

129-5 2:45 PM Chen, Yan*: Zhang, Yang Wendy; Ogg, James G.; Li, Mingsong; Chen, Zhong Qiang; Tu, Chenyi; Chu, Dao liang: MAGNETOSTRATIGRAPHY OF THE CONTINENTAL REFERENCE SECTION FOR LATEST PERMIAN THROUGH EARLY TRIASSIC OF NORTH CHINA AT DAYULIN (HENAN PROVINCE)

129-6 3:00 PM Hinov, Linda A.: A SURVEY OF PALEOZOIC CYCLOSTRATIGRAPHY (Invited Presentation)

129-7 3:20 PM BREAK

129-8 3:35 PM Griffith, Julie M.*; Montanez, Isabel P.; Holterhoff, Peter F.: MULTI-PROXY RECORD OF THE PENNSYLVANIAN-AGE SWOPE CYCLO THEM: GLACIAL TO INTERGLACIAL CHANGES IN MIDCONTINENT SEAWATER CHEMISTRY

129-9 3:50 PM Kodama, Kenneth P.*: ROCK MAGNETIC CYCLOSTRATIGRAPHY OF THE MISSISSIPPIAN MAUCH CHUNK FOMATION, POTTSVILLE, PENNSYLVANIA (Invited Presentation)

129-10 4:05 PM Pas, Damien*: Hinov, Linda A.; Day, James; Kodama, Kenneth P.; Sinnesael, Matthias; Liu, Wei: ASTRONOMICAL CALIBRATION OF THE FAMENNIAN (UPPER DEVONIAN) TIME SCALE


129-12 4:35 PM Meyers, Stephen R.; Malinverno, Alberto: A BAYESIAN INVERSION APPROACH FOR RECONSTRUCTING SOLAR SYSTEM BEHAVIOR AND EARTH-MOON HISTORY (Invited Presentation)

129-13 5:00 PM Sinnesael, Matthias*: De Vleeschouwer, David; Zedeen, Christian; Caiseys, Philippe: REPRODUCIBILITY IN CYCLOSTRATIGRAPHY: INITIATING AN INTERCOMPARISON PROJECT

SESSION NO. 130

T53. Digital, Digital Get Down: Frontiers in Virtual Paleontology (Paleontological Society; Paleontological Research Institution; GSA Geoinformatics Division)

1:30 PM, Washington State Convention Center, Room 606

130-1 1:30 PM Rahman, Imran Alexander*: COMPUTATIONAL FLUID DYNAMICS AS A TOOL FOR TESTING FUNCTIONAL AND ECOLOGICAL HYPOTHESES IN FOSSIL TAXA (Invited Presentation)

130-2 1:45 PM Waters, Johnny*: Nguyen, Bonnie K.; White, Lyndsie Elizabeth: CONSTRUCTIONAL MORPHOLOGY OF BLASTOID FEEDING (Invited Presentation)

130-3 2:00 PM Sheffield, Sarah L.*; Bauer, Jennifer E.; Sumrall, Colin D.; Rahman, Imran Alexander: SYNCHROTRON-BASED TOMOGRAPHIC EVALUATION OF EUMORPHOCYSTIS (DIPLOPORITA: ECHINODERMATA) AND ITS USE IN UNDERSTANDING MORPHOLOGY AND ONTOGENY

130-4 2:15 PM Gru, Tobias B.*; Nebelsiek, James H.: ECHINOIDS IN 3D: UNDERSTANDING MECHANISMS THAT STRENGTHEN LIGHT-WEIGHT SKELETONS

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<td>130-5</td>
<td>2:30 PM Clark, Elizabeth G.; Briggs, Derek E.G.: <strong>DIGITAL MODELING OF THE FUNCTIONAL EVOLUTION OF THE OPHIUROID ARM</strong></td>
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<td>130-6</td>
<td>2:45 PM Banker, Roxanne*: <strong>PRELIMINARY CHARACTERIZATION OF OYSTER CHALKY DEPOSITS USING X-RAY COMPUTED TOMOGRAPHY</strong></td>
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<td>3:00 PM Smith, Selena Y.; Benedict, John C.; Matsunaga, Kelly: <strong>UNLOCKING THE Fossil RECORD WITH MICRO-COMPUTED TOMOGRAPHIC 3D DATASETS OF MODERN AND FOSSIL PLANTS</strong></td>
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<td>3:30 PM Schiffbauer, James D.; Selly, Tara: <strong>PROSPECTS IN MICROANALYTICAL PALEOBIOLGY: APPLICATIONS OF SCANNING ELECTRON MICROSCOPY IN THE STUDY OF ANCIENT LIFE</strong></td>
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<td>130-9</td>
<td>3:45 PM Hughes, Zoe*: Johnson, Kenneth G.; Belben, Rachel; Hughes, Chris; Twitchett, Richard J.: <strong>USING MUSEUM COLLECTIONS TO STUDY BRACHIPOD SIZE CHANGE ACROSS EXTINCTION BOUNDARIES - TAKING ADVANTAGE OF MASS DIGITISATION</strong></td>
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<td>131-0</td>
<td>4:00 PM Winchester, Julie M.; Boyer, Doug M.; Frank, Lawrence; Maga, Murat: <strong>INTEGRATING MORPHSOURCE, A COMMUNITY DIGITAL REPOSITORY FOR 3D SPECIMEN DATA, WITH MORPHOMETRIC ANALYSIS PIPELINES</strong></td>
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<td>131-1</td>
<td>4:15 PM Goodwin, Mark B.; Niroy, Jasmine A.; Huynh, Tony; Parkinson, Dilworth Y.; Evans, David C.: <strong>VISUALIZING CRANIAL AND SUTURAL MORPHOLOGY OF PACHYCEPHALOSAUR DOMES USING COMPUTED TOMOGRAPHY</strong></td>
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<td>131-2</td>
<td>4:30 PM Kashes, Pim*: Brunke, Luca; Emaus, Roeland; Bastiaans, Dylan; Schulp, Anne: <strong>A NOVEL 3D VISUALIZATION OF DINOSAUR BONEBEDS: INTEGRATING GEOLOGY, PALEONTOLOGY AND ARCHEOLOGY</strong></td>
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**SESSION NO. 131**

**T59. Studies in Paleobiology and Paleoecology II: In Honor of Professor David J. Bottjer (GSA Geobiology & Geomicrobiology Division; Paleontological Society; SEPM (Society for Sedimentary Geology); Paleontological Research Institute)**

1:30 PM, Washington State Convention Center, Room 607

**T59. Studies in Paleobiology and Paleoecology II: In Honor of Professor David J. Bottjer (GSA Geobiology & Geomicrobiology Division; Paleontological Society; SEPM (Society for Sedimentary Geology); Paleontological Research Institute)**

1:30 PM, Washington State Convention Center, Room 607

**Thomas J. Algeo, Pedro J. Marenco, Margaret L. Fraiser and Matthew E. Clapham, Presiding**

131-1 | 1:30 PM Jiang, Da-yong*; Motani, Ryosuke; Tintori, Andrea; Sun, Zuoyu; Fu, Wan-ju; Zhou, Min; LU, Hao: **FAST RADIATION OF EARLY TRIASSIC MARINE REPTILES IN THE WAKE OF THE END-PERMIAN EXTINCTION** |


131-3 | 2:00 PM Pruss, Sara B.; Westacott, Sophie; Stark, Courelle; Tosca, Nicholas: **I CAN’T QUIT YOU, DAVE: NEW TAPHONOMIC INSIGHTS FROM THE LOWER TRIASSIC VIRGIN LIMESTONE FORMATION, WESTERN UNITED STATES** |

131-4 | 2:15 PM Tackett, Lydia S.; Tintori, Andrea: **DRILLING AND CRUSHING PREDATION OF BENTHIC INVERTEBRATES DURING THE LATE TRIASSIC IN TETHYS** |

131-5 | 2:30 PM Ritterbush, Kathleen A.; Hebden, Nicholas; Jenkins, Olivia: **AMMONITES WERE SUCCESSFUL SLACKERS AFTER THE TRIASSIC/JURASSIC MASS EXTINCTION** |

131-6 | 2:45 PM Brame, Hannah-Maria*; Ettinger, Nicholas P.; Bodin, Stéphane; Danische, Jan; Kabiri, Laben; Martinde, Rowan C.: **OCURRENCE AND PALEOENVIRONMENTAL SIGNIFICANCE OF EARLY JURASSIC (PLIENSCHABIAN-TOARCIAN) LITHIOD-CORAL REEFAL DEPOSITS FROM THE HIGH ATLAS OF MOROCCO** |

131-7 | 3:00 PM Clapham, Matthew E.; Manojlovic, Marko: **BIOTURBATORS AND THE MID-MESOZOIC DECLINE OF BRACHIOPODS** |

131-8 | 3:15 PM Stanley, Steven M.: **EVIDENCE THAT THE ARMS OF *TYRANNOSAURUS REX* WERE NOT FUNCTIONLESS BUT ADAPTED FOR VICIOUS SLASHING** |

131-9 | 3:45 PM Johnson, Claudia C.; Elswick, Erika R.; Davis, Allicia: **CRETACEOUS CARBONATE SEQUENCES IN THE CENTRAL IGNEOUS PROVINCE OF PUERTO RICO: FURTHERING AN UNDERSTANDING OF EVOLUTIONARY PALEOEKOLOGY IN THE TROPICS** |

131-10 | 4:00 PM Nebelsick, James H.; Thompson, Jeffrey R.: **PALEOECOLOGY AND BIOTIC CONTROLS OF MIXED CARBONATE-SILICICLASTIC SEDIMENTS: A CASE STUDY FROM THE ECHINOID DOMINATED MIocene BUTTON BEDS OF CENTRAL CALIFORNIA** |

131-11 | 4:15 PM Savrda, Charles E.: **BIOEROSION OF A BEDROCK STREAM BED BY MODERN CHIRONOMID AND TRICHOPTERAN LARVAE (CONECCHU RIVER, ALABAMA): ICHNOTAXONOMIC, ICHNOFACIES, AND GEOMORPHOLOGIC IMPLICATIONS (Invited Presentation)**

**SESSION NO. 132**

**T60. The Onset of the Great Ordovician Biodiversity Event (GOBE): Testing Hypotheses with Diverse Data Sets**

(Paleontological Society; GSA Geobiology & Geomicrobiology Division; GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); IGCP 653: Onset of the Great Ordovician Biodiversification Event; Paleontological Research Institution)

1:30 PM, Washington State Convention Center, Room 608

Rebecca L. Freeman and Alycia L. Stigall, Presiding

132-1 | 1:30 PM Graham, Linda*: Graham, James M.; Knack, Jennifer J.; Trest, Marie; Pietrowski, Michael; Aracibica, Patricia: **BIOGEOCHEMICAL FEATURES OF ORDOVICIAN TERRESTRIAL ECOSYSTEMS INFERRED FROM A MICROBIOIOME FOR EARLIEST-DIVERGING MODERN PLANT LINEAGE SAMPLED FROM A REMOTE LOCALE MODELING ORDOVICIAN CONDITIONS** |

132-2 | 1:45 PM Young, Seth A.; Kozik, Nevin P.: **SEDIMENTARY GEOCHEMICAL INSIGHTS INTO MIDDLE-LATE ORDOVICIAN SEAS OF LAURENTIA: IMPLICATIONS FOR MARINE REDOX STATE, WEATHERING, AND BIODIVERSIFICATION (Invited Presentation)** |

132-3 | 2:00 PM Henderson, Miles A.; Kah, Linda C.; Albanesi, Guillermo L.; Feltes, Nicolas A.; Serra, Fernanda; Polyak, Victor J.; Asmerom, Yemane: **SR/MSR AND $\epsilon^{13}$C STRATIGRAPHY OF MIDDLE ORDOVICIAN CARBONATE SEDIMENTS IN ARGENTINA: A POTENTIAL LINK BETWEEN BIOGEOCHEMICAL AND PHYSICOCHEMICAL CHANGES IN OCEAN CHEMISTRY** |

132-4 | 2:15 PM Zhang, Junpeng*; Zhang, Yuandong; Fang, Xiang; Li, Wenjie; Zhang, Zhao: **PALEAO-MARINE ENVIRONMENT ASSOCIATED WITH THE DISTINCT ECOSYSTEMS FOLLOWING THE END-ORDOVICIAN CRISIS IN SOUTH CHINA** |

132-5 | 2:30 PM Freeman, Rebecca L.; Miller, James F.; Evans, Kevin R.; Bassett, Damon J.: **LINGULIFORM BRACHIOPODS ACROSS THE STEPTOEAN/SUNWAPTAN (LATE CAMBRIAN) “BIOMERE” BOUNDARY IN THE GREAT BASIN, USA** |

2:45 PM **BREAK**

132-6 | 3:00 PM Carucci, Jesse R.: **VARIATION IN TAPHONOMIC SIGNATURES BETWEEN BIOFACIES AND SYSTEMS TRACTS: IMPLICATIONS FOR ORDOVICIAN BIODIVERSITY ESTIMATES (Invited Presentation)** |

132-7 | 3:15 PM Marenco, Katherine N.: **REEF-BUILDING AT THE DAWN OF THE GOBE: THE RISE OF METAZOAAN FRAMEWORK**
CONSTITUENTS IN LOWER-MIDDLE ORDOVICIAN REEFS, WESTERN UTAH, USA (Invited Presentation)

132-8 3:30 PM
Stigall, Alycia L.*; How is biodiversity produced? Moving from biodiversity patterns to specification processes during the great orovician biodiversification event.

132-9 3:45 PM
Francke, Franziska*: Capture-mark-recapture analysis of diversification rates in laurentia and baltica during the great orovician biodiversification event.

132-10 4:00 PM
Congreve, Curtis R.*; Wagner, Peter J.; Patzkowsky, Mark E.; Short or long fuse: timing the orovician radiation using the fossilized birth death model.

132-11 4:15 PM
Foote, Michael*; Cooper, Roger A.; Crampton, James S.; Sadler, Peter M.; Diversity-dependent diversification in orovician-silurian graptoloids.

SESSION NO. 133
T78. Environmental Impact Studies for Energy Geology

1:30 PM, Washington State Convention Center, Room 602/603

133-1 1:30 PM
Song, Shuxun*; Liu, Shiqi; Wang, Wenfeng; Ao, Liwen; Liu, Huihu; Liu, Changjiang; Xu, Hongjie; Jia, Jinlong; EXPERIMENTAL RESEARCH PROGRESS ON EFFECTIVENESS OF CO2-ECCM FOR ANTHRACITE OF QINSUI BASIN, CHINA.

133-2 1:45 PM
Buursink, Marc L.*; MAPPING AND INVESTIGATING GEOLOGIC SOURCES OF CARBON DIOXIDE IN CALIFORNIA.

133-3 2:00 PM
Eymold, William K.*; Miller, Jodie A.; Swana, Kelley; Vengosh, Avner; Murray, Ricky; Whyte, Colin; Harkness, Jennifer S.; Darrah, Thomas H.; THE WATER AND GAS GEOCHEMISTRY OF HYDROCARBON-RICH SEEPS FROM THE KAROO BASIN.

133-4 2:15 PM
Preston, Todd M.*; Martínez, Ceriça: SPATIAL AND TEMPORAL TRENDS IN THE FOOTPRINT OF OIL AND GAS DEVELOPMENT IN THE PICEANCE BASIN, WESTERN COLORADO.

133-5 2:30 PM
Masterson, Megan; Perkins, Robert B.; Palmer, Carl D.*; HYDROGEOCHEMISTRY OF THE UINTA AND GREEN RIVER FORMATIONS, PICEANCE CREEK BASIN, NORTHWESTERN COLORADO, USA.

133-6 2:45 PM
Darrah, Thomas H.*; An evaluation of standard and new sampling methodologies for sampling hydrocarbon and other dissolved gas concentrations in groundwater samples.

3:00 PM BREAK

133-7 3:15 PM
Stockman, Mengling Y.; Lopano, Christina L.; Berry, Samantha; Hakala, J. Alexandria: GEOCHEMICAL FACTORS CONTROLLING TRACE METAL AND BARIUM RELEASE IN DRILL CUTTINGS FROM MARCELUS SHALE ENERGY DEVELOPMENT.

133-8 3:30 PM
Pinzon, Gerardo J.*; Ren, Jianhong: System dynamics model to help improve the impact analysis caused by fracking in the eagle ford shale.

133-9 3:45 PM
Baumer, Teresa M.; Moore, Nicole A.; Said, Meena; Sadergaski, Luke R.; Sigmon, Ginger E.; Hixon, Amy E.; Simonetti, Antonio; Burns, Peter C.; Elevated uranium and lead levels in the navajo nation at claim 28.

133-10 4:00 PM
Gregory, Robert T.*; Magnani, M. Beatrice: What do exposed faults in the llano inlier have to do with induced earthquakes in north central Texas?

SESSION NO. 134
T85. Clear as Mud: Stratigraphic, Diagenetic, Sedimentologic, Geomechanical Analyses, and Modern Analogs of Ancient Mudrock Systems

1:30 PM, Washington State Convention Center, Ballroom 6C

134-1 1:30 PM
Sun, Bin*; Yang, Wan; Yu, Qiwan; Lei, Yuhong; Luo, Xiaorong: QUARTZ-ALBITE CORRELATION AS A SHALE PROVENANCE INDICATOR, UPPER TRIASSIC ZHANGJIATAN SHALE, ORDOS BASIN, CHINA.

134-2 1:45 PM
Podrecca, Luca G.*; Miller, Kenneth G.; Wright, James D.; Browning, James V.; Emge, Thomas J.; CLEAR AS MUD: CHANGES IN PALEOESHELVE ENVIRONMENTS AND DEPOSITIONAL RATES AT MEDFORD, NEW JERSEY DURING THE PALEOECO-EOCENE THERMAL MAXIMUM.

134-3 2:00 PM
Hlohoswkyj, Stephan R*; Chappaz, Anthony; Haeri Ardakani, Omid; Sanei, Hamed: DETERMINING MOLYBDENUM SPECIATION TO UNDERSTAND THE DEPOSITIONAL HISTORY OF BLACK SHALES.

134-4 2:15 PM
Rossman, Britt*; Li, Zhiyang; Schieber, Juergen: SEDIMENTOLOGICAL CHARACTERIZATION OF THE TUNUNK SHALE: PETROGRAPHIC AND CHEMICAL INTERPRETATION OF DEPOSITIONAL SYSTEMS FOR CRETACEOUS MUDSTONE PARASEQUENCES.

134-5 2:30 PM
Li, Zhiyang*; Schieber, Juergen: SEQUENCE STRATIGRAPHIC ANALYSIS OF LATE CRETACEOUS (TURONIAN) TUNUNK SHALE MEMBER OF THE MANCOS SHALE FORMATION, SOUTH-CENTRAL UTAH: PARASEQUENCE STYLES IN SHELFAL MUDSTONE STRATA.

134-6 2:45 PM
Mills, N. Tanner*; Reece, Julia S.; Tice, Michael M.*; THE INFLUENCE OF CLAY MINERALS ON THE EVOLUTION OF MUDSTONE PORE FLUIDS DURING MICROBIAL IRON REDUCTION.

134-7 3:00 PM
Salih, Namam*; Mansurbeg, Howri; Kolb, Karnail; Konhauser, Kurt; Gerdes, Axel; Muchez, Philippe; Prétat, Alain; TECTONIC MODELING AND DIRECT DATING OF HYDROTHERMAL CARBONATES IN THE UPPER CRETACEOUS BEKEMIDE FORMATION, SPELEK-SULAUK AREAS, KURDISTAN REGION OF IRAQ.

134-8 3:15 PM
Farooqui, Muhammad Ahmed*; Umar, Muhammad; Syed, Mobasher Attab: GEOCHEMISTRY, PROVENANCE AND PALEOGEOGRAPHY OF MIOCENE-PLIOCENE TALAR FORMATION OF MAKRAN ACCRETIONARY PRISM, PAKISTAN.

3:30 PM BREAK

134-9 3:45 PM
Harris, Nicholas*; Ayanci, Korhan; Knapp, Levi J.; Dong, Tian; McMillan, Julia M.; PETROPHYSICAL AND GEOMECHANICAL RESERVOIR MODELS FOR DEVONIAN SHALE RESERVOIRS IN WESTERN CANADA FROM DETAILED FACIES ANALYSIS (Invited Presentation).

134-10 4:05 PM
Austermann, Gregor*; Hildensbrand, Anne; Ittim, Christina; Bergtsen, Peter: IMPLICATIONS OF LITHOLOGY, GEOCHEMISTRY AND MICROFACIES FOR CAMBRIAN...
Monday, 23 October 2017

SESSION NO. 135

73. Lacustrine Systems across Space and Time II (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM (Society for Sedimentary Geology))

1:30 PM, Washington State Convention Center, Room 307/308

Scott W. Starratt and Michelle F. Goman, Presiding

1:30 PM INTRODUCTORY REMARKS

135-1 1:35 PM Van Dalee, Maarten*; Moenaut, Jasper; De Batist, Marc: QUANTITATIVE PALEOSEISMOLOGY FROM CHILEAN LAKES: A SOUTH AMERICAN PERSPECTIVE (Invited Presentation)

135-2 1:55 PM Leithold, Elena L.*; Wegmann, Karl W.; Bohnenstiehl, DelWayne R.: A HOLOCENE EARTHQUAKE RECORD FROM LAKE CRESCENT, OLYMPIC PENINSULA, WASHINGTON

135-3 2:10 PM Morey, Ann E.*: UNIQUE DEPOSIT CHARACTERISTICS FROM LOWER SQUAW LAKE, OREGON DATED TO 1680-1730 AD SUGGEST A LINK TO SUSTAINED GROUND MOTIONS FROM A CASCADIA EARTHQUAKE

135-4 2:25 PM Shapley, Mark D.*; Thackray, Glenn D.; Finney, Bruce P.; Johnson, Eric M.: SEISMOGENIC SEDIMENT REDISTRIBUTION AND EXPORT AT REDFISH LAKE, IDAHO, DRIVEN BY HOLOCENE FAULTING

135-5 2:40 PM Larsen, Darren*; Crump, Sarah E.; Abbott, Mark B.; Harbert, William; Fasulo, Cooper: LAKE SEDIMENT RECORDS OF DEGLACIATION AND POSTGLACIAL TECTONIC ACTIVITY IN THE TETON RANGE, WY

2:55 PM BREAK

135-6 3:10 PM Birdwell, Justin E.*; Johnson, Ronald C.; Mercier, Tracey J.: ORGANIC MATTER DISTRIBUTIONS IN OIL SHALE ZONES OF THE GREEN RIVER FORMATION, PICEANCE BASIN

135-7 3:25 PM Pope, Michael C.*; Gresh, Sarah; Yates, Julia; Neumann, Landon; Harbers, Blake: SEDIMENTOLOGY, STRATIGRAPHY, AND DIAGENESIS OF LATE CRETACEOUS KOTENAI FORMATION LACUSTRIANE SEDIMENTS, SOUTHWESTERN MONTANA

135-8 3:40 PM Tutolo, Benjamin M.*; Tosca, Nicholas J.: EXPERIMENTAL EXAMINATION OF THE MG-SILICATE SYSTEM AT AMBIENT TEMPERATURE: IMPLICATIONS FOR

SESSION NO. 136

T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)

1:30 PM, Washington State Convention Center, Room 2B

Jason P. Kenworthy and F. Edwin Harvey, Presiding

1:30 PM INTRODUCTORY REMARKS

136-1 1:35 PM Hausner, Mark B.*; Wilson, Kevin P.; Brown, Kevin C.: BEST AVAILABLE SCIENCE AND MANAGING THREATENED ECOSYSTEMS

136-2 1:50 PM Schott, Amy M.*: USING SOIL AND GEOMORPHOLOGY TO UNDERSTAND PREHISTORIC LAND USE IN PETRIFIED FOREST NATIONAL PARK: IMPLICATIONS FOR LANDSCAPE HISTORY AND RESOURCE MANAGEMENT

136-3 2:05 PM Kovarik, Johanna L.*: PROPOSED ROYAL JOHN MINE TAILINGS REPOSITORY: GROUNDWATER AND CAVE ASSESSMENT

136-4 2:20 PM Spears, Kyle Wayne*; Hailihan, Todd; Neel, Christopher Robin: HYDROEGEOPHYSICAL EVALUATION OF THE WASHTA ALLUVIUM AND TERRACE AQUIFER

136-5 2:35 PM Bradbury, Kenneth*; Fehling, Anna; Hunt, Randall J.; Pruitt, Aaron H.; Leaf, Andrew T.; Juckem, Paul F.; Knight, Gregory A.; Thompson, Troy R.; Higgins, Dale; Somer, Sara: DOCUMENTING GROUNDWATER RESOURCES IN WISCONSIN’S CHEQUAMEGON-NICOLLET NATIONAL FOREST: SUCCESSES AND CHALLENGES

136-6 2:50 PM Schmitz, Darrel W.*: EVIDENCE OF STREAM MIGRATION AND PIRACY NEAR TUPELO, MISSISSIPPI (Invited Presentation)

136-7 3:10 PM Hults, Chad P.*; Jones, Tahzay; Venator, Sarah C.; Laker, Mark; Linneman, Charles C.; Lanik, Amanda: STRUCTURE FROM MOTION (SFM) APPLICATIONS TO ALASKA REGION NPS NATURAL RESOURCES SCIENCE AND OUTREACH

136-8 3:25 PM Molnia, Bruce F.*: KEEPING THE BAY IN GLACIER BAY NATIONAL PARK – INTRODUCING GLACIER SCIENCE TO THE UNITED STATES SUPREME COURT

136-9 3:40 PM Knapp, Scott*; Nyborg, Torrey; Santucci, Vincent L.*: PALEONTOLOGICAL INVENTORIES EXPAND THE FOSSIL RECORD AT DEATH VALLEY NATIONAL PARK, CALIFORNIA
Monday, 23 October 2017

136-10 4:10 PM Nyborg, Torrey*: Nyborg, Brant; Fairfield, Hal; Jansen, Birgitta: FOSSIL FISHES OF DEATH VALLEY NATIONAL PARK, CALIFORNIA: RECONSTRUCTING THE ORIGINS AND GEOGRAPHICAL DISTRIBUTION OF THE INDIGENOUS ICHTHYOFANAUA OF SOUTHEASTERN CALIFORNIA


136-12 4:40 PM Rowland, Stephen M.*: TRACKWAY OF A SIDWAYS-WALKING PELICOSAUR IN THE CARBONIFEROUS MANAKACHA FORMATION IN GRAND CANYON NATIONAL PARK

4:55 PM "LIGHTNING ROUND" OF POSTER PREVIEWS

5:10 PM DISCUSSION

SESSION NO. 137

T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning (National Association of Geoscience Teachers; GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)

1:30 PM, Washington State Convention Center, Room 2A

Kristen St. John, Karen McNeal, Anne Gold and Katherine Ryker, Presiding

137-1 1:30 PM Kreager, Bailey Zo*; LaDue, Nicole: PREDICT-OBSERVE-EXPLAIN: A PROMISING ACTIVE LEARNING PEDAGOGY FOR PROMOTING CONCEPTUAL UNDERSTANDING, SELF-EFFICACY, AND INTEREST IN GEOGEOLOGY IN INTRODUCTORY GEOLOGY

137-2 1:45 PM McConnell, David A.*; Ryker, Katherine; Czajka, C. Doug; Chapman, LeeAnna Young; Jones, Jason P.; Wiggen, Jennifer: ASSESSING THE INSTRUCTIONAL UTILITY AND LEARNING EFFICACY OF COMMON ACTIVE LEARNING STRATEGIES (Invited Presentation)

137-3 2:00 PM Wright, Carrie L.: WRITING TO LEARN FOR SCIENTIFIC LITERACY: EVALUATION AND RESEARCH IMPLICATIONS OF A CURRICULUM FOR HISTORICAL GEOLOGY

137-4 2:15 PM Roberts, Jennifer A.; Marshall, Alison Oclott; McLean, Noah; Baker, Gregory; Möller, Andreas: POSITIVE IMPACT OF CLASSROOM TRANSFORMATION ON INEQUALITY IN DFW RATES (“D” OR “F” GRADE, OR WITHDRAW) FOR FIRST-TIME FRESHMAN, FEMALES, AND UNDERREPRESENTED MINORITIES IN TWO INTRODUCTORY GEOLOGY COURSES

137-5 2:30 PM Bruno, Barbara C.*; Engels, Jennifer; Ito, Garrett; Gillis-Davis, Jeffrey J.; Dulai, Henretta; Carter, Glenn; Fletcher, Charlton H.; Bottjer-Wilson, Daniela: TWO-STAGE EXAMS REDUCE THE ACHIEVEMENT GAP IN UNDERGRADUATE OCEANOGRAPHY AND GEOLOGY CLASSES

137-6 2:45 PM Berg, Christopher A.*: INTEGRATE IMPLEMENTATION IN A LARGE-LECTURE COURSE: ASSESSMENT OF IMPACTS ON STUDENT ATTITUDES AND ACHIEVEMENT OF LEARNING GOALS

137-7 3:00 PM Bitting, Kelsey S.; Ryker, Katherine; Teasdale, Rachel: GRADUATE TEACHING ASSISTANT PEDAGOGICAL PREPARATION IN THE GEOSCIENCES: COMMUNITY VALUES AND PRIORITIES, GUIDING RESEARCH, AND NEXT STEPS

3:15 PM BREAK

137-8 3:30 PM Dolan, Erin L.*: BEYOND THE DISCIPLINES IN DISCIPLINE-BASED EDUCATION RESEARCH (Invited Presentation)

137-9 3:45 PM Pelch, Michael*: HOW DO STUDENTS DEFINE AND DESCRIBE SUSTAINABILITY, AND WHAT CAN WE DO TO BETTER CONVEY THE IMPORTANCE OF GEOLOGY IN SUSTAINABILITY?

137-10 4:00 PM Tingin, Laura*; Petcovic, Heather L.; LaDue, Nicole: HOW TINY IS A PROTON? UNDERGRADUATE STUDENT FAMILIARITY WITH SUB-METER METRIC SCALE

137-11 4:15 PM Hamilton, Wayne*; Yelderman, Joe C.: CLASSROOM LESSONS FROM GEOSCIENCE UNDERGRADUATE RESEARCH AND PRESENTATIONS

137-12 4:30 PM Czajka, C. Doug*; McConnell, David A.: AN EXPLORATORY STUDY EXAMINING THE EVOLUTION OF GEOLOGY STUDENTS’ UNDERSTANDING OF EARTH HISTORY AND GEOLOGIC TIME

137-13 4:45 PM Holmgren, Camille A.*; Teed, Rebecca E.: FROM MASS EXTINCTIONS TO MODERN EXTINCTIONS: TEACHING WITH INTEGRATE’S ONLINE CHANGING BIOSPHERE MODULE

137-14 5:00 PM LaDue, Nicole*; Callahan, Caitlin N.; Baber, Lorenzo; Sexton, Julie M.; van der Hoeven Kraft, Katrien J.; Zamani-Gallaher, Eboni M.: APPLYING THEORETICAL FRAMEWORKS TO THE RECRUITMENT AND RETENTION OF UNDERREPRESENTED STUDENTS IN THE GEOSCIENCES (Invited Presentation)

5:15 PM DISCUSSION

SESSION NO. 138

T124. Practical Advice for In-Service and Pre-Service K–12 Earth Science Teacher Preparation and Professional Development (National Earth Science Teachers Association; National Association of Geoscience Teachers, Teacher Education Division)

1:30 PM, Washington State Convention Center, Room 3A

Suzanne T. Metlay, Belinda E. Jacobs, Carla McAuliffe, Sadredin C. Moosavi, Heather Petcovic and Katherine Ryker, Presiding

138-1 1:30 PM Egger, Anne E.*: HOW WELL DO INTRODUCTORY GEOGEOLOGY COURSES PREPARE FUTURE TEACHERS? RESULTS FROM THE NATIONAL GEOGEOLOGY FACULTY SURVEY (Invited Presentation)

138-2 1:45 PM Teed, Rebecca*: DO BETTER-PREPARED STUDENTS LEARN MORE FROM COLLABORATIVE TESTS?

138-3 2:00 PM Pyle, Eric J.*; Reisner, Barbara; Higdon, Robbie; Paulson, Scott; Cressawn, Kerry: PRESERVICE TEACHERS’ DUAL IDENTITIES: EARTH SCIENTIST AND EARTH SCIENCE TEACHER (Invited Presentation)

138-4 2:15 PM Gold, Anne U.*; Morrison, Ariela; Soltis, Nicholas A.; McNeal, Karen; Kay, Jennifer E.: MEASURING ENGAGEMENT AND LEARNING OUTCOMES DURING A TEACHER PROFESSIONAL DEVELOPMENT WORKSHOP ABOUT CREATIVE CLIMATE COMMUNICATION

138-5 2:30 PM D’Errico, Megan E.*; Stewart, Lauren N.; Ross, Donna L.; Vaughn, Meredith H.: CHARACTERIZING TEACHERS’ PROFESSIONAL NOTICING OF STUDENTS’ SCIENTIFIC IDEAS AND EXTENDING IT TO EARTH SCIENCE TEACHING

138-6 2:45 PM Chapman, LeeAnna Young*; McConnell, David A.: WHAT? WHEN? HOW? CASE STUDIES EXPLORING EXPERIENCES MOTIVATING THE DEVELOPMENT OF REFORMED TEACHING BELIEFS AMONG FUTURE GEOSCIENCE FACULTY (Invited Presentation)

3:00 PM DISCUSSION

138-7 3:15 PM Panzik, Joseph E.*; Borden, Rose M.; Roberts, Sarah E.; Muhlbauer, Jason G.; Gwizdi, Samantha: GRADUATE STUDENT GUIDED PHYSICAL GEOLOGY LABORATORY DESIGN AT THE UNIVERSITY OF TENNESSEE AT KNOXVILLE
T149. Celebrating Dr. John W. Valley’s Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)

INTRODUCTORY REMARKS

138-1 1:35 PM Elter, John*: THE EMERGING FIELD OF ‘ISOTOMICS’, AND THE POWER OF GEAR-HEAD INNOVATION IN GEOCHEMISTRY (Invited Presentation)

138-2 1:55 PM Steig, Eric J.: CONTINUOUS, HIGH-RESOLUTION MEASUREMENTS OF δ18O OF H₂O

138-3 2:10 PM Bindeman, Ilya N.; Zakharov, David; Palandri, James; Greber, Nicholas; Dauphas, Nicolas; Retallack, Gregory J.; Lackey, Jade Star; Hoffman, Axel; Bekker, Andrey: SHIFT IN THE HYDROLOGIC CYCLE AND RAPID GROWTH OF SUBAERIAL CONTINENTAL CRUST AT ~2.5 GA BASED ON TRIPLE OXYGEN ISOTOPE SYSTEMATICS OF SHALES

138-4 2:25 PM Cui, Huan*; Kitajima, Kouki; Spicuzza, Michael J.; Fournelle, John H.; Ishida, Akizumi; Denny, Adam; Zhang, Feifei; Valley, John W.: PRIMARY OR SECONDARY? TESTING THE NEPROTEROZOIC SUPERHEAVY PYRITE BY SIMS

138-5 2:40 PM Teng, Fang-Zhen*: TRACING SUBDUCTION ZONE PROCESSES BY USING MG ISOTOPES

138-6 2:55 PM Lamb, William M.*; Hunt, Lindsey: H₂O IN THE UPPER MANTLE: INSIGHTS FROM MINERAL EQUILIBRIA

138-7 3:10 PM Spencer, Christopher J.*; Murphy, J. Brendan; Holland, Carl W.; Johnston, Stephen; Collins, William J.; Mitchell, Ross N.: CORDILLERAN ARC MOBILITY AND ACCRETIONARY TECTONICS DUE TO DEGREE-2 MANTLE CONVECTION

SESSION NO. 140

T162. The Dance of Arcs: Causes of Arc Migrations, Flare-Ups, and Magmatic Focusing II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

INTRODUCTORY REMARKS

140-1 1:35 PM Karlstrom, Leif*: Paterson, Scott R.; Jellinek, A. Mark: A REVERSE ENERGY CASCADE FOR CRUSTAL MAGMA TRANSPORT (Invited Presentation)

140-2 1:55 PM Yang, Jianming*; Rudolph, Maxwell L.; Karlstrom, Leif: OVER-RIDING PLATE CONTROLS ON MANTLE WEDGE MELTING

140-3 2:10 PM Billen, Magali I.*: HOT SLAB MELTS FROM OLD SUBDUCTING LITHOSPHERE: SPONTANEOUS ARC RIFTING CAUSED BY TIME-DEPENDENT EVOLUTION OF THE MANTLE WEDGE CORNER

140-4 2:25 PM Ward, Kevin M.*; Cao, Wenrong: MAGMATIC EVOLUTION OF AN ACTIVE CORDILLERAN MAGMATIC FLARE-UP EPISODE (Invited Presentation)

2:45 PM DISCUSSION

03:00 PM  Klein, Benjamin Z.*; Jagoutz, Oliver; Van Tongeren, Jill; Seteria, Jacob: "EVIDENCE FOR THREE DISTINCT METASEDIMENTARY EMPLACEMENT MECHANISMS IN AN ARC CRUST SECTION, SOUTHERN SIERRA NEVADA, CALIFORNIA"

03:35 PM  Gammel, Elizabeth M.*; Nabelek, Peter: "LITHOSPHERIC STRUCTURE CONTROL ON CHANGES IN MAGMA SOURCE OVER TWO MAGMATIC PULSES IN THE WHITE-INYO RANGE, CA"

04:05 PM  Shea, Erin K.*; Miller, Jonathan S.; Miller, Robert B.; Chan, Christine F.; Kent, Adam J.R.: "GEOCHEMICAL EVIDENCE FOR THE DEVELOPMENT OF A GARNET-BEARING CRUSTAL ROOT IN THE CRETACEOUS NORTH CASCADES MAGMATIC ARC, WA"

04:20 PM  Schwartz, Joshua J.*; Tulloch, Andrew J.; Andico, S.; Stowell, Harold H.; Klepeis, Keith A.; Kitajima, Kouki; Valley, John: "DO MID-CRUSTAL CORDILLERAN BATHOLITHS RECORD ARC FLARE-UP TRIGGERING PROCESSES?"

04:35 PM  Pang, Kwan-Nang*; Chung, Sun-Lin; Zarrinkoub, Mohammad Hossein; Chiu, Han-Yi; Lee, Hao-Yang; Lin, Te-Hsien: "ALONG ARC GEOCHRONOLOGIC AND GEOCHEMICAL VARIATION OF THE URUMIEH-DOKHTAR BELT, IRAN: IMPLICATIONS FOR MAGMATIC FLARE-UP AND CRUSTAL GROWTH"

05:00 PM  DISCUSSION

SESSION NO. 141

T167. The History of the Petroleum Industry: Hydraulic Fracturing—The 20th and 21st Century (GSA History and Philosophy of Geology Division; GSA Energy Geology Division; History of Earth Sciences Society (HESS); GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; History of the Geoscience Section of the Geological Society of Italy)

01:30 PM, The Conference Center, Skagit 3

Francesco Gerali and William R. Brice, Presiding

141-1  1:30 PM  Brice, William R.*: "THE EARLY OIL INDUSTRY AND THE FIRST "FRACKING" (Invited Presentation)"

141-2  1:45 PM  Testa, Stephen M.*: "HISTORICAL DEVELOPMENT OF WELL STIMULATION TECHNOLOGIES VIA HYDRAULIC FRACURING"

141-3  2:00 PM  Gerali, Francesco*: "THE UNCONVENTIONAL DRILLER, THE DEVELOPMENT OF NEW PARADIGMS IN OIL EXPLORATION IN THE 20th CENTURY"

141-4  2:15 PM  Valenciuc, Coneyer Bolton*: "HISTORY OF TECHNOLOGY, HISTORY OF PEOPLE (Invited Presentation)"

141-5  2:30 PM  Soeder, Daniel J.*: "OVERCOMING THE TECHNICAL CHALLENGES OF SHALE GAS AND TIGHT OIL PRODUCTION"

141-6  2:45 PM  Engelder, Terry*: "A BRIEF HISTORY OF HYDRAULIC FRACURING IN THE APPALACHIAN BASIN (Invited Presentation)"

141-7  3:00 PM  Oldsaker, Paul*: "HISTORY OF COAL BED METHANE IN THE SAN JUAN BASIN, COLORADO AND NEW MEXICO"

141-8  3:15 PM  Ryder, Stacia*: "COMPARING AND CONTRASTING REGULATION AND GOVERNANCE APPROACHES TO UNCONVENTIONAL OIL AND GAS DEVELOPMENT: THE CASE OF ARGENTINA AND THE U.S"

141-9  3:30 PM  Otoo, Natascha*: "OIL, POLITICS AND SCIENCE: THE DEVELOPMENT OF PETROLEUM GEOLOGY IN BRAZIL"

SESSION NO. 142

T176. Glacier-Landscape Interactions, Loess Paleoclimatology, and Interdisciplinary Quaternary Science II: In Memory of Stephen C. Porter (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Chelan 4

Glenn D. Thackray, Richard B. Waitt and Zhisheng An, Presiding

1:30 PM  INTRODUCTORY REMARKS

142-1  1:35 PM  Jaffrey, Marc*: Hallet, Bernard: "THE INFLUENCE OF CLIMATE AND TOPOGRAPHY ON GLACIER EROSION RATES"

142-2  1:50 PM  Batbaatar, J.*; Gillespie, Alan R.; Fink, David; Matmon, Ari; Lai, Zhongping; Koppes, Michele: "RELATIVE EQUILIBRIUM-LINE ALTITUDE AS AN INDICATOR OF GLACIER SENSITIVITY TO TEMPERATURE AND PRECIPITATION"

142-3  2:05 PM  Jaeger, John M.*; Salias, Joe Kendall; Penkrot, Michelle L.; Bruand, Emilie: "PERSEVANCE OF THE PLEISTOCENE GLACIAL BUZZSAW IN THE ST. ELIAS MOUNTAINS, ALASKA"

142-4  2:20 PM  Doughty, Alice Marie*: "EQUILIBRIUM LINE ALTITUDE CHANGES IN THE TROPICS AND MID-LATITUDES DURING THE LAST GLACIAL MAXIMUM"

142-5  2:35 PM  Olson, Erika R.*; Constantine, José Antonio: "MID LATITUDE GLACIAL RESPONSES TO ENSO IN THE EASTERN PACIFIC: A TALE OF TWO HEMISPHERES"

142-6  2:50 PM  Brachfeld, Stefanie A.*; Cirone, Ashley; Williams, Trevor; Licht, Kathy; Hemming, Sidney R.: "GEOCHEMICAL AND MINERALOGICAL SIGNATURES OF THREE ICE STREAMS IN THE WEDDELL SEA EMBAYMENT, ANTARCTICA"

3:00 PM  BREAK

3:20 PM  POSTER LIGHTNING TALKS

142-7  3:35 PM  Wyshnytky, Cianna Elizabeth*: "DIGGING DEEPER IN QUATERNARY SCIENCE: THE IMPORTANCE OF PAIRING SEDIMENTOLOGICAL AND MORPHOLOGICAL OBSERVATIONS IN UNDERSTANDING GLACIAL LANDSCAPE EVOLUTION"

142-8  3:50 PM  Shulmeister, James*; Thackray, Glenn D.; Rittenour, Tammy; Fink, David; Rother, Henrik; Hyatt, Olivia M.: "THE TIMING AND NATURE OF THE LAST GLACIAL CYCLE IN NEW ZEALAND"

142-9  4:05 PM  Grau Galofre, Anna*; Jellinek, A. Mark; Olsinski, Gordon R.: "MORPHOLOGY AND FIELD OBSERVATIONS OF TUNNEL VALLEYS IN DEVON ISLAND, ARCTIC ARCHIPELAGO: EXPLORING THE FINGERPRINTS OF SUBGLACIAL DRAINAGE"

142-10  4:20 PM  Farnsworth, Wesley R.*; Ingólfsson, Ólafur; Retelle, Michael J.; Allaire, Lisa; Håkansson, Lena; Schomacker, Anders: "ADVANCES IN DEGLACIATION ON SVALBARD"

142-11  4:35 PM  Haugerud, Ralph A.*: "LATE LAST-GLACIAL SHORELINES IN NORTHWEST WASHINGTON STATE"

142-12  4:50 PM  Thackray, Glenn D.; Shulmeister, James; Marshall, Katherine J.; Staley, Amie E.: "PORTER’S CIRQUE FLOOR ALTITUDES AND THE EXTENSIVE MIS 5-3 GLACIATION OF THE OLYMPIC PENINSULA, WASHINGTON"

5:05 PM  CONCLUDING REMARKS

SESSION NO. 143

T177. Ice Streams of North American Ice Sheets and Their Stratigraphic and Sedimentary Record (GSA Quaternary Geology and Geomorphology Division)

1:30 PM, The Conference Center, Chelan 2

Michel Parent, Martin Ross and Richard Berg, Presiding

1:30 PM  INTRODUCTION OF ARTHUR L. DAY MEDALIST, BY PETER L. MOORE
<table>
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<tr>
<th>Session No.</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>143-1</td>
<td>1:35 PM</td>
<td>Iverson, Neal R.; ARTHUR L. DAY MEDAL: BASAL SLIP OF GLACIERS: CREEPING TOWARD BETTER PARAMETERIZATIONS</td>
<td></td>
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<tr>
<td>143-2</td>
<td>1:55 PM</td>
<td>Wright, Stephen F.; ICE STREAMING IN THE SOUTHERN CHAMPLAIN AND NORTHERN HUDSON RIVER VALLEYS, VERMONT AND NEW YORK</td>
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<tr>
<td>143-3</td>
<td>2:10 PM</td>
<td>Parent, Michel; FLOW PATTERNS AND GLACIAL DISPERSAL PATTERNS IN THE EASTERN LAURENTIDE ICE SHEET - IMPLICATIONS FOR SUBGLACIAL PROCESSES AND ICE STREAM DEVELOPMENT</td>
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<td>143-4</td>
<td>2:25 PM</td>
<td>Norris, Sophie Louise; Margold, Martin; Froese, Duane; LATE WISCONSINIAN ICE FLOW DYNAMICS IN NORTHERN ALBERTA AND NORTHWESTERN SASKATCHEWAN, CANADA</td>
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<td>143-5</td>
<td>2:40 PM</td>
<td>Young, Joseph M.; Froese, Duane G.; QUATERNARY STRATIGRAPHY OF THE LOWER ATHABASCA VALLEY AND IMPLICATIONS FOR DEGLACIAL LAURENTIDE ICE SHEET DYNAMICS AND GLACIAL LAKE AGASSIZ MELTWATER DRAINAGE</td>
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<td>143-6</td>
<td>2:55 PM</td>
<td>Breckenridge, Andy J.; Lowell, Thomas V.; SAWTOOTH VARVE THICKNESS PATTERNS RECORD RE-ORGANIZATION OF MELTWATER PATHWAYS ALONG THE LAURENTIDE ICE SHEET</td>
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<tr>
<td>143-7</td>
<td>3:25 PM</td>
<td>Margold, Martin; Stokes, Chris R.; Clark, Chris D.; THE EVOLUTION OF THE ICE STREAM NETWORK IN THE LAURENTIDE ICE SHEET DURING THE LAST DEGLACIATION (Invited Presentation)</td>
<td></td>
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<tr>
<td>143-8</td>
<td>3:45 PM</td>
<td>Ross, Martin; MULTI-FACETED ANALYSIS OF THE UPSTREAM PORTION OF SELECTED LAURENTIDE ICE SHEET PALEO-ICE STREAMS; INSIGHTS INTO THEIR LONG-TERM BEHAVIOR</td>
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<td>143-9</td>
<td>4:00 PM</td>
<td>Zoet, Lucas; Muto, Atsushi; Rawling, J. Elmo; THE EFFECT OF TUNNEL CHANNELS ON LAURENTIDE ICE SHEET DYNAMICS</td>
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<td>143-10</td>
<td>4:15 PM</td>
<td>Miranda, Evan J.; Morgan, Daniel; Putkonen, Jaakko; Balco, Greg; THE PROVENANCE OF GLACIAL TILL FROM THE HARBOR HILL MORAINE ON LONG ISLAND, NY DETERMINED BY LA-ICP-MS OF DETRITAL ZIRCON</td>
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<tr>
<td>143-11</td>
<td>4:30 PM</td>
<td>Hermanowski, Piotr; Piotrowski, Jan A.; PALAEO-ICE STREAM DYNAMICS DERIVED FROM GEOMORPHOLOGICAL AND GEOLOGICAL CHARACTERISTICS OF DRUMLINS IN THE STARGARD DRUMLIN FIELD, NW POLAND</td>
<td></td>
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<tr>
<td>143-12</td>
<td>4:45 PM</td>
<td>Tremblay, Tommy; FROM LATE TERTIARY FLUVIAL LANDSCAPE TO PRESENT: A GENERAL THEORY ON WARM-BASED AND COLD-BASED GLACIATED TERRAINS SEDIMENTOLOGY AND GEOMORPHOLOGY IN THE NORTHEASTERN CANADIAN SHIELD</td>
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**SESSION NO. 144**

**T185. Geomorphology of Human-Altered Landscapes (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Environmental and Engineering Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group)**

1:30 PM, The Conference Center, Chelan 5

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<tbody>
<tr>
<td>144-1</td>
<td>1:30 PM</td>
<td>Chien, Anne; FINGERPRINTING DECISIONS IN EVOLVING HUMAN-LANDSCAPE SYSTEMS (Invited Presentation)</td>
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<tr>
<td>144-2</td>
<td>1:50 PM</td>
<td>Tanski, Natalie; Schenk, Edward R.; Tobin, Benjamin W.; POTENTIAL KNICKPOINT RETREAT ON THE COLORADO RIVER DUE TO HISTORICALLY LOW LAKE MEAD LEVELS, GRAND CANYON NATIONAL PARK</td>
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<td>144-3</td>
<td>2:05 PM</td>
<td>Nichols, Mary; Shaw, Jeremy; THE GEOMORPHIC LEGACY OF RANGE AND WATER AND EROSION CONTROL STRUCTURES</td>
<td></td>
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<td>144-4</td>
<td>2:20 PM</td>
<td>Gran, Karen B.; Treat, Ian H.; Targos, Courtney; WHAT’S MISSING? WHAT’S LEFT BEHIND? HOW HUMAN ALTERATIONS TO LAND USE AND DRAINAGE ARE RECORDED IN DIFFERENT FLUVIAL ENVIRONMENTS IN AN INCISING AGRICULTURAL LANDSCAPE OF THE UPPER MIDWEST, USA (Invited Presentation)</td>
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<td>144-5</td>
<td>2:40 PM</td>
<td>Blau, Emmett; Constantine, José Antonio; THE ROLE OF THE FLOODPLAIN IN THE STORAGE OF CONTAMINANTS AMONG MEANDERING RIVERS</td>
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<td>144-6</td>
<td>2:55 PM</td>
<td>Blauch, Garrett A.; Jefferson, Anne J.; ABUNDANCE AND GEOMORPHIC FUNCTION OF WOOD IN URBAN STREAM SYSTEMS</td>
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<td>144-7</td>
<td>3:10 PM</td>
<td>Schmidt, Amanda H.; Bierman, Paul R.; Collins, Brian D.; Harrell, Steven; Hinckley, Thomas; Tang, Ya; Rood, Dylan H.; THE GEOMORPHIC HISTORY OF HUMAN ACTIVITY IN SOUTHWESTERN CHINA (Invited Presentation)</td>
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<td>144-8</td>
<td>3:45 PM</td>
<td>Kang, Ranbir Singh; Chacko, Elizabeth; Kaur, Dhian; Viadero, Roger C.; PATTERNS OF SITTING IN THE RESERVOIRS OF SMALL- AND MEDIUM-SIZED EARTHEEN CHECK DAMS IN THE SHIWALKI FOOT HILLS OF THE HIMALAYAS</td>
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<td>144-9</td>
<td>4:00 PM</td>
<td>Donn, Leila; Beach, Timothy; Luzzadder-Beach, Sheryl; Yaege, Jason; LIDAR-BASED HUMAN-ENVIRONMENTAL CONTRIBUTIONS TO LONG-TERM FLOODING AND LANDSCAPE CHANGE IN THE BELIZE-GUATEMALA TRANSBOUNDARY AREA</td>
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<tr>
<td>144-10</td>
<td>4:15 PM</td>
<td>Davis, George H.; LATE BRONZE AGE THROUGH CLASSICAL-PERIOD UTILIZATION OF GEOMORPHOLOGY, STRATIGRAPHY, AND GEOLOGIC STRUCTURE, SANCTUARY OF ZEUS, MT. LYKAION, PELOPONNESE, GREECE</td>
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<td>144-11</td>
<td>4:30 PM</td>
<td>Reed, Miles Mark Langly; Kite, J. Steven; OBSERVATIONS OF EROSION ON VALLEY FILLS PRODUCED BY MOUNTAIN TOP REMOVAL COAL MINING</td>
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<td>144-12</td>
<td>4:45 PM</td>
<td>Keck, Jeffrey W.; FLUVIAL CONNECTIVITY OF A DEEP-SEATED LANDSLIDE TO UPSTREAM TREE HARVESTS</td>
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**LIGHTNING TALKS**

5:00 PM
 SESSION NO. 146

T204. Friends of Hoth: Episode II—Icy Bodies of the Solar System
(GSA Planetary Geology Division)

1:30 PM, The Conference Center, Tahoma 1

D. Alex Patthoff and Emily S. Martin, Presiding

T204. Friends of Hoth: Episode II—Icy Bodies of the Solar System

1:30 PM, The Conference Center, Tahoma 1

D. Alex Patthoff and Emily S. Martin, Presiding

146-1 1:30 PM McCord, Thomas B.*, Castillo-Rogez, Julie C.; Russell, Christopher T.; McSween, Harry Y.: GEOCHEMICAL EVOLUTION OF VESTA AND CERES BEFORE AND AFTER DAWN CONTROLLED BY GEOCHEMISTRY

146-2 1:45 PM Raymond, Carol A.; Castillo-Rogez, Julie C.; Russell, Christopher T.; McSween, Harry Y.: GEOPHYSICAL EVOLUTION OF VESTA AND CERES

146-3 2:00 PM Mest, Scott C.; Crown, David A.; Yingst, R. Aileen; Berman, Daniel C.; Williams, David A.; BuzzkowskI, Debra L.; Scully, Jennifer E.C.; Platz, Thomas; Hiesinger, Harald; Pasckert, Jan Hendrik; Neesemann, Adrian; March, Simone; Jaumann, Ralf; Roatsch, Thomas; Preusker, Frank; Nathues, Andreas; Raymond, Carol A.; Russell, Christopher T.: THE HAMO-BASED GLOBAL GEOLOGIC MAP OF CERES FROM NASA’S DAWN MISSION

146-4 2:15 PM Scully, Jennifer E.C.; Bowling, Timothy; Bu, Caixia; Buzzkowski, Debra L.; Jaumann, Ralf; Longobardo, Andrea; Nathues, Andreas; Neesemann, Adrian; Palomba, Ernesto; Platz, Thomas; Quick, Lynne C.; Raponi, Andrea; Ruesch, Ottaviano; Schenk, Paul M.; Stein, Nathaniel; Russell, Christopher T.; Raymond, Carol A.: THE FORMATION AND EVOLUTION OF CERES’ OCCATOR CRATER AND ITS FACULAE

146-5 2:30 PM Stein, Nathaniel*: Ehlmann, Bethany L.; Palomba, Ernesto; De Sanctis, Maria Cristina; Nathues, Andreas; Hiesinger, Harald; Ammannito, Eleonora; Russell, Christopher T.; Raymond, Carol A.; Jaumann, Ralf; Longobardo, Andrea: THE FORMATION AND EVOLUTION OF BRIGHT SPOTS ON CERES (Invited Presentation)

146-6 2:45 PM Chilton, Heather*: Schmidt, Britney E.; Ferrier, Ken L.; Duarte, Kayla; Hugheson, Kyman H.G.; Scully, Jennifer E.C.; Sizemore, Hanna G.; Nathues, A.; Platz, Thomas; Russell, Christopher T.; Raymond, Carol A.; Wray, James J.: CERES’ NEAR SURFACE PROPERTIES FROM LANDSLIDES

146-7 3:00 PM Patthoff, D. Alex*: Leonid, Erin; Senske, David; Collins, Geoffrey C.: NEW GLOBAL GEOLOGIC MAP OF EUROPAN

146-8 3:15 PM Cooper, Catherine M.*: PRELIMINARY RESULTS FROM SIMULATIONS MAPPING MOBILE LID CONVECTIVE REGIME IN ICY SHELLS: USE THE FORCE (TO AVOID STAGNANT LID)

146-9 3:30 PM Howell, Samuel M.; Pappalardo, Robert T.: EXTENSIONAL TERRAIN FORMATION IN ICY SATELLITES: IMPLICATIONS FOR OCEAN-SURFACE INTERACTIONS

146-10 3:45 PM Hemingway, Douglas J.*: ISOSTASY ON A SMALL ICY MOON: IMPLICATIONS FOR ENCELADUS’S ICE SHELL STRUCTURE (Invited Presentation)

146-11 4:00 PM Leonard, Erin*: Yin, An; Pappalardo, Robert T.: THE FORMATION AND IMPLICATIONS OF CRATERED ISLANDS ON ENCELADUS

146-12 4:15 PM Cameron, Marissa E.; Smith-Koner, Bridget R.; Burkhard, Liliane; Patthoff, D. Alex; Pappalardo, Robert T.; Collins, Geoffrey C.: STRIKE- SLIP TECTONISM ON GANYMEDE: INVESTIGATING COULOMB FAILURE AT A GLOBAL SCALE (Invited Presentation)

146-13 4:30 PM Martin, Emily S.*; Patthoff, D. Alex; Watters, Thomas R.: EXPLORING DIONE’S GEOPHYSICAL EVOLUTION

146-14 4:45 PM Dhingra, Deepak*: Hedman, Matthew M.: CONTRASTING ALTITUDINAL TRENDS IN LAUNCH VELOCITIES OF ENCELADUS’ PLUME PARTICLES

146-15 5:00 PM Byrne, Paul K.*; Regensburger, Paul V.; Klimczak, Christian; Bohnenstiehl, DelWayne R.; Dombard, Andrew J.; Hauck, Steven A.: AN ASSESSMENT OF GEOLOGICAL CONDITIONS AT ICY SATELLITE OCEAN FLOORS

146-16 5:15 PM Mitchell, Karl L.*; Mastrogiuseppe, Marco; Hayes, Alexander G.; Hofgartner, Jason; Lorenz, Ralph; Le Gall, Alice; Janssen, Michael; Lopes, Rosaly; Radebaugh, Jani; Lunine, Jonathan: THIRTEEN YEARS OF CASSINI RADAR OBSERVATIONS OF SATURN’S MOON TITAN, AND ONE LAST HURRAH!

SESSION NO. 147

T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle II (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

1:30 PM, The Conference Center, Tahoma 2

Randolph T. Williams, Alexis K. Ault and James F. Dolan, Presiding

147-1 1:30 PM Resor, Phillip G.*; Cooke, Michele L.; Marshall, Scott T.; Madden, Elizabeth H.: ACCOUNTING FOR FAULT GEOMETRY’S IMPACT ON THE SLIP BUDGET

147-2 1:45 PM Dolan, James F.*: ON THE CONSTANCY (OR NOT) OF FAULT SLIP: POTENTIAL CONTROLS, IMPLICATIONS FOR SEISMIC HAZARD AND PLATE BOUNDARY MECHANICS, AND THE NEED FOR SYSTEM-LEVEL ANALYSIS

147-3 2:00 PM Scharer, Katherine M.*; Cowgill, Eric; Gold, Ryan D.; Weldon, Ray J.: WRIGHTWOOD REVISITED: WHAT WE CAN AND CANNOT SAY ABOUT HOW FAULTS WORK (Invited Presentation)

147-4 2:20 PM Nissen, Edwin*: CASCADEING, COMPOUND, MULTI-FAULT RUPTURES: A NEW CLASS OF EARTHQUAKE

147-5 2:35 PM Baden, Curtis William*: Hilley, George E.; Shuster, David L.; Hourigan, Jeremy: RELATING GEOLoGIC STRUCTURE TO GEODETIC MEASUREMENTS WITHIN THE SANTA
CRUZ MOUNTAINS, NORTHERN CALIFORNIA, THROUGH OFF-FAULT PLASTIC FAILURE

147-6 2:50 PM Burgette, Reed J.*; Scharer, Katherine M.; Litton, Nathaniel A.; Hanson, Austin; McPhillis, Devin; Rittenour, Tammy M.: SLIP RATE VARIATION OF THE CENTRAL SIERRA MADRE FAULT, SOUTHERN CALIFORNIA OVER THE PAST 200 KA

3:05 PM BREAK

147-7 3:20 PM Hirth, Greg*; Behn, Mark; Shneurav, William: CRUSTAL SHEAR ZONES AND THE VISCOSITY OF THE LOWER CRUST (Invited Presentation)

147-8 3:40 PM Chatzaras, Vasilieos*; van der Werf, Thomas; Kriegsman, Leo M.; Kronenberg, Andreas K.; Tikoff, Basil; Drury, Marty: RHEOLOGY OF THE LOWER CRUST AND UPPER MANTEL IN THE ACTIVE BOUNDARY BETWEEN THE PACIFIC PLATE AND BAJA CALIFORNIA MICROPLATE

147-9 3:55 PM Carlson, Chad W.*; Faulds, James E.: STRAIN ACCOMMODATION AND TRANSFER ACROSS THE NORTHERN AND CENTRAL WALKER LANE TRANSITION: KINEMATIC LINKING OF ROTATING AND TRANSLATING CRUST IN AN EVOLVING PLATE BOUNDARY

4:10 PM Cooke, Michele L*; McBeck, Jessica A.; Hatem, Alex E.; Toeneboehn, Kevin; Beyer, Jennifer L.: TRACKING EFFICIENCY ASSOCIATED WITH FAULT SYSTEM REORGANIZATION IN LABORATORY AND NUMERICAL EXPERIMENTS

4:25 PM Riegel, Hannah*; Zambrano, Miller; Jablonska, Danica; Tondi, Emanuele; Agosta, Fabrizio; Mattioni, Luca; Rustichelli, Andrea: IMPACT OF FAULTING IN SILICICLASTICS: A CASE STUDY IN A TURBIDITE SUCCESSION

4:40 PM Perfili, Christopher M.*; Keith, Jeffrey D.; Ritter, Scott M.; Misuraca, Tia; Jordan, Lars; Larsen, Samuel; Kindred, Thane; Hood, Steven; Dunkley, Riley; Pallo, Gage: NEW PSEUDOTACHYLYTE OCCURRENCES FOUND ON THE LITTLE COTTONWOOD STOCK -- PRODUCED FROM A MEGA-SCALE LANDSLIDE EVENT

4:55 PM DISCUSSION

SESSION NO. 148 $

T213. Integrated Approaches to Deciphering Major Crustal Boundaries in Polyphase Orogenic Settings (GSA Structural Geology and Tectonics Division; Society of Economic Geologists; GSA Geophysics Division)

1:30 PM, The Conference Center, Tahoma 3

James V. Jones III, James J. Ryan, Jonathan S. Caine and Benjamin J. Drenth, Presiding

1:30 PM INTRODUCTORY REMARKS

148-1 1:35 PM Siddoway, Christine S.*; Tinto, Kirsteen; Bell, Robin E.; Lockett, Alec: NEW TECTONIC BOUNDARY AND GONDWANA MARGIN INHERITANCE REVEALED IN CRUST BENEATH ROSS ICE SHELF, ANTARCTICA, THROUGH ROSETTA-ICE PROJECT INTEGRATION OF AEROGEOPHYSICS, GEOLOGY, AND OCEAN DATA

148-2 1:50 PM Fielding, Imogen O.H.*; Johnson, Simon P.; Zi, Jian-wei; Sheppard, Stephen; Rasmussen, Birger: LINKING MULTIPLE GOLD MINERALIZING EVENTS TO REACTIVATION OF CRUSTAL-Scale FAULTS

148-3 2:05 PM Yuan, Wanning*: THE ZIRCON FISSION TRACK THERMOCRONOMETRIC EVIDENCES ON THE TECTONOGENESIS AND MINERALIZATION IN THE GANZI-LITANG GOLD BELT, EASTERN QINGHAI-TIBET PLATEAU

148-4 2:20 PM Hatcher, Robert D.*; Bible, Gary G.; Wunderlich, Andrew L.; Strissel, Morgan Marie; Boiling, Kenneth S.: REGIONAL POLYPHASE DEFORMATION ON THE NASHVILLE AND JESSAMINE DOMES, TENNESSEE AND KENTUCKY I:

FAR-FIELD EFFECTS OF THE ACADIAN-NEOACADIAN AND ALLEGHIANIAN OROGENIES

148-5 2:35 PM Levine, Jamie S.F.*; Merschat, Arthur; Casale, Gabrielle; McAleer, Ryan J.; Quillan, Kevin, Reid: DEFORMATION CONDITIONS, KINEMATICS, AND THERMOCRONOMETRIC CONSTRAINTS ALONG THE GOSSAN LEAD FAULT, THE BOUNDARY BETWEEN THE WESTERN AND EASTERN BLUE RIDGE IN NORTHWEST NORTH CAROLINA

148-6 2:50 PM Toraman, Erkan*; Chiaronzelli, Jeffrey R.: NEW ZIRCON AND APATITE U-PB GEOCHRONOLOGY FROM THE CARTHAGE-COLTON SHEAR ZONE: CONSTRAINING THE TIMING OF DEFORMATION IN A MAJOR CRUSTAL BOUNDARY IN THE NORTWEST ADIRONDACKS

3:05 PM BREAK

148-7 3:20 PM Gibson, H. Dan*: MAJOR CRUSTAL BOUNDARIES IN OROGENIC SYSTEMS – HIDDEN TREASURES, MISUNDERSTOOD FEATURES AND PROGRESS MADE (Invited Presentation)

148-8 3:40 PM Ryan, James J.*; Zagorevski, Alexandre; Joyce, Nancy L.: Saltus, Richad W.: THE TAYLOR MOUNTAIN BATHOLITH: AEROMAGNETIC EXPRESSION, GEOMETRY, AND IMPLICATIONS FOR TECTONIC MODELS, EAST-CENTRAL ALASKA


148-10 4:10 PM Drenth, Benjamin J.*; Jones, James V.; Caine, Jonathan Saul; Saltus, Richard W.: THE YUKON-TANANA TERRANE: EXPOSING THE PARAUTOCHTHON THROUGH A THIN FLAP OF ALLOCHTHONOUS YUKON-TANANA TERRANE IN WESTERN YUKON

148-11 4:25 PM Waldien, Trevor S.*; Roeske, Sarah M.; Benowitz, Jeffrey A.; Stockli, Daniel F.: CENOZOIC REACTIVATION OF CRETACEOUS TERRANE ACCRETIONARY STRUCTURES IN THE EASTERN ALASKA RANGE, ALASKA

148-12 4:40 PM Roeske, Sarah M.*; Till, Alison B.; Miller, Meghan S.; Saltus, Richard W.; McClelland, William C.: LARGE VERTICAL OFFSETS OF MOHO COINCIDE WITH MAJOR MESOZOIC TRANSFORM FAULTS IN NORTHERN ALASKA (Invited Presentation)

SESSION NO. 149

T227. Ophiolite and Ocean Plate Stratigraphy Records in Modern and Ancient Accretionary and Collisional Orogenic Belts in the Circum Pacific Region II (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geophysics Division; Geological Society of China; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Tahoma 4

Yildirim Dilek and Jingsui Yang, Presiding

1:30 PM INTRODUCTORY REMARKS

149-1 1:35 PM Maruyama, Shigeru*; Dilek, Yildirm: OPHIOLITES THROUGH GEOLOGICAL TIME

149-2 1:50 PM Yang, Jingsui*: Robinson, Paul T.; Dilek, Yildirm: OPHIOLITES: A NEW SCIENTIFIC WINDOW FOR TRACING DEEPLY SUBDUCTED AND RECYCLED OCEANIC-CONTINENTAL CRUST

149-3 2:05 PM Wang, Qin*: EFFECTS OF COMPOSITION AND SERPENTINIZATION ON SEISMIC PROPERTIES OF THE OCEANIC LITHOSPHERE

149-4 2:20 PM Xu, Zhiqin*: Ma, Xuxuan: TECTONIC EVOLUTION OF THE LHASA TERRANE, SOUTH TIBET SINCE MIDDLE
TRIASSIC: TRANSITION FROM OCEAN-CONTINENT MULTIPLE SUBDUCTION TO CONTINENT-CONTINENT COLLISION (Invited Presentation)

150-5 2:40 PM Ma, Xuxuan*; Xu, Zhiqin: MESOZOIC MULTIPLE INTRA-OCEANIC SUBDUCTION SYSTEMS OF THE NEOETYHS WITHIN THE INDUS-YARLUNG TSANGPO SUTURE AND GANGDSE BELT, SOUTHERN TIBET

150-6 2:55 PM Liu, Fei*; Dilek, Yildirim; Yang, Jingsui; Lian, Dongyang; Xie, Yanxue: A MIDDLE TRIASSIC RIFTED CONTINENTAL MARGIN SEQUENCE WITHIN THE WESTERN YARLUNG ZANGBO SUTURE ZONE, TIBET: RECORD OF DIACHRONOUS OPENING OF NEOTETHYS

150-7 3:10 PM Feng, Guangying*; Yang, Jingsui; Dilek, Yildirim; Liu, Fei; Xiong, Fuhui: PETROLOGICAL AND RE-Os ISOTOPE CONSTRAINTS ON THE ORIGIN AND TECTONIC SETTING OF THE CUOUBUHA PERIDOTITE, YARLUNG ZANGBO SUTURE ZONE, WESTERN TIBET, CHINA

150-8 3:25 PM BREAK

150-9 3:40 PM Xiao, Wenjiao*; Aouizerat, Arthur; Ao, Songjian; Zhou, Jianbo; Zhang, Jinxian: DEXTRAL TRANSPRESSIONAL DEFORMATION OF MESOZOIC HELIOLUANGJING ACCRETIONARY COMPLEX OF NE CHINA: AN OBLIQUE SUBDUCTION OF PACIFIC OCEAN

150-10 3:55 PM Dong, Hanwen*; KINEMATICS AND GEOCHRONOLOGY STUDIES OF THE MÉDÖG SHEAR ZONE: INSIGHTS INTO EXHUMATION OF THE EASTERN HIMALAYAN SYNTHAXIS

150-11 4:10 PM Niu, Xiaolu*; Liu, Fei; Yang, Jingsui; Dilek, Yildirim; Xu, Zhiqin: KALAMYO PERIDOTITE MASSIF IN THE INDO-MYANMAR RANGES (WESTERN MYANMAR): ITS MINERALOGY, GEOCHEMISTRY AND TECTONIC IMPLICATIONS

150-12 4:25 PM Ao, Songjian*; Khalatbari Jafari, Morteza; Xiao, Wenjiao: U-Pb ZIRCON AGE OF THE PIRANSHAH PHELPIITE IN NW IRAN: ENIGMATIC RELICT OF AN ARC IN NEO-TETHYS BEFORE THE ARABIA AND EURASIA COLLISION

150-13 4:40 PM Kusky, Timothy M.*; Windley, Brian F.; Polat, Ali: FOUR BILLION YEAR RECORD OF OCEAN PLATE STRATIGRAPHY IN ACCRETIONARY OROGENS PRESERVE A RECORD OF SEA FLOOR SPREADING, SUBDUCTION, AND ACCRETION THROUGHOUT EARTH HISTORY

150-14 5:00 PM DISCUSSION

150-15 5:15 PM CONCLUDING REMARKS

SESSION NO. 150


151-1 1:30 PM Stock, Greg M.*; Guerin, Antoine; Matasci, Battista; Jaboyedoff, Michel; Derron, Marc-Henri; Collins, Brian D.: QUANTIFYING 40 YEARS OF ROCKFALL ACTIVITY IN YOSEMITE VALLEY WITH STRUCTURE-FROM-MOTION AND TERRESTRIAL LIDAR ANALYSES

151-2 1:45 PM Booth, Adam M.*; McCrory, Justin; Nelson, Joann; Shaw, Susan; Hinkle, Jason; Ampuero, Jean-Paul; Lamb, Michael P.: INFERRING CONTROLS ON DEEP-SEATED LANDSLIDE MOTION WITH HIGH-RESOLUTION, THREE-DIMENSIONAL IMAGE CORRELATION OF REPEAT AIRBORNE LIDAR

151-3 2:00 PM Shaw, Susan*: Justice, Tiffany; Hinkle, Jason; Turner, Ted: QUANTITATIVE METHODS FOR DETECTING, MAPPING, AND MONITORING LANDSLIDE-SUSCEPTIBLE LANDFORMS AT LANDSCAPE SCALES USING AN AUTOMATED, OBJECT-BASED-IMAGE-ANALYSIS APPROACH

151-4 2:15 PM Haneberg, William C.*; Johnson, Sarah: DOUBLE GAUSSIAN FILTERING TO SUPPRESS NOISE AND IMPROVE IDENTIFICATION OF NEW LANDSLIDES ON DEM DIFFERENCE MAPS

151-5 2:30 PM Mitchell, Andrew D.*; Lato, Matthew; McDougall, Scott; Porter, Michael; Baie, Stephanie; Watson, Andrew:
REGIONAL-SCALE LANDSLIDE AND EROSION MONITORING UTILIZING AIRBORNE LIDAR CHANGE DETECTION ANALYSIS

151-6  2:45 PM Ghirotti, Monica*; Borgatti, Lisa: INTACT ROCK FRACTURING VS OPEN DISCONTINUITIES IN THE ONSET AND EVOLUTION OF FAILURE IN WEAK ROCK MASSES

3:00 PM DISCUSSION

3:15 PM BREAK

151-7  3:30 PM Haddon, Elizabeth K.; Schmidt, Kevin M.; Reid, Mark E.; Ritchie, Andrew C.; Warrick, Jonathan A. : TRACKING BIG SUR LANDSLIDE DISPLACEMENTS IN 4D WITH SFM-BUILT TOPOGRAPHY

151-8  3:45 PM Gauthier, David*; Christiansen, Cole: ROCKFALLS AND SMALL PRECURSOR DEFORMATION DETECTED USING OBLIQUE AERIAL SFM PHOTOGRAMMETRY: CASE HISTORY FROM TENNESSEE PASS, CO

151-9  4:00 PM Monsieurs, Elise G.M.; Maki Mateos, Jean-Claude; Jacobs, Liesbet; Michellier, Caroline; Kervyn, Matthieu; Demoulin, Alain; Dewitte, Olivier: LANDSLIDE INVENTORY APPROACH FOR REGIONAL-SCALE HAZARD ASSESSMENT IN A DATA-POOR CONTEXT IN TROPICAL AFRICA

151-10  4:15 PM Watts, Chester F.; Stephens, George C.: PLANNING AND EXECUTING UNMANNED AERIAL SYSTEMS (UAS) MISSIONS FOR LANDSLIDE INVESTIGATIONS

4:30 PM DISCUSSION

SESSION NO. 152

GSA Hydrogeology Division: Henry Darcy Distinguished Lecture

4:00 PM, Washington State Convention Center, Room 615/616/617

Abe Springer, Presiding

152-1  4:00 PM Singh, Kamin*: A TALE OF TWO POROSITIES: EXPLORING WHY CONTAMINANT TRANSPORT DOESN’T ALWAYS BEHAVE THE WAY IT SHOULD

POSTER TECHNICAL SESSIONS

SESSION NO. 153

T34. Sigma Gamma Epsilon-Undergraduate Research (Posters) (Sigma Gamma Epsilon; GSA Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

153-1  1 Briseño-Beltrán, A.;* Moreno-Rodriguez, V.; De la O-Villanueva, M.; Loredo-Portales, R.; Del Rio-Salas, R.; Leyva-Haro, A.; Camacho-Cañez, F.: ARSENIC LEVELS IN RURAL DUST OF A SETTLEMENT SURROUNDED BY AGRICULTURAL FIELDS IN A SEMIARID REGION OF NORTHERN MEXICO

153-2  2 Moreno-Rodriguez, V.*; Ayala-Ramirez, Y.; Del Rio-Salas, R.; Romero, Francisco; Molina-Freaner, F.; Ochoa-Landín, Lucas; Martínez Rodríguez, J.F.: GEOCHEMISTRY OF ABANDONED MINE TAILINGS AND RURAL DUST FROM A NEARBY TOWN: A CASE OF IGNORED POLLUTION IN SEMI-ARID ZONES OF NORTHERN MEXICO

153-3  3 Leyva-Haro, A.*; Del Rio-Salas, R.; Moreno-Rodriguez, V.; Camacho-Cañez, F.; Briseño-Beltrán, A.: METAL CONCENTRATIONS OF DUST IN RURAL AREAS FROM ARID REGIONS OF THE SONORAN DESERT


153-5  5 Peña-Ortega, M.*; Del Rio-Salas, R.; Valencia-Saucedoc, J.; Mendivil-Quijada, H.; Moreno-Rodriguez, V.; Romero, Francisco: ENVIRONMENTAL ASSESSMENT OF ABANDONED MINE TAILINGS FROM NACOZARI DE GARCÍA, NORTHERN MEXICO: INSIGHTS FROM GEOCHEMISTRY AND UNMANNED AERIAL VEHICLES

153-6  6 Romo-Moreno, D.*; Coimbra, R.; Del Rio-Salas, R.; Moreno-Rodriguez, V.; Sotelo-Cruz, N.; Grutter, M.; Torres-Jardón, R.: AIR POLLUTANTS AND INCIDENCE OF ACUTE RESPIRATORY AND GASTRO-INTESTINAL INFECTIONS IN A CITY SITUATED ON A SEMI-ARID REGION OF NORTHERN MEXICO

153-7  7 Kaptein, Elizabet*; Fisher, Robert; Kaptein, Victoria R.; Noll, Mark R.: GEOCHEMICAL CHARACTERIZATION OF STREAM WATER AND SEDIMENT QUALITY IN THE RIO BLANCO WATERSHED, PUERTO RICO

153-8  8 Cunningham, Emily*; Cribb, Warner: PETROLOGIC INVESTIGATION OF MAGMA MIXING BENEATH SMALL QUATERNARY VOLCANIC CENTERS, NORTHERN OREGON CASCADE RANGE

153-9  9 Xu, Xiaohui*: PETROGRAPHIC INVESTIGATION OF MAGMA BATCHES AND CYCLING OF THE AKAROA VOLCANIC COMPLEX


153-12  12 Zerilli, Matthew*; Salings, Emily E.; Michelfelder, Gary S.: THE PRE-ERUPTIVE MAGMATIC CONDITIONS OF THE BLOODGOOD CANYON TUFF: INSIGHTS FROM ALKALI FELDSPAR AND QUARTZ CRYSTAL SIZE DISTRIBUTIONS AND MINERAL CHEMISTRY

153-13  13 Benz, Brooke E.*; Michelfelder, Gary S.; Quick, James D.; Sundell, Tyler: PETROLOGY AND GEOCHEMISTRY OF RHYOLITE TUFFS OF THE BELL TOP FORMATION, DONA ANA COUNTY, NEW MEXICO


153-15  15 Jones, Allison D.; Arnold, Victoria A.; Robinson, Jessica M.; Severson, Allison R.; Burmeister, Kurtis C.; Vollmer, Frederick W.: ANALYSIS OF PETROFABRICS IN THE JURASSIC TUTTLE LAKE FORMATION NEAR GRASS LAKE; MOUNT TALLAC ROOF PENDANT, EL DORADO COUNTY, CA

153-16  16 Hankins, Robin*; Shimabukuro, David H.; Skinner, Steven; Sample, Brie: GEOBAROMETRY OF GRANITOIDS AND U-PB DETRITAL ZIRCON GEOCHRONOLOGY OF OVERLYING SEDIMENTARY COVER IN THE NORTHERN SALINIAN BLOCK, CALIFORNIA

153-17  17 Nelson, Jennifer*; Hoinville, Alex; McRivette, Michael W.; Menold, Carrie A.: COMBINING REMOTE SENSING AND PETROLOGY DATA IN THE NORTH QIADAM UHP TERRANE, CHINA

153-18  18 Enriquez, Olivia R.*; Urbanczyk, Kevin M.: A STUDY OF LUCOBANDS IN THE WAX FACTORY LACCOLITH, BIG BEND RANCH STATE PARK, TX

153-19  19 Navarrete, Gabriela Marie*; Camacho, Daniel; Martinez Gutierrez, Genaro; Antinoo, José Luis; Tjarks, Dulany: ASSESSING QUATERNARY TECTONIC UPLIFT IN THE ARROYO INFIERNO,


153-22  22 Allard, John B.*; Hutchison, Sonny; Acuña, Naomi: GEOLOGIC EVOLUTION OF THE GULF OF CALIFORNIA NEAR MULEGE, BAJA CALIFORNIA SUR: RESULTS FROM BAJA BASINS NSF-REU (RESEARCH EXPERIENCE FOR UNDERGRADUATES)

153-23  23 Martin, Claire P.*; Levine, Jamie S.F.; Casale, Gabrielle; Powell, Nicholas E.: DEFORMATION AND KINEMATICS IN THE TOAXAWAY DOME, EASTERN BLUE RIDGE


153-25  25 Hartwig, Melissa*; Herbert, Lauren A.; Giorgis, Scott; Burmeister, Kurtis C.; Hayman, Nicholas W.; Anna, Ryo: PRELIMINARY ANALYSIS OF ANISOTROPY OF MAGNETIC SUSCEPTIBILITY AND PALEOMAGNETIC FABRICS WITHIN EXHUMED PORTIONS OF THE NANKAI ACCRETIONARY COMPLEX, KII PENINSULA, JAPAN

153-26  26 McLane, Leanna*; Giorgis, Scott; Gran, Karen B.: CONSTRAINTS ON UPLIFT FROM GEOMORPHIC ANALYSIS OF A DIGITAL ELEVATION MODEL OF THE CENTRAL RANGE MOUNTAINS, TRINIDAD

153-27  27 Wallenberg, Alexandra*; Craddock, John P.; Malone, David H.; Jackson, Mike: PALEOMAGNETISM OF AN ARCHEAN HARZBURGITE, BIGHORN MOUNTAINS, WYOMING, USA

153-28  28 Patzkowsky, Samuel*; Randall, Emily; Rosen, Madison Lilith; Thompson, Addison; Moua, Pa Nhia; Schantz, Krysden; Pollock, Meagen; Judge, Shelley A.; Williams, Michael; Matesich, Cameron: NEW COSMOGENIC AND VML DATES AND REVISED EMPLACEMENT HISTORY OF THE ICE SPRINGS VOLCANIC FIELD IN THE BLACK ROCK DESERT, UTAH

153-29  29 Herbert, Lauren A.*; Perpall, Brandon A.; Giorgis, Scott D.; Burmeister, Kurtis C.: EXPLORING PALEOMAGNETISM AS A TOOL FOR RESOLVING THE TIMING OF IGNEOUS INTRUSIONS IN THE MOUNT TALLAC METAMORPHIC ROOF PENDANT; DESOLATION WILDERNESS AREA, ELDORADO NATIONAL FOREST, CA

153-30  30 Lopez, Alexis R.*; Herbert, Lauren A.; Wu, Chenliang; Sacklett, Hannah L.; Giorgis, Scott D.; Burmeister, Kurtis C.; Nittrouer, Jeffrey: A COMPARISON OF RF/PHI AND AMS FABRICS WITHIN STRATA INVOLVED IN THE VARISCAN FOLD-THRU-ST BELT; WESTERN IRISH NAMURIAN BASIN, COUNTY CLAIRE, IRELAND

153-31  31 Reeder, Adrienne*; Morgan, Sara; McClellan, Elizabeth: DIFFERENTIATING THE UNDIFFERENTIATED: MAPPING COMPLEX NEOPROTEROZOIC VOLCANIC AND GLACIOGENIC STRATIGRAPHY IN THE MOUNT ROGERS AREA, SW VA

153-32  32 Gerik, Ashley M.*; Breeding, Dalton R.; Spurgeon, Derek L.; McKay, Matthew P.: A TRAVERSE GEOLOGIC MAP IN THE GLACIER PEAK WILDERNESS: FROM NORTH FORK SAUK RIVER TO GLACIER GAP

153-33  33 Brownson, Cindy*; Noll, Mark R.: MAJOR ELEMENT AND NUTRIENT CHEMISTRY OF GREEN AND ROUND LAKES, NY

153-34  34 Dobinski, Meg*; Noll, Mark R.: VARIATIONS IN SEDIMENT PHOSPHORUS FRACTIONATION ALONG AN ANTHROPOGENIC GRADIENT: EAST BRANCH CAZENOVIA CREEK, NY

153-35  35 Gale, Chesley Philip*; Kaiser, Jason F.: ASSESSING GEOTHERMAL ENERGY POTENTIAL IN SOUTHERN UTAH USING THE TRACE ELEMENT CHEMISTRY OF GRANITIC INTRUSIONS

153-36  36 Shaughnessy, Andrew R.*; Venkata, Aneesh; Hasenmueller, Elizabeth A.; Sloan, John J.; Muirhead, Rachael A.; Corcoran, Miles J.: CAN REDOX CHANGES IN LAKEBED SEDIMENTS TRIGGER ALGAL BLOOMS? A CASE STUDY OF CARLYLE LAKE, ILLINOIS

153-37  37 Bloch, Reilly*; Noll, Mark R.: GEOCHEMICAL VARIATIONS IN BLACK SHALES OF NEW YORK STATE

153-38  38 Gurnicz, Katie*; Argylan, Erin P.; Peiler, Julie; Kelly, Daniel; Krekeler, Mark P.S.; Morris, Charles C.: AN ANALYSIS OF POTENTIAL REGIONAL SOURCES OF ATMOSPHERIC CA+ AND MG+ SUSPECTED TO CONTRIBUTE TO THE FORMATION OF DECOMPOSITION CHIMNEYS IN MOUNT BALDY DUNE AT INDIANA DUNES NATIONAL LAKESHORE


153-40  40 Neundorff, Jeremy A.*; Banik, Tenley J.; Carley, Tamara L.: EVALUATING THE SOURCE: USING DETRITAL ZIRCON TO INVESTIGATE PETROGENESIS IN SUBGLACIAL MAGMAS FROM VATNAJÖKULL, ICELAND

153-41  41 Kling, Melanie*; Austermann, Gregor; Hildenbrand, Anne; Bahr, André; Ifrim, Christina: CYCLOSTRATIGRAPHY OF MICROBIALITES IN BACON COVE, NEWFOUNDLAND, CANADA AND THEIR IMPLICATION FOR DEPOSITIONAL ENVIRONMENTS AND PALEOCURRENTS OF THE LOWER CAMBRIAN

153-42  42 Helprin, Olivia L.*; Flores, Gabriella Vianne; Trepp, Kaya; Murowchick, James B.; Salgado Muñoz, Valente O.: STRATIGRAPHIC AND MINERALOGICAL CHARACTERISTICS OF CU-ZN-COM-MANTOS AT MINERA BOLEO, SANTA ROSALÍA, BCS, MEXICO


153-44  44 Harvey, Lukas A.*; Husinec, Antun: FACES, DEPOSITIONAL ENVIRONMENTS AND SEA-LEVEL TRENDS WITHIN THE UPPER ORDOVICIAN STONEY MOUNTAIN FORMATION, WESTERN NORTH DAKOTA

153-45  45 Giggy, Lauren C.*; Gianniny, Gary L.: INVESTIGATION OF THE DOLORES SALT ANTICLINE AND POTENTIAL EVAPORITE DISSOLUTION


153-47  47 Stoflus, Brittany M.*; Clark, Ryan J.; Tassier-Surine, Stephanie A.; Day, James; Witzke, Brian J.; Cramer, Bradley D.: REVISED CONODONT BIOSTRATIGRAPHY OF THE KINDERHOOKIAN (LOWER TOURNAISSIAN) STRATA IN SOUTHEAST IOWA

153-48  48 Garcia, Cesar A.*; Kibilek, Zoran: MICROPLASTICS IN BEACH SEDIMENT ALONG SOUTHERN SHORES OF LAKE MICHIGAN

153-49  49 Addis, Samantha*; Lobegger, Melissa K.: ANALYSIS OF THECAEMOBIAL ASSEMBLAGES IN FALL CREEK FALLS STATE PARK

153-50  50 Charlton, Joseph*; Cruz, Alora Josephin; Lummus, Myron Malisse; Leesburg, J.N.*; Larson, E.B.; Gauvey, K.L.; Sumrall, J.B.; Hahn, M.S.: STRATIGRAPHIC RECONNAISSANCE OF THE BUSH BAY FORMATION, ENGADINE GROUP, HAWAIIAN NATIONAL FOREST, UPPER PENINSULA, MI

153-51  51 Cheng, Kimberly*; Michel, Lauren A.; Lehmann, Thomas; McNulty, Kieran P.; Fox, David L.; Driese, Steven G.; Peppe, Daniel J.: PALEOCOLD AND PALEOENVIRONMENTAL RECONSTRUCTIONS FROM STRATIGRAPHIC ANALYSIS AND
PALEOSOL DESCRIPTIONS FROM THE EARLY MIOCENE, KIAHERA FORMATION, RUSINGA ISLAND, LAKE VICTORIA, KENYA

153-52  52 Trembath, Matthew*; Cramer, Bradley D.: SEARCHING FOR GEOCHEMICAL SIGNATURES OF STEP-WISE EXTINCTION LEVELS DURING THE IREVKEN (SILURIAN) EXTINCTION EVENT


153-54  54 Oefinger, Jordan*: Weiss, Anna M.; Košir, Adrijan; Martindale, Rowan C.: EVIDENCE OF LATE PALEOCENE-EARLY EOCENE POSSIBLE OCEAN ACIDIFICATION RECORDED IN THE ADRIATIC CARBONATE PLATFORM


153-57  57 Allen, Elliott F.*; McDermott, Jeni A.; Abrahamson, Jenna N.; Redfield, T.F.: GEOMORPHIC AND SEDIMENTOLOGICAL EVIDENCE FOR DRAINAGE REORGANIZATION IN SOUTHWEST NORWAY’S DRIVA RIVER

153-58  58 Abrahamson, Jenna N.*; McDermott, Jeni A.; Allen, Elliott F.; Redfield, Tim F.: USING DRAINAGE AREA POWER-LAW RELATIONSHIPS AS A METHOD TO TEST FOR POINTS OF RIVER CAPTURE


153-60  60 Barnett, Angel V.*; Light, Jennifer: HILLS CANYON WATER QUALITY MONITORING

153-61  61 Anderson, Jasmine*: Lobegeiler, Melissa; ElKadiri, Racha; Paladino, Brielle; O’Toole, Kevin; Robinson, Christopher; Cribb, Warner: EFFECTS OF A RAPIDLY URBANIZING ENVIRONMENT ON WATER QUALITY: A CASE STUDY FROM MURFREESBORO, TN

153-62  62 Tavares, Kamie-Dominique A.*; Fletcher, Charles H.; Barbee, Matthew; Anderson, Tiffany; Burstein, Jacob T.: WILL SEAWALLS DAMAGE CRITICAL HABITAT FOR ENDANGERED SPECIES IN HAWAII AS SEA LEVEL RISES?

153-63  63 Hedges, Rebecca Jean*; McDermott, Stevie; Kaiser, Jason F.; Maxwell, David J.: USING GIS TO CREATE HAZARD MAPS AND ASSES EVACUATION ROUTS AROUND “THE GATE TO HELL”: MASAYA VOLCANO, NICARAGUA

153-64  64 Williams, Maya E.*; Crocker, Emlyn R; Barthelmes, Erika L.; Stewart, Alexander K.: NATURE UP NORTH, A COMMUNITY-BASED ENVIRONMENTAL EDUCATION PROGRAM FOR NORTHERN NEW YORK: INTRODUCING GEOSCIENCE ENGAGEMENT IN RURAL COMMUNITIES

SESSION NO. 154


9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

154-1  65 Bowers, Jade Marie*; de Silva, Shanaka; Tepley, Frank; Pratomo, Indyo; Putra, Armen; Mucek, Adonara: PETROLOGICAL FORENSICS OF MAGMA MINGLING DURING 2013 TO PRESENT Eruptions of SINABUNG VOLCANO, SUMATRA

154-2  66 Glenister, Chase T.*; Cameron, Barry I.: THE 122 BC PLINIAN ERUPTION OF MT. ETNA, SICILY: INSIGHTS INTO EXPLOSIVE ERUPTIVE BEHAVIOR IN BASALTIC SYSTEMS

154-3  67 Miličević, Dejan*: Zagorevski, Aleksandar; Weis, Dominique: UNRAVELLING ARC MANTLE USING TRACE ELEMENT AND ISOTOPIC “INTELLIGENCE” FROM THE MIDDLE-LATE TRIASSIC STI KINE ARC

154-4  68 Andersen, Nathan L.*; Singer, Brad S.; Dufek, Josef: CONCURRENT GROWTH OF TWO CHEMICALLY DISTINCT SILICIC MAGMA RESERVOIRS BENEATH THE LAGUNA DEL MAULE VOLCANIC FIELD, CENTRAL CHILE

154-5  69 Fourney, Anais*: Weis, Dominique; Scoates, James S.; Amini, Marghalayer: IN SITU LEAD ISOTOPE GEOCHEMISTRY BY LA-ICP-MS OF CUMULUS AND INTERSTITIAL MINERALS FROM THE KIGLAAPAT LAYERED INTRUSION

154-6  70 Smith, Diane R.*; Leeman, William P.: BASALTIC LAVAS OF MOUNT ST. HELENS: EVIDENCE FOR DIVERSE MANTLE SOURCES AND INPUTS FROM MORE EVOLVED MAGMAS

154-7  71 Golia, Rebecca Lynne*: Hampton, Samuel: PXRF: PACKED WITH POTENTIAL - PROTOCOLS FOR BASALTIC SAMPLES

154-8  72 Gürso, Semih*: Möller, Andreas: PETROGENETIC FEATURES OF LATE NEOPROTEROZOIC ECLOGITES, META-GABBRIO AND GARNET AMPHIBOLITE DIKES IN THE MENDERES MASSIF, WESTERN TURKEY: IMPLICATIONS FOR CADOMIAN CRUSTAL EVOLUTION WITHIN THE PAN-AFRICAN MEGA-CYCLE

154-9  73 Haley, Maureen Y.*; McLeod, Claire; Brydon, RJ; Wolfe, Amy; Shaubis, Barry; Tronnes, Reidar: CONSTRUCTING CONTINENTAL CRUST: TRACKING PETROGENESIS OF GRANITIC BATHOLITHS OF THE OSLO RIFT, NORWAY

154-10  74 Oppenheim, Louis F.*; Memeti, Vali; Werts, Kevin; Barnes, Calvin G.; Barnes, Melanie A.; Esposito, Rosario; Paterson, Scott R.: ZONING IN FELDSPARS AS TRACERS OF LENGTH SCALES OF MAGMA MIXING AND MAGMA CHAMBER SIZE IN THE TUOLUMNE INTRUSIVE COMPLEX, YOSEMITE NATIONAL PARK, CA

154-11  75 Chambers, Melissa*: Memeti, Vali; Oppenheim, Louis F.: INVESTIGATING THE EXTENT OF CRYSTAL MIXING IN THE NORTHERN TUOLUMNE INTRUSIVE COMPLEX WITH MINERAL INCLUSION PATTERNS IN K-FELDSPAR

154-12  76 Ardill, Katie E.*; Paterson, Scott R.; Barnes, Calvin G.; Stanback, Jon F.; Alasino, Pablo H.; Werts, Kevin; Memeti, Vali; Teruya, LeAnne; King, James; Crosbie, Simon: MAGMATIC STRUCTURES IN THE TUOLUMNE INTRUSIVE COMPLEX RECORD PHYSICAL DIFFERENTIATION OF MAGMAS AT THE EMPLACEMENT LEVEL

154-13  77 Werts, Kevin*; Barnes, Calvin G.; Memeti, Vali; Williams, Dustin R.: WHERE’S THE RHYLITE? EVIDENCE FOR MELT LOSS AND CRYSTAL ACCUMULATION IN THE TUOLUMNE INTRUSIVE COMPLEX

154-14  78 Kempston, Pamela*; Downes, Hilary; Lustrino, Michele: A WINDOW INTO LOWER CRUST AND UPPER MANTLE INTERACTIONS IN THE PETROGENESIS OF OROGENIC MAGMAS: THE EXAMPLE OF MONTE ARCUENTU, SOUTHERN SARDINIA, ITALY


154-16  80 Xu, Yingkui*: Dan, Zhu: MG ISO TOPE FRACTIONATION IN BASALTIC MELT UNDER THERMAL GRADIENT IN NATURAL SETTINGS

154-17  81 Foley, Michelle L.*; Miller, Calvin F.; Gualda, Guilherme A.R.: HETEROGENEOUS GLASSES PREERVE CHEMICAL AND DYNAMIC PROCESSES IN PARTIALLY REMELTED AND REMOBLIZED CUMULATE OF THE PEACH SPRING TUFF (CA-NV-AZ), USA
D48. Geology and Health (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
Booth #

155-1  84 Zhang, Yiding*: WHAT ARE THE EVOLUTION PATTERNS OF RESEARCH STRANDS IN WATERBORNE DISEASE TRANSMISSION IN GROUNDWATER?

155-2  85 Turner, Ashley E.; Vulava, Vijay: GEOCHEMICAL SORPTION AND TRANSPORT OF S ILDENAFIL AND VARDENAFIL IN NATURAL SOILS

155-3  86 Tarp, Cleveland E.; Peterson, Jonas M.; Donahoe, Owen M.; Wade, Randall D.; Brokus, Sarah A.; Pikaart, Michael J.; Best, Aaron A.; Peterson, Jonathan W.: GLOBAL SURVEY OF SUSPENDED LOAD MINERALOGY, HEAVY METAL CONTENT, AND ANTIBIOTIC RESIDUES IN RURAL DRINKING WATER SOURCES USING POINT-OF-USE WATER FILTER KITS

155-4  87 Smith, Melinda*; Sanders, Laura L.; Hrnzaec, Jean M.; Gonzalez, Javier M.: SORPTION AND DESORPTION OF ATRAZINE IN AUTOMOBILE TIRE CHIPS

155-5  88 Galinskaya, Karina*; Williams, Spencer; Wang, Jida; Hettiarachchi, Ganga; Kempston, Pamela; Vero, Sara; Datta, Saugata: GEOSPATIAL ANALYSIS OF RISK COMPONENTS FOR ELEVATED BLOOD LEAD LEVELS; GEOLOGIC AND ANTROPOGENIC FACTORS

155-6  89 Ombati, Dominic*: Nick, Kevin E.: TRANSPORT MECHANISM OF THE ANTHROPOGENIC LEAD ALONG I40 NEAR BARSTOW, CALIFORNIA

155-7  90 Sherman, Amanda R.; Merrick, Jason; Zhu, Junfeng; Fryar, Alan; Lee, Brian: GIS ARCMAP DISTANCE TOOL USED TO DETERMINE PUBLIC WATER SUPPLY RELATIVE RISK METALS SAMPLING SITES IN LEXINGTON, KENTUCKY

155-8  91 Jackson, Robert A.*; Sedillo, Isaiah; Wegweiser, M.D.; Bestram, B.S.: ERIONITE, AN ELUSIVE MINERAL: NEWLY IDENTIFIED ERIONITE BEARING STRATA IN CENTRAL AND NORTHWESTERN WYOMING

155-9  92 Neumann, Klaus*; Nicholson, Kirsten N.; Dowling, Carolyn B.; Wood, Leah; Sharma, Subodh: INDICATIONS OF SURFACE WATER CONTAMINATION OF DRINKING WATER IN THE SAGARMATHA NATIONAL PARK, NEPAL

155-10  93 Buck, Brenda J.; Wolle, Christopher; Miller, Aubrey; Lockey, James E.; Weis, Christopher P.; Weissman, David; Jonesi, Alexander; Ryan, Patrick H.: EXPOSURE TO NATURALLY OCCURRING ASBESTOS DUE TO OFF-ROAD VEHICLE USE

155-11  94 Plau, Jean C.; Kei, Deborah E.; Buck, Brenda J.; Metcalf, Rodney V.: PARADIGM SHIFTS IN EVALUATING HEALTH EFFECTS OF ASBESTOS: NON-CANCER OUTCOMES

155-12  95 Haag, Beau J.*; Frieufa, Kurt: PYRITE-INDUCED REDOX PRECIPITATION OF URANIUM IN A DOLOMITE BRECCIA, EPLER FM., ALLENTOWN, PA

155-13  96 Miller, Aubrey*: HEALTH IMPLICATIONS OF OCCUPATIONAL AND ENVIRONMENTAL ASBESTOS AND OTHER ELONGATE MINERAL FIBER EXPOSURES

155-14  97 Metcalf, Rodney V.*; Buck, Brenda J.; McLaurin, Brett T.; Plau, Jean C.: IN DEFENSE OF THE TERM “NATURALLY-OCcurring ASBESTOS”

155-15  98 Crossin, Natalie*; Meikler, Jamyie: FLUORIDATION AND COUNTY-LEVEL SECONDARY BONE CANCER AMONG CANCER PATIENTS
SAANICH INLET COUPLES BIOGEOCHEMICAL CYCLES IN ANOXIC MARINE ENVIRONMENTS

157-7 111 Malaska, Michael J.; Willis, Madelyn; Bhartia, Rohit; Wang, Greg; Priscu, John C.; Eshelman, Evan; Abbey, William: DEEP UV-FLUORESCENCE MAPPING OF A GLACIAL ICE CORE

157-8 112 Perryman, Clarice R.; Kashi, Natalie N.; McCauley, Carmody K.; Malhotra, Avni; Varner, Ruth K.; METHANE OXIDATION KINETICS PROVIDE INSIGHT TO METHANOTROPHY IN A TAWING PERMAFROST PEATLAND

157-9 113 Ross, Stella C.; Klasek, Scott; Hong, Wei-Li; Torres, Marta E.; Andreassen, Karin; Colwell, Frederick S.: MICROBIAL COMMUNITIES AND DIFFERENTIAL METHANE FLUX IN ARCTIC GAS HYDRATE MOUNDS

157-10 114 Davis, Madison C.*; MICROBIAL COMMUNITY STRUCTURE OF A STRATIFIED ANCHIALINE SINKHOLE

157-11 115 Gaines, Emma*: CONTROLS ON GROWTH RATE OF MODERN STROMATOLITES IN A HYPSERSALINE BAHAMIAN LAKE

157-12 116 Almatar, Mohammed*; Sumner, Dawn Y.: METAZOAAN INTERACTIONS WITH MICROBIAL COMMUNITIES IN CAMBRIAN TRTRIBOLITES

157-13 117 Godbold, Amanda Lynn*: THE RESILIENCE OF CORAL REEF ECOSYSTEMS THROUGH TIME

157-14 118 Mergelsberg, Sebastian T.; Ulrich, Robert N.; Rimmstidt, J. Daniel; Dove, Patricia M.: DISTRIBUTION OF MAGNESIUM AND PHOSPHOROUS IN THE H. AMERICANUS EXOSKELETON: INSIGHTS FOR CHEMICAL SIGNATURES IN BIOMINERALS

157-15 119 Smith, Christopher W.; Goldstein, Susan T.: EFFECT OF SELECTED HEAVY METAL ELEMENTS ON SHALLOW-WATER BENTHIC FORAMINIFERAL ASSEMBLAGES FROM SAPELO ISLAND, GEORGIA AND LITTLE DUCK KEY, FLORIDA: AN INVESTIGATION USING THE PROPAGULE METHOD

157-16 120 Johnson, Jamie*: Williams, Angus; Meyer, Katja M.: SEPARATION AND ISOTOPIC ANALYSIS OF FRAMBOIDAL PYRITES FROM MEROOMIC FAYETTEVILLE GREEN LAKE, NY

SESSION NO. 158

T184. Geologic Research at Mount Rainier and Other Cascade Volcanoes: Ideal Natural Laboratories for Cutting-Edge Research with Implications to Life Safety and Infrastructure Protection in the Pacific Northwest (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Geology and Society Division; National Park Service; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

158-1 121 Benson, Victoria*: Todd, Claire: IDENTIFYING INFLUENCES ON GLACIAL MELTWATER HYDROCHEMISTRY USING LABORATORY SIMULATIONS OF SUBGLACIAL CHEMICAL EROSION

158-2 122 Krehbiel, Logan*: Todd, Claire; Koutrnik, Michelle: ASSESSING THE RISK OF GLACIAL OUTFLOW NOFLOODS FROM EMMONS GLACIER, MT. RAINIER, WASHINGTON

158-3 123 Basehart, Arin*: Altenberger, Samuel; Todd, Claire; Koutrnik, Michelle: MAPPING SUPRAGLACIAL DEBRIS ON EMMONS GLACIER, MOUNT RAINIER, WA

158-4 124 Yannello, Alex*: Todd, Claire: INVESTIGATING SUBGLACIAL HYDROTHERMAL INFLUENCE ON MOUNT RAINIER, WA THROUGH HYDROCHEMICAL ANALYSES OF GLACIAL MELTWATER

158-5 125 Bortel, Hannah*: Todd, Claire: SEASONAL AND DIURNAL FLUCTUATIONS IN SUSPENDED SEDIMENT CONCENTRATIONS IN GLACIAL MELTWATER ON MOUNT RAINIER, WASHINGTON

158-6 126 Beason, Scott R.; George, Joseph L.*: DRAMATIC CHANGES TO GLACIAL VOLUME AND EXTENT SINCE THE LATE

19TH CENTURY AT MOUNT RAINIER NATIONAL PARK, WASHINGTON, USA

158-7 127 Moran, Ariel Q.*; Pringle, Patrick T.; Luke, Beverly K.: USE OF DENDROCHRONOLOGY TO STUDY A SUBFOSSIL FOREST AT KENT, WASHINGTON USA THAT WAS BURIED BY LAHAR-DERIVED SEDIMENTS FROM MOUNT RAINIER ABOUT 530 CE

SESSION NO. 159

T191. Looking to the Past to Understand the Future: Glacial Chronology and Process (Posters) (GSA Quaternary Geology and Geomorphology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

159-1 128 Lesnek, Alia J.; Briner, Jason P.; Baichtal, James F.; Sbarra, Christopher M.: LATEST PLEISTOCENE DEGLACIATION OF THE CORDILLERAN ICE SHEET IN SOUTHEASTERN ALASKA

159-2 129 Hodgon, Taylor S.; Liciardi, Joseph M.*: COSMOGENIC 10BE CHRONOLOGY FOR THINKING OF THE LAURENTIAN ICE SHEET IN NEW HAMPSHIRE DURING THE LAST DEGLACIATION

159-3 130 Prothro, Lindsay O.; Yokoyama, Yuuake; Simkins, Lauren M.; Anderson, John B.; Majewski, Wojciech; Yamane, Masako; Okhouchi, Naochik: TIMING AND SEA LEVEL CONTRIBUTIONS OF THE DECONVOLVING ANTARCTIC ICE SHEET DURING POST-LGM RETREAT OF THE ROSS SEA SECTOR

159-4 131 McKenzie, Marion A.; Principato, Sarah M.*; Benediktsson, Ívar Örn: GEOMORPHIC EVIDENCE FOR A PALEO-ICE STREAM NEAR BÁRBAEDALUR, NORTH ICELAND

159-5 132 Santos, Joao*; Santos-González, Javier; Redondo-Vega, José Maria; Irwin, Jeffrey: TILL MACROFABRIC ANALYSIS OF GLACIAL DEPOSITS IN THE SOUTHERN SERRA DO GESÈ MOUNTAINS, NW IBERIAN PENINSULA

159-6 133 Narloch, Wlodzimierz*: STRAIN MAGNITUDE IN TILLS ASSOCIATED WITH THE VARIABLE SUBGLACIAL DRAINAGE CONDITIONS UNDER THE SCANDINAVIAN ICE SHEET

SESSION NO. 160

T193. Quantifying Geomorphic Processes and Rates of Landscape Evolution (Posters) (GSA Quaternary Geology and Geomorphology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

160-1 134 Hofmann, Florian*; McPhillips, Devin; Kendrick, Katherine J.; Farley, Kenneth A.: THE POTENTIAL OF FINE-GRAINED PEDOGENIC IRON-OXIDES FOR COSMOGENIC 3He DATING

160-2 135 Bender, Adrian*: Lease, Richard O.; Corbett, Lee B.; Bierman, Paul R.: TRANSIENT BEDROCK INCISION OF THE FORTYMILE RIVER IN EASTERN ALASKA AND YUKON, CANADA: SLOW RESPONSE TO YUKON RIVER HEADWATER CAPTURE?

160-3 136 Dix, Monica*: Hill, Marcus; Sussman, Franklin; Schmidt, Amanda H.: TEMPORAL AND SPATIAL VARIABILITY IN SEDIMENT SOURCE IN PLUM CREEK, OBERLIN, OH

160-4 137 Johnsen, Justin*: Wilcox, Tarka: CALIBRATING VEGETATIVE REGENERATION WITHIN A LANDSLIDE GENZED ZONE USING CONSUMER GRADE DRONE PHOTOGRAPHE METRICS

160-5 138 Hidy, Alan J.*; Goss, John; Sanborn, Paul; Froese, Duane G.: AGE-EROSION CONSTRAINTS ON AN EARLY PLEISTOCENE PALEOSOL IN YUKON, CANADA, WITH PROFILES OF 10BE AND 26AL: EVIDENCE FOR A SIGNIFICANT LOESS COVER EFFECT ON COSMOGENIC NUCLIDE PRODUCTION RATES

160-6 139 Dunne, Kieran Bernard Jiamin*: Jerolmack, Douglas J.: EVIDENCE OF, AND A PROPOSED EXPLANATION FOR, BIMODAL TRANSPORT STATES IN ALLUVIAL RIVERS
SESSION NO. 162

T104. Broader Impacts Activities as Vehicles for Filling the Geoscience Pipeline (Posters) (GSA Geoscience Education Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

162-1 158 Giesener, Gary*: MEDL: CREATING A WIDER IMPACTS RESOURCE IN THE DEPARTMENT OF GEOSCIENCES AT VIRGINIA TECH

162-2 159 Hall, Michelle K.*; Mayhew, Michael: TEEN SCIENCE CAFÉS: A MODEL FOR ADDRESSING WIDER IMPACTS, DIVERSITY, AND RECRUITMENT

162-3 160 Harwell, David*: Asher, Pranoti M.; Hankin, Erik R.; Janick, Nathaniel; Marasco, Leslie: AGU PATHFINDER RESOURCES: ADVANCE YOURSELF

162-4 161 Lin, Yi-Ching*: Crompton, Helen; Asija, John Paul; St. John, Kristen; Elgouani, Omar: COLLEGE STUDENTS’ GEOSCIENCE COURSE ENGAGEMENT AND SATISFACTION ASSOCIATED WITH CHOOSING GEOSCIENCE MAJORS

162-5 162 Tierney Cramer, Kate*: Kostlosky, Mary Elizabeth; Neal, Ted; Tassier-Surine, Stephanie A.; Witzke, Brian J.; Cramer, Bradley D.: INTEGRATING LEVELLED ‘NON-FIELD CAMP’ FIELD COURSES INTO DEPARTMENTAL CURRICULA TO ACHIEVE AWARENESS, ENGAGEMENT, AND PROFESSIONAL PREPARATION: EXPANDING THE GEOSCIENCE STUDENT PIPELINE

162-6 163 Soeder, Daniel J.*; Sawyer, J. Foster; Benning, Jennifer L.; Tinant, C. Jason; Sanovia, James J.: ENGAGING NATIVE AMERICAN STUDENTS IN RELEVANT GEOSCIENCE PROJECTS

162-7 164 Burrell, Shondricka*: TOWARDS A GEOSCIENCE PEDAGOGY: A SOCIO-COGNITIVE MODEL
SESSION NO. 163

T122. On the Cutting Edge: Fifteen Years of Impacts on Geoscience Education (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

163-1 169 Orr, Cailin Huyck*; Fox, Sean P.; Egger, Anne E.; Wenner, Jennifer M.: TEACH THE EARTH: NEWLY ENVISIONED PORTAL FOR GEOLOGY EDUCATION RESOURCES

163-2 170 Iverson, Ellen*: ON THE CUTTING EDGE EARLY CAREER FACULTY WORKSHOPS: ENDURING INFLUENCE ON IMPROVED TEACHING IN DEPARTMENTS

163-3 171 Singer, Jill*: FROM WINGSPEED TO WIDER: MY JOURNEY LEARNING ABOUT EVALUATION

163-4 172 Aird, Hannah*; Teasdale, Rachel: DETERMINING THE FACTORS THAT AFFECT THE EFFECTIVE INCORPORATION OF ACTIVE-LEARNING TECHNIQUES INTO A LARGE INTRODUCTORY GEOLOGY CLASS

163-5 173 Srogi, LeeAnn; Lutz, Tim; Bosbyshell, Howell*; Nikitina, Daria; Hall, Cynthia; Helmke, Martin F.: DEPARTMENT-WIDE IMPACTS OF ON THE CUTTING EDGE PROGRAMS ON TEACHING, LEARNING, PROFESSIONAL DEVELOPMENT, AND DEPARTMENTAL GROWTH

163-6 174 Cronin, Vincent S.*: ON THE CUTTING EDGE AS THE SOURCE OF AN EXPANDING WAVE OF BENEFIT

163-7 175 Henry, Darrell J.*; Dutrow, Barbara L.: COURSE-EMBEDDED RESEARCH AND SCIENTIFIC COMMUNICATIONS IN UNDERGRADUATE GEOLOGY MAJORS COURSES: EXAMPLES FROM THE MINERALOGY – IGNEOUS/METAMORPHIC PETROLOGY SEQUENCE AT LSU

163-8 176 Dutrow, Barbara L.*: TEACHING MINERALOGY IN CONTEXT: FROM THE CORE TO THE CRUST


163-10 178 Koziol, Andrea M.*: ON THE CUTTING EDGE: TEACHING PHASE EQUILIBRIA

163-11 179 Bulinski, Katherine V.*: DESIGNING AN ENVIRONMENTAL GEOLOGY COURSE USING EXPERIENTIAL CAREER PREPARATION AND ROLE PLAYING

163-12 180 Yelderman, Joe C.*; Hamilton, Wayne: TEACHING A SUBSURFACE, SIMULATED SUBJECT OUTDOORS: HOW TO LEVERAGE TIME FOR FIELD HYDROGEOLOGY

SESSION NO. 164

T129. The Challenge of Defining Student Success: Broadening Participation, Measuring Success, and Preparing 2YC and 4YC Students for a Variety of Transitions (Posters) (GSA Geoscience Education Division; GSA Geology and Society Division; International Association for Geoscience Diversity; National Association of Geoscience Teachers; National Association of Geoscience Teachers Geo2YC Division; National Earth Science Teachers Association)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

164-1 181 McDaris, John R.*; Baer, Eric M.D.; Macdonald, R. Heather; Ormand, Carol J.; Hoddler, Jan; Emerson, Norlene R.: THE SAGE 2YC WEBSITE: UPDATED CONTENT TO SUPPORT 2YC FACULTY AS AGENTS OF CHANGE

164-2 182 Marton, Fred*; Schott, Lynn: THE WRITE STUFF: USING SCAFFOLDED WRITING ASSIGNMENTS TO MEET GEN-ED GOALS IN INTRO-LEVEL SCIENCE COURSES AT A TWO-YEAR COLLEGE

164-3 183 Haddock, Amanda*; Thatcher, Sean; O'Brien, Mathew; Vinson, Grant; Todd, Anna C.; Pritchard, Caroline E.; Sullivan, Betty; Miller, Leah Z.; Thomas, Christian; Kilpack, Will; Morris, Malea; Whitmeyer, Steven; Atchison, Christopher L.: DIFFERENCES BETWEEN TRADITIONAL AND DIGITAL FIELD NOTEBOOKS FOR INCLUSIVE GEOSCIENCE COURSES

164-4 184 Goldsmith, David W.*; Rivera, Tiffany A.: GEOLITERACY: TEACHING EARLY CAREER STUDENTS TO READ, WRITE, AND THINK LIKE GEOLOGISTS

164-5 185 Jones, Jason P.*; McConnell, David: BETTER LEARNING THROUGH FEEDBACK: IMPROVING STUDENT PERFORMANCE AND JUDGMENT ACCURACY IN AN INTRODUCTORY GEOSCIENCE COURSE

164-6 186 Faust, Megan Thackeray Scott*: ENGAGING INTRODUCTORY GEOSCIENCE STUDENTS IN RESEARCH WITH AN ACTIVITY EXAMINING STOMATAL CELLS IN FOSSIL LEAVES

164-7 187 Beck, Mary A.*: EVALUATING ODP SANDS AT A 2-YEAR COLLEGE USING A REMOTELY-ACCESSSED SCANNING ELECTRON MICROSCOPE

164-8 188 Phillips, C. Dianne; Sorey, Nathan*: Bender, Gary; Bartholomew, Charles: DEVELOPING AUGMENTED REALITY (AR) RESOURCES FOR GEOSCIENCE EXPLORATION, USING LOW COST RESOURCES AND OPEN SOURCE SOFTWARE: 2Y COLLEGE LEARNING COMMUNITY

164-9 189 Ormand, Carol J.*; Baer, Eric M.D.; Bragg, Debra; Eddy, Pamela; Emerson, Norlene R.; Hao, Yi; Hoddler, Jan; Iverson, Ellen; Macdonald, R. Heather: THE INVENTORY OF EDUCATIONAL PRACTICES AND THE INVENTORY OF GEOSCIENCE DEPARTMENT AND PROGRAM PRACTICES: TWO NEW INSTRUMENTS IN DEVELOPMENT FROM THE SAGE 2YC PROJECT

164-10 190 Dooley, Brett S.*; Dooley, Alton C.; Ozolins, Erik: WHEN TWO AND TWO MAKE MORE THAN FOUR: LESSONS LEARNED DURING A 2YC-MUSEUM COLLABORATION

SESSION NO. 165

T135. Comedy in the Geosciences (Posters) (GSA Geology and Society Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 4:30 to 6:30 PM

Booth #

165-1 191 Feig, Anthony D.*; Bennett-Huxtable, Timothy A.: INTRODUCTION TO THE SESSION: MONOLOGUES AND REMARKS

165-2 192 Stein, Seth*: Elling, Reece; Salaree, Amir; Wysession, Michael: UNINTENTIONAL COMEDY - ERRORS IN MOVIES AND EDUCATIONAL MATERIAL- AS A TEACHING TOOL
SESSION NO. 166

**T138. Geology Rocks! A Musical Session on the Sounds of Science (Posters)** (GSA Geology and Society Division; GSA Geoscience Education Division)

*9:00 AM, Washington State Convention Center, Halls 4EF*

Authors will be present from 4:30 to 6:30 PM in Booth #

**166-1** 198 Reheis, Marth C.*: **SONGS OF THE FRIENDS OF THE PLEISTOCENE: OR, ONE MORE BEER AND I’LL SING ALONG...** (Invited Presentation)

**166-2** 199 Saltus, Richard*: **THESE ARE SOME COOL GEOLOGICAL THINGS**

**166-3** 200 Roehner, Clayton*: **SONGS IN THE KEY OF GEOMORPHOLOGY**

**166-4** 201 Sutin, Nicholas A.*: **WAIT, THOSE AIN’T THE LYRICS, BUT I LIKE IT BETTER THAT WAY: WORDSMITHING AS A FUN AND EFFECTIVE WAY TO COMMUNICATE, EDUCATE, AND ENTERTAIN**

**166-5** 202 Howard, Keith A.*; Melosh, Benjamin L.; Watts, Kathryn E.: **RISING FROM THE ASHES—PICK AND HAMMER SONG TRADITIONS IN THE BAY AREA**

**166-6** 203 Miller, Marli B.*: **SINGING TO A LARGE CLASS—ABOUT A SAND GRAIN**

**166-7** 204 Burr, Devon M.*: **GEOSCIENCES POETRY: FUN AND (PEDAGOGICALLY) FRUITFUL!**

**166-8** 205 Pittick, John*: **OUT WITH THE TRUCKERS AND THE KICKERS AND THE COWBOY ANGELS** (Invited Presentation)

**166-9** 206 James, L. Allan*: **GONNA BE THE FIRES AND THE FLOOD NEXT TIME**

**166-10** 207 Pierce, Jennifer L.*; Roehner, Clayton: **IN SPITE OF OURSELVES: THE CLIMATE SCIENTIST AND THE DENIER**

**166-11** 208 Montgomery, David R.*: **GEOLOGY AND MUSIC: EVERY ROADCUT TELLS A STORY**

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**SESSION NO. 167

D55. Great Maps and Other Topics in the History of Geology (Posters)

*9:00 AM, Washington State Convention Center, Halls 4EF*

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM in Booth #

**167-1** 209 Mann, Audra N.*; Parcell, William C.: **DISASSOCIATING EARTH FROM MORALITY: RENE DESCARTES’ UNDERSTANDING OF EARTH’S INTERIOR**

**167-2** 210 Clary, Renee M.*: **RECORDING THE FACTS: HENRY DE LA BECHE’S MAPS AS DATA REPOSITORIES**

**167-3** 211 Smith, Michael S.; Witt, Anne C.: **DENISON OLMSTED AND THE 1825 GEOLOGIC MAP OF NORTH CAROLINA**

**167-4** 212 Diemer, John A.*: **PLATE 6 OF THE GEOLOGY OF RUSSIA (1845): A FINE EXAMPLE OF A HAND-COLORED GEOLOGIC MAP**

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**SESSION NO. 168

D2. Recent Advances in Hydrogeology (Posters)

*9:00 AM, Washington State Convention Center, Halls 4EF*

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM in Booth #

**168-1** 221 Groover, Krishangi Devi*: Izbricki, John; Pappas, Katherine L.; Johnson, Carole D.: **ESTIMATION OF HYDRAULIC CONDUCTIVITY IN FORMERLY SATURATED ALLUVIUM USING NUCLEAR MAGNETIC RESONANCE**

**168-2** 222 Johnson, Mason*: Gilmore, Troy; Briggs, Martin A.; Corcoran, Sydney: **A COMPARISON OF INFORMED AND UNINFORMED SAMPLING USING HEAT AS A PRELIMINARY INDICATOR OF FOCUSED GROUNDWATER DISCHARGE**

**168-3** 223 Moran, Brendan*: Bout, David F.; Munk, LeeAnn; Hynek, Scott: **LONG-TERM DRAINAGE OF STORED GROUNDWATER RESOLVES THE HYDROLOGIC BUDGET DISCREPANCIES OF ARID CATCHMENTS**

**168-4** 224 Swick, Melanie*: **PARTITIONING THE CONTRIBUTION OF LIGHT ABSORBING AEROSOLS TO SNOW AND GLACIER MELT USING A NOVEL HYPERSPECTRAL MICROSCOPY METHOD**

**168-5** 225 Kim, Dahye*: Yeo, In Wook: **MICRO-PIV TECHNIQUE FOR DIRECT MEASUREMENT OF FLUID FLOW VELOCITY IN ROUGH-WALLED FRACTURES AT HIGH REYNOLDS NUMBER**

**168-6** 226 Campbell, Anna Christmann*: Bout, David F.: **HYDROLOGIC RESPONSE OF THE SALAR DE ATACAMA TRANSITION ZONE TO THE EXTREME MARCH 2015 PLUVIAL FLOOD**

**168-7** 227 Zohbe, Noah M.*: **INTERPRETING DISSOLVED METHANE IN SHALLOW AQUIFERS ACROSS SIX OIL AND GAS PRODUCING BASINS OF THE UNITED STATES**

**168-8** 228 Scanlon, Bridget R.*; Reedy, Robert C.; Weingarten, Matthew; Murray, Kyle E.: **HOW CAN WE MANAGE PRODUCED WATER ASSOCIATED WITH UNCONVENTIONAL OIL TO REDUCE POTENTIAL HAZARDS?**

**168-9** 229 Miller, Joseph*: Peterson, Eric; Twalt, Richard: **DIURNAL AND SEASONAL VARIATION IN GROUNDWATER NITRATE-N CONCENTRATION IN A SATURATED BUFFER ZONE**

**168-10** 230 Sherman, Amanda R.*; Fryar, Alan; Walles, Grant; Marshall, Colin; Mourmou, Ali: **TEMPORAL AND SPATIAL VARIABILITY**
IN GROUNDWATER FLOW AND CHEMISTRY ALONG THE CUMBERLAND RIVER, ARTEMUS, KENTUCKY

168-11 231 Oretsky, Zachary L.*; Lehmann, Daniel; Schindel, Geary M.: REPRODUCIBILITY OF GRANULAR ACTIVATED CARBON FOR DYE TRACER DETECTION


168-13 233 Brewer, Will*; Yelderman, Joe C.: ANALYZING DISSOLVED CARBON IN SHALLOW GROUNDWATER

168-14 234 Jabbar, Fadhil K.; Mohamod, Majid S.; Grote, Katherine; Grote, Shang-Ying, Chen*: Jarvis, Jacob*; Byars, B.W.; Wong, Stephanie S.; Hamilton, Wayne; Hsu, Kuo-chin*; Sung, Ming-Hung; Lin, Cheng-Wei:

168-15 235 Chowdhury, Shafiul H.; Springston, Haley C.*; Elderman, Joe C.: DEVELOPMENT OF A CONCEPTUAL MODEL TO EVALUATE THE POTENTIAL FOR AN ON-CAMPUS GROUNDWATER SUPPLY WELLFIELD TO FULLFILL THE WATER NEEDS OF SUNY NEW PALTZ

168-16 236 Hsu, Kuo-chin*: Sung, Ming-Hung; Lin, Cheng-Wei: THE ROLES OF HYDROGEOLOGY AND DRIVING FORCES ON SUBSIDIENCE OF CHOUSHUI RIVER ALLUVIAL FAN, TAIWAN

168-17 237 Jarvis, Jacob*; Byars, B.W.; Wong, Stephanie S.; Hamilton, Wayne; Yelderman, Joe C.: ASSESSING RECHARGE IN ALLUVIAL AQUIFER SYSTEMS: AN INNOVATIVE APPROACH

168-18 238 Shang-Ying, Chen*: UNCERTAINTY REDUCTION OF SUBSURFACE FLOW BY CONDITIONING HYDROGEOLOGICAL DATA

168-19 239 Mohamod, Majid S.; Grote, Katherine; Jabbar, Fadhil K.; Rogers, J. David: EVALUATION OF THE TEMPORAL ACCURACY OF DIFFERENT SATELLITE-BASED ESTIMATES OF PRECIPITATION IN ANAHEIM, CALIFORNIA

SESSION NO. 169

T5. Arsenic and Other Geoenic Contaminants in Groundwater Resources: Linking Water Quality, Food Security, and Treatment (Posters) (GSA Hydrogeology Division; GSA Geology and Health Division; GSA International/International Interdisciplinary Interest Group; International Society of Groundwater for Sustainable Development (ISGSD); International Medical Geology Association; GSA Environmental and Engineering Geology Division; GSA Geobiology & Geomicrobiology Division)

Monday, 23 October 2017

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

169-1 240 Horn, Jackie D.*; Brikowski, Tom: LANDFILL-PROMOTED DISSOLUTION OF PYRITE/MARCSITE (SULFIDES) IN CRETACEOUS CHALK

169-2 241 Zhao, Ruirui*; Xie, Jianjun; Wang, Yanxin; Ge, Shemin; Su, Chunli; Yu, Guan; Li, Junxia; Wu, Ya: EFFECTS OF SURFACE WATER AND GROUNDWATER INTERACTION ON ARSENIC CYCLING IN THE DATONG BASIN, CHINA: RESULTS FROM ONE-YEAR MONITORING

169-3 242 Starbuck, Nicholas C.; Adhikari, Jishnu*; Kulp, Thomas R.: ARS GENE EXPRESSION DURING MICROBIOLOGICAL SB(V) REDUCTION IN A HIGHLY SB- AND AS-RESISTANT BACTERIAL ISOLATE

169-4 243 Wilson, Theodore Jeffrey*; Levitt, Eric; Ghandehari, Shahrzad S.; Lee, Ming-Kuo; Saunders, James A.; Redwine, Jim; Marks, Justin; Billor, M. Zeki; Hames, Willis E.; Brueckner, Stefanie; Uddin, Ashraf: PYRITE BIOMINERALIZATION AND ARSENIC SEQUESTRATION AT A FLORIDA INDUSTRIAL SITE: IMAGING AND GEOCHEMICAL ANALYSIS

169-5 244 Huang, Kun*; Liu, Chongxuan: IDENTIFICATION OF HYDRO BIOGEOCHEMICAL PROCESSES CONTROLLING SEASONAL VARIATIONS IN ARSENIC CONCENTRATIONS AT JIANGHAN PLAIN, CHINA

169-6 245 Chung, Sang Yong*; Senapathi, Venkatramanan; Park, Kye-Hun; Seker, Selvam; Elzain, Hussam Eldin; Son, Jooyeong; Khakimov, Elyorbek: EVALUATION OF GROUNDWATER CONTAMINATION USING GEOCHEMICAL ANALYSES AND FUZZY TECHNIQUE

169-7 246 Yuezi, Cigdem*: Aryan, Sebnem; Celik, Mehmet: GEOGENIC TRACE ELEMENT ENRICHMENT IN THE NORTHERN DEVELI CLOSED BASIN (KAYSERI, TURKEY)

SESSION NO. 170

T8. Fate, Effects, and Mitigation of Chemical and Fuel Releases in Surface and Subsurface Environments (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Energy Geology Division)

Monday, 23 October 2017

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

170-1 247 Link, Hannah N.; McGuire, Jennifer T.; Cozzarelli, Isabelle M.; Bekins, Barbara A.; Martinovic-Weigelt, Dalma: TOXICITY ASSESSMENT OF CRUDE OIL CONSTITUENTS AND BREAKDOWN PRODUCTS IN THE PETROLEUM-IMPACTED GROUNDWATERS AT A BIODEGRADATION AND NATURAL ATTENUATION LEGACY SITE NEAR BEMIDJI MINNESOTA

170-2 248 Cozzarelli, Isabelle M.*; Baedecker, Mary Jo; Bekins, Barbara A.; Trost, Jared J.; Spencer, Tracey; Jaaeschke, Jeanne B.: UNDERSTANDING THE EVOLUTION OF GROUNDWATER CONTAMINANT PLUME CHEMISTRY EMANATING FROM RESIDUAL CONTAMINANT SOURCES, AN EXAMPLE FROM A LONG-TERM CRUDE OIL SPILL

170-3 249 Kneeshaw, Tara*; Lockmiller, Kayla A.: EVALUATION OF RESIDUAL POLYCYCLIC AROMATIC HYDROCARBONS IN SEDIMENTS FOLLOWING A SPILL OF DILUTED BITUMEN

170-4 250 Garvin, Shannon R.*; Gutchev, Kristina M.; Lu, Wanyi; Kappel, William M.; Lautz, Laura K.; Lu, Zunli: GROUNDWATER IODINE ACROSS NEW YORK STATE: POTENTIAL LINKAGE TO METHANE?

170-5 251 Nadas, Alexander*; Lee, Eung Seok: CHARACTERIZING DNAPL CONTAMINATION AND VAPOR INTRUSION IN DAYTON, OHIO

170-6 252 Klein, Hannah*: Davies, Gareth J.: BRING YOUR TOWEL, AND DON’T PANIC: THERE COULD BE LONG, DEEP FLOW PATHS BENEATH APPALACHIAN BRINES

170-7 253 Pandey, Sachin*; Karra, Satish; Vesselinov, Velimir: A MULTICOMPONENT REACTIVE TRANSPORT MODEL OF IN SITU REDOX MANIPULATION FOR REMEDIATION OF CHROMIUM CONTAMINATED GROUNDWATER

170-8 254 Lee, Segun*: Yeo, In Wook: FIELD APPLICATION OF REACTIVE TRANSPORT MODEL FOR NITRATE-BIOREMEDIATION USING FUMARATE IN GROUNDWATER SYSTEM

SESSION NO. 171

D6. The Multidisciplinary Faces of Cave and Karst Science (Posters)

Monday, 23 October 2017

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

171-1 255 Frazier, Victoria E.*; Garey, James R.: LIMESTONE DISSOLUTION IN A COASTAL KARST SYSTEM

171-2 256 Scharping, Robert J.*; Garey, James R.: IMPACTS OF GROUNDWATER EXTRACTION AND SEAWATER INFLTRATION ON A SUBMERGED CAVE ECOSYSTEM

171-3 257 Stepchinski, Leanne M.*; Bertetti, F. Paul; Green, Ronald T.; Edenborn, William M.; Lautz, Laura K.; Lu, Zunli: GROUNDWATER IODINE ACROSS NEW YORK STATE: POTENTIAL LINKAGE TO METHANE?

171-4 258 Fink, Madison S.*; Fisher, Emily; Barna, Joshua; Edendorn, Harry M.; Toran, Laura; Herman, Ellen K.: IDENTIFYING
HYSTERESIS PATTERNS BY DETECTING TRENDS IN CALCULATED AND DIRECTLY MEASURED CO2 CONCENTRATIONS

171-5 259 Daniel, Timothy J.; Richendrfer, John; Lin, Henry; Gall, Heather; Darnault, Christophe: SPATIAL DISTRIBUTION AND MORPHOMETRIC ANALYSIS OF DOLINES OVER TIME IN A WASTEWATER SPRAY IRRIGATED LANDSCAPE

171-6 260 Luhmann, Andrew J.; Bilek, Susan L.; Grapenthin, Ronni; Martin, Jonathan B.: GEOPHYSICAL CHARACTERIZATION OF KARST AQUIFERS USING DYNAMIC RECHARGE EVENTS

171-7 261 Hiler, Mark D.; Schwartz, Benjamin F.; Schindel, Geary M.; SPRINGSHED DELINEATION AT CAVE WITHOUT A NAME, TX, USA:DYE TRACING IN THE LOWER GLEN ROSE LIMESTONE FORMATION

171-8 262 Kaiser, Rachel*; Polk, Jason; Shelley, Adam; Powell, Matt: ASSESSING STORMWATER IMPACTS AND HYDROGEOLOGICAL INFLUENCES ON WATER QUALITY IN AN URBAN KARST LAKE

171-9 263 Barry, Emily R.; Macpherson, G.L.: CHARACTERIZATION OF GROUNDWATER FLOW PATHS THROUGH MEROKARST IN THE NO4D SECTION OF THE KONZA PRAIRIE LONG-TERM ECOLOGICAL RESEARCH SITE IN NORTHEASTERN KANSAS, USA

171-10 264 Kambesis, Patricia N.; Despain, Joel*: CAVE GENESIS IN THE EASTERN GREAT BASIN OF NEVADA AND UTAH, USA

171-11 265 Tewksbury, Barbara J.; Holmwood, Alexander P.; Ratino, Mia E.; Tarabees, Elhamy A.; Mehrhtens, Charlotte J.: QUASI-POLYGONAL RIDGE NETWORK ASSOCIATED WITH NON-TECTONIC SAG SYNCLINES IN THE EOCENE DRUNKA FORMATION, WESTERN DESERT, EGYPT: EVIDENCE FOR HYPOGENE KARST?

171-12 266 Sumrall, Jonathan B.; Larson, Erik B.; Burton, M. Isaac; Quiroga, Allison; Vega, Jordan; Gauvey, K.L.; Leesburg, J.N.: RELATIONSHIP OF BEDROCK GEOLOGY AND KARST FEATURES IN THE ST. IGNACE DISTRICT OF THE HIAWATHA NATIONAL FOREST, UP MICHIGAN

171-13 267 Weary, David J.*; Doctor, Daniel H.: A PRELIMINARY MAP SHOWING THE DISTRIBUTION OF SOLUTION CAVES IN CARBONATE AND EVAPORITE-BEARING GEOLOGIC UNITS IN THE CONTIGUOUS UNITED STATES

171-14 268 Morris, Katherine A.; Murgulet, Valeriu: HURRICANE AND TROPICAL STORM EVENTS IN THE CARIBBEAN SEA AND THE GULF OF MEXICO REGIONS


171-16 270 Solleiro-Rebolledo, Elizabeth*; López-Martínez, Rafael; Valera-Fernández, Daisy; Griset, Sara: DE-CODIFYING THE QUERNARY PALEO(EPI)KARST SYSTEM IN QUINTANA ROO, MEXICO USING THE PALEOPEDEOLOGICAL AND SEDIMENTOLOGICAL RECORD

171-17 271 Martínez-Sacristan, Hernando*: CAVES AS NON-RENEWABLE RESOURCES NEED PUBLIC POLICIES FOR PROTECTION IN SOME LATIN AMERICAN COUNTRIES: FAR FROM Rhetoric, CLOSER TO REALITY

171-18 272 Derf, Kassandra K.*: EXPERIMENTAL ANALYSIS OF THE MORPHODYNAMICS OF CONDUIT FLOW

171-19 273 Sorsby, Skyler*; Lachniet, Thomas E.: STABLE ISOTOPE GEOCHEMISTRY OF RECHARGE IN AN ALPINE KARST AQUIFER, BEAR RIVER RANGE, UTAH

171-20 274 Elkins, Joe T.; Fryar, Alan E.; Mosher, Michael D.: GEOCHEMICAL AND PHYSIOGRAPHIC INFLUENCE ON THE LOCATION OF KENTUCKY BOURBON AND TENNESSEE WHISKEY DISTILLERIES


9:00 AM, Washington State Convention Center, Halls 4E

 Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

172-1 275 Howell, Daniel; Weiss, Yakov; Smit, Karen V.; Loudin, Lorne*; Nestola, Fabrizio: DIAMONDS: NEW APPLICATIONS FOR PROCESSING IR SPECTRA OF FLUID-RICH DIAMONDS AND MAPPING DIAMONDS CONTAINING ISOLATED NITROGEN (TYPE IB) AND BORON (TYPE IB)

172-2 276 Johnson, Paul*; Moe, Kyaw Soe; Myagkaya, Elina; Loudin, Lorne: NICKEL RELATED ABSORPTION CAUSING GREEN COLOR IN HPHT GROWN SYNTHETIC DIAMOND

172-3 277 Lum, Julieta Enone*; Viljoen, Fanus; Cairncross, Bruce; Frei, Dirk: THE CORRELATION OF COLOUR, CHEMISTRY AND CRYSTALLOGEOCHEMISTRY OF EMERALD: A CASE STUDY FROM THE LEYDSDORP AREA

172-4 278 Dirlam, Donna Mary*; Tozer, Rose; Jonathan, Cathleen; Rucinski, Paula; Elen, Sheryl; Rogers, Chris: JOHN SINKANKAS AND GEOMOLOGY: AN ANNOTATED BIBLIOGRAPHY

172-5 279 Sun, Ziyin*; Renfro, Nathan D.; Palke, Aaron: BLUE-GREEN PYROPE-SPESARNARN GARNET WITHOUT A COLOR CHANGE PHENOMENON: THE ROLE OF VANADIUM IN THE COLOR OF GARNETS

172-6 280 Gu, Tingfing*; Wang, Wuyi; Ohfuji, Hiroaki: MICRO- AND NANO-SIZED INCLUSIONS IN IAB DIAMONDS AND THEIR GEOLOGICAL IMPLICATIONS

172-7 281 Moe, Kyaw Soe*; Johnson, Paul; Wang, Wuyi: IRRADIATED AND ANNEALED NATURAL PINK DIAMONDS

172-8 282 Levy, Elizabeth*; Roy, Amitava; Henry, Darrell J.; Dutrow, Barbara L.: SYNCHROTRON XANES: AN ALTERNATIVE TECHNIQUE FOR MEASURING FE+ CONTENT IN TOURMALINE


172-10 284 Mount, Cole*; McMillan, Nancy J.; Dutrow, Barbara L.; Henry, Darrell J.: CHEMICAL ZONING HAS SIGNIFICANT EFFECT ON PREDICTION OF HOST LITHOLOGY OF TOURMALINE USING MULTIVARIATE ANALYSIS OF LASER-INDUCED BREAKDOWN SPECTROSCOPY (LIBS) SPECTRA

172-11 285 Breeding, Christopher M.*: OBSERVATIONS ON MANGANESE INCLUSIONS IN NATURAL SILICON-VACANCY GEM DIAMONDS

172-12 286 Turnier, Rachel*; Harlow, George E.: SYENITE-HOSTED SAPPHIRES—PROBABLE CRUSTAL SAMPLING

172-13 287 Schmidt, Susanne T*; Elmaleh, Emilie; Karampelas, Stefanos; Link, Klemens; Kiefert, Lore; Süsensenber, Annette; Paul, André: U-Pb AGES OF ZIRCON INCLUSIONS IN SAPPHIRES FROM RATNAPURA AND BALANGODA (SRI LANKA)


172-16 290 Smit, Karen V.; Stachel, Thomas; Stern, Richard A.; Shirley, Steven B.; Steele, Andrew; Wang, Wuyi*: DIAMOND FORMATION THROUGH ISOCHEMICAL COOLING OF CHO FLUIDS VS REDOX BUFFERING: EXAMPLES FROM MARANGHE PERIDOTITIC AND ZIMMI ECLOGICTIC DIAMONDS

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Monday, 23 October 2017
SESSION NO. 173

T43. High-Resolution Investigations of the Permian-Triassic Transition (Posters) (GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); Paleontological Society; Paleontological Research Institution)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

173-1 293 Yuan, Dongxun*; Henderson, Charles M.; Shen, Shuzhong: REVISED CLARKINA TAXONOMY BASED ON CONODONT SAMPLE-POPULATION APPROACH

173-2 294 Kus, Kaci*; Gastaldo, Robert A.; Neveling, Johann; Geissman, John W.; Looy, Cindy V.: CACISOLS, PALYNOFLORAS, AND RARE CHARCOAL FROM QUAGGISFONTEIN, EASTERN CAPE PROVINCE, SOUTH AFRICA: CORRELATIONS IN THE WAPADSBERS PASS AREA AND IMPLICATIONS FOR LATE PERMIAN CLIMATE

173-3 295 Sinkler, Samuel*; Gastaldo, Robert A.; Neveling, Johann; Geissman, John W.: SANDSTONES, SILTSTONES, AND TRACE FOSSILS IN A SUCCESSION OF LOWESTRIASSIC ROCKS NEAR LOOTSBERG PASS, EASTERN CAPE PROVINCE, SOUTH AFRICA


SESSION NO. 174

D15. Paleontology, Biogeography/Biostatigraphy (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

174-1 298 Hawkins, Andrew D.*: EVALUATING DIFFERENT METHODOLOGIES FOR SURFACTANT-BASED SHALE DISAGREGATION FOR MICROFOSSIL RECOVERY: TOWARDS A STREAMLINED APPROACH

174-2 299 Awad, Walaa K.; Ohbo-Ikenobe, Francesca E.*: LATE PALEOGENE-EARLY NEOGENE DINOFLAGELLATE CYST BIOSTATIGRAPHY IN ODP HOLE 959A, WEST AFRICA

174-3 300 Pratscher, Kristin Marie*: RADIOLARIAN CHERTS FROM THE IZMIR-ANKARA-ERZINCAN SUTURE ZONE, SARIYAR, TURKEY

174-4 301 Hardy, Fabian*; Bonde, Joshua W.: A GREAT BASIN MIOCENE BIOTA FROM THE ESMERALDA FORMATION OF NEVADA AS AN ECOLOGICAL CONSTRAINT ON THE TIMING OF SIERRAN UPLIFT

174-5 302 Chiarello, Josephine*; Hauf, Emily; Over, Jin-Si R.; Over, D. Jeffrey: BIOTRACER, SEA LEVEL CHANGE, AND DISCONFORMITIES IN THE UPPER DEVONIAN CHATTANOOGA SHALE OF WESTERN TENNESSEE BASED ON CONODONT AND MAGNETIC SUSCEPTIBILITY

174-6 303 Over, Jin-Si R.; Valenzuela-Ríos, J. Ignacio; Liao, Jau Chyn; Martinez-Perez, Carlos; Over, D. Jeffrey: UPPER DEVONIAN CONODONT FROM THE PI SECTION IN THE SERRA DEL CADÍ, SPANISH PYRENEES


174-8 305 Rice, Beverly J.*; Grader, George W.; Doughty, P. Ted; di Pasquale, Mercedes M.; Isaason, Peter E.: REVISION OF THE TYPE SIPHONODIELLA PRAESULCATATA CONODONT LOCALITY AT LICK CREEK, MONTANA

174-9 306 Sato, Tomohiko*; Sawaki, Yusuke; Saitoh, Masafumi; Matsui, Yohei; Maruyama, Shigenori; Bakakas, Karen; Lign, Cédric; Moussavou, Mathieu; Edou-Minko, Ambrose: PALEOPROTEROZOIC ORGANIC CARBON AND NITROGEN ISOTOPIC STRATIGRAPHY ACROSS THE APPEARANCE OF MACROFOSSILS IN THE FRANCHEVILLIN BASINS, GABON

174-10 307 New, Evan*; Yanes, Yurena; Cameron, Robert A.D.; Teixeira, Dinarte; Kaufman, Darrell S.: AMINOCHRONOLOGY AND TIME-AVERAGING IN QUATERNARY LAND SNAIL ASSEMBLAGES FROM THE MADEIRA ARCHIPELAGO

174-11 308 Yeh, Chung-pin*: THE OBJECTIVE MORPHOLOGICAL CRITERIA OF TRACE FOSSIL OPHIOMORPHA ISP. IN THE NANGANG FORMATION, NORTHEAST COAST OF TAIWAN

174-12 309 Wilbert, Greg A.*; Frederickson, Joseph; Cohen, Joshua E.; Cifelli, Richard L.: NEW ADDITIONS TO THE ICHTHYOFUNFA LA OF THE ANTLERS FORMATION (APTIAN-ALBIAN) OF SOUTHEASTERN OKLAHOMA

174-13 310 Cribb, Alison*; Darroch, Simon A.F.; Laflamme, Marc: QUANTIFYING ICHNOGENERA DIVERSITY AND BIODIVERSITY INTENSITY IN THE TERMINAL NEOPROTEROZOIC NAMA GROUP, NAMIBIA

174-14 311 Salenbien, Wout*; Gonzales, Lauren; Kern, Andrea K.; Bejar, Gustavo; Valdivia, Luis Angel; Ortega, Miguel; Kay, Richard F.; Martinez, Jean-Noel; Riggsby, Catherine A.; Baker, Paul A.: A CENOZOIC FOSSIL RECORD FROM SOUTHEAST PERU IN A REVISED CHRONOSTRATIGRAPHICAL AND PALEENVIRONMENTAL FRAMEWORK: EVIDENCE FOR CROSS-CONTINENTAL BIOGEOGRAPHIC PATHWAYS

174-15 312 Cole, Selina R.*; Wright, David F.: INVESTIGATION OF LOWER MISSISSIPPIAN STRATA FROM THE NORTHCENTRAL BROOKS RANGE OF ALASKA: PRELIMINARY STRATIGRAPHIC AND PALEONTOLOGICAL CHARACTERIZATION

174-16 313 Owens, Hayden L.*; Hunt, A.M.: GEOCHEMICAL AND STRATIGRAPHIC ANALYSIS OF PYRRIC DECOMPOSITION WITH RESPECT TO BONE PRESERVATION QUALITY: EXAMPLES FROM THE LANCE FORMATION OF EASTERN WYOMING

174-17 314 Farron, Thomas D.*; Hunt, A.M.: GEOCHEMICAL AND PHYSICAL DETERMINATION OF DIAGNOSTIC K-PG BOUNDARY FEATURES USING NITON XRF 3GOLDD+ FOR CORRELATION OF SELECTED LOCATIONS IN WYOMING AND COLORADO

174-18 315 Aubery, Rose*; Urban, Michael A.; Dunn, Regan E.; Barclay, Richard S.; Punyasena, Surangi W.: RESPONSE OF LEAF EPIDERMAL CELL ARCHITECTURE TO CLIMATE - A POTENTIAL PALEOPROXY

174-19 316 Ng, Molly*; Smith, Selena Y.: MORPHOLOGICAL VARIABILITY ALONG A CLIMATE GRADIENT IN TAXODIUM DISTICHUM (CUPRESSACEAE): IMPLICATIONS FOR PALEOENVIRONMENTAL RECONSTRUCTION

174-20 317 Richmond, Dean R.*; Lupia, Richard; Klimk; Jason: FIRST NORTH AMERICAN OCCURRENCES OF THE FOSSIL WOOD XENOXYLON MEISTERI FROM THE UPPER JURASSIC MORRISON FORMATION OF CENTRAL MONTANA


22–25 October • Seattle, Washington, USA

Monday, 23 October 2017
SESSION NO. 175

T60. The Onset of the Great Ordovician Biodiversity Event (GOBE): Testing Hypotheses with Diverse Data Sets (Posters) (Paleontological Society; GSA Geobiology & Geomicrobiology Division; GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); IGCP 653: Onset of the Great Ordovician Biodiversification Event; Paleontological Research Institution)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

175-1 338 Calner, Mikael*; Calner, Hanna; Lehnert, Oliver: THE HIRANTAN ISOTOPE CARBON EXCURSION (HICE) IN SOUTHERN NORWAY

175-2 339 Yang, Yez*; Marenco, Katherine N.; Marenco, Pedro J.: INVESTIGATING THE ROLE OF AMORPHOUS FABRICS ASSOCIATED WITH CALATHIUM IN THE LOWER ORDOVICIAN FILLMORE FORMATION, UTAH, USA, USING PETROGRAPHY AND GEOCHEMISTRY

175-3 340 Patton, Timothy*; Freeman, Rebecca L.; Dattilo, Benjamin F.: ENCRUSTING ON A CORAL GRAVEYARD: A REWORKED CORAL BED FROM THE UPPER ORDOVICIAN (CINCIANNATIN, RICHMONDIAN) OF CENTRAL KENTUCKY

175-4 341 Wright, David F.; Toom, Ursula: NEW CRINOIDs FROM THE EARLY PALEOZOIC OF BALTICA (ESTONIA) CONSTRAN THE ORIGIN AND ORDOVICIAN–SILURIAN DIVERSIFICATION OF FLEXIBLE CRINOIDs

175-5 342 Pruden, Matthew J.*; Garcia, Elvira A.; Molinaro, Darrin J.; Leighton, Lindsey R.: SHAPE ANALYSIS OF THE ORDER ORTHIDA (PHYLUM BRACHIOPODA) DURING THE ORDOVICIAN RADIATION

175-6 343 Kozik, Nevin P.*; Young, Seth A.: SEQUENCE STRATIGRAPHIC ANALYSIS OF THE EVAN’S FERRY ROAD CUT, TN: A NEW PROSPECTIVE FOR LATE ORDOVICIAN (SANDBIAN) SEA LEVEL FROM THE APPALACHIAN BASIN

175-7 344 Aucoin, Christopher D.*; Brett, Carlton E.; Patton, Timothy; Schwabach, Cameron E.; Dattilo, Benjamin F.: REVISED LATE ORDOVICIAN CORRELATIONS AND THE RICHMONDIAN INVASION IN THE NASHVILLE DOME, TN

175-8 345 Sinnesael, Matthias*; Mauvel, Alain; Desrochers, André; McLaughlin, Patrick J.; De Weirdt, Julie; Vandenbroucke, Thijs R.A.; Claey, Philippe: CYCLOSTRATIGRAPHY OF THE UPPER ORDOVICIAN VAUERÂL FORMATION, ANTICOSTI ISLAND, EASTERN CANADA

SESSION NO. 176

T163. Petrochronology: Advances and Applications to Petrogenesis and Tectonics (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division; Mineralogical Society of America; Geochemical Society)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

176-1 346 Webb, Laura E.*: STRANGE RESULTS OR: HOW I LEARNED TO STOP WORRYING AND LOVE COMPLICATED 40AR/39AR APPARENT AGE SPECTRA

176-2 347 Smit, Matthijs A.*; Scherer, Erik E.; Cutts, Jamie: DATING PETROLOGICAL PROCESSES: A GARNET PERSPECTIVE
Monday, 23 October 2017

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M O N D A Y

POSTERS

SESSION NO. 177

D54. Planetary Potpourri (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

177-1 369 O’Hara, Emma Jane*; Dunn, Tasha: DETERMINING 3D CHONDRULE SIZES FROM 2D THIN SECTIONS: LOST IN TRANSLATION

177-2 370 DeFelice, Dominic*: Ebel, Denton: MODAL ANALYSIS: PIXEL COUNTING VS. POINT COUNTING USING DATA FROM THE TIESCHITZ H/L3.6 METEORITE

177-3 371 Covley, Margaret T.*; Rogers, Kay-Leigh; Lang, Nicholas P.: CONSTRAINTS ON THE ORIGIN OF MAHUEA THOLUS, VENUS: IS IT RELATED TO DIANA-DALI CHASMA?

177-4 372 Beltran, Jonathan*; Rogers, Kay-Leigh; Lang, Nicholas P.: CHARACTERISTICS OF IMPACT CRATERS IN THE MAHUEA THOLUS QUADRANGLE (V-49), VENUS

177-5 373 Treiman, Allan H.*; Harrington, Elise: APATITE ON VENUS: SURFACE-ATMOSPHERE REACTION, CRYSTAL CHEMISTRY, AND RADAR REMOTE SENSING

177-6 374 Torres Celis, Jorge Andres*; Ochoa Gutierrez, Luis Hernan; Saavedra Daza, Fabian: EXPERIMENTAL MODELS USING DRY ICE AS ACTIVE AGENT IN DIFFERENT GEOLOGICAL PROCESSES FOR THE SURFACE OF THE PLANET MARS

177-7 375 Anderson, Robert C.*; Hodges, Kip; Burdick, Joel; Lester, Dan: DESTINATION MARS: RESULT OF A KISS STUDY ON UNRAVELING THE BENEFITS OF EXPLORATION TELEPRESENCE

SESSION NO. 178

T204. Friends of Hoth: Episode II—Icy Bodies of the Solar System (Posters) (GSA Planetary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

178-1 376 Leonard, Erin*; Patthoff, D. Alex; Senske, David; Collins, Geoffrey C.: GLOBAL GEOLOCIC MAP OF EUROPA: USGS SCIENTIFIC INVESTIGATION MAP (SIM)

178-2 377 Nelson, Robert M.; Boryta, Mark*; Heap, Bruce W.; Manatt, Kenneth S.; Shkuratov, Yuriy; Psarev, Vladimir; Vandervoort, Kurt; Kroner, Desiree; Nebedum, Adaeze; Vides, Christina; Quiliones, John: UNDERSTANDING REGOLITH PHYSICAL PROPERTIES
Monday, 23 October 2017

OF ATMOSPHERELESS SOLAR SYSTEM BODIES USING REMOTE SENSING PHOTOPOLARIMETRIC OBSERVATIONS: PLANETARY SURFACE ANALOGS

178-3 378 Schoenfeld, Ashley*; Lopes, Rosaly; Malaska, Michael J.; Solomonidou, Anazina: GEOMORPHOLOGICAL MAP OF THE SOUTH BELET REGION OF TITAN: AN EXPLORATION OF MID-LATITUDE-TO-POLE TRANSITION ZONES

178-4 379 Hughson, Kyan H.G.*; Russell, Christopher T.; Schmidt, Britney E.; Chilton, Heather; Scully, Jennifer E.C.; Sizemore, Hanna G.; Byrne, Shane; Platz, Thomas; Raymond, Carol A.: INFERRING THE COMPOSITION AND MECHANICAL PROPERTIES OF THE NEAR-SURFACE OF CERES FROM EMBLACEMENT MODELING OF LAYERED/PANCAKE-LIKE EJECTA DEPOSITS

178-5 380 Scully, Jennifer E.C.*; Buczkoski, Debra L.; Raymond, Carol A.; Neesemann, Adrian; Bowling, Timothy; Schenk, Paul M.; Williams, David A.; Castillo-Rogez, Julie C.; Russell, Christopher T.: CERES’ OCCATOR CRATER AND ITS FACULAE REVEALED THROUGH GEOLOGIC MAPPING

178-6 381 Duarte, Kayla*; Schmidt, Britney E.; Chilton, Heather; Ferrier, Ken L.; Hughson, Kyan H.G.*; Scully, Jennifer E.C.; Sizemore, Hanna G.; Nathues, Andrea; Platz, Thomas; Russell, C.T.; Raymond, Carol A.; Wray, James J.: DETERMINING CERES’ SUBSURFACE ICE CONTENT THROUGH THE PROPERTIES OF INTERMEDIATE LANDSLIDES

178-7 382 Gosselin, Greg*; McGarry, R. Shane: NUMERICAL MODELING OF CERES’ THERMAL HISTORY AND EVOLUTION USING DAWN MISSION DATA AND ANALYSIS TO CONSTRAIN POSSIBLE EVOLUTIONARY PATHWAYS

SESSION NO. 179

T205. Impact Cratering: From Fire to Ice—Cratering across the Solar System (Posters) (GSA Planetary Geology Division; GSA Geophysics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

179-1 383 King, David T.*; Petruny, Lucille W.; Leiphart, Dan: PLANAR DEFORMATION FEATURES IN QUARTZ GRAINS FROM A DEEPLY BURIED, CANDIDATE IMPACT STRUCTURE, CENTRAL NEW YORK

179-2 384 King, David T.*; Petruny, Lucille W.; de Marchi, Leticia; Adrian, David R.; Ormo, Jens: CROSS-SECTION OF FLYNN CREEK IMPACT STRUCTURE, TENNESSEE

179-3 385 Evans, Kevin*; McKay, Matthew P.; Sakidja, Ridwan: MATRIX IN CARBONATE IMPACT BRECCIAS: COMMINUTION AND PRECIPITATION FROM SUPERCRITICAL WATER (SCW)?

179-4 386 Jaret, Steven J.*; Adrian, David R.; de Marchi, Leticia; King, David T.; Rasbury, Troy: MELT-PRODUCTS AT THE FLYNN CREEK IMPACT STRUCTURE, TENNESSEE

179-5 387 Armour, Mary-Helen*; Boyce, Joseph I.; Zilkey, David: GEOGENICAL SUSPECTED AND CONFIRMED IMPACT STRUCTURES, ONTARIO, CANADA

179-6 388 Anderson, Jennifer L.B.*; Cintala, Mark J.; Plescia, Jeffrey B.; Dechant, Leah E.: EXPERIMENTAL IMPACTS INTO SLOPED TARGETS – A FIRST LOOK

179-7 389 Dhangra, Deepak*: GEOLOGICAL MAPPING AND MINERALOGICAL CHARACTERIZATION OF IMPACT MELT DEPOSITS AT LUNAR CRATER COPERNICUS: PEEKING INTO THE CRATERING PROCESS AND TARGET PROPERTIES

179-8 390 Irizarry, Kayla M.*; Garb, Matthew P.; Witts, James D.; Landman, Neil H.; Danilova, Anastasia: FAUNAL ANALYSIS AT THE CRETAEOUS - PALEOGENE MASS EXTINCTION BOUNDARY, BRAZOS RIVER, TEXAS

179-9 391 Montanari, Alessandro*; Sinnesael, Matthias; Koebert, Christian; Wegner, Wencke; Claesys, Philippe: MULTI-

PROXY CRETAEOUS-PALEOGENE BOUNDARY EVENT STRATIGRAPHY: THE GUBBIO AND OTHER UMBRIA-
MARCHE BASIN SECTIONS

179-10 392 Melancon, Caleb N.*; Gullick, Sean S.P.; Christeson, Gail L.; McCall, Naomia; Lowery, Christopher; Whalen, Michael T.; Morgan, Joanna; Parr, Penelope; Schmitt, Douglas R.; Lof, Johanna; Nixon, Chris; Snedden, John; Expedition 364 Scientists, IODP-ICDP: CORE-LOG-SEISMIC INTEGRATION IN THE CHICXULUB IMPACT BASIN: PRELIMINARY RESULTS FROM IODP-ICDP EXPEDITION 364

179-11 393 Rathbun, Kathryn*; Utkins, Ingrid; Drop, Stephen: A NEW GEOLOGIC INTERPRETATION OF MONTURAQUI METEORITE IMPACT CRATER, CHILE

179-12 394 Sleep, Norman H.*: Olds, Eric Peter: INDUCED INTRAPLATE EARTHQUAKES IN COLORADO FROM EXTREME SEISMIC WAVES FROM THE END-CRETACEOUS ASTEROID OR COMET IMPACT


179-14 396 Connelly, Daniel P.*; Sikder, Arif M.; Brum, Jose; Hill, Tina R.; Liu, Xin-Cheng: IRIDIUM ANOMALY ASSOCIATED WITH MAPCIS?

SESSION NO. 180

T207. Volcanism and Tectonics across the Solar System (Posters) (GSA Planetary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

180-1 397 Hiesinger, Harald*; Roggon, Lars; Hetzel, Ralf; Clark, Jaclyn D.; Hampel, Andrea; van der Bogert, Carolyn H.: LENGTH-DISPLACEMENT SCALING AND THE FORMATION OF UPHILL-FACING LUNAR THRUST FAULTS

180-2 398 van der Bogert, Carolyn H.*; Clark, Jaclyn D.; Hiesinger, Harald; Banks, Maria E.; Watters, Thomas R.; Robinson, Mark S.: SEISMIC RESETTING OF THE CRATER RECORD AROUND LUNAR LOBATE-SCARP THRUST FAULTS

180-3 399 Anderson, Robert C.*; Dohm, James M.; Siwabessy, Andrew G.: DECIPHERING THE COMPLEX FAULT HISTORY OF THE CLARITAS REGION; MARS

180-4 400 Borden, Rose M.*; Burr, Devon M.: SMALL-SCALE WRINKLE RIDGES ON THE MARTIAN DICHTOMITY BOUNDARY: EVIDENCE FOR CHANGE IN PRINCIPAL STRESS DIRECTION

SESSION NO. 181

T252. Cratonic Assembly in the Precambrian: Forming the Core of Modern and Ancient Landmasses (Posters) (GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

181-1 401 Wintzer, Niki E.*; Baker, Peter L.; Buddington, Andrew M.; Doughty, P Ted: U-PB ZIRCON AND GEOCHEMICAL DATA REVEAL PALEOPROTEROZOIC ORTHOGNEISS AND AN EAST KOOTENAY OROGENY MESPATEROZOIC DIKE AT TUBBS HILL, COEUR D’ALENE, IDAHO, SOUTHEAST PRIEST RIVER COMPLEX

181-2 402 Kusky, Timothy M.*; Polat, Ali; Wang, Junpeng; Deng, Hao; Windley, Brian F.; Burke, Kevin; Dewey, John F.; Kidd, William S.F.: GROWTH OF THE NORTH CHINA CRATON BY ARCHEAN THROUGH PALEOPROTEROZOIC ACCRETIONARY OROGENESIS

181-3 403 Baker, Peter L.*; Vervoort, Jeff D.; Baldwin, Julia A.; Harms, Tekia A.; GARNET LU-HF AND ZIRCON U-PB DATING CONSTRAINS EARLIEST PALEOPROTEROZOIC (2.43 GA) THERMAL EVENT IN THE RUBY RANGE, SW MONTANA
SESSION NO. 182
T84. The Dynamics of Stratigraphy and Sedimentation (Posters) (GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology))

Monday, 23 October 2017
9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
Booth #

182-1  408 Howard, Susannah*; Chang, Jessica; Eastman, Elsie; Glumac, Bosiljka; Curran, H. Allen; Savarese, Michael: IMPACT OF HURRICANE MATTHEW (OCTOBER 2016) ON SEDIMENT-STARVED SOUTHERN COAST OF LITTLE EXUMA ISLAND, BAHAMAS

182-2  409 Hsia, Scarletta*; Kerans, Charles; Manfrino, Carrie: REFINEMENT OF STRATIGRAPHIC FRAMEWORK AND VARIATIONS IN DEPOSITIONAL FACIES FROM THE LAST INTERGLACIAL HIGHSTAND, LITTLE CAYMAN ISLAND

182-3  410 Burke, Brandon Glenn*; McNell, Donald F.; Klaus, James S.; Swart, Peter K.: SEDIMENTATION AND DIAGENESIS OF A MIOCENO-PLEISTOCENE NARROW SHELF MIXED-SYSTEM: CIBAO BASIN, DOMINICAN REPUBLIC

182-4  411 Kenning, Brett*; Evans, Kevin: GEOLOGY OF THE COASTAL GROUP, WESTERN ST. ELIZABETH PARISH, JAMAICA

182-5  412 Beckham, Abigaila*; Glumac, Bosiljka; Curran, H. Allen; Kortright, Skylar; Griffin, David H.: PETROGRAPHIC ANALYSIS OF ENCROUSTERS ON CORALS FROM PLEISTOCENE REEFS ON SAN SALVADOR ISLAND, BAHAMAS

182-6  413 Widodo, Robet W.*; Laya-Pereira, Juan Carlos: PORE SYSTEM EVOLUTION AND FLOW UNIT OF MIOCENO CARBONATE RESERVOIR, NORTHWEST JAVA BASIN, INDONESIA: A SIGNIFICANT EFFECT OF DOLOMITIZATION AND DOLOMITIZATION IN A WARM BASIN

182-7  414 Pauls, Kathryn N.*; Isbell, John L.; Moxness, Levi D.; Limarino, C. Oscar; Scheneman, L. Jazmin: LATE PALEOZOIC PALEOClimatic COMPARISONS of MID-LATITUDE BASINS in WESTERN ARGENTINA: CONTROLS ON EARLY PENNSYLVANIAN DEGLACITATION in WESTERN GONDWANA

182-8  415 Fedorchuk, Nicholas D.*; Isbell, John L.; Griffis, Neil; Montanez, Isabel P.; Vesely, Fernando; Iannuzzi, Roberto; Rosa, Eduardo L.M.; Roesler, Guilherme A.: CARBONIFEROUS GLACIOTECTONIZED SEDIMENTS ON THE WESTERN RIO GRANDE DO SUL SHIELD, PARANÁ BASIN, SOUTHERNMOST BRAZIL


182-10  417 Sun, Ke*: Chen, Qinghua; Wang, Guanning; Zhang, Jingjing: CHARACTERISTICS, DISTRIBUTION AND EVALUATION OF REEF-SHOAL RESEVOIRS: A CASE STUDY OF PERMIAN-CARBONIFEROUS IN THE NORTHWEST OF TARIM BASIN, CHINA

182-11  418 Jablonska, Danica*: INTERNAL ARCHITECTURE OF MASS-TRANSPORT DEPOSITS IN BASINAL CARBONATES: A CASE STUDY FROM SOUTHERN ITALY

182-12  419 Alemu, Tadesse B.*; Abdelsalam, Mohamed G.: OUTCROP ANALOG FOR INTRACONTINENTAL SAGS (ICONS): A CASE OF THE MEKELE BASIN IN NORTHERN ETHIOPIA

182-13  420 Parke, Aedan C.*; Clarey, Timothy L.: CHARACTERIZING THE CONTINENTAL-SCALE STRATIGRAPHIC ARCHITECTURE OF AFRICA AND THE MIDDLE EAST USING SLOSS-TYPE SEQUENCES

182-14  421 Washburn, Hudson A.*: SIEVE DEPOSITION ON STEEP ALLUVIAL FANS

182-15  422 West, Logan M.*; Steel, Ronald J.; Olariu, Cornel: LONG-LIVED DEEPWATER ANTIDUNES: OUTCROP DESCRIPTION OF LOW-ANGLE UNDULATING, SYMMETRIC, UPLFLOW ACCRETING BEDFORMS WITHIN SUPERCritical DOMINATED SLOPE DEPOSITS IN THE FISH CREEK VALLECY BASIN, LATE MIocene GULF OF CALIFORNIA

182-16  423 Andeskie, Anna Sofia*: Benison, Kathleen C.; Eichenlaub, Lynnette A.: THICK PERMO-TRIASSIC REDBEDS AND EVAPORITES IN PANGEA: BUILDING CONCEPTUAL BRIDGES FROM NORTHERN IRELAND TO KANSAS

182-17  424 Nair, Kajal*: Singleton, John S.; Holm-Denoma, Christopher S.; Egenhoff, Sven O.: DETRITAL ZIRCON GEOCHRONOLOGY OF THE PENNSYLVANIAN-PERMIAN INGLESIDE FORMATION IN NORTHERN COLORADO: EVIDENCE FOR THE ARRIVAL OF APPALACHIAN ZIRCONS AT THE ANCESTRAL ROCKIES


182-19  426 Lord, Elaine L.*; Harris, Nicholas B.: SUBSURFACE MAPPING OF THE PRAIRIE EVAPORATIVE GROUP SALT DEPOSITS: ASSESSING SALT CAVEN QUALITY FOR COMPRESSED AIR ENERGY STORAGE

182-20  427 Bailey, Claire H.*; Langford, Richard P.; Giles, Katherine A.: STRATURAL ARCHITECTURE OF “THE HAT” PROTO-DROP-IN BASIN; JURASSIC SALT WASH MEMBER OF THE MORRISON FORMATION GYPSUM VALLEY, COLORADO

182-21  428 Bruce, David*: Panrell, William C.: CHEMOSTRATIGRAPHY OF A MIXED CARBONATE-EVAPORITE-CLASTIC SYSTEM: ELEMENTAL AND MINERALOGICAL PATTERNS IN THE MIDDLE JURASSIC GYPSUM SPRING FORMATION, BIGHORN BASIN, WYoming

182-22  429 Wright, Sarah N.*; Holland, Steven M.: ALTERNATING PROGRADATIONAL AND DEGRADATIONAL REGIMES IN AN OPEN-COAST TIDAL FLAT: THE JURASSIC REDWATER-WINDY HILL-MORRISON TRANSITION, WYOMING, USA

182-23  430 Ahern, Justin P.*; Fielding, Christopher R.: SEDIMENTOLOGIC AND STRATIGRAPHIC INVESTIGATION OF THE HEATH FORMATION, CENTRAL MONTANA AND MANNING CANYON FORMATION, UTAH: IMPLICATIONS FOR LATE PALEOZOIC CLIMATE CHANGE

182-24  431 Parrish, Judith Totman*; Hyland, Ethan G.; Chan, Marjorie A.; Hasiotis, Stephen T.; Dorney, Liam J.: CONSTRUCTION OF A SPRING-LAKE SYSTEM IN THE JURASSIC NAVAJO SANDSTONE, UTAH—EVIDENCE FROM STABLE ISOTOPES OF OXYGEN AND CARBON


182-27  434 Brotherton, John L.*; Sweet, Dustin E.: UNPROOFEN SEQUENCE IN THE OROGRANDE BASIN: PRELIMINARY ASSESSMENT

POSTERS
Monday, 23 October 2017

182-28 435 Helfrich, Autumn L.; McLaurin, Brett T.: LACUSTRINE CARBONATE DEPOSITION AND FACIES DISTRIBUTION WITHIN THE MUDDY CREEK FORMATION (MIOCENE-PLIOCENE), NELLIS BASIN, SOUTHERN NEVADA

182-29 436 Byron, Alex*; Norris, Gage; Gianniny, Gary L.: THE LAST GASP OF THE EARLY MISSISSIPPIAN SEAWAY: SEQUENCE STRATIGRAPHY OF HORSESHOE MESA MEMBER OF THE REDWALL LIMESTONE, GRAND CANYON, AZ


182-32 439 Zhou, Kai*: Pratt, Brian R.: SEDIMENTOLOGY OF TWO MUD MOUND REEFS ON AN UPPER DEVONIAN (FRASNIAN) RAMP, WESTERN ALBERTA, CANADA

182-33 440 Somchat, Kittipong*; Reece, Bobby; Gulick, Sean; Ridgway, Kenneth: CORE-LOG-SEQUENCING STUDY ON THE PRE-GlacIAL HISTORY OF THE SURVEYOR FAN DEEP-SEA SEDIMENTARY SYSTEM, GULF OF ALASKA

182-34 441 Jeffrey, Matthew Jarrell*; Huntley, John Warren; Schiffbauer, James D.; Fike, David A.; Shelton, Kevin L.: INFLUENCES OF ENVIRONMENTAL VARIATION AND SEDIMENTATION RATE ON THE RECORDING OF THE STEPTOCEAN POSITIVE CARBON ISOTOPE EXCURSION (SPICE) IN MISSOURI

182-35 442 Haidar, Zachariya*; Abatan, Oluwasegun; Weislogel, Amy L.: SEDIMENTOLOGICAL ANALYSIS OF HAMPSHIRE FORMATION CORES FROM RANDOLPH CO., WV

182-36 443 Abbott, Dallas H.*; Hutson, Dionne; Marrero, Alyssa; Block, Karin A.; Chang, Clara; Cai, Yue: REPLICATION OF ANNUAL CYCLES IN MN IN HUDSON RIVER CORES: MN PEAKS DURING HIGH WATER FLOW

182-37 444 Hutson, D.C.; Abbott, Dallas H.; Block, Karin A.; Marrero, Alyssa; Abdul, Barakat; Herzberger, Kyrah; TO WHAT EXTENT ARE CATASTROPHIC AND ENVIRONMENTAL EVENTS USEFUL STRATIGRAPHIC MARKERS FOR DATING THE HUDSON RIVER: THE IMPACT OF MANGANESE CYCLING, THE PEEKSKILL METEORITE AND ZEBRA MUSSELS?

182-38 445 Hughes, Matthew*; Harris, M. Scott; Luciano, Katherine; Alexander, Clark: INVESTIGATIONS INTO SOUTH CAROLINA AND GEORGIA’S OUT CONTINENTAL SHELF (OCS) RESOURCES: IDENTIFICATION AND MAPPING OF PALEOLANDSCAPES AND MODEL CREATION FOR LOCATION OF SAND RESOURCES


182-41 448 Blake, Elliot*; Lehrmann, Asmara; Welch, Bailey; Ray, Christopher J.; Sun, Kexin; Suarez, Marina B.; Godel, Alexis; Adams, Thomas; Lehrmann, Daniel: SEDIMENTOLOGY AND STRATIGRAPHY OF A LOWER CRETACEOUS DINOSAUR TRACK SITE, HERITAGE MUSEUM OF THE TEXAS HILL COUNTRY, COMAL COUNTY, CENTRAL TEXAS

182-42 449 Chrpina, Michelle E.*; Raymond, Anne: ECHINODERMS OSSICLES IN PENNSylvIAN COAL BALLS: A PROXY FOR SEAWATER MG/CA RATIOS

182-43 450 Eckert, Andreas; Zhao, Wenyu*: NUMERICAL SIMULATION OF OVERPRESSURE DURING SEDIMENTATION

182-44 451 Lowe, James B.*; Ahern, Justin P.; Fielding, Christopher R.: STRATIGRAPHIC AND SEDIMENTOLOGIC CORRELATIONS BETWEEN SURFACE EXPOSURES AND SUBSURFACE INTERSECTIONS USING BULK AND SPECTRAL GAMMA RADIATION

182-45 452 Yu, Jiayi*: Eckert, Andreas: NUMERICAL SIMULATION OF BASIN GEOMETRY INFLUENCE ON THE RESULTING STRESS PATH


182-47 454 Denommee, Kathryn C.; Harazim, Dario*: Bentley, Samuel J.; Maquarrie, Joe: SEDIMENTOLOGICAL RECOGNITION CRITERIA FOR CURRENT-WAVE-ENHANCED SEDIMENT GRAVITY FLOWS (CWSFS)

SESSION NO. 183

T87. Fluvo-Deltaic Processes and Their Stratigraphic Record (Posters) (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; SEPM (Society for Sedimentary Geology))

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

183-1 455 King, M. Ryan*; Botterill, Scott E.; Gingras, Murray K.; Pemberton, S. George: STRATIGRAPHIC PARTITIONING OF WAVE- AND RIVER-INFLUENCED DELTAIC FACIES UTILIZING ICHNOLOGY, FERRON SANDSTONE, UTAH

183-2 456 Bertoch, Austin*: Steves, Blake; Hudson, Sam: RESERVOIR ARCHITECTURE AND CONNECTIVITY OF THE TRAIL MEMBER FLUVIAL SANDSTONES, ERICSON SANDSTONE, MESAVEDE GROUP

183-3 457 Kaufman, Shaeley N.*; Riebe, Clifford S.; McElroy, Brandon: COSMOGENIC NUCLIDE DATING OF THE DELTAIC TERRACES ON THE SELENGA RIVER DELTA, LAKE BAIKAL, SIBERIA

183-4 458 McElroy, Brandon*; Shaw, John; Miller, Kim: FORMATION OF ISLANDS ON DELTAS FROM RADIALY SYMMETRIC FLOW EXPANSION

183-5 459 Wu, Chelington*: Nittrouer, Jeffrey A.; Burmeister, Curtis C.: IMPACTS OF VARIABLE CHANNEL HYDRAULICS ON THE STRATIGRAPHIC RECORD: AN EXAMPLE PROVIDED FROM THE TULLIG SANDSTONE, WESTERN IRISH NAMURIAN BASIN

183-6 460 Fitzgerald, Bailey L.*; Rodriguez, Sophia; Chamberlin, Ellen P.: EVIDENCE FOR COMPLEX FLOODPLAIN MORPHODYNAMICS IN THE STRATIGRAPHIC RECORD: CHARACTERIZING FLOODPLAIN CHANNELS IN THE WASATCH FORMATION (PALEOCENE-Eocene, COLORADO, USA)

183-7 461 Moore, Samantha*; Heise, Elizabeth A.; Grove, Marty J.: LATITUDE AND TEMPORAL COMPARISON OF BEACH SAND ON THE RIO GRANDE DELTA SYSTEM

183-8 462 Frederick, Bruce C.*; Blum, Mike D.; Roberts, Harry H.; Fillion, Richard H.: LOWER MISSISSIPPI RIVER DELTA DEEP-SEATED SUBSIDENCE RATE DYNAMICS, BIAS, AND SPATIAL-TEMPORAL DEPOCENTER COMPLEXITIES THROUGH THE NEOGENE

183-9 463 Shaw, Ashok*: Wakefield, Oliver J.W.; Layek, Mirnal Kant; Das, Prerona; Mukherjee, Abhijit; Sengupta, Probab; Finlayson, Andrew; Kumar, Mohit; Kumar, Ankur; Sen, Joy; Smith, Martin:
SESSION NO. 184

T89. The Dynamics of Tectono-Sedimentary Systems During Basin Formation and Fill (Posters) (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; SEPM (Society for Sedimentary Geology))

9:00 AM, Washington State Convention Center, Halls 4EF

184-1 464 Osorio-Granada, Edward*; Restrepo-Moreno, Sergio A.; Muñoz-Valencia, Jaime; Trejos, Raul; Barbosa-Espitia, Ángel A.; Pardo-Trujillo, Andres: DETRITAL ZIRCON TYPOLGY AND U/PB GEOCHRONOLOGY FOR THE MICOCENE LADRILLEROS-JUANACHACO SEDIMENTARY SEQUENCE, EQUATORIAL PACIFIC (COLOMBIA): NEW CONSTRAINTS ON PROVENANCE AND PALEOGEOGRAPHY IN NORTHWESTERN SOUTH AMERICA

184-2 465 Cassidy, Colleen E.*; Crow, Ryan S.; Cohen, Andrew S.; Beard, L. Sue; Thacker, Jacob O.; Felger, Tracey J.; Pearthree, Philip A.; Howard, Keith A.; Gooitee, Brian F.: THE SUBSUEFACE EXTENT OF THE BOUSE FORMATION IN THE LOWER COLORADO RIVER CORRIDOR AND POSSIBLE TECTONIC IMPICATIONS

184-3 466 Di Fiori, Russell V.*; Long, Sean P.; Rafferty, Kevin C.; Snell, Kathryn E.; Bonde, Joshua W.; Vervoort, Jeff D.: APTIAN-ALBIAN DEPOSITION WITHIN AN AXIALLY-DRAINED SYNTECTONIC BASIN IN THE SEVIER HINTERLAND IN NORTH-CENTRAL NEVADA: INSIGHTS FROM MAPPING AND U-PB GEOCHRONOLOGY FROM THE NEWARK CANYON FORMATION IN THE CORZET MOUNTAINS


184-5 468 Loope, David B.*; Schmitt, James G.: A PALEogene ANTECEDENT STREAM THAT BEVELED RISING, STEEPLY TILTED, CRETAEOUS STRATA ALONG THE EASTERN EDGE OF THE HANNA BASIN DURING LARAMIDE DEFORMATION

184-6 469 Mueller, Megan A.*; Licht, Alexis; Campbell, Clay; Oacakoglu, Fanuk; Taylor, Michael; Burch, Lauren; Coster, Pauline; Metzais, Gregoire; Beard, K. Christopher: CHRONOLOGY OF SUTURING AND POST-COLLISIONAL DEFORMATION OF THE ANATOLIAN OROGENY, TURKEY: INSIGHTS FROM GEOCHRONOLOGY AND SEDIMENTOLOGY OF THE SARICAKAYA BASIN, WESTERN ANATOLIA

184-7 470 Lease, Richard O.*; Houseknecht, David W.; Kylander-Clark, Andrew R.C.: RAPID PROGRADATION AND 400 K.Y. PACING OF THE WORLD’S LARGEST FORELAND CLINOTHEM, CRETAEOUS ARCTIC ALASKA

184-8 471 Sample, Brett D.*; Cecil, M. Robinson; Heermance, Richard V.; Flowers, Michael: DETRITAL ZIRCON ANALYSIS OF MICOCENE STRATA OF THE EL PASO BASIN, SOUTHERN CALIFORNIA, AND NEW CONSTRAINTS ON UPLIFT OF THE SOUTHERN SIERRA NEVADA

184-9 472 Santonja, Camila; Suriano, Julieta*; Bechis, Florencia; Encinas, Alfonso: TECTONO-STRATIGRAPHIC EVOLUTION OF THE NINHIUAU BASIN, NORTH PATAGONIAN ANDES

184-10 473 Suriano, Julieta*; Mahoney, Brian J.; Giambiagi, Laura B.; Aguilar, Andrea; Mesuca, José; Lassada, Ana Clara; Buelow, Ellen K.; Kimbrough, David L.; Hoke, Gregory D.; Mazzitelli, Manuela Amelia; Gomez, Gustavo A.: MULTIDISCIPLINARY STUDIES OF ANDEAN SYNOROGENIC DEPOSITS, UNRAVELING THE UPLIFT SEQUENCES IN THE TRANSITION ZONE BETWEEN FLAT AND NORMAL SUBDUCTION

184-11 474 Noda, Atsushi*; Sato, Daijku: FORMATION AND FILLING PROCESSES OF A FOREARC BASIN IN RESPONSE TO MIGRATION OF A TRIPLE JUNCTION: THE UPPER CRETAEOUS ISUZI GROUP, SOUTHERN JAPAN

184-12 475 Zhang, Jinyu*; Wei, Wei; Liu, Xiaochen; Yu, Qi; Zhu, Xueying; Lei, Dingkun; Mao, Huawu: CHARACTERISTICS OF LITHOFACIES PALAEOPROTOGEOGRAPHY AND SEDIMENTARY FILLING RESPONSE OF TRIASSIC IN TARI B basin

SESSION NO. 185

T90. Advancing Seismic and Sequence Stratigraphy: Insights from Testing the Fundamentals (Posters) (GSA Environmental and Engineering Geology Division; GSA Energy Geology Division; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

185-1 476 Zhang, Jinyu*; Wei, Wei; Shu, Yi; Zhu, Xueying; He, Ju: ARCHITECTURE STYLES AND SEQUENCE STRATIGRAPHIC MODELS OF NIBAO FORMATION SLOPE BREAK BELT IN LUNPOLA BASIN, CENTRAL TIBET

185-2 477 Henry, Candisie L.*; Patson, Lincoln: UNDERSTANDING THE IMPACTS OF AUTOGENIC PROCESSES ON STRATAL ARCHITECTURE USING A 2D DIFFUSIVE SEDIMENT TRANSPORT MODEL

185-3 478 Matecha, Rebecca Miriam*: 3D SEISMIC REFLECTION INTERPRETATION OF IGNEOUS FEATURES IN PARIHAKA-3D, TARANAKI BASIN, NEW ZEALAND

185-4 479 Zhang, Chengcheng; Scholz, Christopher A.*; Harris, Ashley: DEEP LACUSTRINE SEDIMENTARY FILLS IN MULTI-SEGMENT RIFT BASINS: INSIGHTS FROM 3D FORWARD MODELING

185-5 480 Baldwin, Kimberly E.*; Miller, Kenneth G.; Mountain, Gregory S.: DELINEATING MID-CRETAEOUS SEISMIC AND WELL-LOG SEQUENCES TO ASSESS CARBON STORAGE POTENTIAL IN THE NORTHERN BALTIMORE CANYON TROUGH

185-6 481 Yang, Wan*: APPLICATION OF THE “STANDARD” DEPOSITIONAL SEQUENCE MODEL AT A LACUSTRINE-FLUVIAL SETTING, UPPER-TRIASSIC ZHANGJIATAN SHALE, ORDOS FORELAND BASIN, CHINA

SESSION NO. 186

T91. Chemostratigraphy: Environments, Correlation, and Time (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

186-1 482 Fluegeman, Richard H.*; Brett, Carlton E.; Pratt, Brian R.: CHEMOSTRATIGRAPHY AND THE NORTH AMERICAN STRATIGRAPHIC CODE: IS THERE A REASON FOR FORMAL UNITS?

186-2 483 McLaughlin, Patrick I.*; Brett, Carlton E.; Emsbo, Poul; Bancroft, Alyssa M.: CHEMOSTRATIGRAPHIC CALIBRATION OF TIME-ROCK CORRELATION: A NEW LEVEL OF ACCURACY FOR SEQUENCE STRATIGRAPHY

186-3 484 Barnes, B. Daviz*; Zambito, James; Peters, Shanan E.: A MULTI-PROXY GEOCHEMICAL APPROACH TO IDENTIFYING THE HANGENBERG CRISIS IN THE BAKKEN FORMATION, WILLISTON BASIN, USA

186-4 485 Zambito, James J.*; McLaughlin, Patrick I.; Haas, Lisa D.; Niemisto, Erin N.; Stewart, Esther K.: OH WHERE, OH WHERE IS THE EAU CLAIRE? USING PXRF ELEMENTAL ANALYSIS TO IDENTIFY CHEMOSTRATIGRAPHIC UNITS IN A VISUALLY MONOTONOUS QUARTZ SANDSTONE SUCCESSION

186-5 486 Rust, Tyler J.*; Miserendino, Daniel R.; Pietras, Jeffrey T.; Graney, Joseph R.: CHARACTERIZING UTICA SHALE DEPOSITIONAL PROCESSES USING PORTABLE XRF ANALYSES AND POSITIVE MATRIX FACTORIZATION
187-6 487 Oborny, Stephan C.; Bancroft, Alyssa M.; Brett, Carlton E.; Cramer, Bradley D.; USING HIGH-RESOLUTION EVENT STRATIGRAPHY (HRES) TO REVISE THE CHRONOSTRATIGRAPHIC CORRELATION OF WENLOCK-PRIDOLI (SILURIAN) STRATA OF THE CENTRAL AND WESTERN APPALACHIAN FORELAND BASIN (OHIO, WEST VIRGINIA, VIRGINIA)

187-7 488 Danielsen, Erika M.; Cramer, Bradley D.; Kieffner, Mark A.; HIGH-RESOLUTION CHRONOSTRATIGRAPHIC CORRELATION OF UPPER HOMERIAN (SILURIAN) STRATA DURING THE MULDE EVENT, MIDCONTINENT, USA

187-8 489 Fryda, Jiří; Frydová, Barbora; SILURIAN CARBON ISOTOPE CHEMOSTRATIGRAPHY: NEW DATA FROM MID PALAEO-LATITUDES OF NORTHERN PERI-GONDWANA

187-9 490 Fryda, Jiří; Frydová, Barbora; FIRST PAIRED CARBONATE-CARBON AND ORGANIC CARBON ISOTOPE RECORDS ACROSS THE LUFDORIAN (LATE SILURIAN) SUGGEST ELEVATED PCO₂ BEFORE THE LARGEST PHANEROZOIC CARBON ISOTOPE ANOMALY

187-10 491 LaBounty, Deirdre; Whalen, Michael T.; MICROFACIES AND TRACE ELEMENT VARIATION ACROSS THE FRASIAN PUNCTATA EVENT WITHIN THE BEAR BITMORE DRILL CORE (ALBERTA, CANADA)

187-11 492 Koons, Rachel C.; Stebbins, Alan G.; Darrah, Thomas; Williams, Jeremy C.; UTILIZING DOP TO UNDERSTAND DISCREPANCIES IN TOTAL ORGANIC CONTENT IN THE MARCELLUS FORMATION


187-13 494 Gill, Karen; King, David T.; SEDIMENTARY PETROLOGY AND STRONIUM ISOTOPE STRATIGRAPHY WITHIN THE COROZAL BASIN, NORTHERN BELIZE

187-14 495 Scott, Robert W.; METHODOLOGY TO CALIBRATE NUMERICAL AGES FOR CARBON ISOTOPE EVENTS: BARREMIAN-ALBIAN

187-15 496 Valencia, Daniel; Basu, Ashish; GEOCHEMICAL AND GEochRONOLOGICAL ANALYSIS OF THE CENOMANIAN-TURONIAN OCEANIC ANOXIC EVENT (OAE-2), IN MUDROCKS OF SUBSURFACE SOUTH TEXAS

187-16 497 Washburn, Alex M.; Hudson, Samuel M.; APPLICATION OF CHEMOSTRATIGRAPHY AND RE-OS GEOCHRONOLOGY TO THE MAIKOP SERIES OF EASTERN AZERBAIJAN: CONSTRASTING KURA AND SOUTH CASPIAN BASIN EVOLUTION

187-17 498 Kawamura, Kiichiro; MICROPLASTICS: DIFFUSION INTO OCEAN FLOORS AND METHODOLOGY FOR AGE DETERMINATION

SESSION NO. 187

T92. Tectonics and Sedimentation, Avulsion, and Experimental Stratigraphy, and History of Western North America: A Celebration of Paul Heller's Career (Posters) (GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; GSA Quaternary Geology and Geomorphology Division; SEPM Society for Sedimentary Geology)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

187-1 499 Leier, Andrew; Leckie, Dale A.; Currie, Lisel; Rubino, Erica; Barbeau, David L.; Drayton, Devyn; Henrick, Jayne; POST-Orogenic GRAVEL TRANSPORT AND THE DERITRAL ZIRCON PROVENANCE OF CENOZOIC FLUVIAL CONGLOMERATES ON THE CANADIAN PLAINS

187-2 500 Dechesne, Marieke; Trexier, James H.; Cole, James C.; Cashman, Patricia H.; West, Jenna M.; TECTONIC AND CLIMATIC INFLUENCES AND REGIONAL PALEOGEOGRAPHY SPANNING THE PAECOCENE – EOCENE BOUNDARY IN THE NORTH PARK – MIDDLE PARK BASIN, COLORADO

187-3 501 Baykut, Tanyel; Koral, Hayrettin; Öngen, İzvar Cökar; HOW CAN CONTINENTAL COLLISION AFFECT TO DEPOSITIONAL SETTINGS: A REVIEW FOR GEOLOGICAL EVOLUTION OF THE SOUTHERN SAKARYA BASIN, NW TURKEY

187-4 502 Lamb, Melissa A.; Beard, L. Sue; Dracos, Malia; Hanson, Andrew D.; Hickson, Thomas A.; Umhoefer, Paul J.; Karlastrom, Karl E.; Sitton, Mark E.; Dunbar, Nelia; McIntosh, William; PROVENANCE AND PALEOGEOGRAPHY OF THE RAINBOW GARDEN FORMATION AND COEVAL DEPOSITS: STRATIGRAPHIC EVIDENCE FOR TECTONIC ACTIVITY AT ~19 MA AND INTERNAL DRAINAGE INSTEAD OF THROUGHGOING PALEORIVERS ON THE SOUTHWESTERN COLORADO PLATEAU

187-5 503 King, Meghan E.; Sutfin, Nicholas A.; Rowland, Joel C.; STRATIGRAPHY OF ABANDONED CHANNELS: INFERRING RATES AND FLOW CONDITIONS USING DEPOSITIONAL SEQUENCES OF CHANNEL FILL ALONG THE FLOODPLAIN OF THE EAST RIVER, CO

187-6 504 Kent, Bryan A.P.; Huang, Chujiao; Dashtgard, Shahin E.; Gibson, H. Daniel; A SEQUENCE STRATIGRAPHIC FRAMEWORK FOR TERRESTRIAL TO SHALLOW MARINE STRATA OF THE LOWER NANAIMO GROUP, VANCOUVER ISLAND, CANADA

SESSION NO. 188

T234. What Are the Conditions That Lead to Detachment Faulting? (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
Booth #

188-1 505 Sizemore, Travis M.; Cemen, Ibrahim; Wielicki, Matthew; Stockli, Daniel F.; Heizler, Matthew; Lutz, Brandon; THERMOKINEMATIC HISTORY OF THE BADWATER TURTLEBACK IN DEATH VALLEY, CALIFORNIA

188-2 506 Qiu, Liang; Yan, Dan-Ping; Tang, Shuang-Li; Zhang, Yi-Xi; Song, Zhi-Dong; Chen, Feng; CARBONIFEROUS FORMATION OF THE MOTIANLIN EXTENSIONAL DOME (SW CHINA): STRUCTURAL AND THERMOCHRONOLOGICAL CONSTRAINTS

188-3 507 Borel, Megan; Gotti, Raphael; Casale, Gabriele; A GEOTHERMOCHRONOLOGIC INVESTIGATION OF THE COYOTE MOUNTAINS METAMORPHIC CORE COMPLEX (AZ)

188-4 508 Prior, Michael G.; Stockli, Daniel F.; Singleton, John S.; A SYNTHESIS OF THE YOUNGEST DETACHMENT FAULT-RELATED COOLING AGES IN THE LOWER COLORADO RIVER EXTENSIONAL CORRIDOR: SIMILARITIES AND DIFFERENCES BETWEEN THE THERMAL HISTORY OF METAMORPHIC CORE COMPLEXES

188-5 509 Ellsworth, G. Graham; Bartholomew, Mervin J.; JOINTS RELATIONSHIPS: ASSESSMENT OF ROTATION WHILE SLIDING OF THE HEART MOUNTAIN DETACHMENT AND DEVELOPMENT OF RELIEF AT DEAD INDIAN HILL, WYOMING

188-6 510 Koppens, Kohl M.; Gotti, Raphael; PETROLOGIC CONSTRAINTS ON THE EXHUMATION OF THE SIERRA BLANCA METAMORPHIC CORE COMPLEX (AZ)

188-7 511 Prior, Michael G.; Hayman, Nicholas W.; Lima, Rodrigo; Stockli, Daniel F.; MULTIPLE ZIRCON CRYSTALLIZATION EVENTS WITHIN THE BLACK MOUNTAINS, DEATH VALLEY CALIFORNIA; NEW INSIGHTS FROM LA-ICPMS U-PB DEPTH-PROFILING
TUESDAY, 24 OCTOBER 2017

MORNING ORAL TECHNICAL SESSIONS

SESSION NO. 189
D5. Cave and Karst Processes, Hazards, and Monitoring
8:00 AM, Washington State Convention Center, Room 612
R. Laurence Davis, Suleyman Selim Calli and Jacob Alexander Goochenour, Presiding

8:00 AM
INTRODUCTORY REMARKS

189-1 8:05 AM Ford, Derek C.*: MAHONY AND TUNAGO, ADJOINING BUT CONTRASTED KARST PLATEAUS IN THE NORTHWEST TERRITORIES OF CANADA

189-2 8:20 AM Steinmann, Hall J.*: KARST GEOMORPHOLOGY OF THE UPPER-MISSISSIPPIAN PENNINGTON FORMATION, SAVAGE GULF STATE NATURAL AREA, TENNESSEE

189-3 8:35 AM Ramsey, Carol L.*, Griffiths, Paul A.; Stokes, Tim R.*: LAND USE DISTURBANCE PATTERNS IN A BINARY RECHARGE KARST CATCHMENT: THE EXAMPLE OF NORTHERN VANCOUVER ISLAND’S KINNAN KARST UNIT

189-4 8:50 AM Panno, Samuel V.*; Luman, Donald E.*: CHARACTERIZATION OF COVER-COLLAPSE SINKHOLE MORPHOLOGY ON A GROUNDWATER BASIN-WIDE SCALE USING LIDAR ELEVATION DATA: A NEW CONCEPTUAL MODEL FOR SINKHOLE EVOLUTION

189-5 9:05 AM Kromhout, Clint*: THE FAVORABILITY OF FLORIDA’S GEOLOGY TO SINKHOLE FORMATION

189-6 9:20 AM Malaska, Michael L.*; Mitchell, Karl L.*: PREDICTING CAVE FORMATIONS IN SATURN’S MOON TITAN

9:35 AM BREAK

189-7 9:50 AM Kidanu, Shishay*; Torgashov, Evgeniy; Anderson, Neil: 3D ERT IMAGING OF SUBSURFACE STRUCTURE OF A SINKHOLE IN GREENE COUNTY, MISSOURI

189-8 10:05 AM Goochenour, Jacob Alexander*; Admassu, Yonathan: APPLYING DISCRIMINANT ANALYSIS TOWARDS AUTOMATED SINKHOLE MAPPING METHODS

189-9 10:20 AM Land, Lewis*: SINKHOLES AS TRANSPORTATION GEOHAZARDS IN MIXED EVAPORITE-SILICICLASTIC BEDROCK, SOUTHEASTERN NEW MEXICO

189-10 10:35 AM Davis, R. Laurence*: KARST HYDROLOGY ON SAN SALVADOR ISLAND, BAHAMAS: A SUMMARY OF THE RESULTS OF 31 YEARS OF RESEARCH

189-11 10:50 AM Ferrari, José Antonio*; Calux, Allan; Hiruma, Silvio Takashi; Armani, Gustavo; Karmann, Ivo: PRELIMINARY CHARACTERIZATION OF BINARY KARST AQUIFERS WITH TRACER TESTS AND TIME SERIES ANALYSIS

189-12 11:05 AM Donovan, Joseph J.*; Rega, Kevin: GROUNDWATER POTENTIAL IN THE HELDERBERG-TONOLOWAY LIMESTONE, KNOBLEY MOUNTAIN, WILLS CREEK ANTICLINE, WEST VIRGINIA

189-13 11:20 AM Muldoon, Maureen A.*; Hunt, Randall J.; Owens, David; Borchartd, Mark; Finnstahl, Aaron; Stokdyk, Joel; Spencer, Susan K.: USING AUTOSAMPLER MONITORING TO DETERMINE THE TIMING OF ENTERIC PATHGEN CONTAMINATION OF THE FRAGMENTED SILURIAN AQUIFER, NORTHEASTERN WI

SESSION NO. 190
D9. Paleontology, Conservation Paleobiology
8:00 AM, Washington State Convention Center, Room 604
Kristopher M. Kusnerik and Rowan Lockwood, Presiding

190-1 8:00 AM Kusnerik, Kristopher M.*; Means, Guy; Portell, Roger W.; Kowalewski, Michal: TRACKING CHANGES IN THE HISTORICAL ECOLOGY OF FLORIDA’S RIVERS USING RECENT AND FRESHWATER MOLLUSKS

190-2 8:15 AM Kowalewski, Michal*; Kusnerik, Kristopher M.; Bemis, Amanda; Slapczinsky, John D.; Paulay, Gustav: RECONSTRUCTING HISTORICAL ECOLOGY OF KANE’OHE BAY (HAWAII) USING SURFICIAL MOLLUSK-DOMINATED SHELL ACCUMULATIONS

190-3 8:30 AM Zuschin, Martin*: Gallmetzer, Ivo; Haselmair, Alexandra; Stachowitsch, Michael; Tomasovsky, Adam: NATURAL ENVIRONMENTAL CHANGES VERSUS ANTHROPOGENIC IMPACT IN THE NORTHERN ADRIATIC SEA DURING THE HOLOCENE TRANSGRESSION

190-4 8:45 AM Brown, Garett M.*; Larina, Ekaterina: BEYOND WATER DEPTH: ENVIRONMENTAL CONTROLS ON SHALLOW SUBTIDAL MOLLUSCAN DEATH ASSEMBLAGE COMPOSITIONS ON SAN SALVADOR ISLAND, THE BAHAMAS

9:00 AM BREAK

190-5 9:15 AM Khan, Tasnuva Ming*; Anderson, Brendan M.; Allmon, Warren; Stilwell, Jeffrey D.: PALEOCENVIRONMENTAL INTERPRETATION OF TURRITELLINE GASTROPOD-DOMINATED ASSEMBLAGES FROM THE LA MESA FORMATION (UPPER EOCENE), SEYMOUR ISLAND, ANTARCTICA

190-6 9:30 AM Thompson, Carmi Milagros; Lockwood, Rowan*; Ramsey, Kelvin W.: MOLLUSCAN PALEOCENOLOGY AND SUBSTRATE AFFINITIES ON THE MID-ATLANTIC CONTINENTAL SHELF

190-7 9:45 AM Killam, Daniel*; Clapham, Matthew E.: POLLUTION, GROWTH RATES, AND CONSERVATION OF RED SEA GIANT CLAMS USING ISOTOPE SCLEROCHRONOLOGY

190-8 10:00 AM Raga, Mikaela R.*; Huntley, John Warren: CONCH FRITTERS THROUGH TIME: HUMAN PREDATION AND POPULATION DEMOGRAPHICS OF STROMBUS GIGAS, SAN SALVADOR ISLAND, THE BAHAMAS

190-9 10:15 AM Edelman-Furstenberg, Yael*; Kidwell, Susan M.; Gilad, Ehud; Benayahu, Yehuda: UNSUSPECTED LOSS OF SEAGRASS COMMUNITIES BASED ON MOLLUSCAN DEATH ASSEMBLAGES: HISTORICAL BASELINE SHIFT IN THE TROPICAL GULF OF EILAT (AQABA), RED SEA

10:30 AM BREAK

190-10 10:45 AM Tennakoon, Shaminidri Dinusha*; Lindberg, William; Kowalewski, Michal: MOLLUSK DEATH ASSEMBLAGES AS A BASELINE FOR ASSESSING COMMUNITY SHIFTS IN ARTIFICIAL REEFS: A COMPARISON OF DEAD AND LIVING MOLLUSK ASSEMBLAGES IN THE SUWANNEE REGIONAL REEF SYSTEM, FLORIDA

190-11 11:00 AM Kidwell, Susan M.*; Meadows, Caitlin A.; Lowe, Christopher J.; Lyons, Shirley; Macdonald, Tara A.; Esquivel, Kelvin W.; Haralidiotiri, Eva; Vishny, David: USING BIVALVE LIVE-DEAD MISMATCH TO EVALUATE THE FOOTPRINT OF MUNICIPAL WASTEWATER IN MARINE WATERS, CONTINENTAL SHELF, VICTORIA, BRITISH COLUMBIA

190-12 11:15 AM Meadows, Caitlin A.*: HIGH-LATITUDE, BIOMASS, AND RECENT CLIMATE CHANGE, TESTING THE POWER OF LIVE DEAD DiscordANCE IN THE PACIFIC ARCTIC

190-13 11:30 AM Zimmt, Joshua B.*; Kidwell, Susan M.; Lockwood, Rowan; Thirlwall, Matthew: ESTIMATING THE DURATION OF STRATIGRAPHICALLY CONDENSED MIOCENE MARINE SHELL BEDS USING STRONTIUM ISOTOPE
Tuesday, 24 October 2017

SESSION NO. 191
D40. Structural Geology and Tectonics: Advances in Understanding Fault Systems, Plate Boundaries and Deformation: Observations and Experiments

8:00 AM, The Conference Center, Tahoma 3
Mattathias D. Needle and Veronica Sanchez, Presiding

8:00 AM INTRODUCTORY REMARKS

190-1 8:05 AM Subia, Tai Antonia*; Pavlis, Terry L.; Brunner, Benjamin: CARBONATE UNITS IN SURPRISE CANYON – A KEY TO UNDERSTANDING THE TECTONIC PAST OF THE PANAMINT MOUNTAINS

190-2 8:20 AM Hamilton, Matt**; Evans, Stacey; Engel, Michael; Elmore, Douglas: EVIDENCE FOR DEEP FLUID PENETRATION INTO THE PRECAMBRIAN BASEMENT, OKLAHOMA

190-3 8:35 AM Moskalenko, Artem*: PALEOSTRESS ESTIMATION BY FAULT KINEMATIC ANALYSIS BASED ON 3D SEISMIC DATA

190-4 8:50 AM Sanchez, Veronica*; Quisenberry, James; Alarcon-Canto, Felipe; Knavek, Joshua: STRUCTURAL ANALYSES OF THE TASCOTAL MESA FAULT, CHRISTMASMTS., WEST TEXAS

190-5 9:05 AM Sun, Ke*: Chen, Qingshua; Liu, Yin; Zhang, Jingjing: 3D GEOMETRIC AND KINEMATICS CHARACTERISTICS OF A SEGMENTED NORMAL FAULT ZONE: A CASE STUDY FROM THE GAOQING-PINGNAN FAULT ZONE OF WESTERN DONGYING DEPRESSION, BOHAI BAY BASIN, CHINA

190-6 9:20 AM Liu, Yiduo A.*; Murphy, Michael A.; van Wijk, Jolante; Andrea, Ross A.: RIFT INITIATION AND EVOLUTION RECORDED IN THE OBLIQUE TUSAS-ABIOQUÍ SEGMENT OF THE RIÓ GRANDE RIFT, NORTH-CENTRAL NEW MEXICO

190-7 9:35 AM Elling, Reece P.*; Stein, Carol A.; Stein, Seth; Kley, Jonas; Keller, G. Randy; Wyssen, Michael: THE MIDCONTINENT RIFT: A RIFT-LIP HYBRID

190-8 9:50 AM BREAK

190-9 10:05 AM Wilkinson, Bruce*: McElroy, Brandon; Drummond, Carl: BROKEN SHEETS – ON THE NUMBERS AND AREAS OF TECTONIC PLATES AND OTHER TILES


190-12 11:00 AM Cooke, Michele L.*; Teoneboehn, Kevin; Beyer, Jennifer L.: DEVELOPMENT OF NON-STEADY STATE SLIP PARTITIONING UNDER OBLIQUE CONVERGENCE (Invited Presentation)

190-13 11:30 AM Birren, Thomas*: Reber, Jacqueline E.: EXPERIMENTAL ANALYSIS OF SEMI-BRITTLE RHEOLOGY: IMPLICATIONS FOR STRAIN TRANSIENTS

11:45 AM CONCLUDING REMARKS
SESSION NO. 194

T10. Groundwater Influenced Ecosystems: Springs, Gaining Streams, and Terrestrial Ecosystems (GSA Hydrogeology Division; GSA Karst Division; GSA Geobiology & Geomicrobiology Division)

8:00 AM, Washington State Convention Center, Room 615/616/617
Brad David Wolaver, Laura J. Crossev, Rebecca J. Frus and Steven P. Loheide II, Presiding

11:45 AM DISCUSSION

SESSION NO. 194

T14. Approaches to Applied Modeling for Industry and the Public (GSA Hydrogeology Division; GSA Geology and Society Division; National Ground Water Association (NGWA); GSA Environmental and Engineering Geology Division)

8:00 AM, Washington State Convention Center, Room 613/614
Randy Hunt, Henk Haitjema and Jordan Read, Presiding

11:45 AM CONCLUDING REMARKS

194-1 8:10 AM Zhu, Yonghui*: Zhan, Hongbin; Burns, Erick; Jin, Menggui; Mangan, Michael; Ingelbrecht, Steven E.: UNDERSTANDING TRANSPORT IN DIFFUSION-LIMITED SYSTEMS

194-2 8:25 AM Stewart-Maddox, Noah*: Frisbee, Marty D.; Andronicos, Christopher L.; Genereux, David P.; Meyers, Zachary P.: USING THE GEOCHEMICAL KINETICS AND 87SR/86SR RATIOS OF A COMPLEX REWORKED AQUIFER TO IDENTIFY THE REGIONAL EXTENT OF INTERBASIN GROUNDWATER FLOW AND ITS IMPACT ON REGIONAL BASEFLOW GENERATION

194-3 8:40 AM Belcher, Wayne R.*; Sweetkind, Donald S.; Hopkins, Candice; Poff, Megan E.: HYDROGEOLOGICAL CONCEPTUALIZATION OF THE GROUNDWATER SYSTEM OF TECOPA BASIN, CALIFORNIA

194-4 8:55 AM McGibbon, Chris*: Crossev, Laura J.; Karlstrom, Karl; Parson, Mark: BASELINE MONITORING AND USE OF NATURAL TRACERS IN GRAND CANYON SPRINGS

194-5 9:10 AM Robertson, Wendy M.*; Allen, John; Wolaver, Brad David; Hewett, Brent; Sharp, John M.: RESPONSE OF WATER QUALITY IN SAN SOLOMEN SPRINGS TO MESOSCALE PRECIPITATION EVENTS: IMPLICATIONS FOR GROUNDWATER SUSTAINABILITY AND HEALTH OF AQUATIC ECOSYSTEMS IN TRANS-PECOS, TX, USA

194-6 9:25 AM French, Larry*: Anaya, Roberto; Weinberg, Andrew: GROUNDWATER MANAGEMENT IN TEXAS: CONSIDERING FLOWS TO SPRINGS AND STREAMS

194-7 9:40 AM Urbanczyk, Kevin*: Bennett, Jeffery: THE RIO GRANDE WILD AND SCENIC RIVER - A GROUNDWATER DEPENDENT ECOSYSTEM

9:55 AM BREAK

194-8 10:10 AM Springer, Abraham E.*; Stevens, Lawrence E.; Ledbetter, Jeni: THE IMPORTANCE OF SPRINGS AS ECOSYSTEMS AND IN LANDSCAPE CONSERVATION PLANNING (Invited Presentation)

194-9 10:30 AM Miller, Gretchen R.*; Saville, Cody; Gou, Si; Swilley, Jackson: MODELING GROUNDWATER USE BY PHREATOPHYTES: FROM SIMPLE TO COMPLEX APPROACHES (Invited Presentation)

194-10 10:50 AM Feinstein, Daniel T.; Hunt, Randall J.*; Hart, David J.; Gatzke, Sarah: USING GROUNDWATER MODELS TO FORECAST EFFECTS OF FENS IN HUMID TEMPERATE CLIMATES

194-11 11:05 AM Malzone, Jonathan M.*: MORPHOLOGICAL CONTROL OF SEASONAL AND SUB-SEASONAL GROUNDWATER FLOW IN GEOGRAPHICALLY ISOLATED WETLANDS


11:35 AM DISCUSSION

11:45 AM DISCUSSION
SESSION NO. 195
T20. The Critical Zone As Heterogeneous Media: Implications for Physical, Chemical, and Biological Processes (GSA Hydrogeology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology & Geomicrobiology Division; GSA Karst Division)

8:00 AM, Washington State Convention Center, Room 618/619/620

Wendy M. Robertson, Nicole West, Zsuzsanna Balogh-Brustad and Michael H. Young, Presiding

8:00 AM INTRODUCTORY REMARKS

195-1 8:05 AM Sullivan, Pamela L.*; Stops, Marvin Wes; Macpherson, G.L.; Li, Li; Dodds, Walter K.: UNRAVELING HOW LANDSCAPE HETEROGENEITY ALTERS CONCENTRATION DISCHARGE BEHAVIOR IN CARBONATE HEADWATER STREAMS (Invited Presentation)

195-2 8:25 AM Anderson, Suzanne P.*; Włostowski, Adam; Murphy, Sheila; Rock, Nathan D.; Hoffman, Claire: RUNOFF RESPONSE IN A SEMI-ARID HEADWATER DRIVEN BY CATCHMENT-SCALE WATER MOVEMENT

195-3 8:40 AM Lukenbach, Maxwell C.*; Spencer, Christopher S.; Mendoza, Carl; Devito, Kevin J.; Landhauser, Simon M.; Carey, Sean K.: RESOLVING THE NEED FOR GROUNDWATER RECHARGE VERSUS FOREST PRODUCTIVITY IN A RECLAIMED WATERSHED USING NUMERICAL MODELLING

195-4 8:55 AM Tune, Alison K.*; Cargill, Samantha; Murphy, Colleen; Hahm, W. Jesse; Dietrich, William E.; Rempe, Daniella M.: PREFERENTIAL FLOW IN THE CRITICAL ZONE: DIRECT OBSERVATIONS OF THE SPATIAL AND TEMPORAL PATTERNS OF FLUID COMPOSITION IN VARIBLY SATURATED WEATHERED BEDROCK

195-5 9:10 AM Patton, Erik M.; Adam, Claudia; Steward, David R.; Datta, Saugata: MODELING THE EFFECT OF LOW-PERMEABILITY LAYERS ON VADOSE WELL RECHARGE RATES

195-6 9:25 AM Pfeffer, Marco*; Howard, Alan D.; Heimsath, Arjun M.; Morgan, Alexander M.; Amundson, Ronald: LANDSCAPE RESPONSE TO A CENTURY SCALE RAINFALL IN THE ATACAMA DESERT, CHILE

9:40 AM BREAK

195-7 9:55 AM Keller, C. Kent*: CARBON EXPORTS FROM THE CRITICAL ZONE

195-8 10:10 AM Rempe, Daniella M.*; Druhan, Jennifer L.; Wang, Jia J.; Cargill, Samantha; Murphy, Colleen; Schmidt, Logan; Hahm, W. Jesse; Crutchfield-Peters, Kelsey L.; Dawson, Todd E.; Dietrich, William E.: INVESTIGATING COUPLED HYDROLOGIC AND BIOGEOCHEMICAL FLUXES IN THE CRITICAL ZONE VIA DISTRIBUTED SENSING AND SAMPLING IN VARIBLY SATURATED, WEATHERED BEDROCK (Invited Presentation)

195-9 10:30 AM Roman-Sanchez, Andrea*; Laguna, Ana; Giraldez, Juan Vicente; Reimann, Tony; Peña, Adolfo; Willinga, Jacobi; Vanwalleghem, Tom: THE POTENTIAL OF LUMINESCENCE TECHNIQUES IN GEOMORPHOLOGICAL PROCESSES

195-10 10:45 AM Wood, Stephen E.*: A MECHANISTIC, MICROPHYSICAL MODEL FOR THE EFFECTIVE THERMAL CONDUCTIVITY OF SOILS

195-11 11:00 AM Chojna, Sara Irena*; Skidler, Arif M.; Brum, Jose; Liu, Xin-Chen; Kelly, Elizabeth; Clifford, Dustin M.; Londono, Carlos E. Castano: GEOCHEMICAL ANALYSIS OF FE-ENRICHED SOIL OF MEHERRIN, VIRGINIA

195-12 11:15 AM Palmes, John*: SAND ON THE WEST SHORE OF GLACIAL MENденHALL LAKE APPEARS TO BE PETRIFIED PEAT, SILICATES AND MAGNETITE REPLACE ORGANIC CARBON

195-13 11:30 AM Lybrand, Rebecca*; Austin, Jason; Schroeder, Paul A.; Zaharescu, Dragos; Gallery, Rachel: CROSS-SCALE PERSPECTIVES ON MINERAL WEATHERING IN THE CRITICAL ZONE (Invited Presentation)

11:50 AM DISCUSSION

SESSION NO. 196
T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present I (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)

8:00 AM, Washington State Convention Center, Room 609

Lesleigh Anderson and Miriam C. Jones, Presiding

8:00 AM INTRODUCTORY REMARKS

196-1 8:15 AM Loisel, Julie*; MacDonald, Glen M.; Thomson, Marcus: THE FUTURE ‘WARM LIA’ SCENARIO ACROSS THE AMERICAN SOUTHWEST

196-2 8:30 AM Goman, Michelle F.*; Ingram, Lynn; Malamud-Roam, Frances: A LARGE FLOOD EVENT AT -1410 C.E. RECORDED IN PETALUMA MARSH, CALIFORNIA

196-3 8:45 AM Zimmerman, Susan Hergesell*; Hemmings, Sidney R.; Starratt, Scott W.: HOLOCENE FLUCTUATIONS OF MONO LAKE, CALIFORNIA IN THE CONTEXT OF REGIONAL PALEOClimatic CHANGE

196-4 9:00 AM Wortham, Barbara E.*; Montanez, Isabel P.; Swart, Peter K.: FOSSILIZED DRIP-WATER FROM A SIERRA NEVADA CAVE REVEALS CHANGING CONDITIONS OVER THE NORTH PACIFIC DURING THE LAST DEGLACIATION

196-5 9:15 AM Oster, Jessica L.*; Weisman, Isabelle E.; Sharp, Warren: GLACIAL TO HOLOCENE CALIFORNIA CLIMATE INFERRED FROM TWO MULTI-PORxy SPELEOTHEM RECORDS

196-6 9:30 AM Myhre, Sarah E.*; Hilla, Tessa M.; Yasuhara, Morikai; Kennett, James; Deutsch, Curtis: LATE PLEISTOCENE OSTRACOD RESPONSES TO MILLENNIAL CLIMATE EVENTS OF DEOXYGENATION AND SEA LEVEL RISE IN THE CALIFORNIA BORDERLAND

9:45 AM BREAK

196-7 10:00 AM Kawahata, Hodaka*: THE COLDEST CLIMATE IN THE WESTERN NORTH PACIFIC DURING THE LAST 27KYR - THE FIRST APPEARANCE OF THE WORLD OLDEST STONE ARROWHEADS AND POTTERY IN HEINRICHTYPE I-

196-8 10:15 AM Lechler, Alex R.*; Huntington, Katharine; Breecker, Dan O.; Sweeney, Mark R.; Schwartz, Andrew J.: CARBONATE CLUMPED ISOTOPE RECORD OF LGM-HOLOCENE CLIMATE CHANGE ACROSS THE PACIFIC NORTHWEST US: INSIGHTS FROM LOESS-PALEOSOLS AND PLUVIAL LAKES

196-9 10:30 AM Praetorius, Summer*; Mix, Alan; Walczak, Maureen; McKay, Jennifer L.; Du, Jianghui: NORTHEAST PACIFIC COOLING AND FRESHENING EVENTS DURING EARLY HEINRICHI STADIAL 1 AND THE YOUNGER DRYAS: LINKS TO THE MISSOULA MEGAFLOODS? (Invited Presentation)

196-10 10:50 AM Beilman, David*: Massa, Charly; Nichols, Jonathan; Elison Tirm, Oliver: HOLOCENE HYDROCLIMATE CHANGE EVIDENCE FROM THE NORTH CENTRAL PACIFIC: WINDWARD MONTANE MOLOKAI, HAWAII

196-11 11:05 AM Yesner, David R.*: HOLOCENE PALEOENVIRONMENTAL HISTORY OF THE NORTHERN SEA OF JAPAN IN RELATION TO HUMAN OCCUPATION OF SOUTHERN PRIMORIE (RUSSIA) AND NORTHERN HOKKAIDO (JAPAN)

196-12 11:20 AM Feng, Zhaodong*: HOLOCENE CLIMATE VARIATIONS IN THE CORE AREA OF CENTRAL ASIA DRY LANDS

11:35 AM DISCUSSION
### SESSION NO. 197

**T56. Mass Extinctions I: Past, Present, and Future?**

(Paleontological Research Institution; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Cushman Foundation for Foraminiferal Research; Paleontological Society; Volcanic and Magmatic Studies Group)

8:00 AM, Washington State Convention Center, Room 608

David P.G. Bond, Thierry Adatte, Gerta Keller and Dougal A. Jerram, Presiding

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<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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<tr>
<td>197-1</td>
<td>8:00 AM</td>
<td>Padian, Kevin*; Keller, Gerta; Eddy, Michael P.;</td>
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<td>197-2</td>
<td>8:15 AM</td>
<td>Buynevich, Ilya V.*; Haslott, Stephen T.; Wiest, Logan A.; Flagg, Peter P.:</td>
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<td>197-3</td>
<td>8:30 AM</td>
<td>Rovelli, Remy*; Moore, Jason R.; Myers, Corinne:</td>
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<td>197-4</td>
<td>8:45 AM</td>
<td>Matsunaga, Kelly*; Smith, Selena Y.; Manchester, Steven; Srivastava, Rashmi; Bonde, Suresh D.:</td>
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<td>197-5</td>
<td>9:00 AM</td>
<td>Witts, James D.*; Landman, Neil H.; Garb, Matthew P.; Thibault, Nicolas; Jones, David S.; Larina, Ekaterina; Yancey, Thomas E.:</td>
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<td>197-6</td>
<td>9:15 AM</td>
<td>Wheeler, Elisabeth*; Srivastava, Rashmi; Manchester, Steven; Baas, Pieter:</td>
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<td>197-7</td>
<td>9:30 AM</td>
<td>Dzombak, Rebecca M.*; Sheldon, Nathan M.; Mohabey, Dhananjay; Samant, Bandana; Matsunaga, Kelly:</td>
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<td>197-8</td>
<td>9:45 AM</td>
<td>Smith, Stephanie M.*; Sprain, Courteney J.; Wilson, Gregory P.; Clemens, William A.; Renne, Paul R.:</td>
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<td>197-9</td>
<td>10:00 AM</td>
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<td>197-10</td>
<td>10:15 AM</td>
<td>Schoene, Blair*; Samperton, Kyle Michael; Eddy, Michael P.; Keller, Gerta; Adatte, Thierry; Khodayem, Hassan:</td>
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<td>197-11</td>
<td>10:30 AM</td>
<td>Vanderkluyse, Loyal*; Barber, Nicholas; Woloszynek, Stephen; O'Connor, Michael P.; Mittal, Tushar; Sealing, Christine R.; Sprain, Courtney J.; Renne, Paul R.:</td>
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<td>197-12</td>
<td>10:45 AM</td>
<td>Kale, Vivek*; Pande, Kanchan:</td>
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<td>197-13</td>
<td>11:00 AM</td>
<td>Adatte, Thierry*; Keller, Gerta; Font, Eric; Mbabi Bitchong, André; Schoene, Blair; Samperton, Kyle Michael; Eddy, Michael Patterson:</td>
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### SESSION NO. 198

**T56. Exceptionally Preserved Proterozoic–Early Paleozoic Fossils**

(Paleontological Society; GSA Geobiology & Geomicrobiology Division; Paleontological Research Institution)

8:00 AM, Washington State Convention Center, Room 607

Ross P. Anderson, Lida G. Tarhan and Sean McMahon, Presiding

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<tr>
<th>Time</th>
<th>Speaker(s)</th>
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<tr>
<td>198-1</td>
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<td>Ye, Qin*; Tong, Jinnan; Xiao, Shuhai; An, Zhihui; Hu, Jun; Tian, Li:</td>
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<td>198-2</td>
<td>8:15 AM</td>
<td>Pang, Ke*: Chen, Zhe; Zhou, Chuanming; Yuan, Xunhai; Xiao, Shuhai:</td>
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<td>198-3</td>
<td>8:30 AM</td>
<td>Evans, Scott D.*; Droser, Mary L.; Gehling, James G.:</td>
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<td>198-4</td>
<td>8:45 AM</td>
<td>Gibson, Brandt M.*; Schiffbauer, James D.; Darroch, Simon A.F.:</td>
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<td>198-5</td>
<td>9:00 AM</td>
<td>Tarhan, Lidya G.*; Hood, Ashleigh v.S.; Droser, Mary L.; Gehling, James G.; Briggs, Derek E. G.:</td>
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<td>198-6</td>
<td>9:15 AM</td>
<td>Xiao, Shuhai*: Hochella, Michael F.:</td>
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<td>198-7</td>
<td>9:30 AM</td>
<td>Strange, Michael A.*; Schiffbauer, James D.; Ren, Minhaua; Rowland, Stephen M.:</td>
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<td>198-8</td>
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<td>198-9</td>
<td>10:00 AM</td>
<td>Smith, Emily F.*; Nelson, Lyle L.:</td>
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<td>198-10</td>
<td>10:15 AM</td>
<td>Wood, Rachel A.*; Bowyer, Fred; Penny, Amelia M.:</td>
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<td>10:30 AM</td>
<td>Tang, Qing*: Xiao, Shuhai; Wan, Bin; Yuan, Xunhai:</td>
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<td>10:45 AM</td>
<td>Jacquet, Sarah M.*; Betts, Marissa J.; Brock, Glenn A.:</td>
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<td>198-13</td>
<td>11:00 AM</td>
<td>Bath Enright, Orla G.*; Minter, Nic J.; Sumner, Esther J.; Mangano, Maria Gabriela; Buatois, Luis A.:</td>
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SESSION NO. 199

T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles (GSA Geobiology & Geomicrobiology Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Paleontological Society; GSA Limnogeology Division)

8:00 AM, Washington State Convention Center, Room 606

Jonathan P. Wilson, Caroline A.E. Strömbäck and Patrick J. Frings, Presiding

199-1  8:00 AM  Michalopoulos, Panagiotis*; Krause, Jeffrey W.; Pickering, Rebecca A.; Rouselaki, Eleni; Taillefer, Martaal; Rabouille, Christophe; Ragueneau, Olivier; Corvaisier, Rudolph: MICROBIAL EFFECTS ON EARLY DIAGNOSTIC SI CYCLING IN DEEP-SEA AND DELTAIC SEDIMENTS


199-3  8:30 AM  Moynihan, William C.*; Tapanila, Leif: SPONGES, CONCRETIONS AND CHERT IN THE PHOSPHORIA FORMATION, WYOMING

199-4  8:45 AM  Trower, Elizabeth J.*; Fischer, Woodward W.: THE ROLE OF SILICA AS A CHEMICAL SEDIMENT PRIOR TO THE ADVENT OF METAZOAN BIOMINERALIZATION (Invited Presentation)

9:05 AM DISCUSSION

199-5  9:15 AM  Johnson, Clark M.*; Zheng, Xin-Yuan; Beard, Brian L.: NEW INSIGHTS INTO LOW-TEMPERATURE SI ISOTOPE EXCHANGE KINETICS AND FRACTIONATING USING LABORATORY EXPERIMENTS

199-6  9:30 AM  Hayles, Justin A.*; Cao, Xiaobin; Gao, Caihong; Liu, Yun; Bao, Huiming; Homann, Martin; Yeung, Laurence Y.: THEORETICAL CALIBRATION OF THE QUARTZ-WATER TRIPLE OXYGEN ISOTOPE THERMOMETER

199-7  9:45 AM  Chen, Xinyang*; Chatzizisis, Athanasios; Chen, Xinyang*; Saitz, Hans; Lapen, Thomas J.: SILICON ISOTOPE VARIATIONS IN SILICEOUS SINTER DEPOSITS IN HOT SPRINGS: EXAMPLES FROM YELLOWSTONE NATIONAL PARK, WYOMING, U.S.A

199-8  10:00 AM  Frings, Patrick J.*; Fontorbe, Guillaume; Conley, Daniel J.: INTERPRETATION OF SILICON ISOTOPE RECORDS IN MARINE SEDIMENTS

199-9  10:15 AM  Cooke, Julia*: PLANTS AND SILICON: A MODERN ECOLOGICAL PERSPECTIVE (Invited Presentation)

10:35 AM DISCUSSION

199-10  10:45 AM  Wilson, Jonathan P.*; Trembath-Reichert, Elizabeth; McGlynn, Shawn E.; Fischer, Woodward W.: A GEOBIOLOGICAL PERSPECTIVE ON THE EVOLUTION OF SILICA BIOMINERALIZATION IN PLANTS

199-11  11:00 AM  Stromberg, Caroline A.E.*; Brightly, William H.; Di Stilio, Verónica; Song, Zhaoliang; Thummel, Ryan: EVOLUTION OF SILICA ACCUMULATION STRATEGIES IN LAND PLANTS AND THE ADAPTIVE VALUE OF PHYTOHITS

199-12  11:15 AM  Thummel, Ryan*: Stromberg, Caroline A.E.; Brightly, William H.: EVOLUTION OF PHYTOHIT DEPOSITION IN MODERN BRYOPHYES—IMPLICATIONS FOR EARLY LAND PLANTS

SESSION NO. 200

T75. Planetary Climate Disruption Demands Urgent Global Policy Action (GSA Quaternary Geology and Geomorphology Division; GSA Energy Geology Division; GSA Environmental and Engineering Geology Division; GSA Geology and Society Division; GSA Hydrogeology Division)

8:00 AM, Washington State Convention Center, Room 611

George T. Stone and Jennifer L. Pierce, Presiding

200-1  8:00 AM  Steig, Eric J.*: ANTARCTICA AND FUTURE SEA LEVEL RISE

200-2  8:15 AM  Horton, Benjamin P.*; Engelhart, Simon E.; Little, Christopher M.; Kemp, Andrew C.; Kopp, Robert E.; Mitrovica, Jürg X.: COMMON ERA CONSTRAINTS ON FUTURE SEA-LEVEL RISE (Invited Presentation)

200-3  8:35 AM  Thompson, Lonnee G.*: ACCELERATING LOSS OF GLACIERS ON THE WORLD’S HIGHEST MOUNTAINS AND SOCIETAL CONSEQUENCES

200-4  8:55 AM  Pierce, Jennifer L.*; Gibble, Katie; Stallings, Ksenia; Wilkins, David; Matson, Samuel: “TAG, YOU’RE IT!” ENGAGING K-6 STUDENTS TO CLOSE THE CLIMATE SCIENCE KNOWLEDGE GAP

200-5  9:10 AM  Bean, Jessica R.*; Oshry, Aleeza; Marshall, Charles R.: SYSTEMIC METHODS FOR TEACHING AND COMMunicATING CLIMATE CHANGE: NEW PEDAGOGICAL TOOLS FOR SCIENTISTS AND EDUCATORS

200-6  9:25 AM  Schweitzer, Alexa*: STUDENT-LED LOCAL AND INTERNATIONAL COLLABORATION ON CLIMATE MONITORING UTILIZING ARDUINO TECHNOLOGY AND OPEN SOURCE PROGRAMMING

200-7  9:40 AM  Stone, George T.*: IMPACTS OF CLIMATE CHANGE: PROFESSIONAL RESPONSIBILITIES TO REPORT, TO WARN AND TO RECOMMEND

200-8  9:55 AM  White, Kasey S.*: GSA INSIDE THE BELTWAY: AN INSIDE PERSPECTIVE ON INTERSECTIONS BETWEEN CLIMATE SCIENCE AND CLIMATE POLICY

200-9  10:10 AM  Mann, Michael E.*; Schurer, Andrew; Hawkins, Edward; Tett, Simon; Hegerl, Gabrielle: IMPORTANCE OF THE PRE-INDUSTRIAL BASELINE IN DETERMINING THE LIKELIHOOD OF EXCEEDING THE PARIS LIMITS (Invited Presentation)

10:30 AM DISCUSSION

SESSION NO. 201

T79. Geologic Energy Research I (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)

8:00 AM, Washington State Convention Center, Room 602/603

Laura Ruhl, J. Fred Mclaughlin, Marc L. Buursink and Brett J. Valentine, Presiding

201-1  8:00 AM  Eble, Cortland*: Nelson, John; Elrick, Scott; Greb, Steve; DiMichele, William: PALYNOLOGY, PETROLOGY AND GEOCHEMISTRY OF THE SPRINGFIELD COAL BED IN PROXIMITY TO A PALEOCHANNEL, EASTERN INTERIOR (ILLINOIS) BASIN, USA

201-2  8:15 AM  Greb, Stephen F.*; Eble, Cortland F.: DIFFERENCES IN THE DURATION OF CARBONIFEROUS EUSTATIC CYCLES MAY EXPLAIN SOME DIFFERENCES IN COAL AND LITHOCYCLES DISTRIBUTION THROUGH TIME
SESSION NO. 203

T105. Building an Inclusive Geoscience Community Today for Tomorrow I (GSA Geoscience Education Division; GSA Diversity in the Geosciences Committee; GSA Geology and Society Division; National Association of Black Geoscientists)

8:00 AM, Washington State Convention Center, Room 2A

Stephen K. Boss, Alisha R. Morris, Sadredin C. Moosavi, Wendy Smythe and Darryl Reano, Presiding

8:00 AM INTRODUCTORY REMARKS

203-1  8:15 AM Suiter, Marilyn J.*; Jesse, Jolene K.: INCLUSION ACROSS THE NATION OF COMMUNITIES OF LEARNERS OF UNDER-REPRESENTED DISCOVERERS IN ENGINEERING AND SCIENCE (INCLUDES)

203-2  8:30 AM Myles, LaToya*; Brinkworth, Carolyn; Dixon, P. Grady; Kaufman, Eric K.; Guardokus Fisher, Kathleen; Simmons, Denise R.: GEO OPPORTUNITIES FOR LEADERSHIP IN DIVERSITY (GOLD): HEARTS OF GOLD

203-3  8:45 AM Williams, Billy M.*; McPhaden, Michael J.; Gundersen, Linda C.; Davidson, Eric; McEntee, Chris; Townsend, Randy: REDEFINING EXPECTATIONS FOR INCLUSIVE EARTH AND SPACE SCIENCE COMMUNITIES - STRATEGIES AND ACTIONS TO IMPACT SEXUAL HARASSMENT AND OTHER WORK CLIMATE ISSUES

203-4  9:00 AM Taylor, Tah-Shana A.*: HARNESSING BLACK LEADERSHIP AND BUILDING RELATIONSHIPS: LESSONS LEARNED FROM A DECADE OF WORKING WITHIN BLACK COMMUNITIES

203-5  9:15 AM Houlton, Heather R.*; Chen, Jason; Brinkworth, Carolyn: GEOSCIENCE DIVERSITY EXPERIENTIAL SIMULATIONS (GEODES)

203-6  9:30 AM Lerback, Jory C.*; St. Pierre, Gabriela: INCLUSIVE EARTH: A GRASSROOTS APPROACH TO BUILDING A PROFESSIONAL AND DIVERSE COMMUNITY (Invited Presentation)
203-7 9:45 AM  Heise, Elizabeth A.: INCREASING THE DIVERSITY IN THE FACULTY AT A GROWING EMERGING RESEARCH INSTITUTION

10:00 AM  BREAK


203-9 10:30 AM  Carabajal, Ivan G.; Atchison, Christopher L.: UNDERSTANDING FIELD-BASED ACCESSIBILITY FROM THE PERSPECTIVE OF GEOSCIENCE DEPARTMENTS

203-10 10:45 AM  Lamb, Diedre A.; Bennett, Richard A.: ACCESSIBLE EARTH: ENHANCING DIVERSITY IN THE GEO SCIENCES THROUGH ACCESSIBLE COURSE DESIGN

203-11 11:00 AM  Collins, Trevor*; Crompton, Helen; Marshall, Anita M.; Whitmeyer, Steven; Atchison, Chris; Pyle, Eric J.; Carabajal, Ivan G.; Platek, Jennifer; Eriksson, Susan C.: INVESTIGATING MODELS OF TECHNOLOGY-ENHANCED GROUP WORK ON AN INCLUSIVE INTERNATIONAL FIELD TRIP

203-12 11:15 AM  Bennett, Richard A.; Lamb, Diedre A.: ACCESSIBLE EARTH: AN ACCESSIBLE STUDY ABROAD CAPSTONE FOR THE GEO SCIENCE CURRICULUM

203-13 11:30 AM  Snow, Eleanor*: Childs, Dawn; Robinson, Craig R.; Wilson, Tamara: ENGAGING YOUNG ADULTS WITH COGNITIVE DISABILITIES IN USGS SCIENCE: A PARTNERSHIP TO PROMOTE INCLUSION

203-14 11:45 AM  Mobasher, Katayoun*; Kraemer, Carol Ann; Turk, Jeff; Moore, Logan O.: STEM LABORATORY ACTIVITIES AND FIELD-BASED LEARNING ENVIRONMENTS FOR STUDENTS IN GEO SCIENCES WITH ORTHOPEDIC AND SENSORY DISABILITIES

SESSION NO. 204

T115. Hands-On Teaching Demonstrations that Combine Geoscience and Societal Issues: Audience Participation Requested! (National Association of Geoscience Teachers; GSA Geoscience Education Division)

8:00 AM, Washington State Convention Center, Room 3A

Elizabeth A. Nagy-Shadman and Anne E. Egger, Presiding

8:00 AM  INTRODUCTORY REMARKS

204-1 8:05 AM  Nagy-Shadman, Elizabeth A.; Fadem, Cynthia M.: USING ROLE-PLAYING TO HELP STUDENTS APPRECIATE THE COMPLEXITIES OF CLIMATE MODELING

204-2 8:20 AM  Walker, Becca; Stearns, Leigh A.; Pratt-Sitaula, Beth: USING GEODETIC DATA TO INVESTIGATE SOCIETALLY RELEVANT GEO SCIENCE PROBLEMS IN INTRODUCTORY COURSES: GETS’ S ICE MASS AND SEA LEVEL CHANGES MODULE

204-3 8:35 AM  Doner, Lisa A.; Stapleton, Patricia; Motola, Lorraine: MAJOR STORM RISKS AND CLIMATE CHANGE, EMPOWERING COMMUNITY RESILIENCE THROUGH APPLIED ASPECTS OF GEOLOGY AND GEOGRAPHY

204-4 8:50 AM  Resor, Phillip G.; Dunn, Allison L.; MacKay, Robert M.: HANDS ON WITH EARTH’S THERMOSTAT, A DATA-RICH INTRODUCTION TO THE CLIMATE SYSTEM FOR INTRODUCTORY COLLEGE SCIENCE COURSES (Invited Presentation)

204-5 9:05 AM  Phillips, Michael A.; Darby, Kate; Phillips, Lisa: MAPPING THE ENVIRONMENT WITH SENSORY PERCEPTION: SENSING AND RECORDING ENVIRONMENTAL DATA (Invited Presentation)

204-6 9:20 AM  Phillips, Lisa*; Darby, Kate; Phillips, Michael A.: MAPPING THE ENVIRONMENT WITH SENSORY PERCEPTION: USING CASE STUDIES TO CRITICALLY INVESTIGATE QUALITATIVE AND QUANTITATIVE DATA ANALYSIS, COLLECTION, AND INQUIRY

204-7 9:35 AM  Fortner, Sarah K.; Scherer, Hannah H.; Murphy, Martha: HELPING STUDENTS ADVOCATE FOR THE EARTH USING INTEGRATE MODULES (Invited Presentation)

SESSION NO. 205

T120. Making Thinking Visible: Actions and Expressions of Problem Solving and Decision Making in the Geosciences (GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)

8:00 AM, Washington State Convention Center, Room 2B

Eric M. Riggs, Lauren N. Holder and Angela Van Boening, Presiding

8:00 AM  INTRODUCTORY REMARKS

205-1 8:05 AM  McNeal, Karen*: EXPLORING THE APPLICATIONS OF EYE TRACKING AND SKIN BIOSENSORS IN GEO SCIENCE EDUCATION (Invited Presentation)

205-2 8:25 AM  Atkins, Rachel M.; McNeal, Karen S.: VISUALIZING STUDENT NAVIGATION OF GEOLOGIC BLOCK DIAGRAMS

205-3 8:40 AM  LaDue, Nicole*: Shipley, Thomas F.: USING CLASSROOM RESPONSE SYSTEMS TO STUDY SPATIAL CONCEPTIONS IN INTRODUCTORY GEOLOGY

205-4 8:55 AM  Van Boening, Angela*: Riggs, Eric M.: FROM TO HAND TO MOUTH TO MIND: TRACING THE CO-OCCURRENCE OF GESTURE AND SPEECH TO CONCEPTUAL UNDERRSTANDING

205-5 9:10 AM  McNeal, Peggy M.; Petcovic, Heather L.; Ellis, Todd D.; LaDue, Nicole D.: COGNITIVE PROCESSING IN METEOROLOGY: AN INVESTIGATION OF THE FORECASTING PROCESS

205-6 9:25 AM  Petcovic, Heather L.*; Baker, Kathleen M.; Callahan, Caitlin N.: HOW DO THEY KNOW WHERE TO GO? EXPERT VERSUS NOVICE REASONING AND NAVIGATION DURING BEDROCK GEOL OGY MAPPING

205-7 9:40 AM  Jackson, Matthew A.; Riggs, Eric M.*: DOCUMENTING THE CHARACTERISTICS OF EXPERTISE, EXPERIENCE AND WORKFLOW STRATEGIES EMPLOYED IN SEISMIC INTERPRETATION

9:55 AM  BREAK
Tuesday, 24 October 2017

SESSION NO. 207 $  

T152. Fluids and Melts in Geologic Systems  
8:00 AM, The Conference Center, Skagit 2

Pilar Lecumberri-Sanchez, Matthew Steele-MacInnis, Andras Fall and Rosario Esposito, Presiding

8:00 AM INTRODUCTORY REMARKS

207-1  
8:05 AM Appold, Martin S.: ORIGIN OF HYPOGENE NON-SULFIDE ZINC DEPOSITS: EVIDENCE FROM THE VAZANTE (BRAZIL), FLINDERS RANGES (AUSTRALIA), AND STAR (ZAMBIA) DEPOSITS (Invited Presentation)

207-2  
8:25 AM Lecumberri-Sanchez, Pilar*: Heinrich, Christoph A.; Wällle, Markus; Codoço, Marta; Weis, Philipp; Pinto, Filipe; Vieira, Romeu: FLUID EVOLUTION AT THE PANASQUEIRA TUNGSTEN-VEIN DEPOSIT

207-3  
8:40 AM Drivenes, Kristian*: Larsen, R.B.; Sørensen, Bjørn Eski; Hughes, Sam: TOURMALINE TEXTURES IN THE LAND’S END GRANITE, SW ENGLAND – A STROLL THROUGH THE MAGMATIC-HYDROTHERMAL TRANSITION

207-4  
8:55 AM Locmelis, Marek*: Fiorentini, Marco L.: THE ROLE OF HYDROUS FLUIDS IN THE FORMATION OF MAGMATIC SULFIDE DEPOSITS IN THE LOWER CONTINENTAL CRUST

207-5  
9:10 AM Barkoff, Drew*: PRESSURES OF SKARN MINERALIZATION AT CASTING COPPER, NEVADA, BASED ON APATITE INCLUSIONS IN GARNET

207-6  
9:25 AM Hudak, Michael R.*; Binderman, Ilya N.; Guan, Yunbin: EXPERIMENTALLY CONSTRAINED H AND O ISOTOPE FRACTIONATION BETWEEN WATER AND VOLCANIC GLASS

207-7  
9:40 AM Scott, Sean Ross*: Sims, Kenneth W.W.: FE ISOTOPE SYSTEMATICS OF HYDROTHERMAL WATERS FROM THE YELLOWSTONE HYDROTHERMAL SYSTEM

9:55 AM BREAK

207-8  
10:10 AM Webster, James D.*; Huber, Christian; Bachmann, Olivier: INSIGHTS ON MAGMATIC FLUID EXSOLUTION AND EVOLUTION FROM CHLORINE THE UNDER-APPRECIATED MAGMATIC VOLATILE COMPONENT (Invited Presentation)

207-9  
10:30 AM Brooks, Hanna L.*; Steele-MacInnis, Matthew; Lecumberri-Sanchez, Pilar*: AN EXAMINATION OF MINERAL SOLUBILITY IN COMPLEX SALINE AQUEOUS FLUIDS

207-10  
10:45 AM Lamadrid, Hector; Steele-MacInnis, Matthew*: Bodnar, Robert J.: FUGACITY IN GAS MIXTURES DETERMINED FROM RAMAN SPECTROSCOPY

207-11  
11:00 AM Hall, Don*: FLUID INCLUSION STUDIES IMPACT THE ECONOMICS OF PETROLEUM EXPLORATION AND FIELD DEVELOPMENT (Invited Presentation)
SESSION NO. 208

T161. Petrology across the Inner Solar System: In Honor of Roebeling Medalist Ed Stolper (Mineralogical Society of America; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division)

8:00 AM, The Conference Center, Skagit 4

Paul D. Asimow and Harry Y. McSween Jr., Presiding

208-1 8:00 AM McSween, H.Y.; Raymond, Carol A.: IGNEOUS PETROGENESIS ON VESTA, IN THE LIGHT OF DAWN (Invited Presentation)


208-3 8:30 AM Leshin, Laurie A.*: FROM SNC METEORITES TO THE CURIOSITY ROVER: INSIGHTS INTO MARTIAN PETROLOGY AND VOLATILES (Invited Presentation)

208-4 8:45 AM Macris, Catherine A.*; Turley, Richard J.; Eiler, John M.; Stolper, Edward M.: USING DIFFUSION IN TEKTITES AND EXPERIMENTS TO INVESTIGATE IMPACT PLUME DYNAMICS

208-5 9:00 AM Lin, Chaney; Hollister, Lincoln S.; Macpherson, Glenn J.; Bindi, Luca; Ma, Chi; Andronicos, Christopher L.; Steinhardt, Paul J.: EVIDENCE ABOUT THE FORMATION HISTORY OF NATURAL QUASICRYSTALS IN OUTER SPACE, AND THE OCCURRENCE OF STOLPERITE

208-6 9:15 AM Whittington, Alan*; Sehike, Alexander; Speck, Angela: RECALCULATION DURING CRYSTALLIZATION OF STARDUST: RESOLUTION OF THE AMORPHOUS INTERSTELLAR MEDIUM PARADOX

208-7 9:30 AM Kent, Adam J.R.*; Duncan, Robert A.; Graham, David W.; Alamri, Abullah M.; Hanan, Barry M.; Alshantoni, Saeed A.; Alhejji, Suhail: ENIGMATICALKALINE VOLCANISM IN WESTERN SAUDI ARABIA: SUB-LITHOSPHERIC CHANNELING FROM THE AFAR MANTLE PLUME? (Invited Presentation)


10:00 AM BREAK

208-9 10:15 AM Garcia, Michael O.*; Norman, Marc D.; Bennett, Vickie C.; Pietruszka, Arthur J.: MELT INCLUSIONS IN FORSTERITIC OLIVINE FROM HISTORICAL Kilauea lavas REVEAL DIVERSE MANTLE MELT COMPOSITIONS

208-10 10:30 AM Zhang, Yuxue*: ESTIMATING THE SOURCE MANTLE COMPOSITION OF A MANTLE-DERIVED BASALT

208-11 10:45 AM Hirschmann, Marc M.*; Armstrong, Lora; Hauri, Erik H.: STORAGE OF C O IN OLIVINE AND CARBONATED MELTING IN THE MORB SOURCE REGION (Invited Presentation)

208-12 11:00 AM Du, Wei; Walker, David*: MICROSTRAIN IN DRY PYROPE-GROSSULAR GARNET SOLUTIONS


SESSION NO. 209

T168. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols (GSA Sedimentary Geology Division; GSA Soils and Process Interdisciplinary Interest Group)

8:00 AM, The Conference Center, Skagit 3

Rebecca M. Dzombak, Emily J. Beverly, Daniel P. Maxbauer and Gary E. Stinchcomb, Presiding

209-1 8:05 AM Cerling, Thure*: GSA PRESIDENT’S MEDAL: CROSS DISCIPLINARY SCIENCE - THOUGHTS ON PRACTICE AND TRAINING

209-2 8:25 AM Schaller, Morgan F.*; Knobbe, Todd K.; Pettitt, Elizabeth: ATMOSPHERIC O2 CONCENTRATIONS FROM SOIL CARBONATE-HOSTED FLUID INCLUSIONS: A POTENTIAL NEW PROXY FOR PALEO-ATMOSPHERIC P O2

209-3 8:40 AM Fox, David L.; Hansen, Lars N.; Tutolo, Benjamin M.; Snell, Kathryn E.; Lukens, William E.: SPECTROSCOPY AND ELECTRON MICROSCOPY OF TERRESTRIAL CARBONATES: MINERALOGY, MICROTEXTURES, AND IMPLICATIONS FOR THE STABLE ISOTOPE RECORD OF THE Plio-Pleistocene MEADE BASIN (SW KANSAS)

209-4 8:55 AM Breecker, Daniel O.*; Fricke, Henry; McNeece, Colin J.; Miller, Nathan R.; Schaller, Morgan F.; Clyde, William C.; Jordan, Jacob S.: BORON IN SOIL CARBONATES: DEVELOPMENT AND INITIAL APPLICATION OF A HYBRID PALEO-CQ Proxy (Invited Presentation)


209-6 9:30 AM Huth, Tyler E.*; Cerling, Thure; Marchetti, David W.; Bowling, David R.; Fernandez, Diego P.; Mackey, Glenn N.; Passey, Benjamin H.: A FLEXIBLE MONTHLY EQUILIBRIUM MODEL OF SOIL CARBONATE PRESERVATION APPLIED TO SOUTHERN UTAH

9:45 AM BREAK

209-7 10:00 AM Licht, Alexis*; Page, Mara; Meijer, Niels; Schauer, Andrew J.; Bajnai, David; Fiebig, Jens; Mulch, Andreas; Huntington, Katharine W.; Abels, Henning; Guo, Zhaojie; Lai, Zongping; Dupont-Nivet, Guillaume: PALEOGENE DESERTIFICATION OF CENTRAL ASIA SEEN THROUGH THE PALEOSOL RECORD: A TALE OF CLUMPED ISOTOPES AND SOIL PALEOBAROMETRY


209-9 10:30 AM Fan, Majie; Godfrey, Conan; Jesmok, Greg; Upadhyay, Deepshikha; Tripati, Aradhna: PETROGRAPHY AND STABLE AND CLUMPED ISOTOPE GEOCHEMISTRY OF OLGOCENE-MIOCENE CONTINENTAL CARBONATES IN SOUTH TEXAS: IMPLICATIONS FOR PALEOCLIMATE
SESSION NO. 210

T175. Earthquakes, Faults, and Fault Systems in the Pacific Northwest

8:00 AM, The Conference Center, Chelan 4

Timothy J. Walsh and Corina Forson, Presiding

8:00 AM INTRODUCTORY REMARKS

210-1 8:05 AM Anderson, Megan L.; Dragovich, Joe D.; Mahan, Shannon A.; Macdonald, James H.; Koger, Curtis J.; Cakir, Recep; Allen, Mitchell; Masor, Skyler; Blakely, Richard J.; Wells, Ray E.: NO STRAIN LEFT BEHIND: THE PUGET LOWLAND NEOTECTONIC FAULT NETWORK (Invited Presentation)

210-2 8:25 AM Morell, Kristin*; Regalla, Christine; Amos, Colin B.; Bennett, Scott E.K.; Graham, Audrey; Leonard, Lucinda J.; Lynch, Emerson; Harrichhausen, Nicolas: LIDAR DATA, GEOLOGIC MAPPING, AND PALEOSEISMIC TRENCHING REVEAL LATE QUATERNARY FAULT RUPTURES IN THE CASCADIA FOREARC OF SOUTHWESTERN BRITISH COLUMBIA

210-3 8:40 AM Barrie, Vaughn*; Greene, H. Gary: THE DEVILS MOUNTAIN FAULT ZONE: AN ACTIVE FAULT AND FOLD BELT OF THE PACIFIC NORTHWEST OF NORTH AMERICA

210-4 8:55 AM Goldfinger, Chris*: THE CASCADIA CREEPING SECTION: STRUCTURAL EVIDENCE FOR HETEROGENEOUS PLATE COUPLING AND LINKAGES TO GEODESY AND PALEOSEISMOLOGY

210-5 9:10 AM Wirth, Erin*; Frankel, Arthur D.; Vidale, John E.; Marafi, Nasser; Stephenson, William J.: 3-D SIMULATIONS OF M9 EARTHQUAKES ON THE CASCADIA MEGATHRUST: KEY PARAMETERS AND CONSTRAINTS FROM PALEOSEISMIC EVIDENCE

9:25 AM BREAK

210-6 9:40 AM Bennett, Scott E.K.*; Reid, Mattie M.; Delano, Jamie; Scharer, Katherine M.; Kelsey, Harvey M.; McPhillips, Devin; Sherrod, Brian L.; Streig, Ashley R.; Hornsby, Kristofer T.; Martin, Gregory; Mahan, Shannon A.: LATE QUATERNARY EARTHQUAKES ON THE CANYON RIVER FAULT, OLYMPIC MOUNTAINS, WASHINGTON: LINKING ACTIVE FAULTS IN THE PUGET LOWLAND TO OFFSHORE CASCADIA (Invited Presentation)

210-7 10:00 AM Contreras, Trevor A.*; Legorreta Paulin, Gabriel; Patton, Annette I.; Weeks, Sarah A.; Stone, Kimberly A.; Spangler, Eleanor; Fusso, Logan A.; Polenz, Michael: FINDING

SESSION NO. 211

T181. The Geological Signature of Natural Hazard Events I (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)

8:00 AM, The Conference Center, Chelan 5

Peter Bobrowsky, David H. Huntley, Jasper Knight and Catherine Chague-Goff, Presiding

8:00 AM INTRODUCTORY REMARKS

211-1 8:15 AM Kelso, Keith*; Hall, Brian; Harden, Tessa; Mahan, Shannon; Duren, Angela: LATE HOLOCENE PALEOFLOODS ON THE MIDDLE FORK WILLAMETTE RIVER: IMPROVING HYDROLOGIC LOADING INPUT FOR USACE DAM SAFETY EVALUATIONS

211-2 8:30 AM Ostena, Dean*: BETTER ESTIMATING UNCERTAINTY IN GEOLOGIC PALEOFLOOD ANALYSES

211-3 8:45 AM McKay, Larry D.*; Cyr, Howard J.; Tran, Liem; Horn, Sally P.: SEDIMENTARY SIGNATURE OF HOLOCENE FLOOD DEPOSITS IN UPPER REACHES OF THE TENNESSEE RIVER

211-4 9:00 AM Milewski, Adam M.*; Leigh, David S.: PALEOFLOODS IN THE TENNESSEE RIVER BASIN: RECORDS OF MEGAFLOODS USING TRACTIVE-LOAD DEPOSITS

211-5 9:15 AM Hodge, Joshua Brian*: POWERFUL HURRICANE STRIKES SERVE AS GEOLOGIC AGENTS ON THE MCFADDIN NATIONAL WILDLIFE REFUGE, TEXAS

211-6 9:30 AM Tang, Hui*: Weiss, Robert: MARINE AND TERRESTRIAL SIGNALS IN TSUNAMI DEPOSITS

9:45 AM DISCUSSION

10:00 AM BREAK

211-7 10:15 AM Huntley, David H.*; Bobrowsky, Peter; Sawai, Yuki; Tanigawa, Koichiro; Chague-Goff, Catherine; Goff, James: GEOLOGICAL SIGNATURE OF MARINE GEOHAZARDS IN COASTAL NORTHWEST BRITISH COLUMBIA

211-8 10:30 AM Koeberl, Christian*: METEORITE IMPACT AND AIRBURSTS AS A NATURAL HAZARD (Invited Presentation)

211-9 10:50 AM Hawkes, Andrea*: Donnelly, Jeffrey P.: MILLENNIAL ARCTIC, TEMPERATE, AND TROPICAL STORM RECONSTRUCTIONS: FREQUENCY, PERIODICITY, AND TELEconnections (Invited Presentation)
Tuesday, 24 October 2017

211-10 11:10 AM  Baker, Victor R. *: THE SUPREME IMPORTANCE OF GEOLOGICAL THINKING FOR COPING WITH NATURAL HAZARD EVENTS (Invited Presentation)

211-11 11:30 AM  Lancaster, Nick*: CHALLENGES IN UNDERSTANDING THE QUATERNARY RECORD OF DUNE DEPOSITS
11:45 AM DISCUSSION

SESSION NO. 212


8:00 AM, The Conference Center, Chelan 2
Martha Cary Eppes, Gregory S. Hancock, Greg M. Stock and Bernard Hallet, Presiding

212-1  8:00 AM  McFadden, Leslie D.*: GSA QUATERNARY GEOLOGY AND GEOMORPHOLOGY DIVISION KIRK BRYAN AWARD: SOIL GEOMORPHOLOGICAL RESEARCH IN ARIDLANDS: THERE MIGHT BE A LITTLE DUST ON THE BOTTLE—IT’S ONE OF THOSE THINGS THAT GETS SWEETER WITH TIME

212-2  8:30 AM  Persico, Lyman P.*; McFadden, Les; McAuliffe, Joseph R.: HILLSLOPES IN THE MOJAVE: REGIMES OF WEATHERING, SOIL FORMATION, AND EROSION ALTERED BY A FLIP OF THE PLEISTOCENE- HOLOCENE CLIMATE SWITCH (Invited Presentation)

212-3  8:45 AM  West, Nicole*; Kirby, Eric; Nyblade, Andrew A.; Brandley, Susan L.: ASPECT-DEPENDENT FEEDBACKS BETWEEN REGOLITH PRODUCTION AND TRANSPORT AT THE SHALE HILLS CRITICAL ZONE OBSERVATORY

212-4  9:00 AM  Germanoski, Dru*: DIFFERENTIAL WEATHERING AND RELATIONSHIPS BETWEEN TOPOGRAPHY, LITHOLOGY, AND REGOLITH THICKNESS IN EAST-CENTRAL PENNSYLVANIA

212-5  9:15 AM  Johnstone, Sam*; Finnegan, Noah J.; Hilley, George E.: WHEN WATER IS SCARCE AND ROCKS ARE FRAGILE, EQUATOR-FACING VALLEY NETWORKS OUT-STRETCH THEIR POLE-FACING COUNTERPARTS

212-6  9:30 AM  Linol, Bastien*; de Viliers, Stephanie; de Wit, Maarten J.: COLLAPSE OF THE AFRICAN WEATHERING SURFACE ACROSS THE CONGO BASIN TRIGGERED CHANGES IN CENOZOIC OCEAN CHEMISTRY
9:45 AM BREAK

212-7  10:00 AM  Hancock, Gregory S.*; Shobe, Charles M.; Eppes, M.C.; Small, Eric E.: FIELD EVIDENCE FOR THE INFLUENCE OF WEATHERING ON ROCK ERODIBILITY AND CHANNEL FORM IN BEDROCK RIVERS

212-8  10:15 AM  Cerda, Carla Ivanna*; Sweeney, Kristin E.: GEOLOGIC CONTROLS ON SHORE PLATFORM MORPHOLOGY: IMPLICATIONS FOR BIODIVERSITY

212-9  10:30 AM  Siman-Toy, Shalev*; Stock, Greg M.; Brodsky, Emily E.; White, Joseph Clancy: A MICROMETER THICK COATING LAYER SLOWING THE WEATHERING RATE OF GLACIAL POLISH (Invited Presentation)

212-10 10:45 AM  Eppes, Martha Cary*; Keanini, Russell: CLIMATE, MECHANICAL WEATHERING, ROCK EROSION AND REGOLITH PRODUCTION: NEW INSIGHTS FROM FRACTURE MECHANICS

212-11 11:00 AM  Voigtlaender, Anne*; Leith, Kerry; Krautblatter, Michael: CONSTRAINING THE PHYSICS OF SUBCRITICAL CRACK GROWTH IN CARRARA MARBLE USING NEUTRON DIFFRACTION TECHNIQUES

212-12 11:15 AM  Mackenzie-Helmwein, Peter*: Hallet, Bernard: MECHANICAL ROCK BREAKDOWN DUE TO DIURNAL SOLAR EXPOSURE: RESOLVING A PARADOX BETWEEN OBSERVATIONS AND THEORY (Invited Presentation)

SESSION NO. 213

T218. Understanding the Interplay of Structural, Metamorphic, and Magmatic Processes in the Evolution of Convergent Margins: Lessons from the Proterozoic to Present-Day South American Andean Margin (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA International/International Interdisciplinary Interest Group)

8:00 AM, The Conference Center, Tahona 2
Sean R. Mulcahy, Sarah M. Roeseke and William C. McClelland, Presiding

213-1  8:00 AM  Horton, Brian K.*: CONTRASTING TECTONIC REGIMES AND BASIN EVOLUTION IN RESPONSE TO VARIABLE PLATE COUPLING ALONG THE ANDEAN MARGIN

213-2  8:15 AM  Chen, Yi-Wei*; Wu, Junyi; Suppe, John: BUILDING AN ANDES PLATE TECTONIC RECONSTRUCTION BACK TO THE LATE CRETACEOUS ~80MA USING UNFOLDED SLABS FROM SEISMIC TOMOGRAPHY: IMPLICATIONS FOR FLAT SLAB TECTONICS

213-3  8:30 AM  Mescua, José F.*; Giambiagi, Laura; Sruoga, Patricia; Winocur, Diego; Barrionuevo, Matias; Tapia, Felipe; Alvarez, Pamela; Spagnotto, Silvana Liz; Farias, Marcelo; Stahlenschmidt, Erico; Benitez, Anañ: FEEDBACKS BETWEEN MAGMATISM AND STRESS AND STRAIN FIELDS IN THE MALARGÜE FOLD AND THRUST BELT, SOUTHERN CENTRAL ANDES (34º-36ºS)

213-4  8:50 AM  Perez, Nicholas*: MULTIPHASE PRE-ANDEAN DEFORMATION GUIDES GENOZOIC MOUNTAIN BUILDING IN THE CENTRAL ANDES, SOUTHERN PERU

213-5  9:10 AM  Wise, James*: FOLD ANALYSIS OF THE CENTRAL PERUVIAN SEGMENT OF THE ANDEAN OROGENY REVEALS STRAIN ACCUMULATION PATTERNS DURING REPEATED PARALLEL CONTRACTUAL EVENTS

213-6  9:25 AM  Garibaldi, Nicolas*; Schäner, Allen; Tikoff, Basil; Singer, Bradley S.: CRUSTAL SHORTENING INDUCED FILTER PRESSING AND RHYOLITE MELT EXTRACTION IN A SHALLOW PLUTONIC COMPLEX, SOUTHERN ANDES

213-7  9:40 AM  Jackson, Lily J.*; Horton, Brian K.; Vallejo, Cristian: DETRITAL ZIRCON U-PB GEOCHRONOLOGY OF MODERN RIVER SANDS IN THE ECUADORIAN ANDES: IMPLICATIONS FOR TECTONIC HISTORY AND SEDIMENT RECYCLING
9:55 AM LIGHTNING TALKS
10:10 AM  LIGHTNING TALKS
10:25 AM BREAK

213-8  10:40 AM  Hodgin, Eben Blake*; Crowley, James L.; Carlotto, Victor; Macdonald, Francis A.: DISPLACED CAMBRIAN BASINS AND CAMBRIAN STRIKE-SLIP EMBLACEMENT OF THE AREQUIPA TERRANE IN SOUTHERN PERU

213-9  10:55 AM  Ratschbacher, Barbara*; Paterson, Scott R.; Alaisino, Pablo; Larrovere, Mariano A.; Cao, Wenrong; Okaya, David: DEPTH-DEPENDENT CHANGES IN DEFORMATION AND MAGMATISM IN THE FAMATINIAN ARC, ARGENTINA: IMPLICATIONS FOR ISOSTATIC RESPONSE AND MOUNTAIN BUILDING

213-10 11:15 AM  Larrovere, Mariano A.; Paterson, Scott R.*; Alaisino, Pablo H.; Ratschbacher, Barbara C.; Lusik, Alexander Dmitri Johnston; Cawood, Tarryn Kim: ARCHITECTURE OF CRUSTAL-SCALE DUCTILE SHEAR
ZONE SYSTEMS IN A HOT OROGEN: THE ORDOVICIAN FAMATINIAN OROGEN, NW ARGENTINA  

213-11 11:30 AM  
Webber, Patricia*; Houlihan, Emily; Tholl, Andrew; McClelland, William C.; Roeseke, Sarah M.; Mulcahy, Sean R.: U/Pb CHARACTERIZATION OF SIERRA DE MAZ: IMPLICATIONS FOR THE TIMING OF TERRANE ACCRETION AND TRANSLATION ON THE WESTERN MARGIN OF GONDWANA

213-12 11:45 AM  

SESSION NO. 214  

(GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; SEPM (Society for Sedimentary Geology); Future of Tectonics Initiative)

8:00 AM, The Conference Center, Tahoma 4

Roma A. DiBiase, Elizabeth J. Cassel and Majie Fan, Presiding

214-1 8:00 AM  
Huntington, Katharine W.*; Klepeis, Keith; Cassel, Elizabeth J.; Currie, Claire A.; DiBiase, Roma A.; Kirby, Eric; Lang, Karl A.; Pazzaglia, Frank; Riebe, Clifford S.; Zeiter, Peter: UNDERSTANDING THE DYNAMIC INTERACTIONS BETWEEN EARTH-SURFACE PROCESSES AND TECTONICS: OPPORTUNITIES FOR PROGRESS FROM OUTCROP TO GLOBAL SCALES

214-2 8:15 AM  
Hayman, Nicholas W.*; Gulick, Sean; Milliken, Kitty; Ramirez, Sebastian G.: WHAT ARE THE POSSIBLE SEDIMENTARY-TECTONIC-CLIMATE LINKAGES ALONG THE MIOCENE-TO-RECENT SOUTH JAPAN MARGIN?

214-3 8:30 AM  
Staish, Lydia M.*; O’Connor, Jim E.; Holm-Denoma, Christopher S.: U/Pb DETRITAL ZIRCON PROVENANCE OF THE RINGFOLD FORMATION WITH IMPLICATIONS FOR THE ANCESTRAL COLUMBIA AND SNAKE RIVER DRAINAGE AND REGIONAL TECTONIC UPLIFT

214-4 8:45 AM  
Schwartz, Theresa M.*; Chamberlain, C. Page; Graham, Stephan A.: PALEOGENE LANDSCAPE EVOLUTION IN THE NORTHERN ROCKY MOUNTAIN CORDILLERA

214-5 9:00 AM  
Foster-Baril, Zachary*; Cassel, Elizabeth J.; Leier, Andrew; Archibald, S. Bruce: EOCENE BASIN RECORDS OF VOLCANISM, TOPOGRAPHY, AND TECTONICS IN THE NORTH AMERICAN CORDILLERA HINTERLAND, SOUTHERN BRITISH COLUMBIA

214-6 9:15 AM  
Garzoni, Carmala N.*; McQuarrie, Nadine; Perez, Nicholas; Ehlers, Todd A.; Beck, Susan; Kar, Nandini; Eichelberger, Nathan W.; Chapman, Alan D.; Ward, Kevin M.; Ducea, Mihai N.; Lease, Richard O.; Poulsen, Christopher J.; Wagner, Lara S.; Saylor, Joel E.; Zandt, George; Horton, Brian K.: THE TECTONIC EVOLUTION OF THE CENTRAL ANDEAN PLATEAU AND GEODYNAMIC IMPLICATIONS FOR THE GROWTH OF PLATEAUS (Invited Presentation)

214-7 9:35 AM  
Mulch, Andreas*; Nieto-Moreno, Vanesa; Pingel, Heiko; Roehrmann, Alexander; Sachse, Dirk; Chamberlain, C. Page; Strecke, Manfred R.: PRECIPITATION HYDROGEN ISOTOPE RECORDS TRACK TOPOGRAPHY OF THE EVOLVING ANDEAN PLATEAU MARGIN

9:50 AM  
BREAK

214-8 10:05 AM  
Terhune, Patrick*; Benowitz, Jeff A.; Layer, Paul W.; Trop, Jeffrey M.; O’Sullivan, Paul B.: THERMOCHRONOLOGY OF THE TALKEETNA MOUNTAINS OF SOUTHERN ALASKA: CENOZOIC TOPOGRAPHIC DEVELOPMENT HISTORY

SESSION NO. 215  

T232. Subduction Zone Response to Ridge and Plateau Collision: Perspectives from the Archean to the Cenozoic (GSA Structural Geology and Tectonics Division)

8:00 AM, The Conference Center, Tahoma 5

Michael P. Eddy and Paul J. Umhoefer, Presiding

8:00 AM  
INTRODUCTORY REMARKS

215-1 8:15 AM  
Thorkelson, Derek*; Eyuboglu, Yener: FROM UNDERSTANDING THE CENOZOIC TO SOLVING THE PRECAMBRIAN (Invited Presentation)

215-2 8:35 AM  
Billen, Magali I.: THE EFFECT OF SPREADING RIDGES AND BUOYANT CRUST ON THE DYNAMICS OF SUBDUCTION (Invited Presentation)

215-3 8:55 AM  
Russo, R.M.*: LATE CENOZOIC SUBDUCTION OF THE CHILE RIDGE BENEATH PATAGONIA: RESULTS FROM PASSIVE SEISMIC DEPLOYMENTS (Invited Presentation)

215-4 9:15 AM  
Wu, Jonny*; Lin, Yi-An; Flament, Nicolas: IMAGED AND PREDICTED MANTEL STRUCTURE OF THE SUBDUCTED IZANAGI-PACIFIC RIDGE UNDER EAST ASIA

215-5 9:30 AM  
Priestley, Keith F.; Rafi, Zahid; Mahmood, Nasir: LATERAL VARIATIONS IN THE CRUSTAL STRUCTURE OF THE PAKISTAN REGION

215-6 9:45 AM  
Barbosa-Espitia, Angel A.; Foster, David A.; Pardo-Trujillo, Andres; Restrepo-Moreno, Sergio A.; Kamenov, George: NEogene MAGMATISM ALONG WESTERN CORDILLERA OF COLOMBIA AND ITS RELATIONSHIP WITH THE TECTONIC HISTORY OF THE NORTHERN ANDES

10:00 AM  
BREAK

215-7 10:15 AM  
Umhoefer, Paul J.*; Eddy, Michael P.; Miller, Robert B.; Tepper, Jeffrey H.; Skinner, Lisa A.: UPPER PLATE RESPONSE TO RIDGE AND PLATEAU SUBDUCTION, WASHINGTON CASCADES, USA: IMPLICATIONS FOR PLATE TECTONIC EVOLUTION OF THE PACIFIC NORTHWEST
SESSION NO. 218
T257. Contributions of Rock- and Paleo-magnetism to Understanding Orogenic Processes

8:00 AM, The Conference Center, Yakima 1

Peter A. Selkin and Daniel Pastor-Galán, Presiding

218-1 8:00 AM Biedermann, Andrea R.*; Billardello, Dario; Jackson, Mike; Feinberg, Joshua M.: ISOLATING COMPONENTS OF COMPLEX MAGNETIC FABRICS TO ENHANCE THE ANISOTROPY CORRECTION OF PALEOMAGNETIC DIRECTIONS AND INTENSITIES (Invited Presentation)

218-2 8:15 AM Weil, Arlo Brandon*; Yonkee, Adolph: INTEGRATING AMS AND PALEOMAGNETISM TO FULLY RESTORE SHORTENING DIRECTIONS ACROSS COMPLEX OROGENIC SYSTEMS (Invited Presentation)

218-3 8:30 AM Waters-Tormey, Cheryl*; Kelso, Paul; Tikoff, Basil: WHICH SCALE(S) OF STRAIN ANALYSIS BEST CHARACTERIZES AN OVERPRINTING "BULK" DEFORMATION? A CASE STUDY FROM THE CAPRICORN RIDGE SHEAR ZONE, CENTRAL AUSTRALIA

218-4 8:45 AM Adams, Gayin W.*; Dulin, Shannon A.; Elmore, Douglas; Evans, Stacey; Spencer, Brandon M.; Schwing, Jonathan E.: TIMING OF DOLOMITIZING FLUIDS IN ZEBRA DOLOMITE BODIES OF NEVADA'S BASIN AND RANGE PROVINCE

218-5 9:00 AM Hamilton, Christina D.*; Evans, Stacey; Elmore, Douglass; Engel, Michael; Parnell, John: PALEOPLUMBING AND REMAGNETIZATION ALONG FAULTS IN SCOTLAND

218-6 9:15 AM Acton, Gary D.*; Richter, Carl; Xuan, Chuang; Verosub, Kenneth L.: PALEOENVIRONMENTAL CHANGE RECORDED IN THE MAGNETIC PROPERTIES OF MARINE SEDIMENTS CORED OFF THE MARGIN OF SPAIN AND PORTUGAL DURING IODP EXPEDITION 339

9:30 AM BREAK

SESSION NO. 219

P4. Speed Dating!: Advice on Sampling and Applications Through the Lens of the Geochronologist (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Karst Division; GSA Limnogeology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Tammy Rittenour, Michelle Summa Nelson and Shannon A. Mahan, Presiding

9:00 AM INTRODUCTION: SPEED DATING LIGHTNING PRESENTATIONS- ROUND 1

219-1 9:05 AM Park Boush, Lisa E.*; Lehnerst, Kerstin A.; Mybro, Amy; Noren, Anders J.; Peters, Shanan; Singer, Brad S.; Williams, John W.; Goring, Simon; Condon, Daniel: SPEED DATING! WHAT IS YOUR RATE? EARTH RATES: A NEW NSF FUNDED RESEARCH COORDINATION NETWORK FOR LINKING SCALES ACROSS THE SEDIMENTARY CRUST AND OTHER RELATED PROJECTS SUPPORTING GEOCHRONOLOGY

219-2 9:10 AM Rittenour, Tammy*; Nelson, Michelle; Mahan, Shannon A.; Ideker, Carrie; Gray, Harrison: SPEED DATING!: ADVICE ON SAMPLING AND APPLICATIONS FOR LUMINESCENCE DATING

219-3 9:15 AM Paces, James B.*; Niespolo, Elizabeth; Sharp, Warren: SPEED DATING WITH A YOUNG, DIVERSE CROWD: U-TH GEOCHRONOLOGY USING HYDROGENIC AND BIenic MATERIALS

219-4 9:20 AM Enkelmann, Eva*; Garver, John I.: SPEED DATING!: ADVICE ON SAMPLING AND APPLICATIONS FOR FISSION-TRACK DATING

219-5 9:25 AM Schoene, Blair*; Cottle, John: EDDY, Michael P.: SPEED DATING!: SAMPLING AND APPLICATIONS FOR U-TH-PB GEOCHRONOLOGY

219-6 9:30 AM Feinberg, Joshua M.*; Sprain, Courtney J.; Stoner, Joseph S.; Tauxe, Lisa; Swanson-Hysell, Nicholas L.: SPEED DATING!: ADVICE ON SAMPLING AND APPLICATIONS FOR PALEOMAGNETISM

9:35 AM VISIT PRESENTERS AT THEIR BOOTHS (DATABASES, LUMINESCENCE, U-TH, FISSION TRACK, U-TH-PB, PALEOMAG)

12:00 PM LUNCH

1:30 PM INTRODUCTION: SPEED DATING LIGHTNING PRESENTATIONS- ROUND 2

219-7 1:35 PM Pigati, Jeffrey S.*; Springer, Kathleen B.; Honke, Jeffrey S.: SPEED DATING!: ADVICE ON SAMPLING AND APPLICATIONS FOR RADIOCARBON DATING

219-8 1:40 PM Balco, Greg*: Goehring, Brent M.: SPEED DATING: ARTISANAL KNOWLEDGE OF COSMOCGENIC-NuCLide GEOCHRONOLOGISTS REVEALED

Tuesday, 24 October 2017
Tuesday, 24 October 2017

SESSION NO. 220
D8. Paleontology, Macroevolution/Biogeography
1:30 PM, Washington State Convention Center, Room 606
Gene Hunt and Martin Aberhan, Presiding

220-1 1:30 PM Adrain, Jonathan M.*: GENERA ARE EFFECTIVE SURROGATES FOR SPECIES RICHNESS IN DEEP TIME: COMPARISONS AT MULTIPLE SCALES

220-2 1:45 PM Roden, Vanessa Julie*; Kiesling, Wolfgang: RELIABLE ESTIMATES OF BETA DIVERSITY WITH INCOMPLETE SAMPLING

220-3 2:00 PM Pierrehumbert, Nadia D.*; THE ROLE OF HABITAT PERTURBATION IN FACILITATING PALEOCOMMUNITY TURNOVER

220-4 2:15 PM Kocis, Ádám T.*; Reddin, Carl J.; Kiesling, Wolfgang: DETERMINANTS OF BENTHIC BIOGEOGRAPHY IN THE OCEANS

220-5 2:30 PM Christie, Max*; Patzkowsky, Mark E.; Dietl, Gregory P.; Kelley, Patricia H.; Whitaker, Anna F.: CHANGES IN TAXONOMIC AND FUNCTIONAL ECOLOGY NORTH OF A BIOGEOGRAPHIC BOUNDARY DURING THE PLEISTOCENE TO MODERN, WESTERN NORTH ATLANTIC

220-6 2:45 PM Fernandes Martins, Maria João*; Hunt, Gene; Thompson, Carmi Milagros; Lockwood, Rowan; Swaddle, John P.: DID SEXUAL SELECTION HINDER SURVIVAL OF OSTRACODE SPECIES THROUGH THE K/PG MASS EXTINCTION?

220-7 3:00 PM Simpson, Andrew G.*: RELATIONSHIPS BETWEEN EXTINCTION SELECTIVITY AND REGIONAL CLIMATE CHANGE INTENSITY IN MIO-PLIOCENE PLANTS OF NORTH AMERICA

220-8 3:15 PM Hunt, Gene*; Fernandes Martins, Maria João; Puckett, T. Markham; Shaw, Jack O.; Lockwood, Rowan; Swaddle, John P.: SEXUAL DIMORPHISM IS GENERALLY STABLE OVER THE LIFETIME OF OSSICICARIA OSTRACODE SPECIES

220-9 3:30 PM Yeakel, Justin Douglas*; Kempes, Christopher; Redner, Sidney: THE DYNAMICS OF STARVATION AND RECOVERY: A MECHANISTIC MODEL FOR A WITHIN-LINEAGE DRIVER OF COPE’S RULE

220-10 3:45 PM Uhen, Mark*: COORDINATED DIVERSITY CHANGES IN CENOZOIC MARINE VERTEBRATE REFLECT CLIMATIC FLUCTUATIONS

SESSION NO. 221
D14. Paleontology, Phylogenetic/Morphological Patterns: Vertebrates
1:30 PM, Washington State Convention Center, Room 604
Samantha S.B. Hopkins and Sinjini Sinha, Presiding

221-1 1:30 PM Cohen, Joshua E.*; Frederickson, Joseph: THE EFFECT OF WEAR ON THE PLACEMENT OF LANDMARKS ON MAMMALIAN DENTITIONS USING TWO- AND THREE-DIMENSIONAL GEOMETRIC MORPHOMETRICS

221-2 1:45 PM Long, Katherine L.*; Prothero, Donald; Madan, Meena A.; Syverson, V.J.P.: DID SABER-TOOTH KITTENS GROW UP MUSCLEBOUND? A STUDY OF POSTNATAL LIMB BONE ALLOMETRY IN FELIDS FROM THE PLEISTOCENE OF RANCHO LA BREA

221-3 2:00 PM Mann, Arjan*; Paterson, Ryan; Tsuji, Linda A.: CRANIAL OSTEOLGY OF THE LONG-SNOITED APEX PREDATOR LYCAENOPS MAJOR COMB. SP. (THERAPSIDA: GORGONOPSIS) FROM THE KAROO BASIN, SOUTH AFRICA

221-4 2:15 PM Marsh, Adam D.*; Parker, William G.; Kligman, Ben T.; Lessner, Emily J.: BONEBED OF A CARNIVOROUS ARCHOSAURUMORPH FROM THE CHINLE FORMATION (LATE TRIASSIC: NORTIA) OF PETRIFIED FOREST NATIONAL PARK

221-5 2:30 PM Surya, Kevin*; Brenes, Isabelle M.; Gardiner, Jacob D.; Viñola López, Lázaro W.; Orga, Chris L.; Varricchhio, David J.: PELVIC COEVOLUTION WITH EGG SIZE AND SHAPE IN MODERN BIRDS: IMPLICATION FOR REPRODUCTIVE BIOLOGY OF EXTINCT DINOSAURS

221-6 2:45 PM Stack, Jack Reza*; Sallan, Lauren: SAMPLING, STASIS AND SNOW: RESOLVING GAPS IN THE LATE PALEOZOIC FISH RECORD

221-7 3:00 PM Sirne, John A.*; Chang, Jonathan; Alfaro, Michael E.; Sallan, Lauren C.: DOES THE ECOLOGY OF CLADE IMBALANCE EXPLAIN THE “LIVING FOSSIL” PHENOMENON WITHIN A MEGA-PHYLOGENY OF RAY-FINNED (ACTINOPTERYGIAN) FISHES?

221-8 3:15 PM Lively, Joshua R.*: UNDERSTANDING THE DIVERSIFICATION OF MOSASAURINAIA BASED ON TWO NEW GENERA FROM THE WESTERN INTERIOR SEAWAY


221-10 3:45 PM Hopkins, Samantha S.B.*; McLaughlin, Win N.F.; Famoso, Nicholas A.: SIMILARITIES AND DIFFERENCES BETWEEN THE JOHN DAY AND CROOKED RIVER BASINS: OLIGOCENE LANDSCAPE HETEROGENEITY IN TERRESTRIAL FAUNAS
SESSION NO. 222
D19. Geoscience and Public Policy: Bringing Our Science to Society
1:30 PM, Washington State Convention Center, Room 613/614
Christopher P. Carlson and Bruce Clark, Presiding

1:30 PM INTRODUCTORY REMARKS

222-1 1:35 PM Wessel, Gregory R.*: GEOLOGY ACROSS BORDERS: GUIDELINES FOR SUSTAINABLE GLOBAL DEVELOPMENT


222-3 2:05 PM Geissman, John W.*: 21 YEARS AFTER HOUSE ARREST IN JIMSAI, XINJIANG PROVINCE, PEOPLES REPUBLIC OF CHINA, WHILE STUDYING THE PERMIAN/ TRIASSIC BOUNDARY SECTION, A SOON TO BE RETIRED GEOLOGIST LOOKS BACK ON MANY INTERNATIONAL EXPLOITS

222-4 2:20 PM Flessa, Karl W.*: WATCHING THE RIVER FLOW: BINATIONAL SCIENTIFIC MONITORING IN THE COLORADO RIVER DELTA

222-5 2:35 PM Eriksson, Susan C.*: THINKING MORE BROADLY AND MORE DEEPLY ABOUT EVALUATION

222-6 2:50 PM Finzi, Yaron M.*: IMPROVING AND GAUGING COMMUNAL AND FAMILIAL RESILIENCE USING A PERSONAL SEISMIC RISK AND READINESS INTERACTIVE MAPPING TOOL

3:05 PM CONCLUDING REMARKS

SESSION NO. 223
P5. Origin, Accretion, and Translation of Mesozoic-Cenozoic Terranes along the Pacific Margin of North America (GSA Structural Geology and Tectonics Division)
1:30 PM, Washington State Convention Center, Ballroom 6A
David T. Katopody, Mark T. Brandon and Bernard Housen, Presiding

1:30 PM INTRODUCTORY REMARKS

223-1 1:35 PM Cowan, Darrel S.*: THE CASE FOR COASTWISE DISPLACEMENTS: A PERSONAL VIEW

223-2 1:55 PM Liu, Lijun*: GEODYNAMIC CONSTRAINTS ON TERRANE ACCRETION ALONG THE WEST COAST OF NORTH AMERICA

223-3 2:15 PM Housen, Bernard A.*: A SYNOPSIS OF PALEOMAGNETIC DATA FROM CRETACEOUS ROCKS OF NORTH AMERICA AND CORDILLERAN TERRANES


223-6 3:15 PM Ward, Peter D.*: COMPARING BIOGEOGRAPHIC INFORMATION FROM THE UPPER CRETACEOUS NANAIMO GROUP, AND THE SEPARATE EAST, AND WEST BASINS CURRENTLY COMBINED AS THE UPPER CRETACEOUS GREAT VALLEY SEQUENCE OF THE SACRAMENTO VALLEY

3:35 PM BREAK

223-7 3:50 PM Garver, John L.*: Davidson, Cameron: ACCRETION AND TRANSLATION OF THE CHUGACH, PRINCE WILLIAM, AND YAKUTAT TERRANES IN ALASKA

223-8 4:10 PM Matthews, William A.*; Guest, Bernard; Boivin, Marie-Pier; Coutts, Daniel S.; Hubbard, Stephen M.: DETRITAL ZIRCONS FROM THE NANAIMO BASIN, VANCOUVER ISLAND, BRITISH COLUMBIA: AN INDEPENDENT TEST OF LATE CRETACEOUS TO CENOZOIC NORTHWARD TRANSLATION


223-11 5:10 PM Stern, Robert J.*: SUBDUCTION INITIATION AND TERRANE ACCRETION

SESSION NO. 224
T24. How Nick Crawford’s Vision Helped Shape Contemporary Karst Science and Education (GSA Karst Division; National Cave and Karst Research Institute; GSA Hydrogeology Division; GSA History and Philosophy of Geology Division)
1:30 PM, Washington State Convention Center, Room 615/616/617
Chris Groves, George Veni, Geary Schindel and Augusto Auler, Presiding

1:30 PM INTRODUCTORY REMARKS

224-1 1:35 PM White, William B.*: THE REVOLUTIONARY IMPACT OF TRACER INVESTIGATIONS ON KARST HYDROGEOLOGY: A TRIBUTE TO NICHOLAS C. CRAWFORD (Invited Presentation)

224-2 1:55 PM Crawford, Nicholas C.*: KARST EDUCATION AND SCIENCE AT WESTERN KENTUCKY UNIVERSITY (Invited Presentation)

224-3 2:15 PM Baker, Nancy T.*: NICK CRAWFORD’S INFLUENCE BEYOND KARST SCIENCE: CONTAMINANT TRANSPORT IN OTHER HYDROGEOLOGICAL SETTINGS

224-4 2:30 PM Schindel, Geary M.*; Ellis, Grant; Covington, Phillip; Courage, Susan; Curry, Brock; Hamilton, J. Mark; Doty, Brent R.: THE CITY OF SAN ANTONIO'S EDWARDS AQUIFER PROTECTION PROGRAM - AN EXAMPLE OF INTER AGENCY COOPERATION TO PROTECT GROUNDWATER QUALITY IN A KARSTIC EDWARDS AQUIFER OF SOUTH CENTRAL TEXAS USA

224-5 2:45 PM Veni, George*: KARST, SCIENCE, AND LIFE: LESSONS FROM DR. NICK CRAWFORD

224-6 3:00 PM Groves, Chris*: Crawford, Nicholas: EXPLOSIVE AND TOXIC VAPORS IN THE VADOSE ZONES OF KARST FLOW SYSTEMS: CASE STUDIES AND ONGOING CONCERNS

224-7 3:15 PM Auler, Augusto S.*: NICHOLAS CRAWFORD AND THE KARST HYDROGEOLOGY OF THE LAGOA SANTA AREA, SOUTHEASTERN BRAZIL

224-8 3:30 PM Jones, Sid*: THE LAST FORTY YEARS OF KARST HYDROLOGY STUDIES ON THE CUMBERLAND PLATEAU ESCARPMENT IN TENNESSEE

224-9 3:45 PM Kambesis, Patricia N.*; Groves, Chris: KARST HYDROGEOLOGIC RESEARCH IN THE UPPER MIDWEST OF THE UNITED STATES

224-10 4:00 PM Tobin, Benjamin W.*; Schindel, Geary M.; Zappitello, Sarah J.; Schenk, Edward R.; Springer, Abraham E.: GRAND CANYON DYE TRACING: CHALLENGES, CONCERNS, AND RESULTS

224-11 4:15 PM Ham, Brian*: Miller, Ben: ESTABLISHING LONG-TERM CONTINUOUS DISCHARGE GAGING STATIONS AT TENNESSEE’S LARGEST KARST SPRINGS
Tuesday, 24 October 2017

**SESSION NO. 225**

**T33. Intersections of Sustainability and Geosciences**

*GSA Geology and Society Division; GSA Karst Division; GSA Environmental and Engineering Geology Division*

1:30 PM, Washington State Convention Center, Room 612

**INTRODUCTORY REMARKS**

**225-1** 1:45 PM Solomon, Geri E.; Brinkmann, Robert*: SUSTAINABILITY AND THE DIARY OF A 19TH CENTURY GOLD MINER: INSIGHTS ON ENVIRONMENTAL CHANGE IN NORTH AMERICA

**225-2** 2:00 PM Wiest, Adam C.; Mahoney, J. Brian; Mueller, Carly A.; Lindquist, Derek B.; Hackenmiller, Melissa A.; Sellwood, Stephen M.; Mc Ellistrem, Laurel J.: COMPREHENSIVE ENVIRONMENTAL BASELINE STUDIES: THE FIRST STEP IN RESPONSIBLE AND RESPONSIBLE MINING REGULATIONS

**225-3** 2:15 PM Gentner, Tiffany M.*; Dehm, Dustin; Becker, Richard H.: CLIMATE IMPACTS ON NUTRIENT LOADING IN LAKE ERIE

**225-4** 2:30 PM Gazis, Carey A.*: A PRELIMINARY STUDY OF AGRICULTURAL SOILS INTENDED FOR CARBON SEQUESTRATION

**225-5** 2:45 PM Richard, Emile M.*; Digan, Shane C.: ONGOING ENVIRONMENTAL BASELINE STREAM ASSESSMENT PRIOR TO MANAGED SEDIMENT RELEASE FROM THE LOWER RESERVOIR, ONEONTA CREEK, ONEONTA, NY

**225-6** 3:15 PM Willenbrink, Elizabeth*; North, Leslie A.; Nguyen, Vu Thi Minh: POLICY COMMUNICATION AND THE IMPACT OF AGRICULTURAL COMMUNITIES ON KARST LANDSCAPES: AN EXAMPLE FROM PHONG NHA-KÉ BÀNG NATIONAL PARK, VIETNAM

**225-7** 3:30 PM Egendorf, Sara Perl*; Cheng, Zhongqi; de Jesus, Erycka; Walsh, Daniel; Groffman, Peter: HUMAN AND NATURAL SYSTEM INTERACTIONS: MODELING BIOGEOCHEMISTRY FOR THE NEW YORK CITY CLEAN SOIL BANK

**225-8** 3:45 PM Schaefer, Kirsten*; Dogwiler, Toby: ASSESSMENT OF GRASSED WATERWAY IMPLEMENTATION USING ACPF AND SWAT MODELS

**225-9** 4:00 PM Larson, Robert A.; Cruz, Olga; Masters, Clay; Burger, Karin: FLOOD CONTROL, STORMWATER CAPTURE, AND GROUNDWATER RECHARGE: THE RORY M. SHAW WETLANDS PARK PROJECT

**225-10** 4:15 PM Graham, James*; North, Leslie A.; Huijbens, Edward H.: USING MOBILE EYE-TRACKING TO INFORM THE DEVELOPMENT OF MASS TOURISM IN ICELAND TOWARDS THE PRINCIPLES OF ECOTOURISM

**225-11** 4:30 PM Chia, Kimberly Y.M.*; Smith-Tripp, Sarah M.; Wanzer, Lucy A.; Love, Brianna N; Jones, Kristina N.; Langridge, Suzanne M.; Gilbert, Kathleen W; Walier, Maria; Besancon, James; Brabander, Daniel J.: SCIENCE, SYSTEMS, STAKEHOLDERS: USING GEOSCIENCES FOR LANDSCAPE SUSTAINABILITY, ENHANCED BY ECOLOGY OF PLACE

**SESSION NO. 226**


1:30 PM, Washington State Convention Center, Room 611

Miriam E. Katz, Francine M.G. McCarthy and Michelle F. Goman, Presiding

**INTRODUCTORY REMARKS**

**226-1** 1:35 PM Hayward, Bruce W.*; Grentell, Hugh R.: PROXY FORAMINIFERAL RECORD OF HUMAN IMPACT ON NEW ZEALAND’S COASTAL MARINE ENVIRONMENT (Invited Presentation)

**226-2** 1:55 PM Lobigeier, Melissa K.*: USING TESTATE AMOEBAE TO ANALYZE WATER QUALITY AND ENVIRONMENTAL CHANGES IN THE CLINCH AND POWELL RIVER WATERSHED, VIRGINIA OVER THE LAST 100 YEARS (Invited Presentation)

**226-3** 2:15 PM Kornecki, Krystyna*; Katz, Miriam; McCarthy, Francine M.G.; Schaller, Morgan F; Gillikin, David P.; Stager, Jay Curt: CALIBRATING PALEO-BIOMONITORS IN LAKE GEORGE, NY SEDIMENTS WITH MODERN GEOCHEMICAL AND LIMNOLOGICAL MEASUREMENTS

**226-4** 2:30 PM Martin, Ruth A.*; Nesbitt, Elizabeth A.: CANARIES IN THE COAL MINE: BENTHIC FORAMINIFERA IN THE ASSESSMENT OF PUGET SOUND, WASHINGTON STATE, BENTHIC ENVIRONMENTS

**226-5** 2:45 PM Collins, Laurel S.*; Cheng, Jie; Hayek, Lee-Ann C.; Fourqurean, James W.; Buzas, Martin A.: A ~3,800-YEAR RECORD OF SEAGRASS COVERAGE IN SOUTH FLORIDA, BASED ON FORAMINIFERA

**BREAK**

**226-6** 3:15 PM Mathewes, Rolf W.*: FORENSIC PALYNOLOGY IN CANADA - FROM DELGAMUUKW TO HOMICIDE INVESTIGATION (Invited Presentation)

**226-7** 3:35 PM Perrotti, Angelina G.*; Fenerty, B.: THE UTILITY OF NON-POLLEN PALYNOMORPHS AS PALEOEENVIRONMENTAL PROXY IN THE SOUTHEASTERN UNITED STATES

**226-8** 3:50 PM Wu, Jiaying*; Porinchu, David: RECONSTRUCTION OF LATE HOLOCENE HYDROCLIMATE AND ENVIRONMENTAL CHANGE IN SOUTHERN CENTRAL AMERICA WITH AN EMPHASIS ON THE TERMINAL CLASSIC DROUGHT (TCD)

**BREAK**

**226-9** 4:05 PM Gerlach, Matthew J.; Engelhart, Simon E.*; Kemp, Andrew C.; Moyer, Ryan P.; Smoak, Joseph M.; Cahill, Niamh: RECONSTRUCTING COMMON ERA RELATIVE SEA-LEVEL CHANGE ON THE GULF COAST OF FLORIDA

**226-10** 4:35 PM Sider, Maria N.*; Collins, Laurel S.; O’Dea, Aaron: A BASELINE STUDY FOR ASSESSING LAND-USE CHANGES ALONG THE CARIBBEAN COAST OF PANAMA

**226-11** 4:50 PM Wood, Elizabeth Tedder*; McBride, Randolph A.: HOLOCENE BENTHIC FORAMINIFERAL ASSEMBLAGES OF TIDAL-INLET DEPOSITS ALONG CEDAR ISLAND, VA, USA: INSIGHTS INTO STORM IMPACTS, BREAHC DYNAMICS, AND INLET EVOLUTION
SESSION NO. 227

**T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present** (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)

1:30 PM, Washington State Convention Center, Room 609

Lesleigh Anderson and Miriam C. Jones, Presiding

1:30 PM INTRODUCTORY REMARKS

**227-1** 1:45 PM Porter, Trevor J.*; Schoenemann, Spruce W.; Davies, Lauren J.; Froese, Duane G.: A FULL HOLOCENE SUMMER TEMPERATURE RECONSTRUCTION FROM PRECIPITATION ISOTOPES IN SYNGENETIC PERMAFROST IN CENTRAL YUKON TERRITORY (EASTERN BERINGIA)

**227-2** 2:00 PM Reuther, Joshua D.*; Druckenmiller, Patrick; Rogers, Jason S.; Bundtzen, Thomas K.; Bowman, Robert C.; May, Kevin; Wallace, Kristi L.: LATE QUATERNARY (MIS-30 TO MIS-1) STRATIGRAPHIC TRANSITIONS IN A HIGHLAND BERINGIAN LANDSCAPE ALONG THE KUSKOKWIM RIVER, ALASKA

**227-3** 2:15 PM Crossen, Kristine J.*; Yesner, David R.; Pasch, Anne D.: PLEISTOCENE-HOLOCENE EVOLUTION OF LANDSCAPES AND SUBSISTENCE OPPORTUNITIES AT BERING PIEDMONT GLACIER, NORTHERN GULF OF ALASKA

**227-4** 2:30 PM Zellers, Sarah D.*; Cowan, Ellen A.; Caisse, Beth; Müller, Juliane: A TALE OF TWO RETREATS – COMPARING AND CONTRASTING PALEOENVIRONMENTAL CONDITIONS DURING THE ULTIMATE AND PENULTIMATE LGM RETREATS OF BERING ICE STREAM, GULF OF ALASKA

**227-5** 2:45 PM Petete, Dorothy M.*; Nichols, Jonathan; Mann, Daniel H.; Jones, Miriam C.: COASTAL ALASKA AND COASTAL EASTERN US PALEOCOLOGY/PALEOCLIMATE - HOW DO DEGLACIATION, COLONIZATION, YOUNGER DRYAS, NORTHWARD TREE MIGRATION, HOLOCENE THERMAL MAXIMUM, NEOGLACIATION, AND PEAT FORMATION COMPARE? (Invited Presentation)

**227-6** 3:05 PM Lacourse, Terri*: A MULTI-PROXY PALEOENVIRONMENTAL RECORD FROM COASTAL BC: SUMMER TEMPERATURES, VEGETATION AND FIRE OVER THE LAST 14,000 YEARS

3:20 PM BREAK

**227-7** 3:35 PM Fitzhugh, Ben*: Addison, Jason; Brown, William; Finney, Bruce P.; Harada, Naomi; Miisarti, Nicole; Nagashima, Kana; Takase, Katsunori; Tremayne, Andrew: DID HOLOCENE VARIABILITY IN ALEUTIAN LOW DYNAMICS FORCE OSCILLATIONS IN MARINE ECOSYSTEMS AND HUMAN SUBSISTENCE HARVESTERS?

**227-8** 3:50 PM Bigelow, Nancy H.†; Reuther, Joshua D.; Wooller, Matthew; Saulnier-Talbot, Emilie; Mulliken, Katherine; Wallace, Kristi L.: LATE GLACIAL AND HOLOCENE LANDSCAPE CHANGE IN THE MIDDLE SUSITNA VALLEY, ALASKA

**227-9** 4:05 PM Anderson, Lesleigh*; Finney, Bruce P.; Engstrom, Daniel R.; Strickland, Laura E.: NEW RECORDS OF DEGLACIAL AND HOLOCENE HYDROCLIMATE AND ENVIRONMENTAL CHANGE FROM THE MATANUSKA-SUSITNA REGION OF SOUTH-CENTRAL ALASKA

**227-10** 4:20 PM Edwards, Mary E.; Dash, Jadu; Fedorov, Alexander; Langdon, Peter G.; Mogowan, Suzanne; van Hardenbroek, Maarten; Yurova, Alla: PAST LAND-ATMOSPHERE-LAKE INTERACTIONS IN BERINGIA: IMPLICATIONS FOR THE ANTHROPOCENE (Invited Presentation)

**227-11** 4:40 PM Jones, Miriam C.*; Anderson, Lesleigh; Jolley, Chelsea; Keller, Katherine J.; Littell, Virginia; Nash, Bailey: TOWARD UNDERSTANDING DRIVERS AND CONTROLS OF HOLOCENE OXYGEN ISOTOPIC SHIFTS OF WATER AND PEAT CELLULOSE ON THE KENAI PENINSULA, ALASKA

**227-12** 4:55 PM Wiles, Gregory*: Charlton, Joshua; Wilson, Rob; D’Arrigo, Rosanne D.; Gaglioti, Ben; Wiesenberg, N.; Oelkers, Rose; Hayles, Laia Andrew; Davi, Nicole: PROGRESS AND PROMISE IN RECONSTRUCTING NORTH PACIFIC CLIMATE FROM RING-WIDTH AND BLUE INTENSITY TREE RING CHRONOLOGIES

5:10 PM DISCUSSION

SESSION NO. 228

**T56. Mass Extinctions II: Past, Present, and Future?** (Paleontological Research Institution; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Cushman Foundation for Foraminiferal Research; Paleontological Society; Volcanic and Magmatic Studies Group)

1:30 PM, Washington State Convention Center, Room 608

David P.G. Bond, Thierry Adatte, Gerta Keller and Dougal A. Jerram, Presiding

**228-1** 1:30 PM Shrivastava, Jaya Prakash*: Pal, Sucharita: ENVIRONMENTAL EFFECTS OF DECCAN VOLCANISM ON BIOTIC CHANGES AND K/PG MASS EXTINCTION IN THE INDIAN SUB-CONTINENT: ORGANO-MOLECULAR EVIDENCES

**228-2** 1:45 PM Callegaro, Sara*: Baker, Don R.; Marzoli, Andrea; Whitehouse, Martin J.; De Min, Angelo; Renne, Paul R.; Svensen, Henrik: SULFUR PARTITIONING BETWEEN CLINOPYROXENE AND MELT: TACKLING GAS LOADS FROM LIP MAGMAS (Invited Presentation)

**228-3** 2:00 PM Le Hir, Guillaume*: Fluteau, Frederic; Godderis, Yves: THE K-PG BOUNDARY: GEOLOGICAL EVENTS, MARINE ACIDIFICATION AND COLLAPSE OF PRIMARY PRODUCERS

**228-4** 2:15 PM Jerram, Dougul A.*; Svensen, Henrik H.; Plante, Sverre; Millett, John; Reynolds, Peter: SILL INDUCED HYDROTHERMAL VENTING AS A CLIMATE TRIGGER: A SUMMARY OF OUR CURRENT UNDERSTANDING

**228-5** 2:30 PM Khozym, Hassan*: Adatte, Thierry; Mbabi Bitchong, Andre; Mohamed, Abdallah; Keller, Gerta: THE ROLE OF VOLCANISM (NORTH ATLANTIC IGNEOUS PROVINCE) IN THE PETM EVENTS REVEALED BY MERCURY ANOMALIES

**228-6** 2:45 PM Saufe, Erin E.; Qiao, Huijie; Farmsworth, Alex; Domnadiue, Yannick; Lunt, Dan J.; Pohl, Alexandre; Sagoo, Navjit; Valdes, Paul J.; Finnegan, Seth: COMBINED CLIMATE AND ECOLOGICAL NICHE MODELING PREDICTS THE RELATIVE SEVERITY OF MARINE EXTINCTIONS DURING THREE PHANEROZOIC GREENHOUSE-ICEHOUSE TRANSITIONS

**228-7** 3:00 PM Beard, J. Andrew*: Bush, Andrew M.; Hren, Michael T.; Brisson, Sarah; Fernandes, Anjali: CARBON CYCLE PERTURBATIONS ALONG AN ONSHORE-OFFSHORE GRADIENT DURING THE KELLWASSER MASS EXTINCTION EVENTS, UPPER DEVONIAN, NORTHERN APPALACHIAN BASIN


**228-9** 3:30 PM Bond, David P.G.*; Wignall, Paul B.; Grasby, Stephen E.: THE MIDDLE PERMIAN (CAPITANIAN) EXTINCTION RECORD IN THE BOREAL REALM (SPEITBERGEN AND ELLESBERME ISLAND): EVIDENCE FOR VOLCANICALLY-DRIVEN KILL MECHANISMS

**228-10** 3:45 PM Kiessling, Wolfgang*: Schobben, Martin; Ghadari, Abbas; Hairapetian, Vachik; Leda, Lucyna; Korn, Dieter: PRE-
SESSION NO. 232

T94. Limnogeology—Progress, Challenges, and Opportunities on Earth and Beyond: A Tribute to Beth Gierlowski-Kordesch (GSA Limnogeology Division; SEPM (Society for Sedimentary Geology); Paleontological Society; International Association of Limnogeology; GSA Sedimentary Geology Division; GSA Geobiology & Geomicrobiology Division)

1:30 PM, Washington State Convention Center, Room 3A

David B. Finkelstein and Lisa E. Park Boush, Presiding

1:30 PM INTRODUCTORY REMARKS

232-1 1:45 PM Benavente, Cecilia Andrea; Mansuco, Adriana; Bohacs, Kevin M.; Carroll, Alan R.: LAKE-BASIN-TYPES 2.0—EXPANDING THE MODEL TO THE 4TH DIMENSION... AND BEYOND!

232-2 2:00 PM Park Boush, Lisa E.; Motz, Gary J.; Astrop, Tim; Hren, Michael T.: LAKE FAUNAS THROUGH TIME—THE ESTUARY EFFECT AND HOW LIFE INVADED LAND

232-3 2:15 PM Benavente, Cecilia Andrea; Mansuco, Adriana Cecilia; Bohacs, Kevin M.: LINKAGE BETWEEN TWO LACUSTRINE MODELS APPLYING STABLE ISOTOPES TO TRIASSIC CARBONATE PALEOLAKES FROM ARGENTINA

232-4 2:30 PM Glumac, Bosiljka: STABLE ISOTOPE ANALYSIS OF CARBONATE COMPONENTS FROM LACUSTRINE DEPOSITS OF THE JURASSIC TURNERS FALLS FORMATION, DEERFIELD RIFT BASIN, MASSACHUSETTS: A VALUABLE HYDROLOGIC, DIAGENETIC AND STRATIGRAPHIC TOOL (Invited Presentation)

232-5 2:45 PM Harris, Nicholas*: Tucker, Gregory E.: THE ORGANIC CARBON RECORD OF LOWER CRETACEOUS RIFT LAKES, CONGO BASIN, AFRICA: A RECORD OF RIFT TOPOGRAPHY, SOIL DEVELOPMENT AND TOPOGRAPHY

232-6 3:00 PM Wei, Wei*: Algeo, Thomas J.; Lu, Yongchao: MARINE TRANSITIONS INTO THE BOHAI BAY LACUSTRINE SYSTEM DURING THE PALEogene

232-7 3:15 PM Hu, Chenlin*: Zhang, Yuanfu; Jiang, Zaiqing; Algeo, Thomas J.; Wang, Min; Lei, Huarui: DEVELOPMENT OF SAND-BODY RESERVOIRS IN FAULT-BOUND LACUSTRINE BASINS: PLEISTOCENE-HOLOCENE POYANG LAKE, EASTERN CHINA

232-8 3:30 PM Rosen, Michael R.: REVISITING THE CONTRIBUTION OF GROUNDWATER TO PLAYS AS A FUNCTION OF TIMESCALE AND DEVELOPMENT IN THE WESTERN UNITED STATES

232-9 4:00 PM Sirota, Ido; Enzel, Yehouda; Lensky, Nadav G.: TEMPERATURE SEASONALITY CONTROL OVER MODERN HALITE LAYERS IN THE DEAD SEA: IN SITU OBSERVATIONS AND IMPLICATIONS TO PALEOHYDROLOGY AND PALEOClimatology

232-10 4:15 PM Russell, James M.; Vogel, Hendrik; Bijaksana, Satria; Melleis, Martin: BIOGEOCHEMICAL AND SEDIMENTOLOGICAL RESPONSES TO CLIMATE CHANGE IN THE LARGE, FERRUGINOUS LAKE TOWUTI, INDONESIA

232-11 4:30 PM Deocampo, Daniel M.; Rabideaux, Nathan M.; Minkara, Karim E.: SILICATE DIAGENESIS IN ALKALINE LAKE BASINS

232-12 4:45 PM McGlue, Michael M.: Zimmerman, Susan H.; Tunno, Newsom, Horton E.; Rivera-Hernandez, Frances; Stein, Nathanial; Summer, Dawn Y.; Vasavada, A.: PALEOENVIRONMENTS AND STRATIGRAPHIC ARCHITECTURE OF AN ANCIENT LAKE BASIN, GALE CRATER, MARS

232-13 5:00 PM Deocampo, Daniel M.; Rabideaux, Nathan M.; Minkara, Karim E.: SILICATE DIAGENESIS IN ALKALINE LAKE BASINS

232-14 5:15 PM Finkelstein, David B.*; Phillips, Aubrey; Jones, Snowden: INTERNAL WAVES AS DRIVERS OF CHEMICAL CHANGE IN THE BELHURST CASTLE HOLE IN SENeca LAKE, NY

SESSION NO. 233

T101. Better Together: Partnerships That Facilitate or Enhance Experiential Learning in Undergraduate Geoscience Education (GSA Geoscience Education Division; National Association of Geoscience Teachers)

1:30 PM, Washington State Convention Center, Room 3A

Miriam Barquero-Molina and Jonathan W. Mies, Presiding

1:30 PM INTRODUCTORY REMARKS

233-1 1:30 PM Dalbotten, Diana*: Berthelote, Antony R.; Bueno Watts, Nievita; Geraghty Ward, Emily M.: THE RESEARCH EXPERIENCE FOR UNDERGRADUATES ON SUSTAINABLE LAND AND WATER RESOURCES AND THE GEOSCIENCE ALLIANCE NETWORK—WORKING HAND IN HAND TO PROMOTE BROADER PARTICIPATION IN THE GEO SCIENCES

233-2 1:45 PM Morris, Aisha R.: Russo-Nixon, Kelsey; Charlevoix, Donna: PRE-REU INTERNSHIPS FOR COMMUNITY COLLEGE STUDENTS SUPPORTED BY A UNIQUE PARTNERSHIP
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BETWEEN A COMMUNITY COLLEGE, FACILITY, AND FEDERAL AGENCY

233-3  2:00 PM  Wirth, Karl R.*; Davidson, Cameron: KECK GEOLOGY CONSORTIUM: A PARTNERSHIP FOR BROADENING PARTICIPATION IN THE GEOSCIENCES THROUGH STUDENT-FACULTY COLLABORATIVE RESEARCH (Invited Presentation)

233-4  2:20 PM  Brazil, Liza I.*: TOOLS & SUPPORT FOR INTEGRATING REAL ENVIRONMENTAL DATA INTO EDUCATION

233-5  2:35 PM  Visaggi, Christy C.*; Hawthorne, Timothy L.; Graham, Lain; Munisteri, Christine; Jarrett, Olga: PREPARING THE NEXT GENERATION OF SCHOLARS THROUGH GIS AND CITIZEN SCIENCE IN COMMUNITY-BASED RESEARCH ON MARINE DEBRIS AND FLOODING IN HOPKINS, BELIZE

233-6  2:50 PM  Manduca, Cathryn A.*; Benthien, Mark; Chariwoix, Donna; Davis, Felicia; Ellis, Katherine K.; Haddock, Darryl; Iverson, Ellen; McGill, Sally; Morris, Aisha R.; Nagle, Barbara; Neely, Norma; Pandya, Rajul; Peterman, Karen; Taber, John: SUPPORTING LOCAL PATHWAYS LINKING GEOSCIENCE LEARNING TO COMMUNITY ENGAGEMENT: THE EARTHCONNECTIONS ALLIANCE (Invited Presentation)

3:10 PM  BREAK

233-7  3:25 PM  Ryan, Jeffrey*: Nocita, Bruce; Rodriguez, Eileen; Schackne, Michael; Hull, Jon; Vacher, H.L.; Connor, Charles; Rains, Mark: TWENTY-PLUS YEARS OF A SUCCESSFUL EMPLOYER/Academic PARTNERSHIP IN SOUTHWEST FLORIDA (Invited Presentation)

233-8  3:45 PM  Harris, M. Scott*: Evelpidou, Niki; Karkani, Anna; Richter, Lea: USING AN INTERCONTINENTAL SCHOLAR-TEACHER MODEL FOR UNDERGRADUATE EDUCATION IN THE ECUADOR VOLCANOLOGY FIELD CAMP

233-9  4:00 PM  Kelley, Daniel F.*; Uznarlar, Nur; Liseneb, Alvis L.: POSITIVE IMPACTS OF US-ECUADORIAN STUDENT INTEGRATION IN THE ECUADOR VOLCANOLOGY FIELD CAMP

233-10  4:15 PM  Kaiser, Jason F.*: TEACHING GEOLOGY IN SOUTHERN UTAH UNIVERSITY’S JUMPSTART GENERAL EDUCATION PROGRAM: MAKING GEOLOGY ACCESSIBLE TO NON-SCIENTISTS THROUGH COLLABORATIVE TEACHING AND LEARNING


233-12  4:45 PM  Bhattacharrya, Prajuki*; Huss-Lederman, Susan; Deering, Brianna: COLLABORATION ACROSS DISCIPLINES AND CULTURES TO PROMOTE CIVIC ENGAGEMENT IN ENVIRONMENTAL ISSUES: A WAY TO DEVELOP 21ST CENTURY SKILLS

233-13  5:00 PM  Kraal, Erin*: Pfeifer-Wunder, Amy: PARTNERS IN PROCESS: A CONTEMPORARY COLLABORATION BETWEEN A SCIENTIST AND ARTIST

5:15 PM  CONCLUDING REMARKS

SESSION NO. 234

T105. Building an Inclusive Geoscience Community Today for Tomorrow II (GSA Geoscience Education Division; GSA Diversity in the Geosciences Committee; GSA Geology and Society Division; National Association of Black Geoscientists)

1:30 PM, Washington State Convention Center, Room 2A

Stephen K. Boss, Aisha R. Morris, Sadredin C. Moosavi, Wendy Smythe and Darryl Reano, Presiding

1:30 PM  INTRODUCTORY REMARKS

234-1  1:45 PM  Chinn, Pauline W.U.*; Spencer, Kekaha; Russo, Brigitte U.: TRANSFORMING TEACHING: INTERSECTING INDIGENOUS KNOWLEDGE WITH PLACE-BASED GEOSCIENCE INSTRUCTION

234-2  2:00 PM  Black, Jessica L.*: INDIGENOUS ENVIRONMENTAL SCIENCE ON THE COLUMBIA RIVER PLATEAU (Invited Presentation)

234-3  2:15 PM  Garcia, Angel A.*; Semken, Steven; Brandt, Elizabeth: THE CONSTRUCTION OF ETHNOGEOCULTURAL CULTURAL MODELS DERIVED FROM TRADITIONAL KNOWLEDGE TO INFORM PLACE-BASED EDUCATION

234-4  2:30 PM  Mitchell, Todd A.*: USING TRADITIONAL ECOCLOGICAL KNOWLEDGE TO PROTECT WETLANDS, THE SWINOMISH TRIBE’S WETLANDS CULTURAL ASSESSMENT PROJECT

234-5  2:45 PM  Moore, Alexandra*; Carter, Yvonne Yarber; Keakealani, Ku'ulei; Carter, Keoki; Derry, Louis A.; Grant, Katherine: KUKUI LIGHTS THE WAY: MATCHING ORAL HISTORIES TO RADIOCARBON DATES AT KA'UPULEHU HAWAI'I

234-6  3:00 PM  Smail, Marsha*: Fox, Nicholas R.; Hubbard, Mary S.: UNLOCKING THE GATES: CORRELATING GROUND PENETRATING RADAR (GPR) AND GEOGRAPHICAL INFORMATION SYSTEMS(GIS) FOR THE LOCATION OF INDIAN CHILDREN IN HISTORIC INDIAN BOARDING SCHOOL CEMETERIES

234-7  3:30 PM  Judd, Dineh Elizabeth*: ASSESSING THE LUMMI RESERVATION FOR RESTORATION SITES OF COASTAL PRAIRIE HABITAT USING GEOSPATIAL TECHNOLOGY

234-8  3:45 PM  Cooper, Sharon*: Lewis, J.C.; Leckie, R. Mark; Hovan, Steven A.; White, Lisa D.: WORKSHOP INITIAL REPORT: EXPANDING THE GEOSCIENCE PIPELINE BY CONNECTING EDUCATORS WITH EARLY CAREER IODP SCIENTISTS

234-9  4:00 PM  Kar, Aditya*: CONNECTING ACADEMICALLY TALENTED URMS TO A PATHWAY THAT RECRUITS, RETAINS AND GRADUATES GEOSCIENTISTS FOR STEM CAREERS AND AMERICAN WORKFORCE

234-10  4:15 PM  Baldridge, Alice M.*: USING THE PARKS TO INTEGRATE DIVERSITY, EQUITY, AND INCLUSION IN GEOSCIENCE CLASSROOMS

234-11  4:30 PM  Boss, Stephen K.*: RECOGNIZING THE CULTURE OF GEOLOGY AS A PRIMARY BARRIER TO INCLUSION

4:45 PM  DISCUSSION

SESSION NO. 235

T114. Getting It Done: Experiences of Implementing the Framework and NGSS in Earth and Space Science

1:30 PM, Washington State Convention Center, Room 2B


1:30 PM  INTRODUCTORY REMARKS

235-1  1:35 PM  Peterson, Barney*: ACTIVELY ENGAGING ELEMENTARY STUDENTS IN THE WONDERS OF EARTH SYSTEM SCIENCE (Invited Presentation)

235-2  1:50 PM  Workman Ford, Kerry*: TEACHING TEACHERS: A WORTHWILE ENDEAVOR

235-3  2:05 PM  Wyssession, Michael E.*: CHALLENGES IN DEVELOPING K-8 SCIENCE PROGRAMS ALIGNED WITH THE NEXT GENERATION SCIENCE STANDARDS (Invited Presentation)

235-4  2:25 PM  Huntoon, Jacqueline E.*; Opliger, Doug; Robeck, Ed C.; Gochis, Emily E.; Tubman, Stephanie; Wojick, Christopher L.; Mattox, Stephen R.: MI-STAR: IMPLEMENTING THE FRAMEWORK AND NGSS IN MIDDLE SCHOOLS IN MICHIGAN (Invited Presentation)

235-5  2:40 PM  Lyon, Eva*: Rosen, Ashley; Freeman, Rebecca L.; Fryar, Alan; McGee, Michael; Bathon, Justin: ELEVATING THE STANDARDS: USING THE NEXT GENERATION SCIENCE...
STANDARDS TO PROMOTE GEO SCIENCE AWARENESS IN STEM HIGH SCHOOLS

235-6 2:55 PM Pyle, Eric J.*: CONTENT KNOWLEDGE FOR TEACHING: WHAT DO PRESERVICE EARTH SCIENCE TEACHERS NEED TO ‘ALIGN’ WITH NGSS?

235-7 3:10 PM Ebert, James R.*; Bischoff, Paul; Dolphin, Glenn; Ellis, Todd D.: PREPARING NEXT GENERATION GEOSCIENCE TEACHERS: SCIENCE AND ENGINEERING PRACTICES THROUGH MODELS AND MODEL-BASED LEARNING IN A SUMMER INSTITUTE FOR PRE-SERVICE TEACHERS

3:25 PM BREAK

235-8 3:40 PM Ebert, James R.*; NGSS SCIENCE AND ENGINEERING PRACTICES AND CROSSCUTTING CONCEPTS IN GEOSCIENCE COURSES FOR PRE-SERVICE TEACHERS

235-9 3:55 PM Bodzin, Alec*; Carrigan, James H.; Anastasio, David J.; Popejoy, Kate; Hammond, Thomas; Holland, Breena; Rutzmoser, Scott; Farina, William; Sahagian, Dork: SOCIO-ENVIRONMENTAL SCIENCE INVESTIGATIONS THAT SUPPORT NGSS TEACHING AND LEARNING

235-10 4:10 PM Gray, Kyle*: Boesdorfer, Sarah; Del Carlo, Dawn; Escalada, Lawrence: OH MIGHTY ICCISC – USING CROSS-CUTTING THEMES TO DEVELOP NGSS-ALIGNED CURRICULA FOR GRADES 6-12


235-12 4:40 PM Egger, Anne E.*; Fox, Sean P.; McDaris, John R.; Gilbert, Lisa A.: FACILITATING THREE-DIMENSIONAL LEARNING WITH ADAPTABLE, SEARCHABLE, NGSS-ALIGNED CURRICULAR MATERIALS FROM INTEGRATE


235-14 5:10 PM Duggan-Haas, Don*: DON’T JUST THINK OUTSIDE THE BOX, BREAK IT: CAN 3D SCIENCE DRIVE INNOVATIONS THAT GENUINELY AND SUBSTANTIALLY IMPROVE EDUCATIONAL OUTCOMES?

5:25 PM CONCLUDING REMARKS

SESSION NO. 236

T143. Curating Physical Samples in a Digital World (GSA Geoinformatics Division; Paleontological Society; Society for the Preservation of Natural History Collections; Paleontological Research Institution; Cushman Foundation; GSA Geobiology & Geomicrobiology Division; Association of American State Geologists)

1:30 PM, Washington State Convention Center, Room 3B

Tuesday, 24 October 2017

Leslie Hsu, Megan Carter, Anders J. Noren and Lesley A.I. Wyborn, Presiding

1:30 PM INTRODUCTORY REMARKS

236-1 1:45 PM Lehner, Kerstin Annette*: OPEN AND FAIR SAMPLES: THE NEED FOR TRUSTWORTHY DIGITAL AND PHYSICAL SAMPLE CURATION (Invited Presentation)

236-2 2:00 PM Richard, Stephen*: Fils, Douglas; Noren, Anders; Lehner, Kerstin A.: OPEN CORE DATA PROJECT: INTEGRATING PHYSICAL SAMPLES INTO THE WEB OF DATA

236-3 2:15 PM Molineux, Ann*: THE CHALLENGE: WHAT IS A SAMPLE AND HOW BEST TO CAPTURE MEANINGFUL DIGITAL RECORDS


2:45 PM BREAK

236-5 3:00 PM Hills, Denise J.*; McIntyre-Redden, Marcella R.: METADATA ARCHAEOLOGY: AN IMPORTANT PART OF THE PROCESS OF DIGITIZATION OF PHYSICAL COLLECTIONS

236-6 3:15 PM Powers, Lindsay*: CHALLENGES AND OPPORTUNITIES FOR PROMOTING PHYSICAL SAMPLE COLLECTIONS IN GEOLOGICAL SURVEYS (Invited Presentation)

236-7 3:30 PM Cole, Elaina V.*; Bowering, James F.: AMBOPO: ENGINEERING AN OPEN SOURCE SOFTWARE APPLICATION, LIBRARY, AND WEB SERVICE FOR COORDINATE SYSTEM CONVERSIONS

236-8 3:45 PM Curry, Tia*: Bowering, James F.: MARS: MIDDLEWARE FOR ASSISTING THE REGISTRATION OF SAMPLES

4:00 PM BREAK

236-9 4:15 PM Tuite, Michael L.*: DEVELOPING A FRAMEWORK FOR A DATA LIBRARY OF MARS ANALOG GEOSAMPLES

236-10 4:30 PM Noren, Anders*: IGSN IN CONTINENTAL DRILLING AND CORING: PROGRESS AND CHALLENGES

236-11 4:45 PM Klump, Jens*: Devaraju, Anusuriya; Wyborn, Lesley A.I.; Bastrakova, Irina; Golodoniuc, Pavel; Molnnes, Brent I.A.; Cox, Simon: IMPLEMENTING THE INTERNATIONAL GEO SAMPLE NUMBER (IGSN) IN AUSTRALIA (Invited Presentation)

5:00 PM LIGHTNING TALKS

5:15 PM DISCUSSION

SESSION NO. 237

T144. System-Scale Zonation of Ore Systems: Insights into 3D Architecture from Lateral and Deep Exposures Due to Mining and Structural Deformation (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Society of Economic Geologists)

1:30 PM, The Conference Center, Yakima 1

Carson A. Richardson, Simone E. Runyon and Eric Seedorff, Presiding

1:30 PM INTRODUCTORY REMARKS

237-1 1:45 PM Dilles, John H.*; Profitt, John M.; Houston, Robert A.: TOPS AND BOTTOMS OF PORPHYRY COPPER DEPOSITS REVISITED: VERTICAL AND LATERAL EXTENTS FROM YERINGTON, NV, AND BUTTE, MT (Invited Presentation)

237-2 2:05 PM Jensen, Collin G.*; Christiansen, Eric H.; Stearns, Michael A.; Dorais, Michael J.; Dyarich, Tober; Tolworthy, Joseph; Dunkley, Riley; Kindred, Thane; Martin, Samuel; Keith, Jeffrey D.: MULTI-STAGE INTRUSION AND DIFFERENTIATION: PETROLOGIC DEVELOPMENT OF THE LITTLE COTTONWOOD STOCK, UTAH

237-3 2:20 PM Vikre, Peter G.*; Pribil, Michael J.; Poulson, Simon; Premo, Wayne R.; Hayden, Leslie A.: TRANSFER OF SULFUR IN THE MIOCENE COMSTOCK LODE AU-AG SYSTEM (NEVADA, USA) FROM MANTLE TO METEORIC WATER

237-4 2:35 PM Richardson, Carson A.*; Seedorff, Eric: MULTIPLE GENERATIONS OF CENOZOIC NORMAL FAULTS AND RELATED TILTING IN THE GOSHUTE MOUNTAINS AND TOANO RANGE, ELKO COUNTY, NEVADA, WITH GEOLOGIC IMPLICATIONS

237-5 2:50 PM John, David A.*; Colgan, Joseph P.; Watts, Kathryn E.; Henry, Christopher D.: ARCHITECTURE AND GENESIS OF HYDROTHERMAL SYSTEMS IN TILTED MID-CENOZOIC CALDERAS, NORTHERN GREAT BASIN, USA

237-6 3:05 PM Gaynor, Sean*: Rosera, Josh; Coleman, Drew S.: SMALL, EPHEMERAL AND SHALLOW RELATIONSHIPS: AMALGAMATING MO-MINERALIZING MAMMALS AT THE QUESTA PORPHYRY MO DEPOSIT
SESSION NO. 238 $

T150. Chemical Scene Investigations of Large Igneous Provinces II (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)

1:30 PM, The Conference Center, Skagit 2

Cole G. Kingsbury and Richard E. Ernst, Presiding

1:30 PM INTRODUCTORY REMARKS

238-1 1:40 PM Jowitt, Simon*; Ernst, Richard E.: LITHOGEOCHEMICAL INSIGHTS INTO THE NI-CU-PGE PROSPECTIVITY OF MAFIC-ULTRAMAFIC LARGE IGNEOUS PROVINCES AND USES IN EXPLORATION TARGETING (Invited Presentation)

238-2 2:00 PM Liikane, Dustin Andrew*; St-Onge, Marc R.; Ernst, Richard E.; Kjarsgaard, Bruce; Ranney, Nicole M.: GEOCHEMICAL, ISOTOPIC, AND MINERALOGICAL CHARACTERIZATION OF THE FROBISHER SUITE MAFIC-ULTRAMAFIC SILLS, SOUTHERN BAFFIN ISLAND, CANADA, WITH IMPLICATIONS FOR METALLIC POTENTIAL

238-3 2:15 PM Regan, Sean P.*; Grohn, Lisa J.; Williams, M.L.; Chiarenzelli, J.; Jerinicov, Michael; Cousens, Brian; Aspler, Lawrence B.; Mahan, K.H.: THE SNOWBIRD TECTONIC ZONE LIP: IMPLICATIONS FOR AN ABORBED SALT ORIGIN

238-4 2:30 PM Price, Jonathan D.*; Franks, Challen; Puckett, Robert E.; Klasse, Dillon S.: INSIGHTS FROM MAFFIC MINERAL VARIATIONS AMONG A-TYPE LIP GRANITE SERIES FROM THE SOUTHERN OKLAHOMA AULACOGEN

238-5 2:45 PM Kastek, Nico*; Ernst, Richard E.; Cousens, Brian L.; Baragar, W.R.A.; Bleeker, Wouter; Soderlund, Ulf; Sylvester, Paul J.; Kamo, Sandra L.: PETROGENESIS OF THE 1998 MAINTO LARGE IGNEOUS PROVINCE: EVIDENCE FOR TWO DISTINCT MAGMA SOURCES AND PLUMBING SYSTEM PATHWAYS

238-6 3:00 PM Magalhaes, Nivea*; Penniston-Dorland, Sarah C.; Alpheus, Safiya; Feineman, Maureen; Farquhar, James: SURFACE-DERIVED SULFUR IN THE SUB-CONTINENTAL LITHOSPHERIC MANTLE: WHOLE ROCK MULTIPLE SULFUR ANALYSIS OF PERIDOTITE AND ECLOGITE XENOLITHS FROM THE PREMIER KIMBERLITE, SOUTH AFRICA

3:15 PM DISCUSSION

238-7 3:30 PM Pearce, Julian A.*; Ernst, Richard E.; Rogers, Chris; Peate, David W.: LIP-PRINTING: A GEOCHEMICAL PROXY APPROACH TO LIP FORNSICS (Invited Presentation)

238-8 3:50 PM Callegaro, Sara*; Marzoli, Andrea; Bertrand, Hervé; Blickert-Thott, Janne; Reisberg, Laurie; Cavazzini, Giancarlo; Jourdan, Fred; Davies, Joshua H.F.L.; Schaltegger, Urs; Chiaradia, Massimo: THE HIGH-TI CAMP FREETOWN LAYERED COMPLEX (SIERRA LEONE) - LITHOSPHERIC IMPRINTING REVEALED BY ISOYPE SYSTEMATICS

238-9 4:05 PM Heinonen, Jussi S.*; Luttinen, Arto V.; Vuori, Saku K.; Bohrsen, Wendy A.; Spera, Frank J.; Scruggs, Melissa A.: TWO GABBROIC DIKES FROM THE KAROO LIP EXHIBIT INCREASED εNd TOWARDS THE CONTACT WITH THE WALLROCK AND RECORD TWO DISTINCT STORIES OF DIFFERENTIATION

238-10 4:20 PM Kingsbury, Cole G.*; Ernst, Richard E.; Cousens, Brian: THE HIGH ARCTIC LIP IN CANADA: STRATIGRAPHIC CONTROLS AND GEOCHEMICAL MONITORING ON CRUSTAL INFLUENCES

238-11 4:35 PM Harrison, Lauren N.*; Weis, Dominique; Garcia, Michael O.: THE HAWAIIAN MANTLE PLUME OVER >81 MILLION YEARS: EVIDENCE FOR MULTIPLE DEPLETED SOURCES

238-12 4:50 PM Toth, Conner H.*; Bohrsen, Wendy A.; Louis, Mikkel; Bendaña, Sylvana; Moore, Nicole E.; Grunder, Anita: ORIGIN OF GIANT PLAGIOCLASE IN A LARGE-VOLUME BASALTIC MAGMA: ENTRAINMENT OF PARTIALLY-MELTED GABBROIC CUMULATE IN THE STEENS BASALT, SE OREGON, USA

238-13 5:05 PM Weis, Dominique*; Harrison, Lauren; Scoates, James S.: WINDOWS INTO THE DEEP MANTLE FROM LONG-LASTING EM-1 MANTLE PLUME (Invited Presentation) 5:25 PM CONCLUDING REMARKS

SESSION NO. 239

T165. Recent Advances in Understanding Volcanism of the Yellowstone Hotspot

1:30 PM, The Conference Center, Tahoma 3

Arron R. Steiner, John A. Wolff and Martin J. Streck, Presiding

239-1 1:30 PM Camp, Victor E.*; Ross, Martin E.; Duncan, Robert; Kimbrough, David L.: FARALLON SLAB UPLIFT AND BACK-ARC VOLCANISM ALONG THE YELLOWSTONE ADAKITE HOT SPOT TRACK (Invited Presentation)

239-2 1:50 PM Benson, Thomas R.*; Borchardt, Jackson Stone; Coble, Matthew A.; Mahood, Gail A.: NEW CONSTRAINTS ON THE GIANT DIABASE DIKE SWARM AT INITIATION OF THE YELLOWSTONE HOTSPOT THROUGH GEOLOGICAL MAPPING AND HIGH-PRECISION *AR/AR GEochronology OF CONTEMPORANEOUS CALDERAS

239-3 2:05 PM Cahoon, Emily B.*; Streck, Martin J.: PICTURE GORGE BASALT, EASTERN OREGON: EXTENDED DISTRIBUTION AND PETROGENETIC CONNECTIONS TO STEENS BASALT AND STRAWBERRY VOLCANICS

239-4 2:20 PM Bindeman, Ilya N.*; Colon, Dylan P.; Gerya, Taras; Melnik, Oleg; Simakiv, Alexander: ZIRCON DIVERSITY AND NUMERICAL MODELING ON DIFFERENT SCALES TO UNDERSTAND MAGMA GENESIS IN AREAS OF HOT SPOT-CRUST INTERACTION WITH EMPHASIS ON YELLOWSTONE PLUME (Invited Presentation)

239-5 2:40 PM Wolff, John A.*; Starkel, William A.; Henry, Christopher D.; Ellis, Ben; Ramos, Frank C.: MAFIC AND INTERMEDIATE MAGMATISM AT MCDERMITT CALDERA, NEVADA--
SESSION NO. 240

T181. Terroir (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Skagit 3

Scott Burns and Kevin R. Pogue, Presiding

1:30 PM INTRODUCTORY REMARKS

240-1 1:35 PM Burns, Scott F.*: DIFFERENCES IN TERROIRS OF WINE GRAPES IN OREGON, USA

240-2 1:50 PM Jones, Gregory V.; Jones, Henry E.: WITHIN VINEYARD LANDSCAPE CONTROLS ON TEMPERATURE STRUCTURE AND VARIETAL RIPENING POTENTIAL IN THE UMPQUA VALLEY OF OREGON

240-3 2:05 PM Pogue, Kevin R.*: GEOLOGIC JUSTIFICATIONS FOR THE DISTINCTIVENESS OF FEDERALLY SANCTIONED AMERICAN VITICULTURAL AREAS: EXAMPLES FROM THE COLUMBIA BASIN, WASHINGTON AND OREGON

240-4 2:20 PM Ihle, Alexander*; Morgan, Silas; Kimball, Bryn; Pogue, Kevin: A GEOCHEMICAL ANALYSIS OF COLUMBIA RIVER BASIN VINEYARD SOILS

240-5 2:35 PM Wilkins, David*: Busacca, Alan: INSIGHTS INTO TERROIR FACTORS FROM A DENSE NETWORK OF VINEYARD

SOIL AND WEATHER STATIONS, SUNNYSLOPE DISTRICT, IDAHO

240-6 2:50 PM Barlow, Megan L.; Cameron, Barry I.; Guibrandson, Erik L.; Young, Erica B.: SOIL-GRAPEVEIN INTERACTIONS: INSIGHT FROM VERDICCHIO IN THE MARCHE WINE REGION, ITALY

240-7 3:05 PM Hou, Wenzhu*: Ng, Stephen; Chung, Diane; Sun, Yiyin: THE TERROIR OF THE HELAN MOUNTAINS: A RISING WINE REGION OF CHINA

240-8 3:20 PM Burns, Scott F.*: RESURGENCE OF TERROIR TASTING OF RIESLING WINES IN THE WILLAMETTE VALLEY, OREGON, USA

240-9 3:35 PM Bershaw, John*: Carder, Bethany; Burns, Scott F.; Carlson, Tessa B.: CANNABIS TERROIR: WHERE IS THE GRASS GREENER?

3:50 PM CONCLUDING REMARKS

4:05 PM DISCUSSION AND WINE TASTING OF DIFFERENT TERROIRS

SESSION NO. 241

T182. The Geological Signature of Natural Hazard Events II (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Chelan 5

Peter Bobrowsky, David H. Huntley, Jasper Knight and Catherine Chague-Goff, Presiding

241-1 1:30 PM Peck, Alexander M.*: NEW EVIDENCE SUPPORTING PROBABLE EARTHQUAKE NUCLEATION SITE ALONG THE CENTRAL MAYNARD LAKE FAULT WITHIN THE LEFT-LATERAL PAHNAGAT SHEAR ZONE, NEVADA, USA

241-2 1:45 PM Carena, Sara*: Friedrich, Anke M.: VERTICAL-DISPLACEMENT HISTORY OF AN ACTIVE BASIN AND RANGE FAULT BASED ON INTEGRATION OF GEOMORPHIC, STRATIGRAPHIC, AND STRUCTURAL DATA

241-3 2:00 PM Cisternas, Marco*: Mizobe, Cynthia; Wesson, Robert L.; Ely, Lisa L.; Muñoz, Ariel; Dura, Tina; Valdebenito, Galo; Meinick, Daniel: BEACH RIDGES, BURIED EROSIONAL SCARPS AND OVERHANGING SOILS EVIDENCE RECURRING PAST CO-SEISMIC SUBSIDENCE MIDWAY ALONG THE AREA OF THE GIANT 1960 CHILE EARTHQUAKE


241-5 2:30 PM Greene, H. Gary*: Barrie, Vaughn; Todd, Brian J.: THE SKIPJACK ISLAND FAULT ZONE - AN ACTIVE TRANSCURRENT STRUCTURE WITHIN THE UPPER PLATE OF THE CASCADIA SUBDUCTION COMPLEX

2:45 PM DISCUSSION

3:00 PM BREAK

241-6 3:15 PM Geertsema, Marten*: CHALLENGES WITH RADIOCARBON DATING LANDSLIDES

241-7 3:30 PM Hickson, Catherine J.*: WHEN IS A SURGE NOT A SURGE? THAT IS THE PERPLEXING QUESTION

241-8 3:45 PM Major, Jon J.; Pierson, Thomas C.: BLOCKS AND LAPILLI AND ASH, OH MY! INTERPRETATION OF VOLCANICLASTIC DEPOSITS

241-9 4:00 PM Cole, Jeffrey A.*; Bassette-Kirton, Erin K.; Baum, Rex L.; Smith, Joel B.; Schmitt, Robert G.; Geiger, John W.: THE WEST SALT CREEK ROCK AVALANCHE, SAG POND, AND OUTBURST FLOOD: MORPHOLOGICAL AND SEDIMENTOLOGICAL SIGNATURES FROM A SERIES OF EXTRAORDINARY EVENTS
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241-10 4:15 PM Roberts, Nicholas J.; Geertsema, Marten; Kwoll, Eva; Clague, John; Venditti, Jeremy G.: SIGNATURES OF LANDSLIDE-GENERATED WAVES IN THE SOUTHERNMOST COAST MOUNTAINS, BRITISH COLUMBIA

241-11 4:30 PM Shugar, Dan H.: ROCK AVALANCHE SEDIMENTOLOGY AND GEOMORPHOLOGY

4:45 PM CONCLUDING REMARKS

SESSION NO. 242

T188. Interrelationship between Tectonic Uplift and Quaternary Glaciations on the Tibetan Plateau and Its Surrounding Mountains

1:30 PM, The Conference Center, Chelan 2
Zhijiu Cui, Yingkui Li, Jonathan M. Harbo and Chaolu Yi, Presiding

SESSION NO. 243

T189. Landscapes in the Anthropocene (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Sedimentary Geology Division; GSA Limnogeology Division)

1:30 PM, The Conference Center, Chelan 4
Rónadh Cox, José Antonio Constantine and J. Wesley Lauer, Presiding

SESSION NO. 244

T206. Geomorphology and Landscape Evolution of Mars: The G.K. Gilbert Award Session I (GSA Planetary Geology Division)

1:30 PM, The Conference Center, Tahoma 1
James J. Wray, Danielle Wyrick and Sharon Wilson Purdy, Presiding

1:30 PM INTRODUCTORY REMARKS

5:05 PM DISCUSSION

5:20 PM CONCLUDING REMARKS
244-1  1:35 PM  Grant, John A.*; Wilson, Sharon A.*:  **GSA PLANETARY GEOLGY DIVISION G.K. GILBERT LECTURE: IMPACT CRATERS AS A TOOL FOR MEASURING THE AMOUNT AND PROCESSES OF DEGRADATION ON MARS**

244-2  1:50 PM  Schultz, Peter H.*:  **MISSING MARS: CLUES FROM REFLICT CRATERS** (Invited Presentation)

244-3  2:10 PM  Golombek, M.P.*; Warner, N.H.; Ganti, Vamsi; Sweeney, Julianne:  **DEGRADATION OF SMALL IMPACT CRATERS: EROSION RATES AND MARS CLIMATE**

244-4  2:30 PM  Arvidson, Raymond E.*:  **ORBITAL AND ROVER-BASED EXPLORATION OF PERSEVERANCE VALLEY, ENDEAVOUR CRATER, MARS** (Invited Presentation)

244-5  2:50 PM  Parker, Timothy*:  **THE CHANGING LANDSCAPE OF MARS**

244-6  3:05 PM  Williams, Rebecca M.E.*; Chuang, Frank C.; Berman, Daniel C.; Irwin, Rossman P.*:  **INSIGHT INTO VALLEY NETWORK ACTIVITY FROM MORPHOLOGY IN THE GREATER MERIDIANI PLANUM REGION, MARS** (Invited Presentation)

244-7  3:20 PM  Newsom, Horton E.*; Wiens, Roger C.; Gallegos, Zachary E.; Adair, Baylee; Williams, Joshua; Le Mouélic, Stéphane; Lewis, Kevin; Calef, Fred J.; Edgett, Kenneth S.; Winter, Alice B.:  **GALE CRATER AND IMPACT PROCESSES FROM THE MARS SCIENCE LABORATORY PERSPECTIVE INCLUDING ANALYSIS WITH VIRTUAL REALITY TECHNOLOGY**

244-8  3:35 PM  Calef, Fred John*:  **CRATER DENSITIES ON LOWER MOUNT SHARP AS A PROXY FOR MODERN GELOGICAL EROSION**

244-9  3:50 PM  Lapotre, Mathieu G.A.*; Ewing, Ryan C.; Lamb, Michael P.; Weitz, Catherine M.; Rubin, David M.; Bridges, Nathan T.; Ehlmann, Bethany L.:  **MORPHOLOGICAL DIVERSITY OF MARTIAN EOLIAN BEDFORMS AS REVEALED BY THE CURIOISITY ROVER AT GALE CRATER, MARS**

244-10  4:05 PM  Yingst, R. Aileen*:  **CRATER DENSITIES ON LOWER MOUNT SHARP AS A PROXY FOR MODERN GELOGICAL EROSION**

244-11  4:20 PM  Head, James W.*:  **THE CLIMATE HISTORY OF MARS: EVIDENCE FROM GEOMORPHOLOGY AND LANDSCAPE EVOLUTION**

244-12  4:35 PM  McEwen, Alfred S.*; Team, HiRISE Science:  **TODAY’S CHANGING LANDSCAPE OF MARS**

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**SESSION NO. 245**

**T212. Geologic Mapping in the Pacific Northwest and Beyond: Recent Maps, Advances, and New Insights:** In Memory of Russell C. Evarts and his Extensive Contributions to Pacific Northwest Geologic Mapping

1:30 PM, The Conference Center, Tahoma 2

Michael Polenz and Dave Norman, Presiding

1:30 PM  **INTRODUCTORY REMARKS**

1:35 PM  **ADDRESS TO HONOR RUSS EVARTS’ LIFE AND WORK**

245-1  1:45 PM  Fallas, Karen M.*; MacLean, Bernard C.; MacNaughton, Robert B.:  **PREVIOUSLY UNRECOGNIZED REGIONALLY EXTENSIVE PRE-WINDERMERE SUPERGROUP FOLDING IN NORTHWESTERN CANADA**

245-2  2:00 PM  Brennan, Daniel T.*; Pearson, David M.; Link, Paul K.:  **RODINIA, RIFTING, AND THE RAMSHORN SLATE: GEOLIGIC MAPPING OF THE BAYHORSE AREA, CENTRAL IDAHO REASSIGNS THE AGE OF POORLY UNDERSTOOD STRATIGRAPHY FROM ORDOVICIAN TO NEOPROTEROZOIC**

245-3  2:15 PM  Cheney, Eric S.*:  **EVIDENCE FOR A 5 MA EROSION SURFACE AND THE SUBSEQUENT RISE OF THE ANTCILINAL CASCADE RANGE, WASHINGTON**

245-4  2:30 PM  Kavana, Ezra*:  **GEOLOGICAL MAPPING, STRUCTURAL SETTING AND PETROGRAPHIC DESCRIPTION OF THE ARCHEAN VOLCANIC ROCKS OF MINANKA AREA, NORTH MARA**

245-5  2:45 PM  Brooks, Justin L.*; Troost, Kathy Goetz:  **SURFICIAL GEOLOGY OF THE NEWLY ANNEXED AREA OF KIRKLAND, WASHINGTON, KING COUNTY, USA**

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**SESSION NO. 246**


1:30 PM, The Conference Center, Tahoma 4

Roman A. DiBiase, Elizabeth J. Cassel and Majie Fan, Presiding

246-1  1:30 PM  Pazzaglia, Frank J.*; Etzel, Nicole; Idleman, Bruce; Zeitler, Peter:  **U-PB DETRITAL ZIRCON (DZ) GEOCHRONOLOGY OF LOWER JURASSIC NEWARK BASIN PALEO-ALLUVIAL FANS, ATLANTIC SLOPE DRAINAGE DEVELOPMENT, AND DYNAMIC INTERACTIONS IN THE POST-OROGENIC LANDSCAPE EVOLUTION OF THE APPALACHIANS**

246-2  1:45 PM  McCulla, James K.*; Rohrer, Lucas P.; Massey, Matthew A.; Moecher, David P.:  **RELATIONSHIP BETWEEN NEOACADIAN MID-CRUSTAL TRANSPRESSION AND EXTRUSION IN THE NEW ENGLAND APPALACHIANS**

246-3  2:00 PM  Moodie, Andrew J.*; Pazzaglia, Frank J.; Berti, Claudio:  **EXOGENIC FORCING AND AUTOGENIC PROCESSES ON CONTINENTAL DIVIDE LOCATION AND MOBILITY**

246-4  2:15 PM  McDermott, Jeni A.*; Abrahamson, Jenna N.; Allen, Elliott F.:  **EXTRUSION IN THE NEW ENGLAND APPALACHIANS**

246-5  2:30 PM  McQuarrie, Nadine*; Ehlers, Todd A.; Eizenhöfer, Paul R.:  **RELATIONSHIP BETWEEN NEOACADIAN MID-CRUSTAL TRANSPRESSION AND EXTRUSION IN THE NEW ENGLAND APPALACHIANS**

246-6  2:45 PM  Lease, Richard O.*:  **EROSIONAL PULSE AND GLACIER-LANDSCAPE FEEDBACKS DURING Plioene GLACIATION ONSET IN THE WESTERN ALASKA RANGE**

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**TUESDAY, 24 October 2017**

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246-7 3:00 PM Hodges, Kip V.; Ehlers, Todd A.: THERMAL-KINEMATIC MODELING OF MULTI-SYSTEM DETRITAL, THERMOCHRONOLOGIC DATA FROM ACTIVE CATCHMENTS AS A RECONNAISSANCE TOOL FOR UNDERSTANDING LONG-TERM REGIONAL EROSION PATTERNS

3:15 PM BREAK

246-8 3:30 PM Kirby, Eric*; Miller, Scott R.: THE GEOMORPHIC SIGNATURE OF MANTLE FLOW: A 'GREAT' CHALLENGE FOR TECTONICS (Invited Presentation)

246-9 3:50 PM Michalak, Melanie*; Hourigan, Jeremy: DYNAMIC TOPOGRAPHY OF SOUTHERN CAScadia RECorded IN PROVenance OF plIO-pLEISTOCENE FOREARC deposits

246-10 4:05 PM Moon, Seulgi*; Perron, J. Taylor; Martel, Stephen J.: TOPOGRAPHIC STRESS AND CATASTROPHIC COLLAPSE OF VOLCANIC ISLANDS (Invited Presentation)

246-11 4:25 PM Eizenhöfer, Paul R.*; McQuarrie, Nadine; Ehlers, Todd A.; Shelef, Eitan: ALL SMERED? GEOMORPHIC RESPONSES TO HORIZONTAL MOVEMENT AT GEOLoGIC TIME SCALES

246-12 4:40 PM Srivastava, Vinee*; Mukul, Malay; Barnes, Jason B.: CURIOUS CASE OF MAIN FRONTAL THrust DEFORMATION IN NORTHWEST HIMALAYA

246-13 4:55 PM Turzezski, Michael D.*; Huntington, Katharine W.; Licht, Alexis: THE ROLE OF MEGAFLOODS IN SHAPING THE EASTERN HIMALAYAN SYNTAXIS: INSIGHTS FROM THE SEDIMENTARY PROVENANCE OF SLACKWATER FLOOD DEPOSITS IN NORTHEASTERN INDIA

246-14 5:10 PM Yanites, Brian J.; Bregy, Josh; Carlson, Grace; Cataldo, Kirstyn; Holahan, Margaret; Johnston, Graham H.; Mitchell, Nathanial; Nelson, Amelia; Valenza, Jeffrey; Waniker, Matthew: LANDSLIDES CONTROL THE SPATIAL AND TEMPORAL VARIATION OF CHANNEL MORPHOLOGY IN SOUTHERN TAIWAN: IMPLICATIONS FOR LANDSCAPE EVOLUTION IN STEEP, TECTONICALLY ACTIVE LANDSCAPES

SESSION NO. 247

T222. Decadal to Millennial Strain Accumulation at Subduction Zones (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

1:30 PM, The Conference Center, Tahoma 5

Christine Regalla, Kristin Morell, Scott Bennett, Lucinda J. Leonard, Colin B. Amos and John P. Loveless, Presiding

247-1 1:30 PM Wang, Kelin*; Sun, Tianhacze; Li, Shaoyang: IMPORTANCE OF VISCOELASTIC STRESS RELAXATION IN BOTH POSTSEISMIC AND INTERSEISMIC DEFORMATION (Invited Presentation)

247-2 1:45 PM Russo, R.M.*; Ambrosius, Boudewijn A.C.; Mocanu, Victor; Fernandes, Rui: INTERPLATE LOCKING AND DISSIPATION OF VISCOELASTIC POST-SEISMIC DISPLACEMENT OF THE 1960 VALDIVIA, CHILE, EARTHQUAKE

247-3 2:00 PM Graham, Shannon E.*; Loveless, John P.; Meade, Brendan J.: HOW MANY M9 EARTHQUAKES ARE POSSIBLE? INTERSEISMIC COUPLING AND RUPTURE PATCH MAGNITUDES ALONG 15 OF THE WORLD’S SUBDUCTION ZONES

247-4 2:15 PM Fisher, Donald M.*; Smye, Andrew J.; Marone, Chris; van Keken, Peter; Yamaguchi, Asuka; Oakley, David; Ramirez, Gabrielle: SPECTRUM OF MEGATHRUST SLIP BEHAVIOR RECORDED WITHIN ANCIENT ACCRETIONARY COMPLEXES: THE ROLE OF SILICA REDISTRIBUTION

2:30 PM BREAK

247-5 2:45 PM Nuyen, Carolyn*; Schmidt, David: ISOLATING LONG-TERM TRANSIENTS IN CAScadia GPS DATA USING A SEASONAL-TREND DECOMPOSITION PROCEDURE

247-6 3:00 PM Van Boskirk, Elizabeth*; Hodgkinson, Kathleen; Gottlieb, Mike; Johnson, Wade; Henderson, Brent; Mencin, David; Mattioli, Glen S.: PBO BOREHOLE STRAINMETERS OBSERVE OVER A DECADE OF EPISODIC TREMOR AND SLIP ALONG THE CAScadia SUBDUCTION ZONE: SOUTHERN VANCOUVER ISLAND, BC, CANADA THROUGH OLYMPIA, WA, USA

247-7 3:15 PM Furlong, Kevin P.: HIDDEN EARTHQUAKE POTENTIAL IN PLATE BOUNDARY TRANSITION ZONES

247-8 3:30 PM Oakley, David O.S.*; Fisher, Donald M.; Gardner, Thomas W.; Barnes, Philip M.; Ghisetti, Francesca C.; VanderLeest, Rebecca A.: RATES AND MECHANISMS OF ACTIVE FAULTING AND FOLDING IN THE TRANSITION FROM HIKURANGI SUBDUCTION TO NORTH CANTERBURY TRANSPRESSION, SOUTH ISLAND, NEW ZEALAND (Invited Presentation)

3:45 PM BREAK

247-9 4:00 PM McCrory, Patricia A.*; Wilson, Douglas S.: A LATE CENOZOIC KINEMATIC MODEL FOR FAULT MOTION WITHIN THE GREATER CAScadia SUBDUCTION SYSTEM (Invited Presentation)

247-10 4:15 PM Aldrich, M. James*: RECONCILING CAScadia FOREARC LONG-TERM DEFORMATION MODELS

247-11 4:30 PM Loveless, John P.*; Schermer, Elizabeth; Amos, Colin B.; Duckworth, Cody; George, Orion: RELATIONSHIP BETWEEN SLIP ON THE LAKE CRECK-BOUNDARY CREEK FAULT SYSTEM, NORTHERN OLYMPIC PENINSULA, AND THE UNDERLYING CAScadia SUBDUCTION ZONE

247-12 4:45 PM von Dassow, Wesley A.*; Kirby, Eric: GEOMORPHIC EVIDENCE FOR DIFFERENTIAL ROCK UPLIFT ACROSS THE SOUTHERN CAScadia FOREarc

247-13 5:00 PM Allmendinger, Richard W.*; González, Gabriel: PERMANENT FOREARC STRAIN IN NORTHERN CHILE

247-14 5:15 PM Regalla, Christine*; Fisher, Donald M.; Kirby, Eric; Oakley, David O.S.: SLIP INVERSION IN THE FOREARC OF TOHOKU JAPAN, OVER MULTIPLE TIME SCALES

SESSION NO. 248

T251. Tsunami Hazards: Innovations in Mapping, Modeling, and Outreach (GSA Environmental and Engineering Geology Division; Washington Division of Geology and Earth Resources; GSA Geoinformatics Division)

1:30 PM, Washington State Convention Center, Room 618/619/620

Corina Forson and Timothy J. Walsh, Presiding

248-1 1:30 PM Thiø, Hong Kie*; Wei, Yong; Robertson, Ian; Chock, Gary: TSUNAMI INUNDATION MODELING FOR THE NEW ASCE 7-16 CHAPTER ON TSUNAMI LOADS AND EFFECTS

248-2 1:50 PM Qin, Xinsheng*; Motley, Michael; LeVeque, Randall J.; Gonzalez, Frank J.: 2D AND 3D MODELING OF TSUNAMI INUNDATION: A CASE STUDY OF SEASIDE, OREGON

248-3 2:05 PM Motley, Michael*; Eberhard, Marc O.; Winter, Andrew: TSUNAMI WAVE LOADING OF INDIVIDUAL BRIDGE COMPONENTS

248-4 2:20 PM Allian, Jonathan; Gabel, Laura Stinem: TSUNAMI MODELING ON THE PACIFIC NORTHWEST COAST OF OREGON: PRESENT AND FUTURE

248-5 2:40 PM Garrison-Laney, Carrie*: Adams, Loyce M.; Chock, Gary: MODELING CAScadia TSUNAMIS INTO DISCOVERY BAY AND HOOD CANAL

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TECHNICAL SESSIONS

SESSION NO. 249
T256. The Co-Evolution of Life and Its Environment during the Precambrian: The Rise of Oxygenic Photosynthesis and the Great Oxidation Event (GSA Geobiology & Geomicrobiology Division)

1:30 PM, The Conference Center, Skagit 5
Joshua Krissansen-Totton, Stephanie Olson and David C Catling, Presiding

249-1 1:30 PM Parenteau, Mary N.*; Jahneke, Linda L.; Cady, Sherry; Pierson, Beverly: EXAMINING THE EVOLUTION OF OXYGENIC PHOTOSYNTHESIS ON THE EARLY EARTH

249-2 1:45 PM Wilmeth, Dylan T.*; Corsetti, Frank A.; Berelson, William M.; Beukes, Nicolas J.; Awramik, Stanley M.; Petryshyn, Victoria A.: GAS PRODUCTION WITHIN ARCHEAN STROMATOLITES: EVIDENCE FOR ANCIENT MICROBIAL METABOLISMS

249-3 2:00 PM Johnson, Aleisha C.*; Reinhard, Christopher T.; Romaniello, Stephen J.; Greeney, Allison T.; Garcia-Robledo, Emilio; Revsbech, Niels Peter; Canfield, Donald E.; Lyons, Timothy W.; Anbar, Ariel D.: QUANTIFYING ARCHEAN OXYGENATION - INSIGHTS FROM SULFIDE OXIDATION EXPERIMENTS AT LOW PO2

249-4 2:15 PM Crowe, Sean A.*; Thompson, Katharine J.: PHOTOFERROTROPHY, CONTINENTAL GROWTH, AND THE HAZY NEOARCHEAN ATMOSPHERE (Invited Presentation)

249-5 2:30 PM Goldblatt, Collin*; McDonald, Victoria; McCusker, Kelly: PHYSICAL FEEDBACKS ON STRATUS CLOUD AMOUNT RESOLVE THE FAINT YOUNG SUN PARADOX

249-6 2:45 PM Sawada, Hikaru*; Isozaki, Yukio; Sawaki, Yusuke; Fujisaki, Wataru; Sakata, Shuhei; Maruyama, Shigenori; Ueda, Hisahiro; Saijo, Takuya; Sato, Tomohiko: THE OLDEST AGE LIMIT OF THE LOMAGUNDI-JATULI EVENT: ZIRCON GEOCHRONOLOGY OF THE PALEOPROTEROZOIC MAGONDI SUPERGROUP IN ZIMBABWE

249-7 3:00 PM Smit, Matthias A.*; Mezger, Klaus: PRIMITIVE MAFIC CONTINENTS IMPEDED OXYGENATION DURING THE ARCHEAN

3:15 PM BREAK

249-8 3:30 PM Summons, Roger E.*; Gold, David A.; Caron, Abigail M.; Momper, Lily; Fournier, Gregory P.: GENOMIC APPROACHES TO EXPLORING THE GOE

249-9 3:45 PM Bowak, Tanja*; Moore, Kelsey R; Fournier, Gregory P.; Momper, Lily; Magnabosco, Cara: CALIBRATING THE MOLECULAR RECORD OF CYANOBACTERIAL EVOLUTION (Invited Presentation)

249-10 4:00 PM Osterhout, Jeffrey T.*; Czaja, Andrew D.: STABLE ISOTOPE GEOCHEMISTRY OF A LATE ARCHEAN MICROBIAL ECOSYSTEM: DIVERSITY IN THE PRE-GOE OCEANS


SESSION NO. 250
Mineralogical Society of America (MSA) Awards Lectures, Presidential Address, and Annual Business Meeting

3:00 PM, The Conference Center, Skagit 4
Michael Brown, Presiding

250-1 3:00 PM Stolper, E.M.*; Shorttle, O.: MSA ROEBLING MEDAL LECTURE: THE EFFECTS OF SOLID-SOLID PHASE EQUILIBRIA AND PARTIAL MELTING ON THE OXYGEN FUGACITY OF THE UPPER MANTLE

250-2 3:30 PM Sisson, Thomas W.*: MSA DANA MEDAL LECTURE: ORIGINS OF CASCADE MAGMAS

250-3 4:00 PM Tail, Dustin*: MSA AWARD LECTURE: AN ACCESSORY MINERAL AND EXPERIMENTAL PERSPECTIVE ON THE EVOLUTION OF THE CRUST

250-4 4:30 PM Harlow, George E.*: MSA PRESIDENTIAL ADDRESS: EARTH SCIENCE EDUCATION–CHALLENGES IN SECONDARY SCHOOLS

5:00 PM ANNUAL MSA BUSINESS MEETING

SESSION NO. 251
GSA Hydrogeology Division: Birdsall-Dreiss Distinguished Lecture

4:30 PM, Washington State Convention Center, Ballroom 6B
Abe Springer, Presiding

251-1 4:30 PM Harvey, F. Edwin*: WATER RESOURCE STEWARDSHIP IN THE U.S. NATIONAL PARK SERVICE

POSTER SESSIONS

SESSION NO. 252
T244. Landslide Inventories, Databases, Hazard Maps, Risk Analysis, and Beyond (Posters) (GSA Environmental and Engineering Geology Division: GSA Quaternary Geology and Geomorphology Division; GSA Geoinformatics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

252-1 1 252-2 252-3 3
1 Schulz, William H.*; Wang, Gonghui; Jiang, Yao; Collins, Brian D.; Reid, Mark E.: UNDULATION OF SHEAR SURFACES CONTROL STRENGTH OF FAULT GOUGE AND MAY AID CATASTROPHIC LANDSLIDE MOTION
2 Johnson, Sarah*; Olsen, Roger; Roenken, Ben: USING SEQUENTIAL LIDAR TO MONITOR AND CATALOG RECENTLY ACTIVE LANDSLIDES IN KENTON AND CAMPBELL COUNTIES IN NORTHERN KENTUCKY
3 Legorreta Paulin, Gabriel*; Bursik, Marcus I.; Contreras, Trevor; Aceves Quesada, Fernando; Polenz, Michael: MAPPING LANDSLIDES AND ASSESSING LANDSLIDE SUSCEPTIBILITY IN THE RÍO LA CARBONERA WATERSHED, ON THE SE FLANK OF PICO DE ORIZABA VOLCANO, MEXICO
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252-4 4 Pritchett, Brittany N.; Chang, Jefferson C.*; Chang, Julie M.; Suneson, Neil H.; Walter, Jake: PRELIMINARY NEHRP SITE CLASSIFICATION AND SOIL AMPLIFICATION MAP OF OKLAHOMA

252-5 5 Mickelson, Katherine A.*; Slaugther, Stephen L.: WASHINGTON STATE'S NEW LANDSLIDE INVENTORY MAPPING PROTOCOL

252-6 6 Schlagel, Nathan A.*: LANDSLIDE HAZARD ASSESSMENT FOR NORTHERN FAZ ABAD DISTRICT, BADAKHSHAN PROVINCE, AFGHANISTAN

252-7 7 Jacobacci, Kara E.*; Mickelson, Katherine A.: LANDSLIDE INVENTORY FOR THE WASHINGTON SIDE OF THE COLUMBIA RIVER GORGE: CLARK, SKAMANIA, AND Klickitat COUNTIES

252-8 8 Contreras, Trevor A.*; Stone, Kimberly A.: BUT IT LOOKS LIKE A LANDSLIDE IN LIDAR! GEOLOGIC MAPPING OF PUGET LOWLAND GLACIAL RECESIONAL LANDFORMS ALONG HOOD CANAL USING LIDAR

252-9 9 Chapella, Hannah C.*; Haneberg, William C.; Crawford, Matthew M.: LIDAR-BASED LANDSLIDE INVENTORY AND SUSCEPTIBILITY, PRESTONSBURG 7.5-MINUTE QUADRANGLE, KY

252-10 10 Kelkar, Kaytan*; Kirschbaum, Dalia; Stanley, Thomas: CONSTRUCTING A COMPREHENSIVE DATABASE FOR RAINFALL-TRIGGERED LANDSLIDES IN THE UNITED STATES

252-11 11 Bunn, Michael D.*; Calhoun, Nancy; Leschinsky, Ben; Olsen, Michael J.; Burns, William J.: INCORPORATING SEMI-AUTOMATED LANDSLIDE MAPPING WITHIN AN EXISTING MANUAL, EXPERT-BASED FRAMEWORK

252-12 12 Pawley, Steven*; Hartman, Gregory; Chao, Dennis: LANDSLIDE SUSCEPTIBILITY MODELLING OF ALBERTA, CANADA: COMPARATIVE RESULTS FROM MULTIPLE STATISTICAL AND MACHINE-LEARNING PREDICTION METHOD

252-13 13 Gerstel, Wendy J.*; Strelloff, Karin L.; Hibler, Katrinka: NECESSARY INTEGRATION OF GEOLOGIC INFORMATION INTO SHORELINE POLICIES

252-14 14 Woodward, Jason S.*: CONTEMPORARY FOREST MANAGEMENT AND MASS WASTING: MAKING SIGNIFICANT PROGRESS

252-15 15 Calhoun, Nancy*; Burns, William J.; Monteverde, Gustavo; Franczyk, Jon J.: LANDSLIDE INVENTORY, SUSCEPTIBILITY AND RISK ANALYSIS OF THE EUGENE-SPRINGFIELD REGION, LANE COUNTY, OREGON

252-16 16 Knapp, Kevin*; Mitchell, Robert J.; Grab, Oliver: THE POTENTIAL EFFECTS OF FORECASTED CLIMATE CHANGE ON MASS WASTING SUSCEPTIBILITY IN THE NOOKSACK RIVER BASIN

252-17 17 Burns, William J.*; McClary, Justin; Krost, Greta: COLLABORATIVE LANDSLIDE INVENTORY MAPPING IN DOUGLAS COUNTY, OREGON

252-18 18 Garriss, Rebecca N.*; Booth, Adam M.; Perkins, Jonathan Patrick: MODELING SURFACE ROUGHNESS TO INCREASE INVENTORIES OF PREHISTORIC LANDSLIDES, GREEN RIVER WATERSHED, WASHINGTON, USA


252-20 20 Zeng, Ziyue*; Hong, Yang; Zhang, Ke: SHALLOW LANDSLIDE DETECTION BASED ON HYDROLOGICAL-CHEMICAL MODELING AND REMOTE SENSING DATA: A CASE STUDY IN SOUTH CHINA

252-21 21 Rodriguez, Stephanie C.*; Bhaskaran, Sunil: GEOLOGIC HAZARD ASSESSMENT OF MASS WASTING ALONG CALIFORNIA'S CENTRAL PACIFIC COAST

SESSION NO. 253

T149. Celebrating Dr. John W. Valley's Contributions to Isotope Geochemistry and Beyond, from the Hadean to the Holocene (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division; Mineralogical Society of America; Geochemical Society; Microanalysis Society; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

253-1 22 Dwyer, Camille H.*; Atudorei, Nicu-Viorel; Myers, Corinne: δ18O SCHLEROCHRONOLOGY OF LATE CRETACEOUS BIVALVES AND PRESERVATION OF SEASONALITY IRRESIDENT OF ALTERATION

253-2 23 Olsen, Ellen*; Needham, Eamonn; Watkins, James M.: SALINITY AFFECTS OXYGEN ISOTOPE FRACTIONATION DURING INORGANIC CALCITE PRECIPITATION

253-3 24 Pollington, Anthony D.*; Kozdon, Reinhard; Anovitz, Lawrence M.; Georg, R. Bastian; Spicuzza, Michael J.; Valley, John W.: EXPERIMENTAL CALIBRATION OF FRACTIONATION OF SILICON ISOTOPES BETWEEN QUARTZ AND WATER

253-4 25 Cui, Huant*; Kitajima, Kouki; Spicuzza, Michael J.; Fournelle, John H.; Ishida, Akizumi; Brown, Philip E.; Valley, John W.: SEARCHING FOR THE GREAT OXIDATION EVENT IN NORTH AMERICA: A REAPPRAISAL OF THE "MIF–MDF TRANSITION" IN THE HURONIAN SUPERGROUP BY SIMS SULFUR FOUR-ISOTOPE ANALYSIS

253-5 26 Hartley, Elena Sohn*; Pereira, Ines; Cameron, Evan D.; Page, F. Zeb; Storey, Craig; Valley, John: TRACING MANTLE FLUIDS: TRACE ELEMENT SIGNALS IN METASOMATIC GARNET IN QUARTZITES FROM THE CATALINA SCHIST (CALIFORNIA, USA)

253-6 27 Flood, Clara Margaret*; Cameron, Evan D.; Page, F. Zeb; Valley, John W.: METASOMATISM AT THE PEAK OF METAMORPHISM: USING COMPUTATIONAL THERMODYNAMIC MODELING TO UNDERSTAND DRAMATIC OXYGEN ISOTOPE ZONING IN CATALINA GARNET QUARTZITES

253-7 28 Lozier, Emilie H.*; Page, F. Zeb; Cruz-Uribe, Alicia M.; Kitajima, Kouki; Valley, John: GETTING IN THE ZONE: OXYGEN ISOTOPE AND CATION ZONING IN MULTIPLE GENERATIONS OF FRANCISCAN GARNETS

253-8 29 Gevedon, Michelle L.*; Barnes, Jaime D.; Lackey, Jade Star: OXYGEN ISOTOPE SYSTEMATICS OF SKARN GARNET: FLUID FLOW AND ORE FORMING HISTORIES OF THE CORDILLERAN ARC

253-9 30 Stowell, Harold*; Schwartz, Joshua J.; Tulloch, Andrew J.; Odom Parker, Karen; Klepeis, Keith A.: RESOLVING THE AGES AND NATURE OF INTRUSION, METAMORPHISM AND PARTIAL MELTING IN MIGMATITE: AN EXAMPLE FROM FIORLAND, NZ

253-10 31 McCarty, Kyle R.*; Jenkins, Mariiah; Lackey, Jade Star; Spicuzza, M.J.; Valley, John: THE BADGER COMPLEX: AGES, GEOCHEMISTRY, AND OXYGEN ISOTOPE TONALITES IN THE SEQUOIA REGION Foothills, Sierra Nevada, CA

253-11 32 Chen, Julia*; Holk, Gregory J.; Clausen, Benjamin L.*: MIXED MAGMA SOURCES FOR THE SOUTHERN AREQUIPA SEGMENT OF THE PERUVIAN COASTAL BATHOLITH: EVIDENCE FROM STABLE ISOTOPES

253-12 33 Hayes, Leigh*; Wenner, Jennifer M.; Teasdale, Rachel; Lenz, Quin A.: OXYGEN ISOTOPE IN OLVINE REVEAL SMALL-SCALE VARIATIONS IN THE MANTLE BENEATH THE POISON LAKE CHAIN, LASSEN REGION, CALIFORNIA

253-13 34 Sun, Yang*; Teng, Fang-Zhen; Ying, Ji-Feng; Su, Ben-Xun; Hu, Yan; Fan, Qi-Cheng; Zhou, Xin-Hua: MAGNESIUM ISOTOPIC EVIDENCE FOR ANCIENT SUBDUCTED OCEANIC CRUST IN LOMU-LIKE POTASSIUM-RICH VOLCANIC ROCKS

253-14 35 Bilenko, Laura D.*; Fourny, Ana; Weis, Dominique; Scowes, James S.; Morse, Stearns A.: SIGNIFICANT FE ISOTOPE
SESSION NO. 254 $  

**T151.** Consequences of Fluids in Subduction Zones: From Grain Scale to Plate Boundary Shear Zone (Posters) (GSA Hydrogeology Division)  
9:00 AM, Washington State Convention Center, Halls 4EF  
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM  
Booth #

**254-1**  37 Fagereng, Ake*; Dierer, Johann F.A.; Meneghini, Francesca; Harris, C.: **FLUID RELEASE AND DEFORMATION AT, AND BEYOND, THE BASE OF THE MEGATHRUST SEISMOGENIC ZONE**  
(Invited Presentation)

**254-2**  38 Scott, Brandt E.*; Newell, Dennis L.; Jessup, Micah J.: **TRACING VOLATILE AND ISOTOPE GEOCHEMISTRY WITHIN MANTLE- AND SLAB-DERIVED FLUIDS IN A FLAT-SLAB SUBDUCTION ZONE, PERU**

**254-3**  39 Ferry, John M.; Penniston-Dorland, Sarah C.*; Blair, Michael A.; Tostevin, David W.: **DIFFUSION OF CO2, CA AND NA DRIVEN BY H2O INFILTRATION DURING SUBDUCTION ZONE METAMORPHISM OF THE FRANCISCAN COMPLEX, CALIFORNIA**  
(Invited Presentation)

**254-4**  40 Quandt, Dennis*; Micheuz, Peter; Kurz, Walter; Krenn, Kurt: **FLUID INCLUSIONS OF VEIN PRECIPITATES HOSTED IN THE TROODOS PILLOW LAVAS: IMPLICATIONS FOR THE POST-MAGMATIC STRUCTURAL EVOLUTION OF SUPRA-SUBDUCTION ZONES**

**254-5**  41 Hoover, William F.*; Penniston-Dorland, Sarah C.; Bebout, Gray E.: **LITHIUM MOBILITY DURING DEHYDRATION, FACT OR FICTION?: INSIGHTS FROM LI ISOTOPE IN ALPINE METASEDIMENTARY ROCKS**

**254-6**  42 Vieite, Daniel R.*; Hacker, Bradley R.; Allen, Mark B.; Tobin, Mark; Seward, Gareth G.E.: **PRESSURE AND FLUID PULSES DURING SUBDUCTION: RECORDS FROM GARNET**

**254-7**  43 Otsubo, Tomonori*; Matsunaga, Yuzuru; Ueda, Akira: **DEHYDRATION REACTIONS AND HYDROLOGICAL CYCLES OF THE KAMBERI-DHATTA BLASTOMORPHIC TRAVERSE: INFERENCES FROM A FLUID-MELT-MINERAL INCLUSION IN A FLUID-ALTERED KUNZIT GARNET**

**254-8**  44 Elliott, Sara J.*; Fisher, Donald M.; Ukar, Estabilitz; Ramirez, Gabrielle; Forster, Stephanie: **SLIP BEHAVIOR OF A SUBDUCTION ZONE: PRELIMINARY INFERENCES FROM QUARTZ AND CALCITE FILLED VEINS (HYDROFRACURES) IN AN EXHUMED ACCRETIONARY WEDGE, SHIMANTO BELT, JAPAN**

**254-9**  45 Grabiec, Justine G.*; Penniston-Dorland, Sarah C.; Walker, Richard J.; Melodie: **INSIGHTS INTO THE FORMATION OF THE COTTONWOOD CANYON FAULT IN THE CATALINA SCHIST**

SESSION NO. 255 $  

**T152.** Fluids and Melts in Geologic Systems (Posters)  
9:00 AM, Washington State Convention Center, Halls 4EF  
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM  
Booth #

**255-1**  46 Koteas, G. Christopher*; Seaman, Sheila J.; Williams, Michael L.: **RAPID HEATING AND PARTIAL MELTING OF THE LOWER CRUSTAL 2.6 GA FEHR GRANITE, ATHABASCAN GRANULITE TERRANE: EVIDENCE FROM LEUCOSOME AND GARNET COMPOSITIONS**


**255-3**  48 Esposito, Rosario*; Badescu, Kimberly; Steele-MacInnis, Matthew; Cannatelli, Claudia; Lima, Annamaria; De Vivo, Benedetto; Manning, Craig; Bodnar, R.J.: **ASSESSMENT OF IONIC PROCESSES AT THE MICRON SCALE USING MELT INCLUSION (USA)**

**255-4**  49 Takagi, Tetsuichiro*; Tsukimura, Katsuhiro: **REDOX PATHS OF GRANITES DEDUCED FROM THEIR TEXTURE AND MINERALS**

**255-5**  50 Feng, Peng*; Wang, Lu; Brown, Michael; Songjie: **MULTIPLE EPISODES OF PARTIAL MELTING RECORDED IN THE HAIYANGSUO COMPLEX, NORTHERN SULU BELT, EASTERN CHINA**

**255-6**  51 Baques, Vinyet*; Ukar, Estabilitz; Zhang, Liujuan; Yuan, Wenfang; Laubach, Stephen; Forstner, Stephanie; Fan, Andras; Sun, Chonghao: **DECAMETER-SCALE BIT DROPS AT 7 KM DEPTH IN THE YIJIANFANG FORMATION, HALAHATANG OILFIELD, TARIM BASIN, CHINA: FAULT-RELATED DEEP-SEATED DISSOLUTION**

**255-7**  52 Lucemberri-Sanchez, Pilar*; Bouabdellah, Mohammed; Zemri, Oussama: **CHARACTERIZATION OF MINERALIZING FLUIDS AT THE EL HAMMAM REE-RICH FLUORITE DEPOSIT**

**255-8**  53 Connors, M. Elizabeth*; Taibly, Nicholas D.; Fiege, Adrian: **USING HIGH RESOLUTION MAPPING OF CRYSTALLIZED MELT INCLUSIONS TO UNDERSTAND THE EVOLUTION OF S AND I-TYPE VOLCANICS FROM THE LACHLAN FOLD BELT, AUSTRALIA**

**255-9**  54 Duccini, Kalie M.*; Esposito, Rosario; Manning, Craig; Clemens-Knott, Diane: **FLUID-MELT-MINERAL INCLUSION STUDY OF THE EVOLUTION OF INTERCUMULUS FLUIDS ASSOCIATED WITH THE DEER MOUNTAIN OLIVINE GABBRO, SIERRA NEVADA BATHOLITH, CALIFORNIA**

**255-10**  55 Gion, Austin M.*; Candela, Philip A.; Piccoli, Philip M.: **EXPERIMENTAL GEOCHEMISTRY AND MODELING AS AN AIDE TO EXPLORATION: AN INDUS CASE STUDY**

**255-11**  56 Obom, Collin Austin*: **MAGMA PLUMBING SYSTEM BENEATH HERDBUBEID, NORTHERN RIFT ZONE, ICELAND**

SESSION NO. 256

**T247. Deciphering the Major Paleoenvironmental Crises of the Earth and Their Impact on the Marine Ecosystems and Biogeochronological Cycles (Posters) (Paleontological Research Institution; GSA Sedimentary Geology Division; Paleontological Society)**  
9:00 AM, Washington State Convention Center, Halls 4EF  
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM  
Booth #

**256-1**  57 Magnin, Benjamin P.*; Meszaros, Nicholas; Brake, Sandra; Hasiotis, Stephen T.: **REPEATED EXPOSURE OF A EUKARYOTIC MICROORGANISM TO SHORT WAVE, UV-C RADIATION—IMPLICATION FOR LIFE ON EARLY EARTH AND EXTRATERRESTRIAL PLANETARY BODIES**

**256-2**  58 Florie, Joshua M.*; Thelling, Bethany P.: **HIGH RESOLUTION CHEMOSTRATIGRAPHY OF THE IREVIKEN CARBON ISOTOPE EXCURSION IN THE ARBUCKLE MOUNTAINS, OKLAHOMA**


**256-4**  60 Marolt, Samuel D.*; Tackett, Lydia S.: **STRONTIUM ISOTOPE EXCursions, SIlICEOUS SPONGES, AND SiLICIFIED CARBONATE MICROFossils ACROSS THE NORIAN-RAETIAN BOUNDARY IN SHALLOW MARINE DEPOSITS OF PANTHALASSA (LATE TRIASSIC, NEW YORK CANYON, NV)**

**Tuesday, 24 October 2017**
Tuesday, 24 October 2017

SESSION NO. 257

**T185. Geomorphology of Human-Altered Landscapes (Posters)**
(AGU Quaternary Geology and Geomorphology Division; AGU Archaeological Geology Division; AGU Environmental and Engineering Geology Division; AGU Soils and Soil Processes Interdisciplinary Interest Group)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

**Booth #**

257-1 61 Miller, Nar*: MODELING METEORIC 10-BERYLLIUM ACROSS VARYING LAND USE AND CLIMATIC HISTORIES: UNIQUE SCENARIOS AND SOURCE-SINK COUPLING

257-2 62 Trein, Debora C.; Beach, Timothy P.: ANTHROPOGENIC LANDSCAPE MODIFICATION ON A MAYA LOWLANDS TROPICAL CATENA

257-3 63 McCusker Hill, Megan*; Ouimet, William B.; Gonzales, Sean: SPATIAL VARIATION IN GEOCHEMICAL SIGNATURES OF THE ANTHROPOCENE IN NORTHEASTERN US

257-4 64 Ruhm, Catherine T.; Jefferson, Anne J.; Blackwood, Christopher B.; Minerovic, Anthony J.; Davis, Christopher: SOILS AND GEOMORPHOLOGY OF FIVE RECLAIMED SURFACE MINE SITES IN THE CUYAHOGA VALLEY NATIONAL PARK, OHIO

257-5 65 Owens, Rebecca Anne*; Zhao, Pan Shu; Giardino, John R.; Gamache, Kevin R.: BIVOUACS OF THE ANTHROPOCENE: HUMAN-BUILT ENVIRONMENTS IN THE SAN JUAN MOUNTAINS, COLORADO, USA

257-6 66 Bloniarz, Andrew*; Constantine, José Antonio: SNAPSHOTS OF A CHANGING LANDSCAPE: THE HISTORICAL GEOMORPHOLOGY OF THE LOWER MISSISSIPPI RIVER

SESSION NO. 258

**T111. Geology and Hydrology in the National Parks: Research, Mapping, and Resource Management (Posters)**
(AGU Hydrogeology Division; AGU Environmental and Engineering Geology Division; AGU Limnogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

**Booth #**

258-1 67 Schmidt, Kevin M.*; Minor, Scott A.; Power, Paula; Rudolph, Rocky: GEOLOGIC CONTROLS ON SURFACE-WATER HYDROLOGY ON SANTA ROSA ISLAND, CHANNEL ISLANDS NATIONAL PARK, CA

258-2 68 Hutcheson, Holly*; Milewski, Adam M.; Rasmussen, Todd C.; Faustini, John M.; Graves, Grant; Dowd, John; Webster, Claire; Maher, Sage: WATER RESOURCES INVENTORY AND ASSESSMENT FOR FELSENTHAL NATIONAL WILDLIFE REFUGE

258-3 69 Clark, Gregory D.*; Moffett, Kevan B.: UNDERSTANDING SOIL MOISTURE DYNAMICS IN FORESTS RECOVERING FROM WILDFIRE USING ELECTRO-MAGNETIC INDUCTION

258-4 70 Larson, Sophia K*; Quintana, Angelica; Kellogg, James H.; Pembroke, Heather; Gale, Marjorie; Wixsom, Scott: STYLISTED FACTS RELATING WATERBODY ACIDIFICATION TO HYDROLOGY, BEDROCK AND SURFICIAL GEOLOGY, SOIL AND ATMOSPHERIC POLLUTANTS IN THE LYKE BROOK WILDERNESS, VERMONT

258-5 71 Springer, Kathleen B.*; Pigati, Jeffrey S.; Manker, Craig R.; Mahan, Shannon A.: THE LAS VEGAS FORMATION

258-6 72 Haddon, Elizabeth K*; Stock, Greg M.; Booth, Derek B.: LATEST PLEISTOCENE AND HOLOCENE LANDSCAPE EVOLUTION OF YOSEMITE VALLEY, CALIFORNIA

258-7 73 Chappell, James R.*; O'Meara, Stephanie A.; Winter, James R.H.; Karpilo, Ronald D.: STANDARDIZING AND AUTOMATING DIGITAL GIS MAP SYMBOLIZATION FOR GEOLOGIC MAPS OF NATIONAL PARKS

258-8 74 Port, Rebecca B.*; Kenworthy, Jason P.; Barthelmes, Michael; KellerLynn, Katie: NATIONAL PARK SERVICE GEOLOGIC RESOURCES INVENTORY REPORTS: CONNECTING GEOLOGY TO PARK HISTORY, LANDSCAPES, AND RESOURCE MANAGEMENT

258-9 75 Flynn, Barrett*: Hungerford, Jefferson; Mordensky, Stanley; O'Neil, Molly: STRUCTURING AND ANALYSIS OF TEMPERATURE DATA FROM UPPER GEYSER BASIN IN YELLOWSTONE NATIONAL PARK

258-10 76 Norr, Megan R.*; Thacker, Jacob O.; Oberg, Erik: FROM PRESERVATION TO PUBLIC COMMUNICATION: YELLOWSTONE NATIONAL PARK GIS JOINT INTERNSHIP, 2016

SESSION NO. 259

**T113. Geoscience Education Research: Implications for Undergraduate Geoscience Teaching and Learning (Posters)**
(National Association of Geoscience Teachers; AGU Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

**Booth #**

259-1 77 McConnell, David A.*; Jones, Jason P.; Wiggen, Jennifer: CAN UNDERGRADUATES LEARN JUST AS EFFECTIVELY FROM VIDEOS AS LECTURES? INVESTIGATION OF A FLIPPED PHYSICAL GEOLOGY CLASS

259-2 78 Czajka, C. Doug*; McConnell, David A.: EXAMINING THE IMPACT OF THE USE OF INTEGRATE TEACHING MATERIALS ON STUDENT PERFORMANCE ON A GEOSCIENCES LITERACY EXAM

259-3 79 Bruckner, Monica Z.*; Manduca, Cathryn A.; McConnell, David A.; Hanselman, Jennifer; Orr, Cailin Huyck; McDaniel, John R.; Fox, Sean P.: USING INSTRUCTOR STORIES TO DEMONSTRATE THE ADAPTABILITY OF THE INTEGRATE INTERDISCIPLINARY SUSTAINABILITY CURRICULA

259-4 80 Orr, Cailin Huyck*; McDaniel, John R.; Manduca, Cathryn A.: LESSONS FROM INTEGRATE ON PROGRAM SCALE CHANGE: SYNTHESIZING REAL-WORLD EXPERIENCE

259-5 81 St. John, Kristen*; Cervato, Cinzia; Kastens, Kim A.; Macdonald, Heather; McDaniel, John R.; McNeal, Karen; Petcovic, Heather L.; Pyle, Eric J.; Riggs, Eric M.; Ryker, Katherine; Semken, Steven; Teasdale, Rachel: IDENTIFYING AND PRIORITIZING GEOSCIENCE EDUCATION RESEARCH GRAND CHALLENGES: DRAFT PLANS FOR A COMMUNITY RESEARCH AGENDA

259-6 82 Foreman, Elizabeth A.D.*; Ryker, Katherine: UNDERSTANDING PATHS TO A GEOVISION MAJOR: A CLOSER LOOK AT ACADEMIC PROVENANCE

259-7 83 Merle-Johnson, Dominique*; Barrow, Lloyd: UNDERGRADUATE STUDENTS UNDERSTANDING AND CONNECTIONS AMONG VOLCANOLOGY-RELATED CONCEPTS

259-8 84 Nosofsky, Robert*: McDaniel, Mark; Douglas, Bruce J.: TESTS OF AN EXEMPLAR-MEMORY MODEL OF HUMAN CLASSIFICATION LEARNING IN THE DOMAIN OF ROCK CATEGORIZATION

259-9 85 Pettit, D.N.*; Lally, Diane; Forbes, Cory; Brozovic, Nick; Franz, Trenton: TRANSDISCIPLINARY STUDENTS’ LEARNING AND REASONING ABOUT SOCIO-HYDROLOGICAL ISSUES IN AN UNDERGRADUATE WATER COURSE

259-10 86 McLeod, Claire*: Angi-O'Brien, Elizabeth: GET INTERACTIVE! EVALUATING THE INFLUENCE OF DIFFERENT TEACHING DELIVERY METHODS ON STUDENT LEARNING IN AN INTRODUCTORY GEOLOGY COURSE

259-11 87 Dolphin, Glenn*: USING THE HISTORY OF GEOLOGY AS A VEHICLE IN TEACHING THE “WHAT” AND THE “HOW” OF GEOLOGY IN A LARGE LECTURE SERVICE COURSE SETTING
SESSION NO. 260
T120. Making Thinking Visible: Actions and Expressions of Problem Solving and Decision Making in the Geosciences (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers, Division of Geoscience Education Research)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

260-1 91 Myer, Rachel A.*; Jaeger, Allison J.; McLaughlin, Jessica A.; Lombardi, Doug; Shipley, Thomas F.; Davatzes, Alexandra K.: METHODS FOR IMPROVING STUDENTS’ SPATIAL REASONING ABOUT EARTH’S SUBSURFACE

260-2 92 Caplan-Auerbach, Jacqueline*: PICTURES AND PROSE: A QUALITATIVE WAY TO ENHANCE STUDENT UNDERSTANDING OF QUANTITATIVE PROCESSES

260-3 93 Menard, Julie M.*; Beall King, Allyson; Larson, Peter B.: THE APPLICATION OF THE COMPLEX FIELD OF GEODESY TO AN ENTRANCE-LEVEL COLLEGE COURSE USING COGNITIVE LEARNING TECHNIQUES

260-4 94 Breeding, Dalton R.*; McKay, Matthew P.; Bassett, Damon J.: HOW LONG DOES IT TAKE TO TEACH STUDENTS TO TAKE A QUALITY STRIKE AND DIP?

SESSION NO. 261
T121. Natural History Museums in the 21st Century—Programming for the Future While Preserving the Past (Posters) (GSA Geoscience Education Division; Paleontological Society; GSA Geoinformatics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

261-1 95 Gallaher, Timothy J.*; Senske, Ashly; Marvet, Claire; Akbar, Sultan; Wong, Silihsia; Hsu, Tingting; Jessett, Kari; Klaks, Phillip C.; Clark, Lynn G.; Strömberg, Caroline A.E.: 3D DIGITIZATION OF GRASS SILICA SHORT CELL PHYTOLITHS (GSSCP’S): A DIGITAL REFERENCE COLLECTION TO IMPROVE THEIR UTILITY FOR THE STUDY OF GRASSES AND GRASSLAND EVOLUTION

261-2 96 White, Lisa D.*; Crites, Erica C.; Ross, Robert; Duggan-Haas, Don: EXPLORATIONS IN THE GEOLOGY, SEDIMENTOLOGY, AND PALEONTOLOGY OF THE KETTLEMAN HILLS IN CENTRAL CALIFORNIA THROUGH VIRTUAL FIELDWORK EXPERIENCES

261-3 97 Clark, Andrea*: Davis, Arryn; Stromberg, Caroline A.E.: MIDDLE SCHOOL GIRLS IN SCIENCE AT THE BURKE MUSEUM (UNIVERSITY OF WASHINGTON, SEATTLE): CREATING A SAFE SPACE AND COMMUNITY FOR GIRLS TO UNLEASH THEIR INNER SCIENTIST

261-4 98 Dooley, Alton C.*; Smith, Kathryn M.; Stoneburg, Britney; Radford, Daria; Ozolins, Margaret; Drouault, Krystle; Dooley, Brett S.: VALLEY OF THE MASTODONS: CASE STUDY OF AN INTEGRATIVE APPROACH TO RESEARCH COLLABORATION, OUTREACH, AND EXHIBITS

261-5 99 Hendy, Austin J.W.; Estes-Smargiassi, Kathryn*: Walker, Lindsay J.; Hamdan, Kamal: PARTNERSHIPS IN PALEONTOLOGY: BRINGING STUDENTS AND TEACHERS INTO THE COLLECTION TO EXPERIENCE AUTHENTIC SCIENCE AND DEVELOP EDUCATION OUTCOMES

SESSION NO. 262
T123. Pedagogical Applications of Point Cloud Collection and Manipulation (Posters) (GSA Geoscience Education Division; UNAVCO; GSA Geoinformatics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

262-1 101 Hasbargen, Leslie*: SFM POINT CLOUD GENERATION, SCALING, AND GEOREFERENCING APPROACHES IN AN UNDERGRADUATE FIELD COURSE

262-2 102 Richardson, Lauren J.*: APPLICATIONS OF PHOTOGRAMMETRY AND STRUCTURE FROM MOTION FOR RESEARCH AND UNDERGRADUATE EDUCATION

262-3 103 Montieth, Grant Harrison*: Zimmer, Brian: MEASURING VOLUMETRIC AND AREAL CHANGE IN STRUCTURE FROM MOTION MODELS AND APPLICATIONS

262-4 104 Douglas, Bruce J.*; Crosby, Christopher J.; Pratt-Staiaux, Beth; Crosby, Benjamin; Shervais, Katherine A.H.; Charlevoix, Donna: USING HIGH RESOLUTION TOPOGRAPHY DATA IN UNDERGRADUATE GEOSCIENCE FIELD COURSES (Invited Presentation)

262-5 105 Hasiuk, Francziszek*: Harding, Chris; Renner, Alex; Winer, Eliot: TOUCHTERRAIN: A SIMPLE WEB-TOOL FOR CREATING 3D-PRINTABLE TOPOGRAPHIC MODELS (Invited Presentation)

262-6 106 Arrowsmith, J. Ramón*: Crosby, Christopher J.; Nandigam, Viswanath: MORE THAN A TRILLION POINTS ON-LINE: POINT CLOUD LESSONS FROM OPENTOPOGRAPHY (Invited Presentation)

262-7 107 Fleming, Zachariah Douglas*: Pavlis, Terry L.: STRUCTURE FROM MOTION-MULTIVIEW STEREO (SFM-MVS) PHOTOGRAMMETRY FOR CONSTRUCTING VIRTUAL OUTCROP MODELS AND CLASSROOM “FIELD” EXPERIENCES

262-8 108 Admassu, Yonathan*: STRUCTURE FROM MOTION (SFM)-BASED SLOPE STABILITY EXERCISE AT JAMES MADISON UNIVERSITY’S FIELD CAMP IN IRELAND

262-9 109 Berti, Claudio*: I HOPE IT FLIES! THE USE OF REAL TIME AIRBORNE IMAGES AND 3D DATA IN FIELD CAMP EDUCATION

262-10 110 Hutchinson, Sonny*: Mookerjee, Matty; Anfinson, Owen A.: INTRODUCING STRUCTURE FROM MOTION TECHNIQUES INTO UNDERGRADUATE FOLD ANALYSIS PROJECTS

262-11 111 Shaw, Colin A.*: TEACHING INFORMATION-INTENSIVE METHODS IN THE FIELD: TERRESTRIAL LIDAR SCANNING OF THE LONE PEAK ROCK GLACIER, MONTANA

262-12 112 Baggett, Jeffrey A.*; McMillan, Margaret E.: USING UNITY AND VIRTUAL REALITY AS TOOLS FOR EXPLORING TERRESTRIAL LASER SCANNING DATA FROM BIG BAT CAVE, KENTUCKY

SESSION NO. 263
T124. Practical Advice for In-Service and Pre-Service K–12 Earth Science Teacher Preparation and Professional Development (Posters) (National Earth Science Teachers Association; National Association of Geoscience Teachers, Teacher Education Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
SESSION NO. 264

T141. Use of Geoscience Data and Information Resources in Education and Research (Posters) (Geoscience Information Society; GSA Geoinformatics Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

264-1 119 Welii, Russ*; Hubenthal, Michael; Taber, John: TOOLS FOR EDUCATIONAL ACCESS TO SEISMIC DATA AND DATA PRODUCTS

264-2 120 Chidsey, Thomas C.; Vanden Berg, Michael D.; Nielsen, Peter; Burris, Jason: INTRODUCING THE LARGEST SINGLE OIL FIELD (GREATER ANETH, SOUTHEASTERN UTAH) COLLECTION OF CARBONATE CORES IN THE ROCKY MOUNTAINS—TOOLS FOR EDUCATION AND RESEARCH

264-3 121 Lukes, Laura A.; Ryker, Katherine; Millsaps, Camerian; Lockwood, Rowan; Uhen, Mark; Bentley, Callan; Berquist, Peter J.; George, Christian O.: STUDENT PERCEPTIONS OF USING THE PALEOBIOLOGY DATABASE (PBDB) TO CONDUCT UNDERGRADUATE RESEARCH

264-4 122 Loughner, Erica Anne*; Oldham, Jordan C.: GENUINE OR REPRODUCTION: A COMPARISON OF PHOTOMETRY AND 3D SCANNING TECHNIQUES

264-5 123 Prosser, Cynthia L.; Pereira, Monica: CONNECTING THE DOTS WITH DATA: LEARNING WITH GEOSCIENCE DATA

264-6 124 Teplitzky, Samantha; Warren, Mea*: TRENDS IN OPEN EDUCATIONAL RESOURCES IN THE EARTH SCIENCES: EMERGING ROLES FOR THE ACADEMIC LIBRARY

264-7 125 Prassack, Kari A.: WE HAVE A LESSON PLAN FOR THAT! TRAINING THE NEXT GENERATION OF SCIENTISTS TO BE BETTER EDUCATORS THROUGH PUBLIC INTERACTION AND LESSON PLAN DEVELOPMENT

264-8 126 Rossavik, Claudia Kristina*; Glover, Stanley: GEOCORPS GIS INTERNSHIPS WITH THE NATIONAL FOREST SERVICE IN ALABAMA

SESSION NO. 265

T93. Lacustrine Systems across Space and Time (Posters) (GSA Limnogeology Division; GSA Sedimentary Geology Division; Paleontological Society; SEPM (Society for Sedimentary Geology))

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

265-1 135 Vaught-Mijares, Roxanna M.; Hillman, Aubrey L.; Abbott, Mark B.; Weine, Josef P.; Arkush, Elizabeth N.: A MULTIPROXY APPROACH TO UNRAVELING CLIMATE AND HUMAN DEMOGRAPHY IN THE PERUVIAN ALTIPLANO FROM A 5000 YEAR LAKE SEDIMENT CORE

265-2 136 Perdziola, Stephen*; Stansell, Nathan D.; Harvey, William; Steinman, Byron A.; Lachniet, Matthew S.: LATE HOLOCENE OXYGEN ISOTOPE RECORD OF HYDROCLIMATE VARIABILITY IN NICARAGUA FROM LAKE ASOSOSCA

265-3 137 Mortensen, Peter*; Stansell, Nathan D.; Steinman, Byron A.; Brocard, Gilles Y.; Shea, Christopher J.; Lachniet, Matthew S.: LATE HOLOCENE HYDROCLIMATE RECONSTRUCTION FROM LAKE CHICHOUJ, GUATEMALA USING STABLE ISOTOPE ANALYSIS OF SEDIMENTS

265-4 138 Betts, Makayla N.; Meixnerova, Jana; Ingalls, Miquela; Westacott, Sophie; Miller, Laurence G.; Sessions, Alex L.; Trower, Elizabeth J.; Geobiology Course 2017, Agouron: SOURCES OF CARBONATE PRECIPITATION IN MONO LAKE SEDIMENTS: A RECORD OF RECENT ENVIRONMENTAL CHANGE

265-5 139 Ingalls, Miquela; Westacott, Sophie; Betts, Makayla; Meixnerova, Jana; Lloyd, Max; Miller, Larry; Sessions, Alex L.; Trower, Elizabeth J.; Geobiology Course 2017, Agouron: SOURCES OF CARBONATE CLUMPED ISOTOPES AS LAKE LEVEL PROXIES

265-6 140 Staley, Spencer E.; Fawcett, Peter J.; Anderson, R. Scott; Brown, Erik T.; Petronis, Michael; Dunbar, Neila W.: SEDIMENTOLOGICAL ANALYSIS OF THE STONEMAN LAKE, AZ: CORE: IMPLICATIONS FOR LONG-TERM QUATERNARY CLIMATE CHANGE IN THE SOUTHWEST
TUESDAY, 24 October 2017

SESSION NO. 266

T94. Limnogeology—Progress, Challenges, and Opportunities on Earth and Beyond: A Tribute to Beth Gierlowski-Kordesch (Posters) (GSA Limnogeology Division; SEPM (Society for Sedimentary Geology); Paleontological Society; International Association of Limnogeology; GSA Sedimentary Geology Division; GSA Geobiology & Geomicrobiology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

266-1 157 Gravina, Anna Naomi*; Cohen, Andrew S.; Soreghan, Michael J.; Somasundaram, Ramanathan; Ryan, Emily: IMPACTS OF EXCESS SEDIMENT DISCHARGE FROM HILLSLOPE DEFORESTATION ON POPULATIONS OF OSTRACODES ON TWO PLATFORMS IN LAKE TANGANYIKA, TANZANIA

266-2 158 Arnon, Ali; Selker, John S.; Lensky, Nadav G.*: THERMALINE STRATIFICATION AND DOUBLE DIFFUSION DIAPYCNAL FLUXES IN THE HYPERSALINE DEAD SEA

266-3 159 Kiro, Yael*; Goldstein, Steven L.; Kushner, Yochanan; Lazar, Boaz; Stein, Mordechai: RECONSTRUCTING PRECIPITATION AND WATER SOURCES TO THE DEAD SEA BASED ON SEDIMENTS AND THEIR GEOCHEMISTRY

266-4 160 Hodelka, Bailee*; McGuire, Michael; Zimmerman, Susan H.; Tunno, Irene: PRELIMINARY INSIGHTS ON LATE QUATERNARY PALEOPRODUCTIVITY IN MONO LAKE, (CA) FROM ELEMENTAL AND STABLE ISOTOPE GEOCHEMISTRY

266-5 161 DeMott, Laura M.*; Scholz, Christopher A.; Uveges, Benjamin Thornton Iglar; Junium, Christopher K.: GROWTH HISTORY AND COMPOSITION OF A LACUSTRINE TUFA DOME FROM WINNEMUCCA DRY LAKE, NV, USA

266-6 162 Curtin, Tara M.*; Geiser, Keri: CULTURAL EUTROPHICATION CAUSES MODIFICATION OF NUTRIENT CYCLES IN THE NEW YORK FINGER LAKES

SESSION NO. 267

D33. Mineralogy/Crystallography (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

267-1 163 Barbato, Allison Kay*; Dutrow, Barbara L.; Henry, Darrell J.: CATHODOLUMINESCENCE AND TRACE ELEMENT CHEMISTRY OF SILLIMANITE: EVIDENCE FOR MULTIPLE METAMORPHIC REACTIONS

267-2 164 Lary, Erin*; Krekeler, Mark P.S.: TRANSMISSION ELECTRON MICROSCOPY (TEM) INVESTIGATION OF MINERALOGICAL COMPOSITION OF OLDUVAI’S LOCALITY 80 CORE SAMPLES

267-3 165 Lary, Erin*; Cymes, Brittany A.; Krekeler, Mark P.S.: SCANNING TRANSMISSION ELECTRON MICROSCOPY – ENERGY DISPERSIVE SPECTROSCOPY (STEM-EDS) REVEALS COMPOSITIONAL HETEROGENEITY AND ZONATION OF SMECTITES FROM OLDUVAI GORGE LOCALITY 80

267-4 166 Salvador, J.J.*; Antao, S.M.: THE CRYSTAL CHEMISTRY OF BIREFRINGENT UVAROVITE GARNET, IDEALLY CA3CR2SI3O12

267-5 167 Cruickshank, L.*; Antao, S.M.: COMPARISON OF TETRAGONAL AND MULTI-PHASE CUBIC GARNETS

267-6 168 Dhilliwal, I.*; Antao, S.M.: OSCILLATORY ZONING IN ERYTHRITE, IDEALLY CO,(ASO4)2•8H2O

267-7 169 Stefano, Christopher J.*; Hackney, Stephen A.: RAPID FORMATION OF EUTECTIC TEXTURES IN FE-SI INTERMETALLIC COMPOUNDS IN A FULGURITE FROM CENTRAL LOWER MICHIGAN

267-8 170 Green, Carlin J.*; Seal, Robert R.; Cannon, William F.; Piatak, Nadine M.; McAleer, Ryan J.: VARIATIONS IN AMPHIBOLE
CHEMISTRY IN THE IRONWOOD IRON-FORMATION, GOGEBIC IRON RANGE, WISCONSIN, USA

171 Chakoumakos, Bryan C.*; Roth, Nikolaj; May, Andrew F.; Ye, Feng; Iversen, Bo: IRON/MANGANESE DISTRIBUTION AND MAGNETISM IN BIXBYITE

172 Cymes, Brittany A.*; Krekeler, Mark P.S.; Almquist, Catherine B.: THE CATALYTIC ACTIVITY OF NATURAL CAVANSITE (CA(VO)\textsubscript{3}O\textsubscript{4}·4H\textsubscript{2}O)

173 Steven, Cody J.*; Gunter, Mickey E.: EXCELIEB: AN EXCEL SPREADSHEET FOR SOLVING THE OPTICAL ORIENTATION OF UNIAXIAL AND BIAXIAL CRYSTALS

174 Terry, Olivia Renee*; Zandanel, Amber E.; Kazszena, John: THE POTENTIAL OF HYDROCARBONS TO AFFECT THE ABILITY OF KCL TO STABILIZE MONTMORILLONITE

175 Zigah, Sean Christopher*: CHARACTERIZING SURFACE PROPERTIES OF NATURAL IRIDESCENT IRON (HYDROXIDE MINERALS

176 Clark, Christine M.*; Schillert, Matthew P.; Cymes, Brittany A.: PUVONDRAITE CRYSTAL CHEMISTRY

177 Serensen, Bjorn Eske*; Drivenes, Kristian; Nolze, Gert: Distinguishing Fine Integrations in Cu-Fe-Zn-S Minerals from the Arctic Mid-Ocean Ridge Using SEM, EBSD and Optical Microscopy

178 Restrepo-Moreno, Sergio A.*; Bernet, Matthias; Foster, David; Clift, Peter D.*; Wan, Shiming; Zhao, Debo; Ho, Huiyu; Niels; Munhoven, Guy; France-Lanord, Christian; Wang, Yinxi; Xiong, Zhifang; Huang, Jie; Yu, Zhaoqie; Zhang, Jin; Ma, Wenzao; Zhang, Guoliang; Li, Anchun; Li, Temeng: ENHANCED SILICATE WEATHERING OF TROPICAL SHELF SEDIMENTS EXPOSED DURING GLACIAL LOWSTANDS: A SINK FOR ATMOSPHERIC CO\textsubscript{2}

179 Luna, Melissa R.*; O’Connell, Suzanne; Ortiz, Joseph D.; Wizewicz, Michael C.: WEAK PLOIENEOSE BOTTOM CURRENTS IN THE JANE BAY, NW WEDDELL SEA BASED ON MULTIVARIATE ANALYSIS OF GRAIN SIZE SPECTRA

180 Calner, Mikael*: Calner, Hanna; Alwmark, Carl; Naeraa, Tomas: HOLOCENE AND ANTHROPOPOcene OOD PRECIPITATION AS A POSSIBLE NATURAL ARCHIVE FOR SHORT-TERM CHANGES IN OCEAN GEOCHEMISTRY AND CLIMATE

181 Haralson, Marlie D.*; Lukens, William E.; Martin, Robert A.; Fox, David L.: PALEOClimATE AND PALEOENVIRONMENTAL RECONSTRUCTION ACROSS THE PLEISTOCENE BLANCAN- IRWINGTONIAN TRANSITION IN SOUTHWEST KANSAS

182 Parker, Wesley G.*; Yanes, Yurena; Mesa-Hernández, Eduardo; Surge, Donna: HIGH-RESOLUTION PALEOTEMPERATURE INFERENCES IN TENERIFE, CANARY ISLANDS FROM ARCHAEOLOGICAL PHRACUS ATRACUS SHELLS

183 Fraser, Danielle; Kim, Sora L.; Welker, Jeffrey; Clementz, Mark T.: THE POSSIBILITY OF PRONGHORN TEETH AS SEASONALITY INDICATORS FOR PALEOClimATE RECONSTRUCTIONS

184 Rabideaux, Nathan*; Decampo, Daniel M.: MINERALOGICAL AND GEOCHEMICAL TRENDS FROM MODERN SURFACE AND OUTCROP SAMPLES OF THE SOUTHERN KENYA RIFT

185 Carlson, Tessa Boe*: Bersaw, John; Cassel, Elizabeth J.: DEUTERIUM VALUES FROM HYDRATED VOLCANIC GLASS: A PALEOELEVATION PROXY FOR OREGON’S CASCADE RANGE

186 Carroll, Robert J.*; Mody, Alexander B.; Olenik, Anton E.: ASSESSING SR/CA PALEOTEMPERATURE CALIBRATION TECHNIQUES FOR SUBTROPICAL WESTERN ATLANTIC CORALs USING PSEUDOPDIPLOPIA STRIGOSA

187 Brook, Zev*: Barclay, Richard S.; Wing, Scott L.: CELL SIZE IN GINKGO AND THE PALEO-CO\textsubscript{2} PROXY

188 Rigby, Emma*; Nutt, Mara; Lear, Caroline; Faul, Kristina: EVIDENCE FOR ENHANCED EXPORT PRODUCTIVITY DUE TO VOLCANIC ASH FERTILIZATION AROUND THE MIDDLE MIocene CLIMATE TRANSITION (MMCT) IN THE CARIBBEAN (ODP SITE 999)

189 Frazer, C.J.*: A COMPARISON BETWEEN THE CLAMP AND PALEOSOL PALEOClimATE DATA OF THE MIocene IN REGARDS TO MAT

190 Brombacher, Anieke*: Edgar, Kirsty Marie; Wilson, Paul A.; Ezard, Thomas H.G.: EVOLUTIONARY RESPONSE OF THE PLANKTIC FORAMINIFER ORBULINOIDES BECKMANNI/TO CLIMATIC CHANGE DURING THE MIDDLE EOCENE CLIMATIC OPTIMUM (MECO)

191 Littell, Virginia*; Licht, Alexis; Dupont-Nivet, Guillaume; Win, Zaw; Schauer, Andrew J.; Swe, Hnin Hnin; Kay Thi, Myat; Aung, Day Wa; Roperch, Pierrick; Poblete, Fernando; Huang, Huasheng; Hoorn, Carina; Sein, Kyawing: PALEOClimATIC...
RECONSTRUCTION OF LATE EOCENE MYANMAR VIA
STABLE ISOTOPE PROXIES
268-22 202 Kelson, Julia R.*; Huntington, Katharine; Hyland, Ethan G.;
Saenger, Casey: HOT SUMMERS ON LAND IN THE EARLY
EOCENE SUBTROPICS

268-23 203 Deans, Benjamin J.*; Fan, Majie; Benowitz, Jeffrey A.; Finzel,
Emily S.: HIGH-LATITUDE CONTINENTAL RESPONSE TO
CENOZOIC CLIMATE CHANGE IN SOUTHERN ALASKA
BASED ON VOLCANIC GLASS HYDROGEN ISOTOPE
COMPOSITIONS

268-24 204 Hall, Christine M.S.*; Kirtland Turner, Sandra; Droser, Mary L.: 
OSTRACODE RESPONSE TO CHANGING ENVIRONMENTS
DURING EOCENE THERMAL MAXIMUM 2 IN THE 
EQUATORIAL ATLANTIC

SESSION NO. 269
T45. Miocene–Pliocene Terrestrial Ecosystem Response to
the Climate System (Posters) (Paleontological Society; GSA
Limnogeology Division)
9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #
269-1 205 People, Mark D.*; Feakins, Sarah J.; Levin, Naomi E.;
Haile-Selassie, Yohannes: PLANT WAX RECONSTRUCTIONS 
OF PALEOEKOLOGY AND PALEOHYDROLOGY ON THE 
WORANSO-MILLE, ETHIOPIA

269-2 206 Buzeta, Rachel Kristine*; Polissar, Pratigya J.; Uno, Kevin T.;
Pheps, Samuel R.: STEP-WISE COOLING IN THE HIGH
NORTH ATLANTIC OVER THE PAST 17 MILLION YEARS

269-3 207 Oginga, Kennedy Ogonda*; Peppe, Daniel J.; Lukens, William E.;
Lutz, James A.; Michel, Lauren A.: PALEOCLIMATE AND 
PALAEENVIRONMENTAL RECONSTRUCTION OF THE EARLY 
MIocene TINDERET SITES IN WESTERN KENYA AND THEIR 
IMPLICATIONS FOR HOMINID EVOLUTION

269-4 208 Jackson, Kevin E.*; Strömberg, Caroline A.E.; Andrae,
Jake W.; McInerney, Francesca A.: THE EVOLUTION OF C3 
GRASSLANDS IN AUSTRALIA: PHYTOLITH ASSEMBLAGE 
DATA FROM NEONEGE MARINE CORES

269-5 209 Valdivia-McCarthy, Allin Del Carmen*; Reichgelt, Tammo;
D’Andrea, William J.; Fox, Beth R.S.: SUBORBITAL-SCALE CO2 
RECONSTRUCTIONS FROM THE EARLIEST MIocene BASED 
ON FOSSIL LEAVES

269-6 210 Beane, Luke*: PALEOENVIRONMENTAL INTERPRETATIONS OF 
AN EARLY MIocene PRIMATE SITE USING SIZE AND 
STABLE ISOTOPIC SIGNATURES OF RHIZOLOTHES; LOPEROT, 
WEST TURKANA (KENYA)

269-7 211 Takashita-Bynum, Kevin K.*; Liitkus-Pierce, Cynthia M.; Beane,
Luke; Wright, James D.; Grossman, Areyh; Kinera, Francis M.: 
UTILIZING STRATIGRAPHY AND STABLE ISOTOPE 
GEOCHEMISTRY TO RECONSTRUCT THE ANCIENT 
ENVIRONMENTS OF OUR PRIMATE ANCESTORS: LOPEROT, 
GREAT RIFT VALLEY, KENYA

SESSION NO. 270
T47. Recent Developments in Cyclostrophy Graphy (Posters)
9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #
270-1 212 Royce, Bethany*: LATE PLIOCENE DEPOSITIONAL HISTORY 
AND PALEOClimATE RECONSTRUCTIONS OF THE 
SOUTHWEST PACIFIC

270-2 213 Shen, Chen*: Schoepfer, Shane D.; Henderson, Charles M.: 
ASTRONOMICAL TUNING OF THE EARLY TRIASSIC INDIAN 
STAGE IN THE DISTAL MONTNEY FORMATION, NE BRITISH 
COLUMBIA, CANADA

270-3 214 Rodgers, Naomi Joyce*; Kinney, Sean T.; Lewis, Kevin; Olsen,
Paul: CHEMOSтратIGRAPHIC ANALYSIS USING LASER-
INDUCED BREAKDOWN SPECTROSCOPY: MARS, BY WAY 
OF THE NEWARK BASIN

270-4 215 Chen, Yan*; Zhang, Yang Wendy; Huang, Keke; Gong, Yifan; Ogg,
James G.; Jiang, Haishui: GLOBAL CORRELATION OF EARLY 
TRIASSIC SHALLOW-WATER PLATFORMS IN SOUTH CHINA 
USING COMBINED MAGNETOSTRATIGRAPHY, CARBON-
ISOTOPE EXCURSIONS AND CYCLOSTRATIGRAPHY

SESSION NO. 271
(Paleontological Research Institute; GSA Mineralogy,
Geochemistry, Petrology, and Volcanology Division; Cushman 
Foundation for Foraminiferal Research; Paleontological Society; 
Volcanic and Magmatic Studies Group)
9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
Booth #
271-1 216 Kerr, James*: ENCRUSTERS AND BORERS THROUGH AN 
EXTINCTION EVENT: A DESCRIPTION OF SKELETOBIONT 
ASSEMBLAGES THROUGH THE FRASNIAN-FAMENNIAN 
BOUNDARY OF THE APPALACHIAN FORELAND BASIN

271-2 217 Paschall, Olivia C.*; Carmichael, Sarah K.; Waters, Johnny A.;
Koenigshofer, Peter; Joachimski, Michael M.; Ta, Phuong H.;
Komatsu, Toshifumi: PRECURSING VOLCANISM AS PRIMARY 
TRIGGER FOR DEVONIAN-CARBONIFEROUS GLOBAL 
ANOXIA EVENT: IMPLICATIONS OF THE HANGENBERG 
EVENT IN THE LATE DEVONIAN PHO HAN FORMATION, CAT 
BA ISLAND, VIETNAM

271-3 218 Kani, Tomomi*; Isozaki, Yukio; Misawa, Keiji; Ishikawa, Akira;
Yoneda, Shigezaku: STABLE AND RADIOgenic STRONTIUM 
ISOTOPE (87Sr/86Sr) IN SEAWATER ACROSS 
GUADALUPIAN-LOPINGIAN BOUNDARY (PERMIAN)

271-4 219 Tobita, Tomoyo*: Isozaki, Yukio: REEF COLLAPSE IN THE 
MID-CAPITANIAN NEAR THE NORTHERN CONNECTING 
CHANNEL BETWEEN THE TETHYS AND PANTHALASSA:
LITHOSTRATIGRAPHY OF THE TOPMOST IWAIZAKI 
LIMESTONE (CAPITANIAN) IN NE JAPAN

271-5 220 Wang, Xiang-Dong*: Yao, Le: PERMIAN RUGOSE CORALS IN THE 
DATWORLD

271-6 221 Graham, Grace M.*; Fontaine, Alice; Meyer, Katja M.: ROLE OF 
CLIMATE WARMING AND THE BIOLOGICAL PUMP IN END-
PERMIAN OCEAN ANOXIA

271-7 222 Hodges, Montana S.*; Stanley, George D.; Blodgett, Robert B.;
Hodges, Christopher L.: CORAL RECOVERY IN EASTERN 
PANTHALASSA AFTER THE END-TRIASSIC MASS 
EXTINCTION: NEW EVIDENCE FROM AN ALASKAN 
TERRANE

271-8 223 Benca, Jeffrey P.*: EVALUATING POLLEN MALFORMATIONS AS 
INDICATORS FOR PAST ENVIRONMENTAL STRESS

271-9 224 Svensen, Henrik; Jerram, Dougall A. F.; Frolow, Sergei; Akhmanov,
Grigorii; Polozov, Alexander; Planke, Sverre; Burgess, Seth D.: 
RAPID SILT INTRUSIONS INTO EVAPORITE RICH SEQUENCES 
IN THE TUNGUSKA BASIN, SIBERIA; A PERFECT STORM FOR 
THE END-PERMIAN ENVIRONMENTAL CRISIS

271-10 225 Wilson, Paige Kathryn*; Wilson, Gregory P.; Stromberg,
Caroline A.E.: VEGETATION AND ENVIRONMENT CHANGE 
ACROSS THE K-PG BOUNDARY IN THE HELL CREEK OF 
MONTANA
Tuesday, 24 October 2017

272-2 227 Regan, Anik*; Harnik, Paul G.: TAPHONOMIC VARIATION AMONG CARBONATE AND SILICICLASTIC DEPOSITIONAL ENVIRONMENTS IN THE NORTHERN GULF OF MEXICO

272-3 228 Cummings, Cameron*; MacKenzie, Lindsay: DEGREE OF PYRITIZATION OF VARYING TISSUE TYPES: A TAPHONOMIC EXPERIMENT

272-4 229 Hassell, Keenan J.%; Dornbos, Stephen Q.; Oji, Tatsuo: Gonchiogoh, Sersmaa: PALEOBIOLOGY AND TAPHONOMY OF EXCEPTIONALLY PRESERVED PUTATIVE MACROALGAE FROM THE EDICARAN ZUUN-ARTS BIOTA, WESTERN MONGOLIA

272-5 230 Nigo, Matthew*: MacKenzie, Lindsay: EXPERIMENTAL TAPHONOMY: THE EFFECTS OF SEDIMENT GRAIN SIZE ON MICROBIAL AND MINERAL FUEL GROWTH ON TISSUES

272-6 231 MacKenzie, Lindsay Ann*: USING EXPERIMENTAL TAPHONOMY TO UNDERSTAND EXCEPTIONAL PRESERVATION IN THE Fossil RECORD

272-7 232 Anderson, Bailey M.*; Peterson, Joseph E.; Lenczewski, Melissa; Schifflauer, James D.: CARBONATE PRECIPITATION DURING VERTEBRATE DECOMPOSITION IN A HYPERALKALINE AQUATIC SETTING: A CASE STUDY IN EXPERIMENTAL TAPHONOMY

272-8 233 Du, Kim*; Bosak, Tanja; Newman, Sharon; Macdonald, Francis A.; Lahr, Daniel J.; Pruss, Sara B.: TUBULAR MICROFOSSILS PRESERVED BY AL-SI CLAY IN SHALLOW WATER CARBONATE FACIES OF THE POST-STURTIAN RASTHOF FORMATION (~660 MA), NORTHERN NAMIBIA

272-9 234 Weaver, Lucas N.*; Rogers, Raymond R.; Thole, Jeffrey T.: AUTHIGENIC MINERALOGY AND ELEMENT DISTRIBUTIONS OF VERTEBRATE MICROFOSSILS FROM THE HELL CREEK (LATEST CRETACEOUS) AND TULLOCK (PALEOCENE) FORMATIONS OF EASTERN MONTANA

272-10 235 Maguire, Evin P.*; Feldmann, Rodney M.; Schweitzer, Carrie E.; Casadio, Silvio: VOLCANIC ASH AND EXCEPTIONAL FOSSIL PRESERVATION: INSIGHTS INTO TAPHONOMY AND EARLY DIAGNOSIS

272-11 236 Anderson, Evan P.*: BUG IN A JAR: TAPHONOMIC EXPERIMENTS ALTERING BURIAL CONDITIONS OFFER INSIGHTS INTO SOFT-BODIED PRESERVATION

272-12 237 Legewie, Mary*; MacKenzie, Lindsay: INFLUENCE OF MICROBIAL BIOFILMS ON THE PRESERVATION OF SOFT TISSUE IN SNAILS

272-13 238 Parsons-Hubbard, Karla*; Banks, Shannon: DEVELOPING THE MIRCITE ENVELOPE: PATTERNS OF MICROBORING INTENSITY ACROSS DEPTH AND GEOGRAPHIC LOCATION

272-14 239 Dick, Daniel*: IS IT WHAT’S ON THE INSIDE THAT COUNTS? LITHIFICATION BIAS AND COMMUNITY PALEOCOLOGY IN CARBONATE SETTINGS

272-15 240 Clark, Timothy*: MacKenzie, Lindsay: EFFECTS OF EXPOSURE PRIOR TO BURIAL ON PRESERVATION OF DETAILED MORPHOLOGY IN FOSSIL NEREIS

272-16 241 Stoller, Michael R.*: PRESERVATION POTENTIAL OF OWL DERIVED VERTEBRATE REMAINS FROM SAN SALVADOR ISLAND, THE BAHAMAS

272-17 242 Koy, Karen A.*; Berry, Justin: ISOLATING ABIOTIC FACTORS IN VERTEBRATE BONE TAPHONOMY: A PILOT STUDY

272-18 243 Wynn, Peter D.*; Yager, Joyce A.; West, A. Joshua; Rollins, Nick; Barelson, William M.; Corsetti, Frank A.: TESTING LIQUID DECARBONATION TEMPERATURE AND TIME FOR δ13CORG ANALYSES IN SEDIMENTARY SECTIONS

272-19 244 Lumsden, David N.*: XRD ANALYSIS OF QUARTZ CRYSTALLINITY: A PETRIFIED WOOD UPDATE

272-20 245 Brundin, Junstin Nathaniel*; Sauda, Charles E.: PRELIMINARY OBSERVATIONS FROM A WOOD BIOEROSION EXPERIMENT IN MARINE AND MARGINAL MARINE SETTINGS, MOBILE BAY AREA, ALABAMA

272-21 246 Stark, Courcelle*; Tosca, Nicholas; Pruss, Sara B.: SMALL SHELL-STYLE PRESERVATION OF FOSSILS IN LOWER TRIASSIC CARBONATES OF THE WESTERN US

272-22 247 Eubanks, Eric M.*; Lewis, Ronald D.: DISTRIBUTION OF ENCROUCKING FORAMINIFERA AT MAYAGUANA, BAHAMAS: DETERMINING ASSEMBLAGE COMPOSITION AND RELATIONSHIP TO FOOD AVAILABILITY


272-24 249 Beckham, Abigail*; Graveline, Alyssa; Alvarez, Nathaly Reyna; Glumac, Bosiljka; Curran, H. Allen: IMPACT OF BIOTURBATION ON PLEISTOCENE CARBONATE SUBTIDAL SEDIMENTS, HARRY CAY SITE, LITTLE EXUMA, BAHAMAS: INSIGHTS FROM PETROGRAPHIC ANALYSIS

272-25 250 Wilson, Mark A.*; Conrad, Macy A.; Taylor, Paul D.: BIOROSION OF OYSTERS IN THE TYPE CAMPANIAN (UPPER CRETACEOUS) OF SOUTHWESTERN FRANCE


272-28 253 Lapic, Whitney*: Smith, Jansen A.; Dieti, Gregory P.: DO NATICID GASTROPODS LEAVE PREDATORY MICROTRACES WHEN THEY DRILL THEIR BIVALVE PREY?

272-29 254 Handley, John C.*; Smith, Jansen A.; Dieti, Gregory P.: MANLY’S ALPHA FOR PREDATION SELECTIVITY: MODELS, ESTIMATION AND INTERPRETATION

272-30 255 Martineilli, Julietta*: Gordillo, Sandra; De Aranzamendi, Maria Carla; Rivadeneira, Marcelo: FIRST CHARACTERIZATION OF DRILLING PREDATION ON EASTER ISLAND - RAPA NUI

272-31 256 Karnes, Molly E.*; Casey, Michelle M.; Dieti, Gregory P.; Fall, Leigh M.: INVESTIGATION OF OMNIVOROUS TROPHIC POSITION IN THE DRILLING GASTROPOD, PARASALPINX CINEREA, USING STABLE ISOTOPE ANALYSIS

272-32 257 Das, Shibjyotij*: Ivanv, Linda C.; Junium, Christopher K.: USING STABLE NITROGEN AND CARBON ISOTOPE VALUES OF BIVALVE-SHELL-BOUND ORGANICS TO UNDERSTAND FOOD WEB DYNAMICS

272-33 258 Hopkms, Melanie J.*; Chen, Feiyang; Hu, Shixue; Zhang, Zhilei: THE OLDEST KNOWN DIGESTIVE SYSTEM CONSISTING OF BOTH PAIRED DIGESTIVE GLANDS AND A CROP FROM EXCEPTIONALLY PRESERVED TROPHOBIOLOGICAL ASSEMBLAGES OF THE GUANSHAN BIOTA (EARLY CAMBRIAN, CHINA)

272-34 259 DeVore, Melanie L.*; Freile, Deborah: COENOBITA CLYPEATUS (THE TERRESTRIAL HERMIT CRAB) AND ITS PREFERENCE FOR INHABITING CITARIUM PICA (WEST INDIAN TOP SHELL): A TAPHONOMIC SIGNATURE FROM A COHORT STUDY FROM SAN SALVADOR ISLAND, BAHAMAS

272-35 260 Myers, Timothy S.*: DIET OF ORNITHOCHEIROID PTEROSAURS INFERRED FROM STABLE CARBON ISOTOPE ANALYSIS OF TOOTH ENAMEL

272-36 261 Buczek, Alexandra J.*; Hendy, Austin J.W.; Hopkins, Melanie; Sessa, Jocelyn: VARIABLE BIVALVE SHELL MICROSTRUCTURE PRESERVATION IN THE CEBADA AND GRACIOSA MEMBERS OF THE CAREAGA SANDSTONE (PILOCENE, SANTA MARIA, CA) HIGHLIGHTS NEED TO SEM ALL SPECIMENS PRIOR TO ISOTOPIC ANALYSIS

272-37 262 Durham, Stephen R.*; Gillikin, David P.; Goodwin, David H.; Dieti, Gregory P.: LA-ICP-MS LINE SCANS OF SHELL MG/CA
RATIOS AS A RAPID, COST-EFFECTIVE ALTERNATIVE TO STABLE ISOTOPE ANALYSIS FOR OYSTER SCLEROCHRONOLOGY

272-38 263 Moss, David K.; Irvany, Linda C.; Thomas, Roger D.K.; Surge, Donna: LATITUDINAL GRADIENTS IN LIFESPAN AND GROWTH RATE FOR TWO SPECIES OF GLYCERMIS (BIVALVIA) FROM THE MID-PLIOCENE OF THE ATLANTIC COASTAL PLAIN


272-40 265 Opazo, L. Felipe; Marquet, Pablo A.; Labra, Fabio A.; Portell, Roger W.; Kowalewski, Michal: CHANGES IN GUILD COMPOSITION AND ENERGETIC DEMANDS THROUGHOUT THE PLOcene-PLEISTOCENE EXTINCTION EVENT

272-41 266 Cronin, Kelly; Walker, Sally E.; Mann, Roger; Chute, A.S.; Long, Mathew; Bowser, Samuel S.: RELATIVELY FAST GROWTH AND MODERATE LONGEVITY FOR THE ANTHARCTIC SCALLOP, ADAMSSUM COLBECKI, LIVING IN THE COLDEST WATERS ON EARTH

272-42 267 Martinelli, Julieta; Rivadeneira, Marcelo; Oyanadel, Pablo; Bavestrello, Claudia; Acosta Jofre, Maria Soledad: DISENTANGLING ANTHROPOGENIC AND ENVIRONMENTAL EFFECTS ON THE MORPHOMETRY OF FOSSIL AND RECENT SCALLOPS FROM THE SOUTH PACIFIC

272-43 268 Bowdish, Maeve; Nagel-Myers, Judith: THE IMPACT OF RIVER IMPOUNDMENT AND OTHER HUMAN ACTIVITY ON THE SHELL SHAPE OF A NORTHERN NEW YORK FRESH WATER BIVALVE

272-44 269 LaPointe, Cullen; Walker, Sally E.: GROWTH AND LONGEVITY OF THE SCALLOP CHESAPECKEN NÆFRENS (CALVERT CLIFFS, MARYLAND) DURING THE MIDDLE MIocene CLIMATIC OPTIMUM AND SUBSEQUENT RAPID COOLING EVENT

272-45 270 Boag, Thomas H.; Elder, Leanne; Beck, Chelsey; Hull, Pinellc M.; Sperling, Erik A.: THE SYNERGISTIC ROLE OF OXYGEN AND TEMPERATURE IN DEFINING AEROBIC SCOPE: PHYSIOLOGICAL IMPLICATIONS FOR PAST AND FUTURE OCEANS

272-46 271 Rogers, Raymond R.; Curry Rogers, Kristina; Zaton, Michal P.; Thole, Jeffrey T.; Bagley, Brian C.; Goodin, James: EVIDENCE FOR TREMATODE PARASITISM IN LATE Cretaceous (CAMPANIAN) FRESHWATER BIVALVES FROM THE JUDITH RIVER FORMATION, MONTANA

272-47 272 Mody, Alexander B.; Toth, Lauren T.; Mortlock, Richard A.; Oleinik, Anton E.: RESTRICTED FRINGING REEF DEVELOPMENT ON THE SOUTHEAST FLORIDA CONTINENTAL REEF TRACT DURING THE LATE HOLOCENE


272-49 274 Petsios, Elizabeth; Thompson, Jeffrey R.; Pietach, Carlie; Bottjer, David J.: BIOTIC IMPACTS OF TEMPERATURE BEFORE, DURING, AND AFTER THE END-PERMIAN EXTINCTION: A MULTI-METRIC AND MULTI-SCALE APPROACH TO MODELING EXTINCTION AND RECOVERY DYNAMICS

272-50 275 Hendy, Austin J.W.: HIGH-RESOLUTION PALEONENVIRONMENTAL ANALYSIS OF A Plio-PLEISTOCENE MARINE SUCCESSION IN CALIFORNIA

272-51 276 Paton, Timothy; Brett, Carlton E.; Kampouris, George: HABITAT HETEROGENEITY, PALEOECOLOGY, AND LOCAL BIODIVERSITY OF AN UPPER ORDOVICIAN MOUNDED HARDGROUND: IMPLICATIONS FOR BIODIVERSIFICATION

272-52 277 Wheatley, Alexander A.; Fritz, Sherilyn C.; Baker, Paul A.: DEVELOPING AN EVOLUTIONARY NICHE MODEL FOR TROPICAL SOUTH AMERICA

272-53 278 Foster, William Joseph; Lehmann, Daniel J.; Yu, Mei; Ji, Li; Martindale, Rowan C.: HABITAT SELECTIVITY OF BENTHIC COMMUNITIES IN MICROBIAL REEF ECOSYSTEMS FOLLOWING THE LATE PERMIAN MASS EXTINCTION EVENT

272-54 279 Chertok, Marley A.; Gannon, Michelle; Rosenberg, Gary: HEART COCKLE WINDOWS AND TRANSLUCENCY: IMPLICATIONS FOR ENVIRONMENTAL STUDIES

272-55 270 Chattopadhyay, Debabrata; Chattopadhyay, Devapiya: SUBSTRATE RELATIONSHIP GUIDED MOLLUSCAN BODY-SIZE RESPONSE TO CLIMATIC FLUCTUATION DURING THE PAST 66 MA


272-57 282 Webster, Claire; Walker, Sally E.; Teeter, William H.; Bowser, Samuel S.: UPDATE ON THE POTENTIAL EFFECTS OF OCEAN ACIDIFICATION ON ANTARCTIC MARINE BIVALVES

272-58 283 Fortier, Chantelle M.; Paterson, Audrey; Engell, Annette Summers: ECOLOGY AND ENDOSSYMBIONT DIVERSITY OF SIX CO-OCCURRING BIVALVES (BIVALVIA: LUCINIDAE) FROM AN ANTHROPOGENICALLY-ImpACTED TIDAL FLAT ON SUGARLOAF KEY, FLORIDA KEYS

272-59 284 Hayes, Matthew B.; Herbert, Gregory S.; Tapanila, Leif: HELICONOPTER TOOTH WHORS AS PALEOLACTOMETRY PROXIES FOR THE PERMIAN PHOSPHORIA SEA

272-60 285 Warnock, Rachel C.M.; Heath, Tracy A.; Stadler, Tanja: ON THE IMPORTANCE OF INCOMPLETE SAMPLING IN PALEOECOLOGICAL AND PHYLOGENETIC APPROACHES TO ESTIMATING SPECIATION AND EXTINCTION RATES

272-61 286 Soul, Laura C.; Hunt, Gene: A SIMULATION REVIEW OF METHODS FOR ESTIMATING MACROEVOLUTIONARY RATES USING FOSSIL DATA

272-62 287 Thompson, Carmi Milagros; Fernandes Martins, Maria João; Hunt, Gene: AN OSTRACODE FAUNA FROM THE CLAYTON FORMATION (PALEOCENE) AND ANALYSIS OF SAMPLE-STANDARDIZED DIVERSITIES ACROSS THE K/PG BOUNDARY IN THE US COASTAL PLAIN

272-63 288 Brophy, Shannon K.; Garb, Matthew P.; Landman, Neil H.; Brezina, Jamie; Naujokaitis-Jones, Jone; Hafner, Brianna P.; COLD METHANE SEEPS AS POSSIBLE REFUGES FROM ASH FALLS: EVIDENCE FROM THE UPPER Cretaceous PEARL SHEALE, SOUTH DAKOTA

272-64 289 Loxton, Jason; Melchin, Michael: EVIDENCE FOR A GRATOPOLITE EXTINCTION EVENT LINKED TO SEA-LEVEL FALL AT THE ORDOVICIAN-SILURIAN BOUNDARY

272-65 290 Morgan, Ryan: PALEOECOLOGY AS A CAPSTONE COURSE FOR GEOSCIENCES: AN INTENSIVE, FIELD-BASED APPROACH

SESSION NO. 273

T69. The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles (Posters) (GSA Geobiology & Geomicrobiology Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; Paleontological Society; GSA Limnogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 6:30 to 8:00 PM

Booth #


273-2 292 Bane, Katherine; Jones, Jennifer; Coenen, Jason; Scherer, Reed P.: LIGHT MICROSCOPY ANALYSIS OF WEST ANTARCTIC SUBGLACIAL SEDIMENTS: BIOGENIC SILICA PRESERVATION AND THE POTENTIAL FOR MICROBIAL COMMUNITY INTERACTIONS

Tuesday, 24 October 2017

22-25 October • Seattle, Washington, USA

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Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
9:00 AM, Washington State Convention Center, Halls 4EF


274-2 297 Murphy, J. Brendan*; Shellnutt, J. Gregory; Collins, William J.; LATE NEOPROTEROZOIC TO CARBONIFEROUS GENESIS OF A-TYPE MAGMAS IN AVALONIA OF NORTHERN NOVA SCOTIA: REPEATED PARTIAL MELTING OF ANHYDROUS LOWER CRUST IN CONTRASTING TECTONIC ENVIRONMENTS


274-4 299 Brydon, RJ; McLeod, Claire; Haley, Maureen Y.; Wolfe, Amy; Brown, Kenneth; Shaulis, Barry; Tronnies, Reidar: BREAKING UP A CONTINENT: TIMING AND SOURCES OF GRANITOID MAGMATISM IN THE OSLO RIFT, NORWAY

274-5 300 Zhou, Tengfei*; Zhou, Yaoqi; Peng, Tianming; Zhang, Zhenkai: THE GENESIS OF THE XIAOZHUSHAN GRANITE PLUTON IN SULU OROGEN BELT, EAST CHINA AND ITS IMPLICATION OF ROLLBACK OF SUBDUCTING PACIFIC-OCEANIC IN LATE MESOZOIC

274-6 301 Steiner-Leach, Travis Lewis*; Feineman, Maureen; Penniston-Dorland, Sarah; Magalhaes, Nivea; Farquhar, James; Bybee, Grant; Rinehart, Josh: MULTIPLE SULFUR ISOTOPES IN GRANITE-HOSTED SULFIDES FROM THE BUSHVELD IGNEOUS COMPLEX

274-7 302 Yan, Jingjing*; Zhao, Zhidan: LATE JURASSIC MAGMATISM IN XURU TSO BATHOLITH, CENTRAL LHASA SUBTERRANE: PRODUCTS OF SOUTHWARD SUBDUCTION OF BANGONG-NUIJIANG NEO-TETHYAN OCEANIC SEAFLOOR?

274-8 303 Gevedon, Michelle L.; Duccini, Kalie M.; Clemens-Knott, Diane: DEEP CRUSTAL ASSIMILATION BY DEPLETED-MANTLE-DERIVED BASALTS MASQUERADING AS MELTING OF ENRICHD MANTLE: HF-O MODELING OF EASTERN SIERRA NEVADA ARC GABBROS

274-9 304 Boyles, Julia L.; Sisson, Thomas W.; Miller, Jonathan S.: EXPERIMENTAL PETROLOGY OF THE K-FELDSPAR MEGACRYST-BEARING CATHEDRAL PEAK GRANODIORITE, TUOLUMNE INTRUSIVE SUITE, YOSEMITE NATIONAL PARK, CA

274-10 305 Savage, Jessica*; Douglas, Sarah R.; Barth, Andrew; Riggs, Nancy: GEOCHEMISTRY AND FACIES OF THE EASTERN SIERRA NEVADA AS ANALOGUES FOR MODERN CONTINENTAL ARC SETTINGS

274-11 306 Fuston, Spencer L.; Hetherington, Callum J.; Barnes, Calvin G.: GEOCHEMISTRY AND PETROGRAPHY OF THE ASHLAND PLUTON, KLAMATH MOUNTAINS, NORTHERN CALIFORNIA AND OREGON

274-12 307 Bankhead, John Gardiner Richards*: COMAGMATIC EVOLUTION OF THE BOULDER AND PIONEER BATHOLITHS OF SOUTHWEST MONTANA

274-13 308 Pettus, Holly D.; Brown, Kenneth L.: PETROGRAPHY AND GEOCHEMISTRY OF MEGACRYSTIC K-FELDSPARS FROM A GRANITOID INTRUSION, NORTHERN WESTERN NEVADA

274-14 309 Stearns, Michael*; Jensen, Collin; Keith, Jeffrey D.; Christiansen, Eric H.: FOUR MILLION YEARS FROM INTRUSION TO EROPTION IN THE WHITE PINE STOCK AND EAST TRAVERSE MOUNTAINS PEBBLE DIKE SWARM, WASATCH MOUNTAINS, UTAH, U.S.A

274-15 310 Meszaros, Nicholas*; Mills, James G.: PETROGENESIS OF IGNEOUS ROCKS IN THE EMINENCE KNOBS REGION: SOUTHWESTERN ST. FRANCIS MULTIPLE SULFUR ISOTOPES IN THE ASHLAND PLUTON, KAMLOOPS, BC, CANADA

274-16 311 Brinkman, Jacob*: Encarnacion, John: MAGMA MIXING AND MINGLING PROCESSES IN THE TIEMANN SHUT-INS, ST. FRANCIS MOUNTAINS, MISSOURI: CONSTRAINTS FROM GEOCHEMICAL VARIATIONS WITHIN MAFIC ENCLAVES

274-17 312 Angi-O'Brien, Elizabeth*; McLeod, Claire; Haley, Maureen Y.; Brydon, RJ; Wolfe, Amy; Shaulis, Barry: MAGMA MINGLING: UNRAVELLING GRANITE CRYSTALIZATION ONE CRYSTAL AT A TIME

274-18 313 Johnson, Eric L.; Pettito, Evan*: TEXTURAL, MINERAL AND BULK CHEMICAL EVIDENCE FOR MAGMA MIXING AT ANDREWS POINT, CAPE ANN MASSACHUSETTS

274-19 314 Lopez, Nora V.*; Hudgins, Thomas R.: MAGMA MIXING USING GEOCHEMICAL DATA FROM THE TRANS-MEXICAN VOLCANIC BELT

274-20 315 Smith, Veronica*: Miller, Calvin F.: GEOCHEMICAL RELATIONS BETWEEN MAFC INTRUSIONS IN POST-PACHE Spring TUFF DEPOSITS IN THE SOUTHERN BLACK MOUNTAINS, ARIZONA

274-21 316 Stephens, Travis Scott*; Pritchard, Chad J.; O’Sullivan, Paul: U–PB GEOCHRONOLOGY OF SILVER HILL, SPOKANE COUNTY, WASHINGTON

274-22 317 Pritchard, Chad J.*; O’Sullivan, Paul; Lewis, Reed S.: LATE MIOCENE VAPOR-PHASE ENRICHMENT OF REE IN BASALTIC ENCLAVES

274-23 318 Szymanski, Mark E.*; Browne, Brandon L.; Bindeman, Ilya N.: OXYGEN ISOTOPE COMPOSITIONS OF OLIVINE FROM QUATERNARY MAFIC VENTS OF THE GOLDEN TROUT VOLCANIC FIELD, KERN PLATEAU, CA

274-24 319 Silva, Clotilde Q.*; Wittke, James H.; Hazelden, Gordon B.: UNUSUAL MINERALS AND ASSOCIATIONS IN PRIMITIVE ULTRAPOTASSIC MICROSHONKINITE DIKES, MOUNTAIN PASS RARE EARTH DISTRICT, SOUTHERN CALIFORNIA

274-25 320 Kaya, Mustafa*: Kulmar, Mustafa; Yalcin, Cihan; Hanlici, Nurullah; Tanc, Bent: GEOCHEMICAL PROPERTIES OF HIGH MAGNETISM BASALTS OF SARAYCICK FORMATION, KAGIRGÔRUM, TURKEY

274-26 321 Maruszczak, Alex D.*; Peate, David W.: GEOCHEMISTRY OF OFF-AXIS BASALTIC GLASSES FROM THE SNAEFELLNESNES PENINSULA, ICELAND


274-28 323 Love, Harrison F.; Zerda, Christina; Barton, Michael: MODELING FRACTIONAL CRYSTALLIZATION OF BASALTS ALONG THE NORTHERN EAST PACIFIC RISE

274-29 324 Mana, Sara*; Cai, Merry Yue; Beck, Catherine C.; Goldstein, Steven L.: TECTONOMAGMATIC EVOLUTION OF THE EAST AFRICAN RIFT SYSTEM AS DOCUMENTED IN WEST TURKANA, KENYA

274-30 325 Attia, Snir*; Paterson, Scott R.; Ardill, Katie E.; Martinez, Ana Maria; Rotschbacher, Barbara; Cao, Wenrong; Cottle, John M.: UPPER CRUSTAL EVOLUTION DURING AN ARC FLARE-UP: INTEGRATING SEDIMENTARY, VOLCANIC, AND
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SESSION NO. 277
Tuesday, 24 October 2017

SESSION NO. 278

D50. Precambrian Geology (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

278-1 356 Colbert, Kyle V.**; Allard, Stephen T.: NEW CLASSIFICATION FOR ARCHEAN GNEISSES IN THE LITTLE ELK TERRANE BASED ON STRAIN AND MICA ABUNDANCES, BLACK HILLS, SOUTH DAKOTA

278-2 357 Evenocheck, Elizabeth Lee**; Allard, Stephen T.: GEOCHEMICAL ANALYSIS OF VARIABLY STRAINED ARCHEAN GNEISSES IN THE LITTLE ELK TERRANE, BLACK HILLS, SOUTH DAKOTA

278-3 358 Lincoln, Timothy N.*; Lincoln, Beth Z.: PETROLOGY AND ORIGIN OF THE PROTEROZOIC CROW FORMATION, BLACK HILLS, SOUTH DAKOTA

278-4 359 Fedo, Christopher M.*; Brengman, Latisha Ashley; Whitehouse, Martin J.; Hanor, Jeffrey S.: SILICON ISOTOPE RECORD OF EARLY SILICIFIED PALEOARCHEAN (~3.3 GA) KOMATIITES FROM THE ONVERWACHT GROUP, BARBERTON GREENSTONE BELT, SOUTH AFRICA

278-5 360 Zylstra, Scott*: Van Buer, Nicholas J.; Nourse, Jonathan A.; Vermillion, Karissa: LATE CRETACEOUS PLUTONIC AND METAMORPHIC OVERPRINT OF PROTEROZOIC METASEDIMENTS OF ONTARIO RIDGE, EASTERN SAN GABRIEL MOUNTAINS, CA

278-6 361 Hiatt, Eric E.; Schwid, Maxwel F.; Porto, Claudio G.; Abram, Maisa Bastos: PHOSPHORITE AND IRON FORMATION DEPOSITED DURING THE MARINOAN SNOWBALL EARTH ICE AGE, MATO GROSSO, BRAZIL: PALEOCEANOGRAPHY OF A GLACIMARINE BIOCHEMICAL SYSTEM

278-7 362 Sarkar, Soumendra*: RELATION OF PIPILIA DYKE SWARMS WITH 1800–1700 MA LARGE IGNEOUS PROVINCE (LIP): APPROACH TO COLUMBIAN/JUNA SUPERCONTINENT ASSEMBLAGE FROM DOLERITE DYKES IN SINGHBHUM CRATON, INDIA

SESSION NO. 279

T254. The Co-Evolution of Life and Its Environment during the Precambrian: The “Boring Billion” and Mid-Proterozoic Emergence of Complex Life (Posters) (Paleontological Society; GSA Geobiology & Geomicrobiology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

279-1 363 Meineroeva, Jana*: Stüeeken, Eva E.; Kipp, Michael A.; Buick, Roger: DID VOLCANISM CAUSE THE WHIFF OF OXYGEN 2.5 BILLION YEARS AGO?

279-2 364 Hodgskiss, Malcolm S.W.*; Frost, Jamie L.; Dagnaud, Olivia; Halverson, Galen P.; Schmitz, Mark D.; Sperling, Erik A.: REVISITING THE ~2.0 GA BELCHER GROUP WITH HIGH-RESOLUTION CARBON ISOTOPE CHEMOSTRATIGRAPHY AND ZIRCON GEOCHRONOLOGY

279-3 365 Doyle, Katherine A.*; Poulton, Simon W.; Newton, Robert J.; Podkorytov, Victor; Beiker, Andrej: EVERY OCEAN HAS AN OXIC LINING: EVIDENCE FOR SHALLOW WATER ANOXIA IN THE MESOPROTEROZOIC

279-4 366 Tang, Qing*: Pang, Ke; Chen, Lei; Wan, Bin; Xiao, Shuhai; Zhou, Chuanming; Yuan, Xunlai; Hua, Hong: BIOSTRATIGRAPHIC CONSTRAINT ON TONIAN SUCCESSIONS IN EASTERN NORTH CHINA BLOCK


SESSION NO. 280

T255. The Co-Evolution of Life and Its Environment during the Precambrian: The Late Proterozoic Rise of Animals; Climate, Tectonic, and Environmental Dynamics, and the Transition into the Early Paleozoic (Posters) (Paleontological Society; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

280-1 368 Zhao, Zhouqiao*; Lang, Xianguo; Pei, Haoqiang; Shen, Bing: ACTIVE METHANOGENESIS DURING THE MELTING OF MARINOAN SNOWBALL EARTH: EVIDENCE FROM RARE EARTH ELEMENT

280-2 369 Smith, Brett; Kipp, Michael; Stüeeken, Eva E.; Buick, Roger: NUTRIENT CYCLING IN THE PHOSPHORIA SEA

280-3 370 Ha, Young*: STRONTIUM, CARBON AND OXYGEN ISOTOPIC COMPOSITIONS OF THE HYANGSANNI DOLOMITE FROM THE OKCHEON METAMORPHIC BELT, SOUTH KOREA: POSSIBILITY OF ASSOCIATION WITH NEOPROTEROZOIC GLACIAL EVENT

280-4 371 Huang, Tianzheng*: Zhao, Zhouqiao; Shen, Bing: EVOLUTION OF MARINE REDOX LANDSCAPE CONTROLLED BY THE PHYTOPLANKTON COMMUNITY STRUCTURE

SESSION NO. 281

T175. Earthquakes, Faults, and Fault Systems in the Pacific Northwest (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

281-1 372 Lynch, Emerson M.*; Regalla, Christine; Morell, Kristin; Harrichhausen, Nicole: GEOMORPHIC EVIDENCE FOR RECENT RUPTURES ON THE BEAUFORT RANGE FAULT IN THE NORTHERN CASCADIA FOREARC OF BRITISH COLUMBIA, CANADA

281-2 373 Murphy-Deak, Daniel*: INVESTIGATION OF THE MT TEBO STRUCTURE AT DRY CREEK, MASON COUNTY, WA

281-3 374 Roland, Emily*: Watt, Janet; Bennett, Scott E.K.; Brothers, Daniel S.; Kluesner, Jared W.; Hart, Patrick E.; Myers, Emma; Haugerud, Ralph A.; Johnson, Samuel Y.; Walton, Maureen; Kennedy, Daniel; Balster-Gee, Alicia: EXPLORING SHALLOW FAULT AND FOLD DEFORMATION OF THE SEATTLE FAULT ZONE USING HIGH-RESOLUTION MARINE GEOPHYSICAL DATA

281-4 375 Cakir, Recep*: Walsh, Timothy J.; Scott, Spenser; Lau, Todd; Kover, Alex: MONITORING ACTIVE CRUSTAL FAULTS IN WASHINGTON
281-5 378 Edgley, Joseph*; Pritchard, Chad J.: AN ISOLATED CRUSH BRECCIA IN MAGNISON BUTTE, OR PART OF A LARGER FAULT SYSTEM IN EASTERN WASHINGTON?

281-6 377 Hansen, Eljiaht*; Pritchard, Chad J.: STRUCTURAL RELATIONSHIP BETWEEN FOLDING AND FAULTING PRESERVED IN PROTEROZOIC BUTTES OF THE MEDICAL LAKE AREA, EASTERN WASHINGTON

281-7 378 Redwine, Joanna*; Klinger, Ralph E.; Piety, Lucille A.; Wells, Ray E.; Sherrod, Brian L.; Howe, Julia Corbett; Levinston, Ryan; Hornby, Kris; Niem, Alan: QUADRENNIAL ACTIVITY ON THE GALES CREEK FAULT, NORTHWEST OREGON

281-8 379 Klinger, Ralph E.; Redwine, Joanna; Derouin, Sarah A.; Piety, Lucille A.: HOLOCENE ACTIVITY ON THE KING MOUNTAIN FAULT, NORTHEASTERN OREGON

281-9 380 Mark-Moser, MacKenzie*; Meigs, Andrew: SEPARATION OF SILETZIA FROM THE BACKARC ALONG THE SISTERS FAULT ZONE, CENTRAL OREGON, USA?

281-10 381 Morton, Emily A; Bilek, Susan L.*; Rowe, Charlotte A.: NEWLY DETECTED CASCADE SUBDUCTION ZONE EARTHQUAKES OFFSHORE CENTRAL OREGON USING THE CASCADE INITIATIVE AMPHIBIOUS DATASET

281-11 382 McKenzie, Kirsty A.*; Furlong, Kevin P.: LINKS BETWEEN SUBDUCTION MEGATHRUST EARTHQUAKES AND UPPER-PLATE BRITTLE DEFORMATION IN THE PACIFIC NORTHWEST

281-12 383 McPherson, Bob*; Hemphill-Haley, Mark; Smith, Stewart; Williams, Todd; Pryor, Ian: COMPLICATED KINEMATICS IN THE SOUTHERN CASCADE SUBDUCTION ZONE

281-13 384 Lifton, Zachery M.*: PROPOSED UPDATES TO THE IDAHO FAULT DATABASE

281-14 385 Im, Chang Bock*; Shim, Taek Mo; Choi, Ho Seon; Yang, Jun Mo; PARK, Seon Jeong: RELATIONSHIPS BETWEEN EARTHQUAKE MAGNITUDES AND GEOLOGICAL PARAMETERS: A CASE STUDY ON THE SE KOREAN PENINSULA

SESSION NO. 282

T176. Glacier-Landscape Interactions, Loess Paleoclimatology, and Interdisciplinary Quaternary Science: In Memory of Stephen C. Porter (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division) 9:00 AM, Washington State Convention Center, Halls 4EF

282-1 386 Rawling, J. Elmo*; Zoet, Lucas; Attig, John W.; Mode, William N.: GEOGRAPHICAL AND QUATERNARY GEOLOGY OF TUNNEL CHANNELS ALONG THE WESTERN MARGIN OF THE GREEN BAY LOBE, WISCONSIN

282-2 387 Luczak, Jonathan N.*; Fisher, Timothy G.; Samsen, Brian: PRELIMINARY MAP OF THE SURFICIAL GEOLOGY OF THE BURNSIDE 7.5 MINUTE QUADRAMAPLE, LAPEER COUNTY, MICHIGAN

282-3 388 Kasmerchak, Chase*; Schaeftitl, Randall; Lepper, Kenneth: INTRODUCING GLACIAL LAKE ROSCOMMON, CENTRAL LOWER MICHIGAN, USA

282-4 389 Olson, Trent*; Fischer, Jenna; Clark, Logan; Gibbs Schnucker, Sara; Marston, Haley; Lepper, Kenneth: DATING THE LATEST TINTAH SHORELINE OF LAKE AGASSIZ IN NORTHERN MINNESOTA: ADDING TO THE GEOCHRONOLOGIC PUZZLE

282-5 390 Massey, Matthew A.*; PLEISTOCENE FLUVIAL INCISION, AGGRAVATION, AND SLACKWATER DEPOSITION ASSOCIATED WITH THE LICKING RIVER IN NORTHERN KENTUCKY

282-6 391 Yahui, Qiu*: MAGNETOSTRATIGRAPHIC DATING OF THE LINGYI FAUNA AND IMPLICATIONS FOR SEQUENCING THE MAMMALIAN FAUNAS ON THE CHINESE LOESS PLATEAU

282-7 392 Rodgers, Kelsey*; Bevis, Kenneth A.: REVISED MAPPING OF THE LOCATION AND EXTENT OF GLACIATION IN THE CENTRAL OREGON CASCADES BASED ON LIDAR DATA

282-8 393 Penkrot, Michelle L.*; Jaeger, John M.; Loss, Dylan P.; Bruand, Emilie: INVESTIGATING MODERN GLACIAL EROSION-TECTONIC INTERACTIONS WITHIN THE ST. ELIAS MOUNTAINS, ALASKA USING MARINE SEDIMENT PROVENANCE

282-9 394 Dahl, Svein Olaf*; Skoglund, Ranveig Ovrevik; Nielsen, Pål Ringkjøbd: DID PRECIPITATION STARVATION AS INDICATED BY DEPOSITION OF LOESS TERMINATE THE LATE WISCONSINIAN SCANDINAVIAN ICE SHEET IN EAST-CENTRAL SOUTHERN NORWAY DURING THE EARLY HOLOCENE?

SESSION NO. 283

T177. Ice Streams of North American Ice Sheets and Their Stratigraphic and Sedimentary Record (Posters) (GSA Quaternary Geology and Geomorphology Division) 9:00 AM, Washington State Convention Center, Halls 4EF

283-1 395 Kotrapu, Kristi M.*: CALCULATING THE SLIDING VELOCITY OF THE RAINY LOBE OF THE LAURENTIDE ICE SHEET USING MASS BALANCE CALCULATIONS AND LARGEST CLAST SIZE IN LODGEMENT TILLS

283-2 396 Légaré-Couture, Guillaume*; Parent, Michel: THE ST. LAWRENCE ICE STREAM LANDFORM ASSEMBLAGE – NEW INSIGHT BASED ON LIDAR SURVEYS

283-3 397 Kerr, Phillip J.*; Bettis, E. Arthur; Tassier-Surine, Stephanie A.; Quade, Deborah J.; Woida, Kathleen; Kilgore, Susan M.: EVIDENCE FOR MIDDLE WISCONSIN GLACIATION IN NORTH CENTRAL IOWA

283-4 398 Meister, Paul*; Malone, David H.: PROVENANCE ANALYSIS OF GRANITE COBBLES IN THE TISKILWA TILL USING U-PB GEOCHRONOLOGY

283-5 399 Wittkop, Chad*; Bartley, Julie K.; Krueger, Russell; Knaebel, Alan R.; Bouvier, Audrey; Georg, R.Bastian; St. Clair, Katherine; Piper, Christian: PROVENANCE CONTROLS ON THE GEOCHEMISTRY AND RADIOGENIC ISOTOPIC COMPOSITION OF PLEISTOCENE TILLS IN MINNESOTA USA

283-6 400 Regis, Robert S.*: LATE QUATERNARY GLACIAL DYNAMICS OF THE KEWEENAW PENINSULA

SESSION NO. 284

T178. Advances in Terrestrial Paleoclimate Reconstructions Using Paleosols (Posters) (GSA Sedimentary Geology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group) 9:00 AM, Washington State Convention Center, Halls 4EF

284-1 401 Gerzan, Mallory N.*; Stinchcomb, Gary E.; Ferraro, Joseph V.; Forman, Steven L.; Blegen, Nick; Stewart, C. Lance; Binetti, Katie M.: SITE FORMATION OF THE LATE AND POTENTIALLY MIDDLE PLEISTOCENE FARRE ARCHAEOLOGICAL SITE, CHALBI BASIN, NORTHERN KENYA

284-2 402 Beverly, Emily J.*; Sharriff, Jenni; Wilkinson, Keith; Adler, Daniel; Gasparian, Boris: USING PLEISTOCENE PALEOSOL TO RECONSTRUCT PALEOENVIRONMENTS IN THE HRAZDAN VALLEY OF THE SOUTHERN CAUCASUS OF ARMENIA

284-3 403 Horgan, Juliana S.*; Beck, Catherine C.: XRF ANALYSIS OF LATE MIOCENE SEDIMENT FROM THE LOCHERANGAN LOCALITY, TURKANA BASIN OF WESTERN KENYA

284-4 404 Ibarra, Georgina*; Ayala, Emmanuel; Solleiro, Elizabeth; Lopez, Rafael: PALEOPEDOGENESIS AND SEDIMENTATION IN LA PLAYA, SONORA AS EVIDENCES OF THE PALEOENVIRONMENTAL CONDITIONS FROM: MACRO AND MICRO SCALES OF OBSERVATION
SESSION NO. 285

T169. Deciphering Climate Change and Climate Variability in the Geologic Record Using Palaeosols, Loess, Palaeoweathering Profiles, Pedosedimentary Sequences, and Polygenetic Soils: Their Applications and Limitations as Terrestrial Proxies in Understanding Impacts of Climatic Changes (Posters) (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

285-1 409 McCarthy, Paul*; Fiorillo, Anthony R.; Kobayashi, Yoshitsugu; Tanaka, Tomonori; Tomsich, Carla S.; Flagg, Peter P.; Salazar Jarimillo, Susana: A LATE CRETACEOUS HIGH-LATITUDE PALEOENVIRONMENTAL AND PALEOECOLOGICAL TRANSIENT ACROSS GREENHOUSE ALASKA: A COMPARISON OF THE CHIGNIK, LOWER CANTWELL, AND PRINCE CREEK FORMATIONS, ALASKA, USA

285-2 410 Kielhofer, Jennifer*; Tierney, Jessica; Holmes, Charles; Potter, Ben A.; Edsall, Julie; Lanoee, Francois; Bigelow, Nancy H.; Reuther, Joshua D.; Wohler, Matthew: AN ORGANIC GEOCHEMISTRY PERSPECTIVE ON DEGLACIAL PALEOClimATICAL VARIABILITY IN CENTRAL ALASKA


285-4 412 Andrzejewski, Kate*; Tabor, Neil J.: PALEOENVIRONMENTAL RECONSTRUCTION OF CRETACEOUS TERRITORIAL FORMATIONS OF TEXAS AND OKLAHOMA USING PEDOGENIC MINERALS

285-5 413 Fox, Mathew L.: HOMININ PALEOVENVIRONMENT AND EAST ASIAN MONSOONAL VARIABILITY IN THE QINLING MOUNTAIN REGION OF CENTRAL CHINA: EXAMINING THE ORGANIC GEOCHEMISTRY AND GRAIN SIZE DISTRIBUTIONS OF MID-PLISTOCENE PALEOLITHIC LOESS-PALEOSOL SEQUENCES

285-6 414 Elliott, McKenzie*; Strozzyk, Sarah; Bader, Nicholas E.: FACTORS INFLUENCING MAGNETIC SUSCEPTIBILITY IN THE PALOUSE LOESS

285-7 415 McGuire, Casey*; Schmidt, Amanda H.; Keen-Zebedt, Amanda; Collins, Brian D.; D'Alpoim Guedes, Jade: TIMING AND PROVENANCE OF LOESS IN JIUZHAIGOU, CHINA

SESSION NO. 286

T170. Rock Transforming to Soil—The Weathering Engine Intersects with the Carbon Cycle (Posters) (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology & Geomicrobiology Division; Paleoclimatology/Paleoceanography)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

286-1 416 Murphy, Kevin*; Trejo, Brittany; LaFond-Hudson, Sophia: RADIAL OXYGEN LOSS IN THE RHIZOSPHERE OF WILD RICE AS A PRIMARY DEFENSE AGAINST TOXIC MINERAL PRECIPITATION

286-2 417 Oriot, Alishia E.: SULFUR AND IRON GEOCHEMISTRY IN THE RHIZOSPHERE OF WILD RICE (ZIZANIA PALUSTRIS)

286-3 418 Dohnalkova, A.; Tiatly, Malak M.; Smith, A. Peyton; Chu, Rosalie; Crump, Alex R.; Brislawn, Colin J.; Varga, Tamas; Shi, Zhenqing; Thomashow, Linda; Harsh, James B.; Baloeh-Brunstad, Zsuzsanna; Keller, C. Kent*: MOLECULAR AND MICROSCOPIC INSIGHTS INTO THE FORMATION OF SOIL ORGANIC MATTER IN A RED PINE RHIZOSPHERE

SESSION NO. 287

T208. Best Student Geologic Map Competition (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

287-1 419 Casady, Sommer M.*; Aird, Hannah; Guglielmo, Andrew: EXPLORATION OF A HIGH-SULFIDATION EPITHERMAL DEPOSIT WITHIN THE ANTELOPE VALLEY VOLCANIC CENTER, SIERRA COUNTY CALIFORNIA

287-2 420 Mauch, James*: Pederson, Joel L.: MAPPING OF MOAB AND SPANISH VALLEYS TO EXPLORE SUBSIDENCE PATTERNS IN A QUATERNARY SALT GRABEN

287-3 421 Kelkar, Kaytan*: Giardino, John R.: SURFICIAL LANDFORMS AND GEOMORPHOLOGY OF THE WESTERN SAN JUAN MOUNTAINS, COLORADO


287-5 423 Gregorich, Holly*: Malone, David; Shields, William: SURFICIAL GEOLoGIC MAP OF THE PONTIAC NORTWEST QUADRANGLE, LIVINgTON COUNTY, IL

287-6 424 Sellers, Victoria*; Brane, Scott; Castle, James W.: GEOLOGIC MAP OF THE NORTHERN THIRD OF THE SIX MILE 7.5' QUADRANGLE, PICKENS COUNTY, SOUTH CAROLINA

287-7 425 Strickland, Evan D.*; Singleton, John S.; Griffin, Andrew T.B.: DETAILED GEOLOGIC MAPPING OF MYONYLIC UNITS IN THE FOOTWALL OF THE PLOMOSA DETACHMENT FAULT, WEST-CENTRAL ARIZONA

287-8 426 Brown, Mark Byron*; Nandi, Sourav Krishna; Spurgeon, Derek L.; Gerik, Ashley; Breeding, Dalton R.; McKay, Matthew P.: GEOLoGIC MAP OF THE POLLOCK MOUNTAIN 7.5-MINUTE QUADRANGLE, WEST-CENTRAL IDAHO

287-9 427 Severson, Allison R.*; Kuiper, Yvette D.; Buchanan, J. Wes: STRUCTURAL MAP ACROSS THE NASHOBA TERRANE, EASTERN MASSACHUSETTS, SCALE 1:300,000

287-10 428 Sharp, Emily*; Tate, Garrett W.; Richardson, Andrea E.: GEOLOGIC MAP OF FORELAND-DIPPING DUPLEX STRUCTURES IN THE SOUTHWESTERN MOUNTAIN CITY WINDOW, CHEMAOA QUADRANGLE, TENNESSEE APPALACHIANS

287-11 429 Deck, Eric A.*; Malone, David; Shields, William: SURFICIAL GEOLoGIC MAP OF THE PONTIAC NORTH EAST 7.5 MINUTE QUADRANGLE IN LIVINGTON COUNTY, IL, SCALE 1:24,000

287-12 430 Mahatma, Asha*: Powell, Logan; Kuiper, Yvette; Ruleman, Cal: GEOLOGY OF THE SOUTHERN HALF OF THE MOUNT EVANS 7.5 MINUTE QUADRANGLE, CENTRAL COLORADO FRONT RANGE

287-13 431 Chesnutt, Julian M.*; Pawl, Timothy A.; Wegman, Karl W.; Cole, Rex D.; Byrne, Paul K.; White, Jonathan L.: SURFICIAL, BEDROCK AND GEOLoGIC MAP OF THE MESA LAKES QUADRANGLE, GRAND MESA COLORADO
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<td>T209. Challenges in Tectonics: Fault Zone Behavior through Time, from Earth’s Surface to the Upper Mantle (Posters) (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)</td>
<td>Gray, Brian*; Page, William D.; Unruh, Jeffery R.; Baldwin, John; A REGIONAL KINEMATIC MODEL FOR HAT CREEK LANE</td>
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<td>EXPERIMENTALLY PRODUCED DEFORMATION BANDS IN ETCHEGOIN SANDSTONE: IMPLICATIONS FOR INFERRING STRESS DIRECTIONS IN CENTRAL CALIFORNIA</td>
<td>Lindquist, Peter*; French, Melodie; Titus, Sarah; Williams, Randolph T.; Goodwin, Laurel B.</td>
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<td>A NEW APPROACH TO STATISTICAL ANALYSIS OF PALEOSEISMIC DATA CONFIRMS THE FUNDAMENTAL PERIODICITY OF MOST LARGE EARTHQUAKES</td>
<td>Sare, Robert M.<em>; Hilley, George E.; Caine, Jonathan Saul</em>; Todd, Erin; Lease, Richard O.; Jones, James V.</td>
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<td>288-4</td>
<td>ESTIMATING FAULT ZONE MATURITY AT THE PLATE BOUNDARY SCALE USING TEMPLATE MATCHING FOR FAULT SCARP DETECTION AND MORPHOLOGIC DATING</td>
<td>Song, Won Joon*; Johnson, Scott E.; Gerbi, Christopher C.; Caine, Jonathan Saul*; Todd, Erin; Lease, Richard O.; Jones, James V.</td>
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<td>288-6</td>
<td>TRANSPRESSION AND TRANSTENSION ALONG THE LAKE CLARK FAULT IN SOUTH-CENTRAL ALASKA: NEW VIEWS ON ITS FORMATION, CHARACTERISTICS, DAMAGE, KINEMATICS, EXHAUMATION, AND EVOLUTION</td>
<td>Zuza, Andrew V.*; Carlson, Chad W.; Levy, Drew A.</td>
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**SESSION NO. 289**

T211. Faults: Causes and Consequences (Posters) (GSA Structural Geology and Tectonics Division)

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<td>Pilanski, Laura S.*; Vervoort, Jeff D.; Long, Sean P.; Gordon, Stacia M.; TIMING OF METAMORPHISM IN THE MAIN CENTRAL THRUST ZONE IN SOUTH-CENTRAL BHUTAN: INSIGHTS FROM PRELIMINARY GARNET AND MONAZITE GEOCHRONOLOGY</td>
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<td>THE TRAVERSE RIDGE SITE, WASATCH FAULT, UTAH: AN EXAMPLE OF CHALLENGES IN INTERPRETING EARTHQUAKE RECORDS AT SEGMENT BOUNDARIES</td>
<td>Phillips, Joseph*; Toke, Nathan A.; Langevin, Christopher; Kleber, Emily; DuRoss, Christopher B.; Hiscock, Adam; McDonald, Greg N.; Wells, Jack; Horns, Daniel; Carlson, Joseph K.</td>
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**SESSION NO. 290**

T212. Faults: Causes and Consequences (Posters) (GSA Structural Geology and Tectonics Division)

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<td>STYLES OF STRUCTURAL DEFORMATION ACROSS CASTLE HILL BASIN, NEW ZEALAND</td>
<td>Greshin, Paul S.<em>; Davidson, Jonathan; Anson, Marta</em>; Kodama, Kenneth; Pueyo, Emilio; Soto, Ruth; Garcia-Senz, Jesus; Escudier, Javier; Pastor-Galán, Daniel; PALEOMAGNETIC EVIDENCE OF VERTICAL AXIS ROTATIONS IN A LEFT-LATERAL STRIKE-SLIP SHEAR ZONE: NORTHEASTERN DOMINICAN REPUBLIC</td>
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<td>AIRBORNE LIDAR-BASED 3D STRUCTURAL MODELING OF COVER DEFORMATION WITHIN THE CENTRAL APPALACHIAN VALLEY AND RIDGE PROVINCE</td>
<td>Gaschot, Bertrand*; Zuza, Andrew V.*; Carlson, Chad W.; Levy, Drew A.</td>
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T213. Integrated Approaches to Deciphering Major Crustal Boundaries in Polyphase Orogenic Settings (Posters) (GSA Structural Geology and Tectonics Division; Society of Economic Geologists; GSA Geophysics Division)  

9:00 AM, Washington State Convention Center, Halls 4EF  

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM  

Booth #  

290-1 479 Jiménez, Giovanny*: García, Helbert; Cardona, Agustín; García, Lorena: PRELIMINARY RESULTS ON MAGNETIC PROPERTIES OF THE GIRON GROUP COLOMBIA: IMPLICATIONS IN STRATIGRAPHY AND TECTONICS IN THE NW MARGIN OF SOUTH AMERICA  

290-2 480 Weil, Arlo Brandon; Yonkee, Adolph; Whitty, Helen*: REGIONAL PATTERNS TO LOCAL VARIATIONS IN PALEO-STRESS/STRAINS AND VERTICAL-AXIS ROTATIONS ACROSS PART OF THE ARGENTINIAN ANDES: DECIPHERING CONTRIBUTIONS FROM PLATE-MARGIN PROCESSES TO CRUSTAL ARCHITECTURE  

290-3 481 Ruthven, Rachel C.*; Singleton, John S.; Seymour, Nikki M.; Magloughlin, Jerry F.; Golíma, Rodrigo; Stöckli, Daniel F.; Arancibia, Gloria: NEW CONSTRAINTS ON THE GEOMETRY, KINEMATICS, AND TIMING OF DEFORMATION ALONG THE SOUTHERN SEGMENT OF THE PAPOSO FAULT ZONE, ATACAMA FAULT SYSTEM, NORTHERN CHILE  

290-4 482 Seymour, Nikki M.*; Singleton, John S.; Golíma, Rodrigo; Heuser, Gert; Strickland, Evan D.; Ruthven, Rachel C.; Stöckli, Daniel F.; Arancibia, Gloria: MAGNITUDE AND TIMING OF EARLY CRETACEOUS SLIP ALONG THE ATACAMA FAULT SYSTEM, NORTHERN CHILE  

290-5 483 Calle, Amanda Z.*; Horton, Brian K.; García-Duarte, Raúl; Flraig, Peter P.: NEOPROTEROZOIC-PALEOZOIC TECTONICS AND PALEOGEOGRAPHY OF THE WEST-CENTRAL SOUTH AMERICA CONVERGENT MARGIN FROM DETRITAL ZIRCON GEOCHRONOLOGY  

290-6 484 McClelland, William C.*; Mulcahy, Sean R.; Roeske, Sarah M.; Webber, Patricia; Thoît, Andrew; Houlihan, Emily: DETRITAL ZIRCON CHARACTERIZATION OF METASEDIMENTARY UNITS OF SIERRA DE MAZ, WESTERN SIERRAS PAMPEANAS, ARGENTINA  

290-7 485 Thoît, Andrew*: Webber, Patricia; Houlihan, Emily; Mulcahy, Sean R.; McClelland, William C.; Roeske, Sarah M.; Vervoort, Jeff D.; Wilford, Diane: METAMORPHIC EVOLUTION OF THE SIERRA DE MAZ: IMPLICATIONS FOR THE TIMING OF TERRANE ACCRETION ON THE WESTERN MARGIN OF GONDWANA  

290-8 486 Houlihan, Emily*: Thoît, Andrew; Webber, Patricia; Roeske, Sarah M.; Mulcahy, Sean R.; McClelland, William C.; Rutte, Daniel: 40Ar/39Ar GEOCHRONOLOGY AND KINEMATIC ANALYSIS OF SIERRA DE MAZ: IMPLICATIONS FOR TIMING
AND ORIENTATION OF DEFORMATION ON THE PALEOZOIC MARGIN OF WESTERN GONDWANA

291-9  487 Cawood, Tarryn Kim;* Paterson, Scott; Ratschbacher, Barbara C.; Lusk, Alexander Dmitri Johnston; Larrovere, Mariano A.; Alasino, Pablo; Rick, Christopher Benton; Memeti, Valbon; Wu, Weiwei; Memeti, Vali;* Ratschbacher, Barbara C.; Larrovere, Mariano; Alasino, Pablo; Memeti, Valbon; Cawood, Tarryn Kim; Hernandez, Robert: DEFORMATION OF THE UPPERMOST FAMATINIAN OROGEN: MAPPING AND STRUCUTRAL ANALYSIS FROM THE SIERRA DE NARVÁEZ AND SIERRA DE LAS PLANCHADAS, NW ARGENTINA

291-10 488 Lusk, Alexander Dmitri Johnston; Paterson, Scott R.; Ratschbacher, Barbara C.; Larrovere, Mariano; Alasino, Pablo; Memeti, Valbon; Cawood, Tarryn Kim; Hernandez, Robert: GEOCHEMICAL ARCHITECTURE AND EVOLUTION OF THE FAMATINIAN MAGMATIC ARC CRUSTAL SECTION IN THE NW ARGENTINA

291-11 489 Alasino, Pablo H.;* Memeti, Vali; Ratschbacher, Barbara C.; Larrovere, Mariano; Paterson, Scott R.; Lusk, Alexander; Cawood, Tarryn: IGNEOUS ARCHITECTURE AT THE TOP OF THE FAMATINIAN ARC, NW ARGENTINA

SESSION NO. 292

D43. Tectonics I (Posters): Advances in Tectonics from Mineralogy and Geochronology

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

292-1 491 Zalud, Kristy M.;* MacDonald, James H.: GEOCHEMISTRY OF RELIC SPINEL AND SILICATE MINERALS FROM SERPENTINITE OF THE INGALLS OPHIOLITE COMPLEX, CENTRAL CASCADES, WASHINGTON


292-3 493 White, Jennifer;* McMillan, Nancy J.; Henry, Jodie; Dutrow, Barbara L.: TOURMALINE PROVENANCE DETERMINATION IN MODERN SANDS, BLACK HILLS, SOUTH DAKOTA: MULTIVARIATE ANALYSIS OF LASER-INDUCED BREAKDOWN SPECTROSCOPY (LIBS) SPECTRA

292-4 494 Callebert, William;* Housen, Bernard; Surpless, Kathleen: ASSESSMENT OF SCAWING SHALLOWING IN UPPER-CRETACEOUS TURBIDITES, OOCOHO BASIN, CENTRAL OREGON: ASSESSMENTS FOR CORDILLERAN TERRANE TRANSPORT


292-6 496 Andrew, Joseph E.;* LARGE-MAGNITUDE EXTENSION OF THE DEATH VALLEY DETACHMENT SYSTEM CONSTRAIN BY MICOCNE RAPAKIIVI GRANITE

292-7 497 Greenanward, David;* Stewart, Kevin G.; Gaynor, Sean: AMPHIBOLITE ZIRCON U-PB GEOCHRONOLOGY IN THE ASHE METAMORPHIC SUITE, EASTERN BLUE RIDGE, NORTH CAROLINA

292-8 498 DeLuca, Michael J.;* Hemming, Sidney R.; Templeton, John A.; Anders, Mark H.; Christie-Blick, Nicholas: CONSTRAINTS ON THE PROVENANCE OF THE OLD RED SANDSTONE (DEVONIAN) OF SCOTLAND FROM 40AR/39AR MUSCOVITE GEOCHRONOLOGY

292-9 499 WU, Weiwei;* Yang, Jingsui; Wirth, Richard; Dilek, Yildirim; Lian, Dongyang; Millushi, Ibrahim: ORIGIN OF DIAMONDS IN THE SKENDERBEU MASSIF, MIRDITA OPHIOLITE, ALBANIA: IMPLICATIONS FROM ISOTOPES AND INCLUSION COMPOSITIONS

SESSION NO. 293

D56. Tectonics II (Posters): Advances in Tectonics from Crust/Mantle Structure

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

293-1 505 Ogawa, Yujiro;* Dilek, Yildirim; Aung, Than Tin; Mori, Shinichi: ACCRETIONARY PRISM FORMATION IN OBLIQUE SUBDUCTION ZONES: COMPARATIVE STUDY IN SPACE AND TIME

293-2 506 Bernardino, Melissa; Jones, Craig H.;* Levandowski, Will: FOUNDERING OF HETEROGENEOUS MATERIAL, SIERRA NEVADA, CALIFORNIA

293-3 507 Satterfield, Joseph;* Newton, Taylor S.; White, William J.: RECENT MAPPING IN THE SOUTHERN STILLWATER RANGE AND NORTHERN SAND SPRINGS RANGE, NEVADA

293-4 508 Mavec, Michael;* Gray, Keith D.; Schwartz, Darin: INVENTORY OF STRUCTURES ACROSS A HIGH STRAIN ZONE IN WESTERN IDAHO

293-5 509 Biddle, Julian; Ricketts, Jason W.: WHAT IS THE NATURE OF THE BOUNDARY SEPARATING THE RIO GRANDE RIFT AND BASIN AND RANGE PROVINCE IN SOUTHERN NEW MEXICO?


293-7 511 Stevens, Andrew;* Tull, James F.: RELATIONSHIP BETWEEN THE DADEVILLE COMPLEX AND OPELIKA GROUP, APPALACHIAN INNER PIEDMONT OF ALABAMA AND GEORGIA

293-8 512 Abolins, Mark;* Levandowski, Will: UPLIFT OF THE NASHVILLE DOME, CENTRAL TENNESSEE BY INVERSION OF THE PREVIOUSLY-UNDESCRIBED NASHVILLE RIFT

293-9 513 Kasten, Samuel;* Hefferan, Kevin; Soulimaini, Abderrahmane: ANTI-ATLAS MOROCCO GEOCHEMICAL AND FIELD DATA ANALYSIS INDI CATE CADOMIAN SUBDUCTION &
SESSION NO. 294

T231. Subduction Top to Bottom 2 (ST2B-2), Cascadia and Beyond (Posters) (GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

294-1 519 O’Connor, Adam Rhys*; Prytulak, Julie; Weis, Dominique; Martindale, Marina: TRACING CONTRIBUTIONS TO CASCADE MAGMATISM WITH THALLIUM ISOTOPES

294-2 520 Lally, Kevin Francis*: SEISMIC STRUCTURE OF TANAGA ISLAND, ALASKA

294-3 521 Scholl, David William*; Stern, Robert, J.; Barth, Ginger A.; Scheirer, Daniel S.; Malkowski, Matthew A.; Barron, John A.: SCIENTIFIC OCEANIC DRILLING (IODP) TO TEST CONTRASTING HYPOTHESES FOR THE ORIGIN OF THE ALEUTIAN SUBDUCTION ZONE, ALEUTIAN ARCH, AND BACKARC ALEUTIAN BASIN

294-4 522 Wallace, Abraham W.*; Wirth, Erin; Eakin, Caroline; Ulberg, Carl; Creager, Kenneth C.; Abes, Geoff: SHEAR WAVE SPLITTING OBSERVATIONS BENEATH MOUNT ST. HELENS VOLCANO, WASHINGTON

294-5 523 Shaffer, Jamie*; Johnson, Emily R.; Ramos, Frank C.; Bindeman, Ilya N.; Cole, Meredith: EVALUATING SUBDUCTION COMPONENT CONTRIBUTIONS TO THE SOUTHERN CASCADE ARC: INSIGHTS FROM GEOCHEMICAL ANALYSES OF MONOGENETIC VOLCANO MAFIC LAVAS AND GORDA PLATE SEDIMENTS

294-6 524 Bourgeois, Joanne*: Pinegina, Tatiana: 1997 KRONOTSKY EARTHQUAKE AND TSUNAMI AND THEIR PREDECESSORS, KAMCHATKA, RUSSIA—LOCATIONS AND SEGMENTATION(S)

294-7 525 Hu, Yan*: Teng, Fang-Zhen; Ionov, Dmitri A.: PREDICTIVE MODELING OF MAGNESIUM ISOTOPE VARIATION IN ARC LAVAS WITH HYDRATION STATE OF SUB-ARC MANTLE SOURCES

294-8 526 Cranston, Adriana J.*; Caplan-Auerbach, Jackie; Chadwick, William W.; Dziak, Robert P.; Embley, Robert W.: LONG-TERM HYDROACOUSTIC AND VIDEO INVESTIGATIONS OF SUBMARINE VOLCANIC ERUPTION DYNAMICS AT NW ROTA-1 AND WEST MATA

SESSION NO. 295

D22. From Processes to Stratigraphy

8:00 AM, Washington State Convention Center, Ballroom 6C

Carl Drummond, Jonathan W. Peterson and Gabriel E. Gallegos, Presiding

295-1 8:00 AM Gallegos, Gabriel E.*; Miller, Kenneth G.; Browning, James V.; Monteverde, Donald H.; Mountain, Gregory S.: LOWER MICENE (CA. 20-18 MA) NEW JERSEY SEQUENCE Stratigraphy: ARCHITECTURE AND ONSHORE-OFFSHORE CORRELATIONS

295-2 8:15 AM Cyples, Natasha*: Ielpi, Alessandro; Drszowsky, Randy: THE MODERN KICKING HORSE RIVER, BC: AN INTEGRATION OF GROUND-PENETRATING RADAR, REMOTE SENSING, AND GAUGING RECORD ANALYSIS

295-3 8:30 AM Drummond, Carl*: Wilkinson, Bruce: ANALYSIS OF WIND AND WAVE DATA FROM THE LIMITED-FETCH EPICONTINENTAL LACUSTRIAN SETTING OF THE SOUTHERN LAKE MICHIGAN BASIN AS A POTENTIAL ANALOG FOR ANCIENT EPICONTINENTAL MARINE WAVE-DOMINATED REGIMES

295-4 8:45 AM Stock, McKenzie L.; Peterson, Jonathan W.*: DEVELOPING AN EMPIRICAL MODEL TO PREDICT THE SIZE OF VERY-FINE PARTICLES IN NATURAL WATER SUSPENSIONS VIA A LABORATORY SETTLING EXPERIMENT

295-5 9:00 AM Whitmore, John H.*; Strom, Raymond: Rounding of K-FELDSPAR AND QUARTZ SAND GRAINS FROM BEACH TO DUNE ENVIRONMENTS: IMPLICATIONS FOR ANCIENT SANDSTONES

295-6 9:15 AM Kettler, Richard M.*; Loope, David B.: SIDERITE IS AN IDEAL Precursor FOR LARGE ACCUMULATIONS OF IRON OXIDE CEMENT

295-7 9:30 AM Munim, Mustuque A.*; Uddin, Ashraf; Holler, Robert; Jahan, Shakura; Hames, Willis E.: SEDIMENTATION AND TECTONICS OF Plioene-Pleistocene Himalayan Clastic Wedges in the Bengal Basin


10:00 AM BREAK

295-9 10:15 AM Valarezo, Mauricio*: Vallejo, Cristian; Horton, Brian K.; Winkler, Wilfried; Spikings, Richard; Esteban, José; Jackson, Lily J.: SEDIMENTOLOGY AND PROVENANCE ANALYSIS OF THE ALAMOR LANCONES BASIN, SOUTHERN ECUADOR: A LATE CRETACEOUS PRE-ACCRETIONAL FOREARC BASIN

295-10 10:30 AM Dong, HongKui*: SEQUENCE Stratigraphy in different accommodation space tectonic zones—Implication for the mid-lower Jurassic in Turpan Depression

295-11 10:45 AM Zhang, Jingjing*: Chen, Qinghua; Wang, Guanming; Sun, Ke: THE EVALUATION AND PREDICTION OF CRETACEOUS SILICICLASTIC RESERVOIR IN WUSHI SAG, TARIM BASIN, WESTERN CHINA

295-12 11:00 AM Azubuke-Ijomah, Kelechi*: APPLICATION OF SEQUENCE Stratigraphy in Reservoir Characterization: A Case Study of EMI Field, Coastal Swamp Depobelt in the Niger Delta, Nigeria
SESSION NO. 296

D34, Magma to Volcano

8:00 AM, The Conference Center, Skagit 4

Allen Schaan, M. Chris Jenkins, Arianna Soldati and Bryant Platt, Presiding

SESSION NO. 297

P6. Earth Anatomy Revealed: Geologic Mapping for Our Future (GSA Geology and Society Division; GSA Geology and Public Policy Committee; GSA Geoinformatics Division; Association of American State Geologists; American Geosciences Institute; American Institute of Professional Geologists; American Geophysical Union; U.S. Geological Survey)

8:00 AM, Washington State Convention Center, Ballroom 6A

Darcy K. McPhee, Cassandra A. Rose, L. Harvey Thorleifson and Danielle N. Woodring, Presiding

INTRODUCTORY REMARKS

8:01 AM PANEL 1: WHAT IS THE ROLE OF GEOCIENCE AS A WHOLE, OF THE SECTORS OF THE GEOCIENCE COMMUNITY, AND OF GEOCIENCE MAPPING IN RESPONDING TO THE NEEDS OF SOCIETY?

8:44 AM PANEL 1 DISCUSSION/TRANSITION

9:00 AM PANEL 2: HOW IS GEOLOGICAL MAPPING APPLIED IN ORDER TO DELIVER BENEFITS TO SOCIETY?

9:44 AM PANEL 2 DISCUSSION/TRANSITION

10:00 AM PANEL 3: HOW ARE NEW PERSPECTIVES AND NEW TECHNOLOGIES IMPROVING THE ABILITY TO DELIVER BENEFITS TO SOCIETY?

10:44 AM PANEL 3 DISCUSSION/TRANSITION
Wednesday, 25 October 2017

11:00 AM PANEL 4: HOW ARE WE ORGANIZED TO ENSURE THAT GEOLOGICAL MAPPING WILL BRING THE GREATEST BENEFITS TO SOCIETY IN THE FUTURE?

297-13 11:04 AM Eide, Elizabeth*: MAKING THE MOST OF 21ST CENTURY GEOLOGIC MAPS

297-14 11:14 AM White, Kasey S.; McConnell, Vicki: GEOLOGICAL MAPPING: VITAL INFORMATION FOR NATIONAL DECISIONS


297-16 11:34 AM Andrews, William*: ARE WE ORGANIZED FOR BRINGING MAXIMUM MAPPING BENEFITS TO SOCIETY? A STATE GEOLOGICAL SURVEY PRACTITIONER PERSPECTIVE

11:44 AM PANEL 4 DISCUSSION/TRANSITION

11:59 AM CONCLUDING REMARKS

SESSION NO. 298

T9. Groundwater Flow in Coastal and Marine Settings: From the Intertidal Zone to the Deep Seafloor (GSA Hydrogeology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geobiology & Geomicrobiology Division; GSA Environmental and Engineering Geology Division)

8:00 AM, Washington State Convention Center, Room 615/616/617

Alicia Wilson and Evan Solomon, Presiding

8:00 AM INTRODUCTORY REMARKS

298-1 8:05 AM Michael, Holly A.; Duque, Carlos; Geng, Xiaolong; Guimond, Julia; Heiss, James W.; Kim, Kyra H.; Koneshloo, Mohammad; Kreyns, Pieter; Russoniello, Christopher J.; Scott, Kaileigh; Xu, Yuan: SUBMARINE GROUNDWATER DISCHARGE ACROSS SCALES FROM MARSH TO SHELF (Invited Presentation)

298-2 8:25 AM Russoniello, Christopher J.*; Michael, Holly A.: SPATIAL AND TEMPORAL VARIABILITY OF GLOBAL WAVE PUMPING

298-3 8:40 AM Kim, Kyra H.*; Michael, Holly A.; Cai, Wei-Jun; Ullman, William: DYNAMIC MIGRATION OF BIOGEOCHEMICAL REACTION ZONES IN AN INTERTIDAL BEACH AQUIFER


298-5 9:10 AM Kiro, Yael*; Michael, Holly A.; Duque, Carlos; Yechiel, Joseph: IDENTIFYING LONG-TERM SLOW CIRCULATION IN COASTAL AQUIFERS AND ITS POTENTIAL ROLE IN OCEAN CHEMISTRY

298-6 9:25 AM Gustafson, Chloe; Key, Kerry*; Evans, Rob L.: A PILOT ELECTROMAGNETIC SURVEY OF GROUNDWATER BENEATH THE US ATLANTIC CONTINENTAL SHELF (Invited Presentation)

9:45 AM BREAK

298-7 10:00 AM Kurylyk, Barret L.*; Mohammed, Aaron A.; Irvine, Dylan J.; Benise, Victor F.: RETHINKING THE USE OF OCEAN SEDIMENT TEMPERATURE-DEPTH PROFILES TO INFERR SUBMARINE GROUNDWATER DISCHARGE

298-8 10:15 AM George, Camaron M.*; Wilson, Alicia; Moore, Willard; White, Scott; Smoak, Erin: SUBMARINE GROUNDWATER DISCHARGE TO THE CONTINENTAL SHELF IN THE SOUTH ATLANTIC BIGHT

298-9 10:30 AM Solomon, Evan A.*; Kowalski, Lauren; Whorley, Theresa L.: PERSITATIVE SHALLOW SEAFOOD CIRCULATION AT METHANE SEEPS – IMPLICATIONS FOR SEEP ECOSYSTEMS AND MARINE BIOGEOCHEMICAL CYCLES

298-10 10:45 AM Johnson, Harlan Paul*; Salmi, Marie; Merle, Susan; Embley, Robert; Sampaga, Erica; Lee, Michelle: TECTONIC COMPRESSION AS A SOURCE OF METHANE EMISSIONS ON CASCADIA MARGIN

298-11 11:00 AM Philip, Brendan T.*; Solomon, Evan; Kelley, Deborah S.; Collier, Robert W.; Whorley, Theresa L.: PYTHIA’S OASIS: A HIGH FLUX, FLUID-DOMINATED SEAFLOOR SEEP ON THE OREGON SECTOR OF THE CASCADIA MARGIN

298-12 11:15 AM Inderbitzen, Katherine E.*: SECONDARY FLUID RECHARGE AND CIRCULATION IN THE MIDDLE VALLEY HYDROTHERMAL SYSTEM

298-13 11:30 AM Turner, Christina A.*; Moyer, Craig: TAXONOMIC AND FUNCTIONAL ANALYSIS OF MICROBIAL MAT COMMUNITIES OF MARIANA REGION HYDROTHERMAL VENTS

11:45 AM DISCUSSION

SESSION NO. 299

T16. Novel Approaches to Mine Remediation: Addressing the Legacy of Hardrock Mining through Innovative and Practical Methods (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)

8:00 AM, Washington State Convention Center, Room 618/619/620

Kato T. Dee and William J. Walker, Presiding

299-1 8:00 AM Hultquist, Arne David*; Shope, Chris: PRELIMINARY WATER QUALITY DATA IN THE SAN JUAN RIVER IN SAN JUAN COUNTY, UTAH FOLLOWING THE GOLD KING MINE SPILL


299-3 8:30 AM Wu, Robert*; McKenzie, Jeffery M.; Martin, Vincent; Bussière, Bruno; Aubertin, Michel; Broda, Stefan: MONITORING SOIL MOISTURE IN AN EXPERIMENTAL WASTE ROCK PILE USING ACTIVE FIBER OPTIC DISTRIBUTED TEMPERATURE SENSING

299-4 8:45 AM Hallnan, Rachel*: Rasmussen, Dirk; Mohrmann, Jacob; Smeins, Melissa: ASSESSING LONG-TERM SPATIAL AND TEMPORAL VARIABILITY OF WATER QUALITY IN THE SUGARLOAF MINING DISTRICT, LEADVILLE, COLORADO, USA

299-5 9:00 AM Davies, Gareth J.*; Gertson, Jord N.: DEEP IMPACTED GROUNDWATER SOURCES: COAXING OUT SIGNALS USING MULTIPLE TRACERS

299-6 9:15 AM Ebly, G. Nelson*; Soucy, Alyssa; Fontaine, Samuel: USING FACTOR ANALYSIS TO IDENTIFY SOIL CONTAMINANTS FROM THE PALMERTON, PA, ZINC SMELTERS

299-7 9:30 AM Desbarats, Alexander J.*; Percival, Jeanne B.; Venance, Katherine E.: URANIUM MOBILITY IN GROUNDWATER AT HISTORICAL MINE SITES IN THE BANCROFT REGION OF ONTARIO, CANADA

299-8 9:45 AM Bailey, Alexandra S.*; Jamieson, Heather E.: CHARACTERIZATION OF ARSENIC-HOSTING SOLID PHASES IN TAILINGS DUST FROM GIANT MINE: IMPLICATIONS FOR AIR QUALITY MONITORING AT LEGACY MINE SITES

10:00 AM BREAK

299-9 10:15 AM Choi, Jaeyoung*: ADSORPTION OF ARSENIC IN AQUEOUS AND SOLID PHASE BY WASTE-RECLAIMED TREATMENT AGENT IN ABANDONED MINE: BATCH AND FIELD STUDIES

299-10 10:30 AM Wood, Daniel L.*; Singer, David M.; Herndon, Elizabeth; Koval, Joseph; Tucker, Amber: CARBIDE LIME TREATMENT OF ACID MINE DRAINAGE IMPACTED SOILS IN THE HUFF RUN WATERSHED OF NORTHEAST OHIO
Wednesday, 25 October 2017

9:45 AM Kirker, Ashleigh N.*; Vulava, Vijay M.: THE CHEMICAL AND STATISTICAL ANALYSIS OF GEOCHEMICAL MARKERS IN KARST GROUNDWATER OF SPRINGFIELD, MO

9:30 AM O'Shea, Michael J.*; Haber, Sarah J.; Elmi, Chiara; Vann, David R.; Gire, Rerto: MINERALOGICAL AND CHEMICAL CHARACTERIZATION OF ROAD DUST IN PHILADELPHIA, PA


9:00 AM Jacob, Clinton L.*: IN SITU BIOREMEDIATION: A MULTIMODAL APPROACH TO IDENTIFYING STORMWATER POLLUTANT HOTSPOTS IN COASTAL URBAN WATERSHEDS

8:45 AM Kirker, Ashleigh N.*; Vulava, Vijay M.: THE CHEMICAL AND STATISTICAL ANALYSIS OF GEOCHEMICAL MARKERS IN KARST GROUNDWATER OF SPRINGFIELD, MO

8:30 AM Long, David T.*; Voice, Thomas C.; Sanchez-Rodriguez, E. Cuahtemoc; Pearson, Amber; Polanco-Rodriguez, Angel G.; Concha-Valdez, Fanny G.; Kageraraki, Irene: ASSESSING THE INFLUENCE OF URBAN LAND USE ON KARST DRINKING WATER QUALITY DURING WET AND DRY SEASONS, STATE OF YUCATAN, MEXICO

8:15 AM Rakotoarisaona, Henintsoa*; Peterson, Hannah; Wang, Weihong: INVESTIGATING TEMPORAL AND SPATIAL VARIATIONS OF TRACE METAL LOADING TO UTAH LAKE, UT (USA)

8:00 AM Stackelberg, Zach*; Szabo, Zoltan; Jurgens, Bryan C.: RADIIUM MOBILITY AND THE AGE OF GROUNDWATER IN DRINKING-WATER SUPPLIES FROM THE CAmBRIAN-ORDOVICIAn AQUIFER SYSTEM

7:45 AM Weathers, Zach*; Urbaniczky, Kevin M.: AN INVENTORY AND ASSESSMENT OF SPRINGS IN BIG BEND RANCH STATE PARK, Texas

SESSION NO. 301 🔴

T35. Urban Geochemistry (International Association of GeoChemistry; GSA Hydrogeology Division; GSA Karst Division)

8:00 AM, Washington State Convention Center, Room 612

David T. Long and W. Berry Lyons, Presiding

301-1 8:00 AM Stackelberg, Paul E.*; Szabo, Zoltan; Jurgens, Bryan C.: RADIIUM MOBILITY AND THE AGE OF GROUNDWATER IN DRINKING-WATER SUPPLIES FROM THE CAmBRIAN-ORDOVICIAn AQUIFER SYSTEM

Wednesday, 25 October 2017
**SESSION NO. 302**

**T44. Insights from Microfossils, from Traditional to Novel Approaches**

8:00 AM, Washington State Convention Center, Room 609

Miriam E. Katz, Robert K. Poirier, Krystyna Kornecki and Megan K. Fung, Presiding

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**302-1  8:00 AM**

Davies, Marissa A.; Schröder-Adams, Claudia J.; Herrie, Jens O.; Hulse, Peter; Schneider, Simon; Quessy, Alex: BENTHIC FORAMINIFERAL MORPHOGRAM RESPONSE TO PALEO-REDOX CONDITIONS ACROSS THE CONIACIAN TO SANTONIAN "OAE 3" INTERVAL IN THE KANGUK FORMATION, CANADIAN ARCTIC ARCHIPELAGO

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**302-2  8:15 AM**

Perriguey, Dustin*; Leckie, Mark; Myers, Corinne: DIVERSITY AND PALEOECOLOGY OF GULF COASTAL PLAIN FORAMINIFERA PRIOR TO THE END-CRETACEOUS MASS EXTINCTION

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**302-3  8:30 AM**

Shaw, Jack Oliver*; D'haenens, Simon; Thomas, Ellen; Hull, Pincell M.: PLANKTONIC FORAMINIFERAL BLEACHING DURING EARLY EOCENE HYPERTHERMAL EVENTS

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**302-4  8:45 AM**

Cotton, Laura J.*; Bryan, Jon; Eder, Wolfgang; Means, Harley; Monen, Simonetta: LARGER BENTHIC FORAMINIFERA OF FLORIDA AND THE EOCENE OLIGOCENE TRANSITION

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**302-5  9:00 AM**

Evans, David*; Cotton, Laura; Pearson, Paul; Rosenthal, Yair; Rae, James; Müller, Wolfgang; Erez, Jonathan; Aftek, Hagit P.: SUSTAINED IMBALANCE IN THE CALCIUM CYCLE AND CLIMATE-OCEAN CHEMISTRY INTERACTIONS OVER THE EOCENE-OLIGOCENE TRANSITION FROM THE GEOCHEMISTRY OF LARGE BENTHIC FORAMINIFERA

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**302-6  9:15 AM**

Haillock, Pamela*; Papazzoni, Cesare A.; Seddighi, Mona: A PROPOSED MODEL FOR CARBONATE BANKS CHARACTERIZED BY LARGE, FLAT, BENTHIC FORAMINIFERANS

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**302-7  9:30 AM**

Pletka, Crystal*; Collins, Laurel S.: NEOGENE DIVERSITY OF DEEP-SEA CARIBBEAN BENTHIC FORAMINIFERA RELATIVE TO THE CLOSURE OF THE CENTRAL AMERICAN SEAWAY

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**302-8  9:45 AM**

Alvarez Zarikian, Carlos A.*; Nadiri, Chimaz; Alonso-Garcia, Montserrat; Petruny, Loren; Hernandez, Partima; Kroon, Dick; Wright, James; Eberl, Gregor P.; Betzler, Christian: OSTRACOD-BASED RECONSTRUCTION OF BOTTOM WATER CONDITIONS IN THE INNER SEA OF THE MALDIVES DURING THE PLEISTOCENE (IODP SITE U1467, NORTHERN INDIAN OCEAN)

10:00 AM BREAK

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**302-9  10:15 AM**

Ross, Benjamin J.*: RECOVERY OF THE PHOTOSYMBIOTIC FORAMINIFERA AMPHISTEGINA GIBBOSA FOLLOWING LONG-TERM APHOTIC INCUBATION

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**302-10  10:30 AM**

Rustic, Gerald T.*; Polissar, Pratigya J.; Ravelo, Ana Christina; deMenocal, Peter: MEASUREMENTS, METHODS, AND MOTIVATIONS: INSIGHTS ON MG/CA FROM INDIVIDUAL FORAMINIFERA

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**SESSION NO. 303**

**T48. The Timing and Causes of Jurassic–Cretaceous Biological, Climatic, and Tectonic Transitions in North America (GSA Sedimentary Geology Division; Paleontological Research Institution)**

8:00 AM, Washington State Convention Center, Room 611

Brady Z. Foreman and Michael D. D'Emic, Presiding

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**303-1  8:15 AM**

Suarez, Marina B.*; Knight, John A.; Malik, Aisha; Reinhardt, Hannah: CARBON ISOTOPE CHEMOSTRATIGRAPHY OF THE TERRIGENOUS HENSEL FORMATION, CENTRAL TEXAS

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**303-2  8:30 AM**

Yamamura, Daigo*; Suarez, Celina: DIAGENESIS OF VERTEBRATE SKELETAL REMAINS OF THE CRETACEOUS KAPAROWITS FORMATION AND THEIR USE AS PALEOHYDROLOGIC PROXIES: A COMPLEX HYDROLOGIC SETTING

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**303-3  8:45 AM**


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**303-4  9:00 AM**

Bronzo, Kayla Marie*; Fricke, Henry; Hoener, Marie E; Puster, Foster, John R.; Lundstrom, Craig: USING OXYGEN, CARBON AND STRONTIUM ISOTOPE RATIOS OF TOOTH ENAMEL FROM DINOSAURS TO INFER PATTERNS OF MOVEMENT OVER THE LATE JURASSIC LANDSCAPE OF CO, UT AND WY

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**303-5  9:15 AM**

Suarez, Celina*; Frederickson, Joseph; Cifelli, Richard L.; Nydam, Randall L.; Pittman, Jeff; Morgan, Kirsty; Fruci, Mason N.; Hunter, ReBecca: THE VERTEBRATE FAUNA FROM THE LOWER CRETACEOUS HOLLY CREEK FORMATION: THE FIRST MULTI-TAXA VERTEBRATE ASSEMBLAGE FROM THE MESOZOIC OF ARKANSAS, USA

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**303-6  9:30 AM**

Jud, Richard P.*: FOSSIL LEAVES REVEAL THE DIVERSIFICATION AND SPREAD OF FLOWERING PLANTS IN THE CLOVERLY FORMATION (CRETACEOUS, WESTERN INTERIOR, USA) (Invited Presentation)
Wednesday, 25 October 2017

SESSION NO. 304

T52. Biotic Revolutions Recorded in the Trace Fossil Record, Neoproterozoic to Recent I (Paleontological Society; Paleontological Research Institution)

8:00 AM, Washington State Convention Center, Room 606

William J. Foster, Peter J. Harries and Martin Aberhan, Presiding

304-1 8:00 AM Oliphant, Elizabeth C. *; Petersen, Siura V.; Dutton, Andrea; Lohmann, Kyger C.: INTERPRETING LIFECYCLE BEHAVIOR OF EXTINCT BIVALVE SPECIES THROUGH STABLE AND CLUMPED ISOTOPIC VARIATIONS

304-2 8:15 AM Weik, Allen S. *; Roopnarine, Peter D.; Dineen, Ashley A.: AN END-CRETACEOUS PALEOCOMMUNITY FOOD WEB FROM THE LOPEZ DE BERTODANO FORMATION, ANTARTICA

304-3 8:30 AM Sibert, Elizabeth C. *; Martin, Robert W.; Košir, Adrijan: EFFECTS OF THE 20TH CENTURY HYPPOXIC EVENTS ON MOLUSSCAN COMMUNITIES AND THEIR PRESERVATION POTENTIAL IN SEDIMENT CORES (ADRIATIC SEA)

304-4 9:00 AM Weiss, Anna M. *; Martin, Robert W.; Košir, Adrijan: TURNOVER OF SHALLOW MARINE ECOSYSTEMS DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM, SLOVENIA

304-5 9:15 AM Nawrot, Rafal; Scarpini, Daniele; Azzarone, Michele; Amorosi, Alessandro; Witten, Michael; Tauxier, Thomas: A POST-EXTINCTION COMMUNITY STRUCTURE AND ECOLOGICAL ROLE FOLLOWING THE K/Pg MASS EXTINCTION

304-6 9:45 AM Rizzo, David C.; Röpke, Philipp: HARNESSING THE STRATIGRAPHIC ARTIFACTS IN EXTINCTION DYNAMICS: AN EMPIRICAL EVALUATION USING THE HOLOCENE FOSSIL RECORD

304-7 10:00 AM Jarochowska, Emilia *; Ray, David C.; Röstel, Philipp: DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM, SLOVENIA

304-8 10:30 AM Druckenmiller, Patrick; Erickson, Gregory; Benowitz, Jeff A.: DEINONYCHOSAURIAN TRAJECT FOSSILS FROM THE LATE CRETACEOUS (MAASTRICHTIAN) CANTWELL FORMATION, ALASKA: TRACK MAKER INFERENCES USING COEVAL, INTERFORMATIONAL COMPARISONS

304-9 10:45 AM Zonneveld, John-Paul; Zaim, Yahdi; Aswan, Aswan: SURFICIAL TRACKS PRODUCED BY MUDSKIPPERS (PERIOPHTHALMODON) IN FINE-GRAINED COASTAL SUCCESIONS: IMPLICATIONS FOR THE VERTEBRATE COLOIZATION OF LAND

SESSION NO. 305

TS4. Impact of Extinction Events on the Ecological and Geochemical Functioning of Marine Ecosystems (Paleontological Society)

8:00 AM, Washington State Convention Center, Room 608

William J. Foster, Peter J. Harries and Martin Aberhan, Presiding

305-1 8:00 AM Rizal, Yan; Gingras, Murray K.; Gunnell, Gregg F.; Yama, Christopher; Noto, Christopher: FOSSIL EVIDENCE OF BIODIVERSITY DECLINES IN THE BODY SIZE OF BENTHIC MACROINVERTEBRATES AS A HARBINGER OF THE CENOZOIC EXTINCTION EVENTS

305-2 8:15 AM Kaufman, Darrell S.; Zuschin, Martin: AN END-CRETACEOUS PALEOCOMMUNITY FOOD WEB FROM THE LOPEZ DE BERTODANO FORMATION, ANTARTICA

305-3 8:30 AM Sibert, Elizabeth C. *; Martin, Robert W.; Košir, Adrijan: TURNOVER OF SHALLOW MARINE ECOSYSTEMS DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM, SLOVENIA

305-4 8:45 AM Tomaszovych, Adam; Gall netzer, Ivo; Haselmair, Alexander; Kaufman, Darren S.; Zuschin, Martin: EFFECTS OF THE 20TH CENTURY HYPPOXIC EVENTS ON MOLUSSCAN COMMUNITIES AND THEIR PRESERVATION POTENTIAL IN SEDIMENT CORES (ADRIATIC SEA)

305-5 9:00 AM Weiss, Anna M. *; Martin, Robert W.; Košir, Adrijan: TURNOVER OF SHALLOW MARINE ECOSYSTEMS DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM, SLOVENIA

305-6 9:15 AM Nawrot, Rafal; Scarpini, Daniele; Azzarone, Michele; Amorosi, Alessandro; Witten, Michael; Tauxier, Thomas: A POST-EXTINCTION COMMUNITY STRUCTURE AND ECOLOGICAL ROLE FOLLOWING THE K/Pg MASS EXTINCTION

305-7 9:30 AM Pruss, Sara B. *; Bush, Andrew M.; Higgins, John A.; Leckie, R. Mark; Deeg, Claudia: A POST-EXTINCTION CACO SATURATION STATE CRISIS IN THE EARLIEST PALEogene (Invited Presentation)

305-8 10:00 AM Jarochowska, Emilia *; Ray, David C.; Röstel, Philipp: DURING THE PALEOCENE-EOCENE THERMAL MAXIMUM, SLOVENIA


305-10 10:30 AM Aberhan, Martin; Piazza, Veronica; Duarte, Luis V.: DECLINES IN THE BODY SIZE OF BENTHIC MACROINVERTEBRATES AS A HARBINGER OF THE CENOZOIC EXTINCTION EVENTS
Wednesday, 25 October 2017

EARLY TOARCIAN (EARLY JURASSIC) EXTINCTION EVENT IN THE LUSITANIAN BASIN, PORTUGAL

305-11 10:45 AM
Larina, Ekaterina*; Bottger, David J.; Corsetti, Frank A.; Berelson, William M.; Yager, Joyce; West, A. Joshua: NEW RECORD OF BIOTIC RESPONSE AND OF AN UNUSUAL CARBONATE SYSTEM FOR THE END-TRIASSIC MASS EXTINCTION AT FERGUSON HILL, NEVADA

305-12 11:00 AM
Grasby, Stephen E.*; Knies, Jochen Manfred; Beauchamp, Benoit; Bond, David P.G.; Wignall, Paul: IN WAKE OF END PERMIAN EXTINCTION, WIDESPREAD NUTRIENT CRISIS LEADS TO EARLY TRIASSIC PRODUCTIVITY COLLAPSE ACROSS NW PANGAEA

305-13 11:15 AM
Heindel, Katrin*; Foster, William J.; Richoz, Sylviane; Birgel, Daniel; Baud, Aymon; Brandner, Rainer; Krystyn, Leopold; Mohtat, Tanyaeh; Kopun, Erdal; Twitchett, Richard J.; Reitner, Joachim; Peckmann, Jörn: THE ECOLOGICAL COMPOSITION OF MICROBIAL-METAZOAN REEF ECOSYSTEMS FOLLOWING THE LATEST PERMIAN MASS EXTINCTION

305-14 11:30 AM
Godbold, Amanda Lynn*; Schoepfer, Shane D.; Henderson, Charles M.; Isozaki, Yukio: DID OCEANIC ISLANDS ACT AS REFUGIA DURING THE END-PERMIAN EXTINCTION?

305-15 11:45 AM
Erba, Elisabetta*: MASS EXTINCTIONS AND GREATEST SPECIATIONS: THE EMERGENCE OF CALCAREOUS PHYTOPLANKTON IN THE EARLIEST MESOZOIC (Invited Presentation)

SESSION NO. 306

T62. Ancient Environments of South America (Paleontological Research Institution; Paleontological Society; GSA Sedimentary Geology Division)

8:00 AM, Washington State Convention Center, Room 604
Camilla Critto and Regan E. Dunn, Presiding

306-1 8:00 AM
Fedorchuk, Nicholas D.; Isbell, John L.; Griffith, Neil; Montanez, Isabel P.; Vesely, Fernando; Iannuzzi, Roberto; Mundil, Roland; Yin, Qing-zhu; Rosa, Eduardo L.M.: ORIGIN OF PALEOVALLEYS ON THE NORTHEAST RIO GRANDE DO SUL SHIELD (BRAZIL): IMPLICATIONS FOR THE EXTENT OF LATE PALEOZOIC GLACIATION IN WEST-CENTRAL GONDWANA

306-2 8:15 AM
Luque, Javier*: THE ROLE OF THE NEOTROPICS IN THE EVOLUTION OF TRUE CRABS

306-3 8:30 AM
Harmsen, Elizabeth J.*; Jud, Nathan A.; Gandolfo, Maria A.: CRETACEOUS-PALEOGENE MOSQUITO FERNS (AZOLLA) FROM PATAGONIA (CHUBUT PROVINCE, ARGENTINA)

306-4 8:45 AM
Horton, Brian K.*: SEDIMENTARY RECORD OF ANDEAN MOUNTAIN BUILDING, TOPOGRAPHIC BARRIERS, AND PALEODRAINAGE PATTERNS (Invited Presentation)

306-5 9:05 AM
Auerbach, David*; Brandon, Mark T.; Hren, Michael T.; Hourigan, Jeremy K.; Pacini, Astrid; Cosgrove, Martha; Midzik, Maya; Garreau, René; Metzger, Christine: NEW EVIDENCE FOR LONG-LIVED CENOZOIC TOPOGRAPHY IN THE PATAGONIAN ANDES

9:20 AM DISCUSSION

306-6 9:30 AM
Gandolfo, Maria A.*; Zamaloa, Maria C.: EVOLUTIONARY PROCESSES IN THE FOSSIL RECORD: PATAGONIA AS A CASE STUDY (Invited Presentation)

306-7 9:50 AM

306-8 10:05 AM
Jud, Nathan A.*; Gandolfo, Maria A.: THE OLDEST KNOWN MENISPERMACEAE ARE FROM PATAGONIA, SOUTH AMERICA

10:20 AM DISCUSSION

SESSION NO. 307

T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes (Paleontological Society; SEPM (Society for Sedimentary Geology); Paleontological Research Institution)

8:00 AM, Washington State Convention Center, Room 607
Corinne Myers, Thomas S. Tobin, Benjamin J. Linzmeyer and Margaret M. Yacobucci, Presiding

307-1 8:00 AM
Vandepas, Lauren Elizabeth*; Dooley, Frederick D.; Barord, Gregory J.; Swalla, Billie J.; Ward, Peter D.: "I WOULD SWIM 500 MILES": UNEXPECTED CONNECTIVITY OF NAUTILUS POPULATIONS ACROSS THE INDO-PACIFIC (Invited Presentation)

307-2 8:15 AM
Tajika, Amane*; Morimoto, Naoki; Wani, Ryoji; Klug, Christian: PATTERNS OF INTRASPECIFIC VARIATION IN CEPHALOPODS - NEW DATA FROM 3D MORPHOMETRY OF NAUTILUS SHELLS

307-3 8:30 AM
Okamoto, Kristina*; Clapham, Matthew E.: NAUTILID MORPHOLOGY AND EVIDENCE FOR ECCOLOGICAL RELEASE FOLLOWING THE END-CRETACEOUS EXTINCTION OF AMMONOIDS

307-4 8:45 AM
Mertz, David A.A.*; Yacobucci, Margaret M.; Mann, Keith O.; Gregory, Andrew J.: PHYLOGENY AND ECOLOGY OF THE AMMONITE SUPERFAMILY ACANTHOCERATOIDEA THROUGH THE CENOMANIAN AND TURONIAN

307-5 9:00 AM
Tobin, Thomas S.*; Ellis, Nicholas M.: STABLE ISOTOPE SCLEROCHRONOLOGY OF BACULITIS REVEALS POTENTIAL GROWTH RATE ESTIMATES

9:15 AM DISCUSSION

307-6 9:15 AM
Linzmeier, Benjamin J.*; Landman, Neil H.; Sessa, Jocelyn A.; Peters, Shanahan E.; Orland, Ian J.; Kitajima, Kouki; Kozdon, Reinhard; Valley, John W.: USING IN SITU GEOCHEMISTRY TO INVESTIGATE THE DEPTH HABITAT OF AMMONITES

307-7 9:30 AM
Landman, Neil H.*; Cochran, J. Kirk; Larson, Neal L.; Garb, Matthew P.; Brezina, Jamie; Witts, James D.: COLD METHANE SEEPS AS AMMONITE HABITATS (Invited Presentation)

9:45 AM BREAK

307-8 10:00 AM
Yacobucci, Margaret M.: REVISITING THE NOTION OF POSTMORTEM DRIFT IN FOSSIL CEPHALOPODS

307-9 10:15 AM
Seuss, Barbara*: Hembree, Daniel J.; Wisshak, Max; Mapes, Royal H.; Landman, Neil H.: THE INFLUENCE OF BIEROSION ON TAPHONOMY - A CASE STUDY USING NAUTILUS MACROMPHALUS

307-10 10:30 AM
Hugo, Nicholas; Tackett, Lydia S.*; Grier, Joyce: CONCRETIONARY PALEOECOLOGY: PALEOCEANOGRAPHY AND FORMATION OF...
A BACULITES ELIASI CONCRETION FROM THE LATE CRETACEOUS WESTERN INTERIOR SEAWAY

307-11 10:45 AM Paul, Sharmistha*; Gangopadhyay, Tapas Kumar: BIOERODED BELEMNITES AND DIFFERENTLY DISPOSED STEPHANOCEPHALAMMONITES FROM KULDHAR MEMBER JAILSLAMER FORMATION, RAJASTHAN, INDIA: A TOOL FOR SPECIFIC PALAEOENVIRONMENTAL REFINEMENT

307-12 11:00 AM Hoffmann, Rene*; Weinkauf, Manuel F.G.; Schellhorn, Rico; Goedertzer, Peter: CONCH - A NEW SOFTWARE FOR QUANTITATIVE MORPHOLOGICAL ANALYSES OF AMMONOID SHELLS


11:45 AM CONCLUDING REMARKS

SESSION NO. 308 🌐

T80. Geothermal Energy

8:00 AM, Washington State Convention Center, Room 602/603

Corina Forson and Dave Norman, Presiding

8:00 AM INTRODUCTORY REMARKS

308-1 8:05 AM Lautze, Nicole*: AN OVERVIEW OF THE HAWAII PLAY FAIRWAY PROJECT (Invited Presentation)

308-2 8:25 AM Faulds, James E.*; Hinz, Nicholas H.; Coolbaugh, Mark F.; Shevnenli, Lisa; Sadowski, Andrew J.; Ramelli, Alan R.; Siler, Drew L.; Craig, Jason W.; McConville, Emma G.: THE NEVADA PLAY FAIRWAY PROJECT: AN INTEGRATED APPROACH TO DISCOVERING NEW GEOTHERMAL SYSTEMS IN THE GREAT BASIN REGION (Invited Presentation)

308-3 8:45 AM Shervais, John W.*; Glen, Jonathan; Nielson, Dennis; Garg, Sabbath K.; Liberty, Lee; Dobson, Patrick F.; Gaspersen, Erik; Sonnenthali, Eric L.; Newell, Dennis L.; Siler, Drew L.; Neupane, Ghanashyam; DeAngelo, Jacob; Evans, James P.; Snyder, Neil: GEOTHERMAL PLAY FAIRWAY ANALYSIS OF THE SNAKE RIVER PLAIN, IDAHO

308-4 9:00 AM Forson, Corina*; Steely, Alexander N.; Cladouhos, Trenton T.; Swyer, Michael W.; Davatzes, Nicholas C.; Anderson, Megan; Ritzinger, Brent; Peacock, Jared; Glen, Jonathan; Schermerhorn, William; Stelling, Pete: GEOTHERMAL EXPLORATION USING PLAY-FAIRWAY ANALYSIS IN WASHINGTON STATE

308-5 9:15 AM Cladouhos, Trenton T.; Swyer, Michael; Ulberg, Carl; Crosby, Kayla; Forson, Corina; Steely, Alexander N.; Davatzes, Nicholas C.: GEOLOGIC, GEOPHYSICAL, AND GEOTHERMAL CHARACTERISTICS OF ST. HELENS SHEAR ZONE: RESULTS FROM WASHINGTON STATE PLAY FAIRWAY ANALYSIS

308-6 9:30 AM Schermerhorn, William D.*; Ritzinger, Brent; Anderson, Megan; Peacock, Jared; Witter, Jeffrey B.; Glen, Jonathan; Steely, Alexander N.; Forson, Corina; Stelling, Pete; Fournier, Dominique: GEOPHYSICAL INVESTIGATIONS OF THE MOUNT BAKER GEOTHERMAL PLAY

9:45 AM BREAK

308-7 10:00 AM Glen, Jonathan*; Ritzinger, Brent; Blakely, Richard J.; Peacock, Jared; Sherrod, Brian L.; Grober, Benjamin; Palmer, Zachary; Adams, Andrew: POTENTIAL-FIELD (GRAVITY AND MAGNETIC) METHODS APPLIED TO GEOTHERMAL SYSTEMS: THE UMATILLA INDIAN RESERVATION AND OTHER SYSTEMS OF THE WESTERN U.S. (Invited Presentation)

308-8 10:20 AM Lindsey, Cary R.*; Neupane, Ghanashyam; Spycher, Nicolas; Fairley, Jerry P.; Dobson, Patrick F.; Wood, Thomas R.; McLing, Travis L.; Conrad, Mark E.: CLUSTER ANALYSIS AS A TOOL FOR EVALUATING THE EXPLORATION POTENTIAL OF KNOWN GEOTHERMAL RESOURCE AREAS

308-9 10:35 AM Malkemus, Donnel; Perkins, Robert B.*; Palmer, Carl D.: GEOFUHMETRY AND GEOTHERMOMETRY OF THE BREITENBUSH HOT SPRINGS AREA

308-10 10:50 AM Banks, Jonathan*: VOLUMETRIC ASSESSEMENTS OF GEOTHERMAL POWER POTENTIAL FROM DEVONIAN STAATA IN THE WESTERN CANADIAN SEDIMENTARY BASIN

308-11 11:05 AM Jones, Clay*; Walters, Mark; Moore, Joseph; Bowman, John R.: FLUID INCLUSION EVIDENCE OF THE TRANSITION FROM LIQUID-TO VAPOR-DOMINATED RESERVOIR CONDITIONS IN THE NORTHWEST GEYSERS GEOTHERMAL FIELD, CALIFORNIA

308-12 11:20 AM Callison, Kathleen*: DEVELOPING RULES AND REGULATIONS FOR GEOTHERMAL DRILLING IN ETHIOPIA

SESSION NO. 309 🌐

T96. Understanding African Environmental History through Continental Scientific Drilling: Past Successes and Future Opportunities (GSA Limnogeology Division; GSA Sedimentary Geology Division)

8:00 AM, Washington State Convention Center, Room 307/308

James M. Russell, Michael McGlue and Sarah Ivory, Presiding

309-1 8:00 AM Beverly, Emily J.*; Berke, Melissa; Castañeda, Isla; Johnson, Thomas C.; Tryon, Christian: UNVEILING VICTORIA'S SECRETS

309-2 8:15 AM Verschuren, Dirk*; Van Daele, Maarten; Wolff, Chris; Walldmann, Nicholas; Meyer, Inka; Lane, Christine S.; Van der Meer, Thjis; Olgoli, Daniel O.: RECONSTRUCTING ~250,000 YEARS OF CLIMATE CHANGE AND ENVIRONMENTAL HISTORY ON THE EAST AFRICAN EQUATOR (Invited Presentation)

309-3 8:35 AM Yost, Chad L.*; Jackson, Lily J.; Stone, Jeffery R.; Cohen, Andrew S.: THE HOMININ GENETIC BOTTLENECK (Invited Presentation)

309-4 8:55 AM Scholz, Christopher A.*; Muirhead, James D.: A ~10 MILLION YEAR HISTORY OF BASIN EVOLUTION IN LAKE TANGLANYI RECORDED IN MULTIPLE VINTAGES OF SEISMIC REFLECTION DATA

309-5 9:10 AM Ivory, Sarah*; Barker, Phillip; Cohen, Andrew S.; Kimirei, Iseka; Ishmael; Lane, Christine S; Leng, Melanie; McGlue, Michael M.; Msaky, Emma; Noren, Anders; Park Boush, Lisa E.; Russell, James M.; Saltzburger, Walter; Scholz, Christopher: LAKE TANGLANYI DRILLING: ADDRESSING WORLD-CLASS SCIENTIFIC QUESTIONS IN PALEOCLIMATOLOGY, TECTONICS, AND EVOLUTIONARY ECOLOGY IN AFRICA’S OLDEST LAKE

309-6 9:25 AM Thomas, Ellen*; Bowen, Gabriel; Berke, Melissa; Feakins, Sarah; Huber, Matthew; Pearson, Paul; 28 International, TOPIC Proponents: TANZANIA ONSHORE PALEOGENE INTEGRATED CORING (TOPI) (Invited Presentation)

9:45 AM BREAK

309-7 10:00 AM Hspdp, Team Members; Cohen, Andrew S.*: THE HOMININ SITES AND PALEOLAKES DRILLING PROJECT (HSRDP): PROGRESS TOWARDS UNDERSTANDING THE PALEOENVIRONMENTAL CONTEXT OF HUMAN EVOLUTION IN EASTERN AFRICA
Wednesday, 25 October 2017

309-8 10:15 AM Behrensmeyer, Anna K.∗; Potts, R.; Deino, Alan: AN OUTFLOW RECORD OF RAPID LANDSCAPE TRANSFORMATION IN THE PLEISTOCENE OLRONGESAILIE BASIN, EAST AFRICAN RIFT SYSTEM, SOUTHERN KENYA

309-9 10:30 AM Lowenstein, Tim K.∗; Luo, Shangde; Leat, Kennie; McVulty, Emma P.; Owen, R. Bernhart; Shen, Chuan-Chou; Renaut, Robin W.; Cohen, Andrew S.; Rabideaux, Nathan M.; Deocampo, Daniel M.; Muiruri, Veronica M.; Deino, Alan: U-TH DISJUNCTUM DATING OF LAKE MAGADI CHARTS

309-10 10:45 AM Feibel, Craig S.∗; Beck, Catherine C.; Chupik, Daniel T.: PRETTY WELL: NATURAL HISTORY AND GEOSCIENCE WERE ALREADY DOING (ALMOST) EVERYTHING DOING MORE BETTER, WHEN WE INTRODUCTORY REMARKS

309-11 11:00 AM Billingsley, Anne L.∗; Ortiz, Kevin; Anchukaitis, Kevin; Deino, Alan L.; Kingston, John D.; Cohen, Andrew S.: CLIMATE VARIABILITY ACROSS THE PLIO-PLEISTOCENE TRANSITION IN EAST AFRICA AS SEEN IN AN HSPDP DRILL CORE FROM TUGEN HILLS, KENYA, AND POSSIBLE IMPLICATIONS FOR HOMININ EVOLUTION

309-12 11:15 AM Scott, Jennifer J.∗; Hannah, Alan J.; Chupik, Daniel T.: STRATIGRAPHIC PACKAGING IN PLIOCENE TO RECENT RIFT LAKE SUCCESIONS, KENYA RIFT VALLEY, USING LAKE-MARGIN AND TERRESTRIAL THIOLOGY

309-13 11:30 AM Ashley, Gail M.∗; de Wet, Carol; Houser, Leah M.: WIDESPREAD FRESHWATER CARBONATE IN THE OLDUVAI BASIN, A PRE-CURSOR TO A MAJOR VOLCANIC Eruption IN EAST AFRICA RIFT SYSTEM

11:45 AM DISCUSSION

SESSION NO. 310

T121. Natural History Museums in the 21st Century—Programming for the Future While Preserving the Past I (GSA Geoscience Education Division; Paleontological Society; GSA Geoinformatics Division)

8:00 AM, Washington State Convention Center, Room 3A
Lisa D. White, Caroline A.E. Stromberg, Gregory P. Wilson and Elizabeth A. Nesbitt, Presiding

8:00 AM INTRODUCTORY REMARKS

310-1 8:15 AM Almon, Warren D.∗: DOING MORE BETTER, WHEN WE WERE ALREADY DOING (ALMOST) EVERYTHING PRETTY WELL: NATURAL HISTORY AND GEOLOGY MUSEUMS IN THE 21ST CENTURY (Invited Presentation)

310-2 8:30 AM Lieberman, Bruce S.∗; Kimmig, Julien; Saupe, Erin E.: DIGITIZING FOSSILS TO ENHANCE MACROEVOLUTIONARY RESEARCH: THE PALEONICHES AND CRETACEOUS WORLD THEMATIC COLLECTION NETWORKS

310-3 8:45 AM Nelson, Gil∗; MacFadden, Bruce; Phillips, Molly: ADVANCING THE DIGITIZATION OF BIODIVERSITY COLLECTIONS (ADBC) AND IDIGBIO: MODELS FOR MOBILIZING DIGITAL DATA FOR RESEARCH AND EDUCATION IN THE GEO SCIENCES

310-4 9:00 AM Butts, Susan H.∗; Karim, Talia S.; Norris, Christopher A.: IDIGPALEO: EDUCATION AND OUTREACH USING DIGITIZED MUSEUM SPECIMENS

310-5 9:15 AM Sessa, Jocelyn A.∗; Butts, Susan; Karim, Talia S.; Nelson, Gil; Norris, Christopher A.; Serratos, Danielle J.; Smith, Dena; Uhen, Mark D.: THE EPANDDA PROJECT: LINKING THE PALEOBIOLOGY DATABASE, IDIGBIO, AND IDIGPALEO FOR BIOLOGICAL AND PALEONTOLOGICAL RESEARCH, COLLECTIONS MANAGEMENT, AND OUTREACH

310-6 9:30 AM Holroyd, Patricia A.∗: USING DIGITIZED DATA TO IDENTIFY NEW RESEARCH OPPORTUNITIES IN MUSEUM DRAWERS

9:45 AM BREAK

310-7 10:00 AM Marshall, Charles R.∗; Citlles, Erica C.; Bonuso, Nicole; Davis, Edward; Dieti, Gregory P.; Druckenmiller, Patrick; Eng, Ron; Estes-Smargiassi, Kathryn; Finnegan, Seth; Garcia, Christine; Duggan-Haas, Don; Hendy, Austin J.W.; Hollis, Kathy; Holroyd, Patricia A.; Legler, Sara; Little, Holly; Nesbitt, Elizabeth A.; Ross, Robert M.; Skibinski, Leslie; Roopnarine, Peter D.; Vendetti, Jann; White, Lisa D.: DIGITIZATION OF MILLIONS OF MARINE INVERTEBRATE FOSSILS THROUGH THE EASTERN PACIFIC INVERTEBRATE COMMUNITIES OF THE CENOZOIC (EPICC) THEMATIC COLLECTIONS NETWORK (TCN)

310-8 10:15 AM Boyer, Doug M.∗; Gunnell, Greg P.; McGeary, Timothy; Ryan, Timothy; Winchester, Julie M.: MORPHOSOURCE: AIDING IN CURING OF 3D DATA ON MUSEUM SPECIMENS

310-9 10:30 AM Grant, Claudia∗; Ziegler, Michael J.: IDIGFOSSILS: ENGAGING K-12 STUDENTS IN INTEGRATED STEM VIA 3D DIGITIZATION, 3D PRINTING AND PALEONTOLOGY

310-10 10:45 AM Mayer, Paul S.∗: THE FIELD MUSEUM OF NATURAL HISTORY PROGRAMS MIXING NEW TECHNOLOGY WITH OLD COLLECTIONS

310-11 11:00 AM Hendy, Austin J.W.∗; Estes-Smargiassi, Kathryn; Vendetti, Jann; Walker, Lindsay J.: REIMAGINING INVERTEBRATE PALEONTOLOGY AT THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY: EMBRACING THE FUTURE WHILE CURATING THE PAST

310-12 11:15 AM Breithaupt, Brent H.∗; Schulp, Anne; Matthews, Neffra A.; Lookley, Martin; McCrea, Richard T.; Buckley, Lisa G.; Gierlinski, Gerard; Xing, Lida; Vogler, Matthijs; Brouwer, Onne; Houck, Karen J.; Cart, Ken; Lim, Jong Deock; Kim, Kyung Soo; Kong, Dal Yong; Surmik, Dawid: NEST SCRAPE BEHAVIOR IN LARGE THEROPods: FROM colorADO OUTFLOW TO DUTCH SHOWCASE: VISITORS EXPERIENCE ANCIENT DINOSAUR DISPLAYBEHAVIOR FROM FOSSIL EVIDENCE

SESSION NO. 311

T131. Translating Professional Development Experiences into the Classroom I (GSA Geoscience Education Division; National Association of Geoscience Teachers)

8:00 AM, Washington State Convention Center, Room 2A
Megan H. Jones, Jacquelyn Hams and Richard M. Jones, Presiding

8:00 AM INTRODUCTORY REMARKS

311-1 8:10 AM Pound, Kate S.∗; Bratt, Kirstin F.: UNANTICIPATED OUTCOMES: FROM A FACULTY LEARNING community ON BACKWARD DESIGN TO A CO- TAUGHT INTERDISCIPLINARY COURSE ‘GEOLOGY AND POETRY’ (Invited Presentation)

311-2 8:30 AM Hatch, Kim S.∗: AN INTERDISCIPLINARY PALEOCO CLIMATE CASE STUDY TO TEACH STUDENTS ABOUT CLIMATE CHANGE IN AN INTRODUCTORY WEATHER AND CLIMATE COURSE

311-3 8:45 AM Colosimo, Amanda∗: INCREASED COMPLETION RATES FOLLOWING COURSE REDESIGN IN A 2YC PHYSICAL GEOLOGY COURSE

311-4 9:00 AM Ozbay, Gulnihat∗; Phalen, Laurieann; Brey, James; Mills, Elizabeth W.; Jones, Megan H.; Maloney, Ashley E.; Huffman, Louise; Morris, Linda: USING MSI-REACH OCEAN SEDIMENT AND SCHOOL OF ICE WORKSHOPS ON RECONSTRUCTING EARTH’S CLIMATE HISTORY LAB TOOLS FOR UNDERGRADUATE CLIMATE EDUCATION

311-5 9:15 AM Jones, Richard M.∗: BUT CAN I USE THIS ON MONDAY MORNING? ADAPTING PROFESSIONAL
SESSION NO. 312
8:00 AM, Washington State Convention Center, Room 3B

Chris Badurek, Denise Hills and Leslie Hsu, Presiding

312-1  8:00 AM  Evans, Dallas*: THE LEGACY OF VICTOR PORTER AND GEO SCIENCE EDUCATION AT THE CHILDREN’S MUSEUM OF INDIANAPOLIS (Invited Presentation)

312-2  8:20 AM  Zietlow, Daniel W.*; Bartel, Beth; Olds, Shelley E.: HANDS-ON GEODESY: ENGAGING THE PUBLIC AND FOSTERING INTERN PROFESSIONAL DEVELOPMENT

312-3  8:35 AM  Santl, Paul M.*; Gianquinto, Tina: CURATING ANSEL ADAMS – PARTNERING WITH A REGIONAL ART CENTER TO CREATE GEOLOGY LABELS

312-4  8:50 AM  Dulin, Shannon A.: COMBINING ACTIVE LEARNING AND PODCASTING AS AN OUTREACH MEDIUM TO MAKE SCIENCE RELEVANT TO BOTH UNDERGRADUATE NON-MAJORS AND THE PUBLIC (Invited Presentation)

312-5  9:10 AM  Bakker, Robert T.; Temple, David Porter*; Ott, Janet F.: POST OAK IN THE PERMIAN: MONTESSORI HIGH SCHOOL JOINS QUANTITATIVE SAMPLING OF EARLIEST APEX PREDAOR, THE RED BEDS DIME TRODON IN THE CLEAR FORK GROUP, BAYLOR COUNTY, TEXAS

312-6  9:25 AM  Persons, Walter S.*; Bakker, Robert T.; Smith, Sean D.; Mossbrucker, Matthew T.: JURASSIC PARKWAY VERSUS TRICERATOPS SUBURBS: FIELD COURSE FOR AMATEURS SEPARATE RESIDENT DINOSAURS FROM TRANSIENTS

312-7  9:40 AM  Steinhardt, Shanah*; Temple, David Porter; Bakker, Robert T.: MONTESSORI EARLY ELEMENTARY GRADES EXPLORE DEEP TIME WITH TEXAS FOSSIL MOLLUSKS: IDENTIFYING WHO ATE WHOM AND HOW WARM THE WINTERS WERE IN THE EOCENE

312-8  9:55 AM  Miller-DeBoer, Carrie*; Laubach, Timothy: VISUALIZING SUCCESS: SCIENCE FACULTY AS SCIENCE WRITING INSTRUCTORS (Invited Presentation)

312-9  10:15 AM  Gowan, Monica E.*: PREPARING STUDENTS FOR THE DISASTER OF A LIFETIME: AN UNDERGRADUATE TEACHING ACTIVITY ON BUILDING RESILIENCE TO A CASCADIA SUBDUCTION ZONE MEGAQUAKE

SESSION NO. 313
T336. Discovery and Preservation of Geoscience Data and Information Resources (Geoscience Information Society; GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division; GSA Energy Geology Division)
8:00 AM, Washington State Convention Center, Room 3B

Chris Badurek, Denise Hills and Leslie Hsu, Presiding

313-1  8:00 AM  Crosby, Christopher J.; Nandigam, Viswanath; Arrowsmith, J. Ramón: FROM ZERO TO A TRILLION – REFLECTIONS ON NINE YEARS OF OPENTOPOGRAPHY, A PLATFORM TO ENABLE OPEN ACCESS TO HIGH RESOLUTION TOPOGRAPHY

313-2  8:15 AM  Edwards, Jacob*: OREGON LIDAR CONSORTIUM: A SUCCESSFUL MODEL FOR ACQUIRING AND SHARING LIDAR

313-3  8:30 AM  Eungard, Daniel W.: DATA STRUCTURE, WORKFLOW, AND DISPLAY OF SUBSURFACE DATA FROM GEOTECHNICAL REPORTS IN WASHINGTON STATE

313-4  8:45 AM  Curl, Douglas C.; Weisenfluh, Gerald A.: PRESERVATION AND WEB ACCESSIBILITY OF LIMESTONE AND DOLOMITE RESOURCE DATA FOR KENTUCKY

313-5  9:00 AM  Dunn, Lisa G.: THE ARCHIVAL PAPERS OF FIELD GEOLOGISTS: THE CHALLENGES OF DISCOVERY AND ACCESS TO THE BREADTH OF GEOLOGIC DATA FROM UNPUBLISHED FIELD RESEARCH

313-6  9:15 AM  Break

313-7  9:30 AM  Halsted, Christian; Fisher, Adam; Marvinney, Robert G.*: MANAGING THE DIGITAL GEOLOGIC PUBLICATION LIFECYCLE WITH DIGITAL COMMONS: A PARTNERSHIP BETWEEN THE MAINE GEOLOGICAL SURVEY AND THE MAINE STATE LIBRARY

313-8  9:45 AM  Tschirhart, Lori*: DOCUMENTATION IN THE MIDDLE: ACTIVE PHASE PROJECT DOCUMENTATION FOR INCLUSIVE AND EFFECTIVE TEAM-BASED RESEARCH

313-9  10:15 AM  Gowen, Elise D.*: VIRTUAL FRONTIERS: MANAGING 3D AND VIRTUAL REALITY CONTENT AND SYSTEMS IN GEOSCIENCE LIBRARIES
SESSION NO. 314

**T154. Imaging the Rock and Fluid Interactions of Geologic Carbon Sequestration (GSA Hydrogeology Division; GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)**

**INTRODUCTORY REMARKS**

- 8:00 AM, The Conference Center, Skagit 2
  - Laura E. Dalton, Dustin Crandall, Jennifer Druhan and Brian R. Ellis, Presiding

**SESSION**

- **8:10 AM**
  - Thomas, Dana*; Garing, Charlotte; Zahasky, Christopher; Bird, Dennis K.; Benson, Sally M.; Maher, Kate: **VISUALIZING BASALT-CO2 REACTIVITY DURING FLOW-THROUGH EXPERIMENTS** (Invited Presentation)

- **8:30 AM**
  - Luhmann, Andrew J.*; Tutolo, Benjamin M.; Bagley, Brian C.; Tan, Chunyang; Mildner, David F.R.; Moskowitz, Bruce; Saar, Martin O.; Seyfried, William E.: **PHYSICAL AND CHEMICAL CHANGES FROM BASALT-CO2-RICH FLUID INTERACTION DURING FLOW-THROUGH EXPERIMENTS AT 150°C AND 150 BAR**

- **8:45 AM**
  - Davila, Gabriela*; Crandall, Dustin; Druhan, Jennifer: **GEOCHEMICAL ALTERATION OF PORE STRUCTURE IN MT. SIMON SANDSTONE RESULTING FROM CONTINUOUS INJECTION OF CO2-SATURATED BRINE**

- **9:00 AM**
  - Elbakshwan, Mohamed*; Gill, Simerjeet; Weidner, Randy; Ghose, Sanjit; Bai, Jianming; Dooryhee, Eric; Ecker, Lynne: **IN SITU SYNCHROTRON MEASUREMENTS FOR CO2 INTERACTION WITH SUBSURFACE MATERIALS**

- **9:15 AM**
  - Break

- **9:30 AM**
  - Andrew, Matthew*; **MULTISCALE IMAGING OF WETTABILITY USING IN SITU X-RAY MICROSCOPY** (Invited Presentation)

- **9:45 AM**
  - Chang, Chun*; Kneafsey, Timothy J.; Wan, Jianmin; Tokunaga, Tetsu: **NON-UNIFORM DISPLACEMENT AND RESIDUAL TRAPPING OF SUPERCRITICAL CO2 IN MIXED-WET MICROMODELS**

- **10:05 AM**
  - Cama, Jordi*; Davila, Gabriela; Garcia-Rios, Maria; Soler, Josep M.: **CHARACTERIZATION OF FRACTURE CHANGES UNDER HIGH PCO2: X-RAY COMPUTED MICRO-TOMOGRAPHY (XCMT) AND SEM IMAGES** (Invited Presentation)

- **10:25 AM**
  - Dalton, Laura E.; Crandall, Dustin*; Goodman, Angela; King, Seth: **EVALUATION OF METHODS TO MEASURE IN SITU CONTACT ANGLES OF SUPERCritical CO2 AND BRINE IN SANDSTONE CORES USING MICRO-CT IMAGING**

- **10:40 AM**
  - Wang, Yan*; Crandall, Dustin; Wei, Ning; Moore, Johnathan; Li, Xiaochun; Bronhalt, Grant S.: **CO2-BRINE CORE FLOODING IN SANDSTONE FROM ORDOS BASIN UNDER X-RAY CT**

- **10:50 AM**
  - Discussion

- **11:05 AM**
  - Concluding Remarks

SESSION NO. 315

**T169. Deciphering Climate Change and Climate Variability in the Geologic Record Using Palaeosols, Loess, Palaeowettering Profiles, Pedosedimentary Sequences, and Polygenetic Soils: Their Applications and Limitations as Terrestrial Proxies in Understanding Impacts of Climatic Changes (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Sedimentary Geology Division)**

**INTRODUCTORY REMARKS**

- 8:00 AM, The Conference Center, Skagit 3
  - Mohammed Rafi G. Sayyed and Elizabeth Solleiro-Rebolledo, Presiding

- **8:10 AM**
  - Driese, Steven G.*; Ribet, Lars; Dypvik, Henning; Stinchcomb, Gary E.; Sorie, Ronald: **HOW DEEP DOES “TERRESTRIAL” WEATHERING EXTEND INTO CRYSTALLINE BASEMENT? EXAMPLES FROM THE MESOZOIC UTSIRA HIGH, NORWEGIAN NORTH SEA BASIN** (Invited Presentation)

- **8:30 AM**

- **8:45 AM**
  - Solleiro-Rebolledo, Elizabeth*; Sedov, Sergey; Lucke, Bernhard; Terhorst, Birgit; Diaz-Hernandez, Hsuyier: **PALEOSOLS DEVELOPED IN A COASTAL DUNE SYSTEM IN THE GULF OF MEXICO: CAN THEY BE USED AS PALEOENVIRONMENTAL INDICATORS OF THE LAST 100,000 YEARS?**

- **9:00 AM**
  - Kogler, Sarah*; Hembre, Daniel I.: **INFLUENCES OF MODERN PEDOGENESIS ON PALEOClimATE ESTIMATES FROM PENNSYLVANIAN AND PERMIAN PALEOSOLS, SOUTHEAST OHIO**

- **9:15 AM**
  - Retallack, Gregory J.*; Conde, Giselle D.: **PALEOSOL EVIDENCE FOR A SOIL-CO2 GLOBAL THERMOSTAT OVER THE PAST 300 MILLION YEARS** (Invited Presentation)

- **9:35 AM**
  - Kowler, Andrew*: **THE RELATIONSHIP AMONG CLUMPED AND STABLE (C AND O) ISOTOPES IN INCipient PEDOgenic CARBONATES AND IMPLICATIONS FOR THEIR POTENTIAL TO REFLECT THE ANCIENT ENVIRONMENTAL CONDITIONS ASSOCIATED WITH PALEOSOL FORMATION**

- **9:50 AM**
  - Break

- **10:05 AM**
  - Hasiotiis, Stephen T.*; Parrish, Judith Totman; Chan, Marjorie A.: **ROOT TRACE PRESERVATION AND DISTRIBUTION IN THE LOWER JURASSIC NAVAJO SANDSTONE, SOUTHEASTERN UTAH AREA: IMPLICATIONS FOR NAVAJO HYDROLOGY, ECOLOGY, AND CLIMATE**

- **10:20 AM**
  - Knobbe, Todd K.*; Pettitt, Elizabeth; Schaller, Morgan F.: **REVISIoN OF THE PALEOSOL PCO2 PROXY THROUGH DIRECT MEASUREMENT OF SOIL CARBONATE-HOSTED FLUID INCLUSIONS**

- **10:45 AM**
  - Algeo, Thomas J.*; Liu, Jiangsi; Yang, Huan: **CHANGES IN VEGETATION TYPE ON THE CHINESE LOESS PLATEAU SINCE 75 KA RELATED TO EAST ASIAN SUMMER MONSOON VARIATION** (Invited Presentation)

- **11:05 AM**
  - Sayyed, Mohammed Rafi G.*: **CLAY MINERALOGY AND GEOCHEMISTRY OF THE INTRABASALTIC PALEOSOLS (BOLE BEDS) OBTAINED FROM THE SCIENTIFIC DRILLING PROJECT IN KOYNA, INDIA: A MULTI-PROXY PALEOClimATIC STUDY**

- **11:25 AM**
  - McIntosh, Julia A.*; Tabor, Neil J.; Rosenau, Nicholas A.: **CONSTRAINING THE CAUSES OF ILLITIZATION IN PENNSYLVANIAN-AGED PALEOSOLS FROM THE ILLINOIS BASIN USING ILLITE/SMECTITE RATIOs**
SESSION NO. 316

T179. Change Detection Photogrammetry in Earth Science
(GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)

8:00 AM, The Conference Center, Chelan 4

Kristin E. Sweeney and Emily S. Schultz-Fellenz, Presiding

8:00 AM INTRODUCTORY REMARKS

316-1  8:15 AM  Evanoff, Emmett*; Wanless, Harold R.: MEASURING GEOLOGIC AND PALEONTOLOGIC SIGNIFICANCE OF HISTORIC PHOTOGRAPHS IN BADLANDS NATIONAL PARK, SOUTH DAKOTA

316-2  8:30 AM  Warrick, Jonathan A.*; Ritchie, Andrew: MEASURING COASTAL CHANGE FROM 4D STRUCTURE-FROM-MOTION PHOTOGRAFHY (Invited Presentation)

316-3  8:50 AM  Devine, Parker*; Sweeney, Kristin E.: MEASURING POST-ERUPTION EVOLUTION OF THE NORTH FORK TOUTLE RIVER, WASHINGTON FROM HISTORICAL AERIAL PHOTOGRAPHY

316-4  9:05 AM  Diefenbach, Angela K.*; Schilling, Steve: THIRTY SIX YEARS OF TOPOGRAPHIC CHANGE AT MOUNT ST. HELENS VIEWED THROUGH CONSISTENT HIGH-RESOLUTION TERRAIN MODELING (Invited Presentation)

316-5  9:25 AM  Harvey, Jonathan E.*; Greiner, Spencer: USING REPEAT PHOTOGRAFHY TO MONITOR EVOLUTION OF AN ACTIVE MOUNTAIN MOVEMENT NEAR DURANGO, CO

9:40 AM BREAK

316-6  9:55 AM  Bowman, Jacob*; Truksa, Tyler; Goode, Jaime: APPLICATION OF STRUCTURE FROM MOTION (SFM) PHOTOGRAFHY TO QUANTIFY SEDIMENT MOBILIZATION FOLLOWING WILDFIRE BLOWDOWN EVENTS

316-7  10:10 AM  DiBlase, Roman A.*; Liu, Xiaofeng; Chen, Yunxiang; McCarroll, Nicholas R.; Neely, Alexander B.: RAPID CHARACTERIZATION OF STREAMBED MICROTOPOGRAPHY IN MOUNTAIN CHANNELS: METHODS AND APPLICATION USING STRUCTURE-FROM-MOTION PHOTOGRAFHY (Invited Presentation)

316-8  10:30 AM  Naas, Caroline*; Grant, Gordon E.: DETECTING CHANNEL INCISION IN THE NORTHERN GREAT BASIN, U.S.A. USING HIGH RESOLUTION DIGITAL TERRAIN MODELS

316-9  10:45 AM  Florsheim, Joan L.*; Chin, Anne: TEMPORAL CHANGES IN EFFECTIVENESS OF STORM FLOWS IN SOUTHERN CALIFORNIA CHAPARRAL FLUVIAL SYSTEMS AFTER WILDFIRE

316-10 11:00 AM  Kniffin, Maribeth*: INVESTIGATING GROUNDWATER CONNECTIVITY IN A TUNNEL CHANNEL LAKE

316-11 11:15 AM  Pontefly, Trevor Sides*: Hampton, Samuel J.: GO WITH THE FLOW: MAPPING RECHARGE ZONES OF PERCHED SPRINGS ON BANKS PENINSULA, NEW ZEALAND

316-12 11:30 AM  Suarez, Angela M.*: APPLICATION OF REMOTE SENSING TECHNIQUES TO OBTAIN DETAILED SOIL MOISTURE DATA IN LARGE AREAS

11:45 AM DISCUSSION

SESSION NO. 317

T179. New Concepts in Glaciation of the Western Cordillera of North America (GSA Quaternary Geology and Geomorphology Division)

8:00 AM, The Conference Center, Chelan 2

Doug Clark and Jonathan E. Cripps, Presiding

8:00 AM INTRODUCTORY REMARKS

317-1  8:05 AM  Brennand, Tracy A.*; Cripps, Jonathan E.; Perkins, Andrew J.: DEGLACIAL STYLE, PATTERN AND TIMING OF THE CORDILLERAN ICE SHEET, SOUTH-CENTRAL INTERIOR BRITISH COLUMBIA (Invited Presentation)

317-2  8:25 AM  Riedel, Jon*: RETREAT OF THE LAST CORDILLERAN ICE SHEET FROM THE NORTH CASCADE RANGE, WASHINGTON AND BRITISH COLUMBIA

317-3  8:40 AM  Bervid, Heather D.*; Carlson, Anders E.; Walczak, Maureen H.; Hendy, Ingrid; Stoner, Joseph: RAPID RETREAT OF THE WESTERN MARGIN OF THE NORTHERN AND SOUTHERN CORDILLERAN ICE SHEET IN RESPONSE TO ABRUPT DEGLACIAL SEA-SURFACE TEMPERATURE WARMING

317-4  8:55 AM  Troost, Kathy Goetz*: Booth, Derek B.: MIS 4 AND OLDER PLEISTOCENE DEPOSITS IN THE PUGET LOWLAND, WASHINGTON STATE

9:10 AM DISCUSSION/BREAK

317-5  9:25 AM  Menounos, Brian*; Goehring, Brent M.; Osborn, Gerald; Darvill, Christopher; Hawkins, Adam; Clague, John; Margold, Martin; Schaefer, Joerg M.; Ward, Brent C.; Gosse, John; Stroeven, Arjen P.: WHAT HAS SURFACE EXPOSURE DATING TOLD US ABOUT GLACIER FLUCTUATIONS IN WESTERN CANADA? (Invited Presentation)

317-6  9:45 AM  Headley, Rachel*; Sockness, Brian; Borchardt, Scott: IMPACTS OF HOLOCENE WARMING ON PATTERNS OF EROSION AND MORAINE DEPOSITION FOR THE MULDROW GLACIER IN DENALI NATIONAL PARK

317-7  10:00 AM  Tulenko, Joseph P.*; Briner, Jason P.; Young, Nicolas E.; Schaefer, Joerg M.: 10BE DATING MIS 2 AND MIS 4 MORAINES IN THE REVELATION MOUNTAINS, ALASKA

317-8  10:15 AM  Goehring, Brent M.*; Menounos, Brian; Osborn, Gerald; Hawkins, Adam C.; Ward, Brent C.: VARIED MAGNITUDE OF ALPINE GLACIER ADVANCES GREY HUNTER PEAK THEIR CLIMATIC SIGNIFICANCE, YUKON TERRITORY, CANADA

10:30 AM DISCUSSION/BREAK

317-9  10:45 AM  Hawkins, Adam C.*; Menounos, Brian; Goehring, Brent M.; Darvill, Christopher; Schaefer, Joerg M.; Osborn, Gerald D.; Lerch, Rebecca: LATE HOLOCENE GLACIER FLUCTUATIONS IN THE MACKENZIE AND SELWYN MOUNTAINS, NORTHERN CANADA

317-10 11:00 AM  Marchetti, David W.*; Harris, M. Scott; Bailey, Christopher M.: AN ENIGMATIC, THOUGH LIKELY GLACIAL, BOULDER DEPOSIT IN A SMALL, HIGH-ELEVATION, TOPOGRAPHICALLY ENCLOSED BASIN: NORTH CRATER LAKE, FISH LAKE PLATEAU, UTAH


317-12 11:30 AM  Becker, Richard A.*; Barth, Aaron M.; Marcott, Shaun A.; Tikoff, Basil: CONSTRAINING THE TIMING AND MAGNITUDE OF DEGLACIATION IN THE DRAINAGE BASINS OF MONO CREEK AND THE SOUTH FORK OF THE SAN JOAQUIN RIVER, CENTRAL SIERRA NEVADA MOUNTAINS (USA)

11:45 AM DISCUSSION & CONCLUDING REMARKS
SESSION NO. 318

T190. Linking Physical and Ecological Processes from Source-to-Sink to Investigate Multi-Scale Response to Restoration (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)

8:00 AM, The Conference Center, Chelan 5

Andrew C. Wilcox, Amy East and Jon Major, Presiding

8:00 AM INTRODUCTORY REMARKS

318-1 8:05 AM Bufington, John M.*: CONSIDERING SPATIAL AND TEMPORAL VARIABILITY OF FLOODS IN STREAM RESTORATION: EFFECTS OF HYDROCLIMATE ON THE STABILITY OF CHANNEL MORPHOLOGY AND AQUATIC HABITAT (Invited Presentation)

318-2 8:25 AM Pfeiffer, Allison*; Finnegan, Noah J.: SEDIMENT SUPPLY CONTROLS RIVER BED SURFACE GRAIN SIZE AND THE AVAILABILITY OF SALMONID HABITAT (Invited Presentation)

318-3 8:45 AM Cienciala, Piotr*: Nelson, Andrew D.: LARGE WOOD IN A MOUNTAINEOUS STREAM NETWORK: ECO-GEOMORPHIC ASSOCIATIONS, LAND USE EFFECTS, AND IMPLICATIONS FOR INSTREAM HABITAT AND CARBON STORAGE POTENTIAL

318-4 9:00 AM Gartner, John D.*; Lukas, Stephen C.; Larsen, Isaac J.; Hatch, Christine E.: PREDICTING CHANNEL STABILITY AND ANALYZING CHANGES IN RIPARIAN COVER AND WOODY DEBRIS IN THE CHICKLEY RIVER WATERSHED, HAWLEY, MASSACHUSETTS, USA

318-5 9:15 AM Krause, Samantha M.*; Beach, Timothy; Luzzadder-Beach, Sheryl; Doyle, Colin; Guderian, Thomas; Sanchez Morales, Lara: PALEOECOLOGY AND HUMAN USE OF WETLANDS IN THE THREE RIVERS REGION, NORTHWESTERN BELIZE

318-6 9:30 AM East, Amy*: Harrison, Lee R.; Smith, Douglass P.; Bond, Rosealea; Logan, Joshua B.; Nicot, Colin; Williams, Thomas H.; Boughton, David A.: EARLY GEOMORPHIC AND FISH-HABITAT RESPONSE TO A UNIQUE LARGE-DAM REMOVAL AND SUBSEQUENT MAJOR FLOODS: CARMEL RIVER, CALIFORNIA

318-7 9:45 AM Leung, Vivian*: McCoy, Randall E.; McHenry, Michael; Montgomery, David R.: FIELD INVESTIGATIONS OF LOGJAM DISTRIBUTION AND DYNAMICS BEFORE AND DURING THE ELWHRA RIVER RESTORATION PROJECT DAM REMOVALS

10:00 AM BREAK

318-8 10:15 AM Tullos, Desiree*: Elliot, Susan: PHYSICAL MODELING OF THE FEEDBACKS BETWEEN A REED CANARYGRASS (PHALARIS ARUNDINACEA) PATCH, HYDRAULICS, AND BEDFORM EVOLUTION (Invited Presentation)

318-9 10:35 AM Boyer, Elizabeth W.*; Golden, Heather E.; Galloway, James N.; Alexander, Richard B.; Schwarz, Gregory E.; Gomez-Velez, Jesus D.; Harvey, Judson W.; Scott, Durelle; Schmadel, Noah: COUPLED HYDROLOGICAL, BIOGEOCHEMICAL, AND GEOMORPHIC PROCESSES AFFECTING NUTRIENT LOADINGS IN FLUVIAL NETWORKS

318-10 10:50 AM Donahue, Daniel*: Constantine, José Antonio: THE ENVIRONMENTAL LEGACY OF CHANNELIZATION ON AQUATIC HABITATS OF A GRAVEL-BED WANDERING RIVER

318-11 11:05 AM Wilcox, Andrew C.*; Sawyer, April M.: SETUP AND TRIGGERING OF POST-RESTORATION CHUTE CUTOFFS IN A GRAVEL-BED RIVER

SESSION NO. 320


8:00 AM, The Conference Center, Tahoma 2

Seth C. Kruckenberg, Jamie S. Levine and Elena A. Miranda, Presiding

320-1 8:00 AM Pec, Matej*; STRAIN PARTITIONNING AND LOCALIZATION IN GRANITOID FAULT ROCKS DEFORMED AT ELEVATED PRESSURES AND TEMPERATURES (Invited Presentation)

320-2 8:15 AM Reber, Jacqueline E.*; Pec, Matej; THE INTERACTION BETWEEN BRITTLE- AND DISLOCATION CREEP IN QUARTZ

320-3 8:30 AM Thigpen, J. Ryan*; Ashley, Kyle T.; Law, Richard D.; MODELING FEEDBACKS BETWEEN TRANSIENT THERMAL EVOLUTION, RHEOLOGICAL BEHAVIOR, AND STRAIN LOCALIZATION IN COLLISIONAL THRUST BELTS

320-4 8:45 AM McGrew, Allen J.*; Rahi, Jeffrey M.; FROM MICROKINEMATICS TO MACRO-INTERPRETATION: VARIATION IN KINEMATIC VORTICITY AND STRAIN LOCALIZATION IN THE RUBY-EAST HUMBLDT SHEAR ZONE, NORTHERN NEVADA

320-5 9:00 AM Starnes, Jesslyn K.*; Long, Sean P.; Zhang, Jingyi; Gordon, Slacia M.; USING QUARTZ PETROFABRIC INTENSITY PARAMETERS TO DELINEATE SHEAR ZONES: A CASE STUDY FROM THE MAIN CENTRAL THRUST IN WESTERN BHUTAN


320-7 9:30 AM Ashley, Kyle T.*; Beaverlo, Nicholas D.; Law, Richard D.; Behr, Whitney M.; Morgan, Sven S.; APPARENT MECHANICAL HARDENING OF HIGHLY STRAINED QUARTZITE IN THE INNER AUREOLE OF THE PAPOOSE FLAT PLUTON, EASTERN CALIFORNIA

9:45 AM BREAK

10:00 AM POSTER LIGHTENING ROUND

320-8 10:15 AM Mahan, Kevin H.*; Goncalves, Philippe; Orlando, Omero F.; Leydier, Thomas; Condit, Cailey B.; Moris-Mutoni, Benjamin; RELATIONSHIPS AMONG TRANSIENT BRITTLE AND DUCTILE DEFORMATION AND METAMORPHIC REACTIONS IN CRUSTAL SHEAR ZONES (Invited Presentation)

320-9 10:30 AM Sorensen, Bjørn Eske*; Larsen, R.B.; Grant, Thomas Bartholomew: STRAIN LOCALIZATION INDUCED BY LATE-MAGMATIC CO2 FLUX AND REACTION-DRIVEN STRAIN SOFTENING

320-10 10:45 AM Michels, Zachary David*; Medaris, L. Gordon: THE EFFECT OF MAGMATIC UNDERPLATING ON RHEOLOGICAL PROPERTIES OF THE UPPER MANTLE: THEORY AND OBSERVATION

320-11 11:00 AM Behr, Whitney M.*; Kotowski, Alissa; Ashley, Kyle: METAMORPHICALLY-INDUCED RHEOLOGICAL HETEROGENEITY AND THE DEEP TREMOR SOURCE IN SUBDUCTION ZONES (Invited Presentation)

320-12 11:15 AM Politiz, Frederick F.*; LITHOSPHERE AND SHALLOW ASTHENOSPHERE RHEOLOGY FROM OBSERVATIONS OF POST-EARTHQUAKE RELAXATION

320-13 11:30 AM Stewart, Craig*; Miranda, Elena A; PSEUDOTACHYLYTE DEVELOPMENT RESULTING FROM STRAIN LOCALIZATION IN BRITTLE DUCTILE TRANSITION QUARTZOFELSSPATHIC MYLONITES, SOUTH MOUNTAINS CORE COMPLEX, ARIZONA

11:40 AM DISCUSSION

SESSION NO. 321

T219. Paleocene-Eocene Tectonic and Magmatic Evolution of the Pacific Northwest (GS&A Structural Geology and Tectonics Division; GS&A Sedimentary Geology Division; GS&A Mineralogy, Geochemistry, Petrology, and Volcanology Division)

8:00 AM, The Conference Center, Tahoma 4

Jeffrey H. Tepper, Eugene D. Humphreys and Robert B. Miller, Presiding

321-1 8:00 AM Eddy, Michael P.*; EVIDENCE FOR THE SILETZIA TERRANE’S ORIGIN AS A RIDGE-CENTERED OCEANIC PLATEAU

321-2 8:15 AM Wells, Ray E.*; Blakely, Richard J.; Anderson, Megan; SILETZIA, YELLOWSTONE, AND THE FARALLON PLATE BENEATH NORTH AMERICA (Invited Presentation)


321-4 8:50 AM Humphreys, Eugene D.*; ACCRETING SILETZIA: REGIONAL MAGMATIC AND TECTONIC CONSEQUENCES

321-5 9:05 AM Teyssier, Christian; Whitney, Donna L.*; Rey, Patrice F.; CENOZOIC EXTENSION OF THE NORTH AMERICAN CORDILLERA: NEW INSIGHT ON METAMORPHIC CORE COMPLEXES (Invited Presentation)

321-6 9:20 AM Miller, Robert B.*; Bryant, Katherine; Doran, Bridg; Eddy, Michael P.; Sylva, Nick; Raviola, Frank; Umhoefer, Paul J.; EOCENE TRANSTENSION AND STRAIN PATTERNS FROM DIKE SWARMS AND STRIKE-SLIP FAULTS IN THE WASHINGTON CASCADES

321-7 9:35 AM Methner, Katharina*; Fleibig, Jens; Wacker, Ulrike; Umhoefer, Paul J.; Chamberlain, C. Page; Mulch, Andreas; EO-1 OLIGOCENE CASCADE TOPOGRAPHY REVEALED BY THE CLUMPED (δ18O) AND OXYGEN ISOTOPE (δ16O) RECORD OF THE CHUMSTICK BASIN (WA, USA)

9:50 AM BREAK

321-8 10:05 AM Tikoff, Basil*; Kahn, Maureen; Fayon, Anna; Schmidt, Keegan L.; Kelso, Paul; Gaschnig, Richard; Vervoort, Jeffrey; Hole, John A.; AN INTEGRATED TECTONIC AND MAGMATIC HISTORY OF THE INTERIOR REGION OF THE PACIFIC NORTHWEST: THE SIGNIFICANCE OF SYRINGA EMBAYMENT (Invited Presentation)

321-9 10:25 AM Kahn, Maureen; Fayon, Anna; Tikoff, Basil; LATEST CRETACEOUS AND PALEOGENE COOLING HISTORY FROM APATITE AND ZIRCON (U-TH)HE IN THE SYRINGA EMBAYMENT, WESTERN IDAHO

321-10 10:40 AM Cassel, Elizabeth J.*; Smith, M. Elliot; Adams, Alexandra C.; Jicha, Brian R.; THE CORDILLERAN OROGEN IN THE EOCENE: TOPOGRAPHY, DRAINAGE SYSTEMS, AND TECTONIC IMPLICATIONS

321-11 10:55 AM Tepper, Jeffrey H.*; Eddy, Michael P.; THE CAUSE(S) OF WIDESPREAD EOCENE MAGMATISM IN THE PACIFIC NORTHWEST: INSIGHTS FROM GEOCHEMISTRY AND GEOCHRONOLOGY OF IGNEOUS ROCKS IN WASHINGTON

321-12 11:10 AM Gaschnig, Richard*; Vervoort, Jeffrey; Lewis, Reed S.; THE CHALLIS MAGMATIC PROVINCE IN IDAHO: A REVIEW


11:40 AM DISCUSSION
SESSION NO. 322

T230. Polygenetic Mélange: A Glimpse on Tectono-Sedimentary Recycling in Convergent Margins (GSA International/International Interdisciplinary Interest Group; IGCP 640 program S4SLIDE (Significance of Modern and Ancient Submarine Slope Landslides); GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division)

8:00 AM, The Conference Center, Tahoma 5

Andrea Festa, Kei Ogata and Gian Andrea Pini, Presiding

8:00 AM INTRODUCTORY REMARKS

322-1  8:05 AM Raymond, Loren A. *; THE POLYGENETIC HEAVEN’S BEACH MELANGE, FRANCISCAN COMPLEX, CALIFORNIA, USA (Invited Presentation)

322-2  8:25 AM Wakabayashi, John*: SEDIMENTARY COMPARISON TO TECTONIC SERPENTINITE MÉLANGES AND BLOCKS OF ONE TYPE OF MÉLANGE IN ANOTHER: COASTAL CALIFORNIA EXAMPLES

322-3  8:40 AM Shields, Jessie E.; Wakabayashi, John: LARGE RANGE OF METAMORPHIC CONDITIONS RECORDED IN BLOCKS OF A SINGLE MÉLANGE ZONE: AN EXAMPLE FROM THE FRANCISCAN COMPLEX OF CALIFORNIA

322-4  8:55 AM Bier, Sara E.; Fisher, Donald M.; Feineman, Maureen; O’Sullivan, Paul B.: STRUCTURAL FABRICS, GEOCHEMISTRY, AND GEOCHRONOLOGY OF THE REINDEER HILLS MELANGE, A SUTURE ZONE IN SOUTH-CENTRAL ALASKA

322-5  9:10 AM Lacomba, Ryan A.; Waldron, John W.F.; Harris, Nicholas B.: BLOCK-IN-MATRIX ROCKS AT THE LEADING EDGE OF THE HUMBER ARM ALLOCHTHON, PORT AU PORT PENINSULA, NEWFOUNDLAND APPALACHIANS

322-6  9:25 AM Cloo, Mark*; Ukar, Estibalitz: TECTONIC FLOW MÉLANGE AND OLISTOSTROMES IN THE FRANCISCAN COMPLEX: WHICH IS MORE ABUNDANT?

9:40 AM DISCUSSION

9:55 AM BREAK

322-7  10:10 AM Yamamoto, Yuzuru*; Yamada, Yasuhiro; Kawakami, Shunsuke: LIQUEFACTION-INDUCED MASS TRANSPORT DEPOSIT: STRUCTURAL CHARACTERISTICS AND THEIR SEQUENCE OF INTERMITTENT EVENTS (Invited Presentation)

322-8  10:30 AM Ogata, Kei*: Festa, Andrea; Pini, Gian Andrea: SEDIMENTARY STRATAL DISRUPTION AND LITHOLOGICAL MIXING IN POLYGENETIC MÉLANGES

322-9  10:45 AM Wakita, Koji*: TECTONIC CONTROL OF MÉLANGES FORMATION OF SEDIMENTARY AND POLYGENETIC ORIGIN: EXAMPLES FROM PALEozoIC TO MESozoIC ACCRETIONARY COMPLEXES OF THE SOUTHWEST JAPAN

SESSION NO. 323

T240. Structure and Evolution of the North Atlantic–Arctic Realm

8:00 AM, The Conference Center, Yakima 1

Christian Schiffer, Gillian Foulger, Randell Stephenson, Fiona Darbyshire and Hans Thydro, Presiding

323-1  8:00 AM Keathley, Danielle E.; Hetherington, Callum J.: GEOCHEMICAL CHARACTERIZATION OF A FEEDER-DIKE SYSTEM IN THE SEILAND IGNEOUS COMPLEX, NORTHERN NORWAY: IMPLICATIONS FOR GEOTECTONIC ENVIRONMENT OF EMPLACEMENT

323-2  8:15 AM Pease, Victoria*; Koyi, Hemin A.; Nifurouroushan, Faramarz: DEVELOPMENT OF THE AMERASIA BASIN: WHERE ARE WE NOW? (Invited Presentation)

323-3  8:35 AM Schiffer, Christian*: Stephenson, Randell: CRUSTAL STRUCTURE OF THE EUREKAN OROCEN, ARCTIC CANADA

323-4  8:50 AM Dubé, Jean-Michel; Darbyshire, Fiona; Stephenson, Randell A.; Oakey, Gordon: LITHOSPHERIC AND UPPER-MANTLE FABRIC ACROSS THE CANADIAN HIGH ARCTIC: EVIDENCE FROM SHEAR-WAVE SPLITTING

323-5  9:05 AM Schaeffer, Andrew J.*; Lebedev, Sergei; Fulliea, Javier; Audet, Pascal: INVESTIGATING THE SEISMIC AND THERMAL STRUCTURE OF THE CIRCUM-ARCTIC LITHOSPHERE AND ASTHENOSPHERE (Invited Presentation)

323-6  9:25 AM Ben Mansour, Wald*: CRUSTAL PROPERTIES ACROSS THE TRANSITION FROM OROGENIC TO CRATONIC AREA FROM SEISMOLOGICAL ANALYSIS

323-7  9:40 AM Artemieva, Irina M.*; Barantseva, Olga; Thyo, Hans; Shulgin, Alexey; Makushchka, Anna: LITHOSPHERE STRUCTURE OF THE NORTH ATLANTIC REGION

323-8  9:55 AM Foulger, Gillian Rose*: EVOLUTION OF THE GREENLAND-ICELAND-FAROE RIDGE

323-9  10:10 AM Gernigon, Laurent*: Schiffer, Christian; Geoffrey, Laurent; Nasut, Aziz; Foulger, Gillian; Franke, Dieter: HOW DID THE CONTINENTS BREAK APART IN THE NORWEGIAN-GREENLAND-SEA? (Invited Presentation)

323-10 10:30 AM Martinez, Fernando*: Hey, Richard: PLATE BOUNDARY PROCESSES AND SMALL-SCALE MANTLE CONVECTION BENEATH THE REYKJANES RIDGE

10:45 AM DISCUSSION AND CONCLUDING REMARKS

SESSION NO. 324

T254. The Co-Evolution of Life and Its Environment during the Precambrian: The “Boring Billion” and Mid-Proterozoic Emergence of Complex Life (Paleontological Society; GSA Geobiology & Geomicrobiology Division)

8:00 AM, The Conference Center, Skagit 5

Roger Buick, Matthew Koehler and Charles Diamond, Presiding

324-1  8:00 AM Laaksso, Thomas A.*; Schrag, Daniel P.: LIMITATIONS ON LIMITATION

324-2  8:15 AM Gilleaudeau, Geoffrey J.*; Junium, Christopher K.; Kah, Linda C.; Zolotova, Natasha; Anbar, Ariel D.: NO EVIDENCE FOR ALTERNATIVE NITROGENASE EXPRESSION IN A MESOPROTEROZOIC MOLYBDENUM-LIMITED ENVIRONMENT: CONSTRAINTS FROM NITROGEN ISOTOPES AT 1.1 GA

324-3  8:30 AM Koehler, Matthew*: Stüeken, Eva E.; Kipp, Michael A.; Buick, Roger; Knoll, Andrew H.: LOW NITRATE LEVELS IN THE MESPOTROERozoic OCEAN

324-4  8:45 AM Planavsky, Noah J.*; Zhao, Mingyu; Reinhard, Christopher T.: MID-PROTEROZOIC OXYGEN AND METHANE (Invited Presentation)

324-5  9:05 AM Rico, Kathryn*: Sheldon, Nathan D.; Gallagher, Timothy M.: BIOGEOCHEMICAL PATHWAYS OF NUTRIENT AND
WEDNESDAY

SESSION NO. 325

D51. Geophysics/Geodynamics Session

1:30 PM, The Conference Center, Yakima 1

Kent C. Condie, Ting Chen and Paul Winberry, Presiding

325-1 1:30 PM Condie, Kent C.; Shearer, Charles K.: RECOGNIZING THE ONSET OF PLATE TECTONICS ON EARTH: THE APPEARANCE OF WIDESPREAD ENRICHED MANTLE BETWEEN 2 AND 3 GA?

325-2 1:45 PM Shearer, Charles K.; Condie, Kent C.: PRIMORDIAL FRACTIONATION OF HIGH FIELD STRENGTH ELEMENTS (HFSE) ON STAGNANT-LID PLANET MANTELLES

325-3 2:00 PM Jellinek, A. Mark*; Lenardic, Adrian; Weller, Matt B.; HOW DID EARTH NOT END UP LIKE VENUS?

325-4 2:15 PM Head, James W.: GEOLOGICAL EVOLUTION OF THE TERRESTRIAL PLANETARY BODIES: CLUES TO THE ORIGIN OF PLATE TECTONICS (Invited Presentation)

325-5 2:30 PM Davaille, A.; Smrekar, S.: PLUME-INDUCED SUBDUCTION: LOCALIZED ON VENUS NOW, HELPING THE ONSET OF PLATE TECTONICS ON EARTH IN THE ARCHEAN

325-6 2:45 PM Foley, Bradford J.: THE ROLE OF MANTLE THERMAL STATE IN THE INITIATION OF PLATE TECTONICS

325-7 3:00 PM Vorobiev, Oleg*: MECHANISMS OF SHEAR WAVE GENERATIONS DURING UNDERGROUND EXPLOSIONS IN JOINTED ROCK

325-8 3:15 PM BREAK

325-9 3:30 PM Riedman, Leigh Anne*; Sadler, Peter: EUKARYOTIC SPECIES RICHNESS IN THE EARLY TO MIDDLE NEOPROTEROZOIC

SESSION NO. 326

T1. 21st Century Rock Flow Properties and Processes: 3D Printing, Digital Rock Physics, and Hydrogeophysics (GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Karst Division)

1:30 PM, Washington State Convention Center, Room 613/614

Michael C. Sukop, Lee J. Florea, Franciszek Hasiuk and Dave Hart, Presiding

326-1 1:30 PM INTRODUCTORY REMARKS

326-2 1:35 PM Hasiuk, Franciszek*; Ishtov, Sergey: USING RESIN-BASED 3D PRINTING TO BUILD GEOMETRICALLY ACCURATE PROXIES OF POROUS SEDIMENTARY ROCKS

326-3 2:05 PM Yoon, Hongkyu*; Martinez, Mario J.; Dewers, Thomas: 3D PRINTING AND DIGITAL ROCK PHYSICS FOR SINGLE FRACTURE NETWORK

326-4 2:20 PM Kadyrov, Ralil*; Starovoytov, Aleksandr; Utenev, Edward: WAVELET ANALYSIS FOR ADVANCED TOMOGRAPHY DATA INTERPRETATION

326-5 2:35 PM Herman, Ellen K.†; Jacobson, Samuel N.; Vesper, Dorothy J.; Moore, Johnathan; Crandall, Dustin: USING 3D PRINTING TO IMPROVE FLOW AND CONTAMINANT CHARACTERIZATION IN KARST AQUIFERS (Invited Presentation)

326-6 3:10 PM Day-Lewis, Frederick D.*; Singh, Kamini; Briggs, Martin A.; Linde, Niklas; Haggerty, Roy: GEOFRACTAL PHYSICS EXPERIMENT SITE WITH THE LARGE-N SEISMIC ARRAY

326-7 3:30 PM Young, Nathan L.; Simpkins, William W.; Horton, Robert; McLaren, Robert: USING DISCRETE FRACTURE NETWORK MODELS TO COMPUTE EQUIVALENT POROUS MEDIA PARAMETERS FOR FRACTURED TILL

326-8 3:45 PM Gates, Christopher*; Perfect, Edmund; Lokitz, Bradley: Brabazon, Jared William: TRANSIENT ANALYSIS OF ADVANCING CONTACT ANGLE MEASUREMENTS ON POLISHED ROCK SURFACES
**327-9** 4:00 PM Brabazon, Jared William*; Perfect, Edmund; Cheng, Chu-Lin; Bilheux, Hassina Z.; Tremsin, Anton S.; Santodonato, Louis J.; *INVERSE ESTIMATION OF SURFACE FRACTAL DIMENSION AND APERTURE WIDTH FOR ROCK FRACTURES FROM SPONTANEOUS IMIBITION MEASUREMENTS

**327-10** 4:15 PM Stumpf, Andrew J.; Lin, Yu-Feng Forrest*; *THERMOPHYSICAL CHARACTERIZATION OF THE HETEROGENEOUS SUBSURFACE (Invited Presentation)

**327-11** 4:45 PM Thomas, Lauren K.*; Tinjum, James; Hart, David J.; Fratta, Dante; *LONG-TERM MONITORING OF A GEOTHERMAL EXCHANGE BOREFIELD WITH FIBER OPTIC DISTRIBUTED TEMPERATURE SENSING

**327-12** 5:00 PM Park, Byeong-Hak*; Jung, Dahee; Lee, Bo-Hyun; Lee, In-Soo; *SENSING AND GEOPHYSICAL CONSTRAINTS ON THE DISTRIBUTION AND DEFORMATION ASSOCIATED WITH SALT DOME INTRUSIONS ALONG THE SOUTHERN RED SEA COASTLINE, SAUDI ARABIA

### SESSION NO. 327

**T18. Remote Sensing Applications in Hydrology and Geology (GSA Hydrogeology Division; GSA Geoinformatics Division; GSA Geophysics Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)**

**327-13** 1:30 PM Soliman, Mohamed; Abdelmohsen, Kareem; Emad, Mustafa; Al-Harbi, Hassan; Eldakir, Rachaa; Emad, Mustafa Kemal; Gebremichael, Eysid; *REMOTE SENSING AND GEOPHYSICAL CONSTRAINTS ON THE DISTRIBUTION AND DEFORMATION ASSOCIATED WITH SALT DOME INTRUSIONS ALONG THE SOUTHERN RED SEA COASTLINE, SAUDI ARABIA*

**327-14** 4:50 PM Young, Brennan W.*; Bishop, Michael P.; Huo, Da; Owen, Lewis A.; *GEOMORPHOMETRIC CHARACTERIZATION OF TOPOGRAPHIC STRUCTURE AND TECTONICS IN THE KARAKORAMHIMALAYA, PAKISTAN*

**327-15** 5:05 PM Krekeler, Mark P.S.*; Burke, Michelle; Allen, C. Scott; Sather, Barrett; Dawson, Claudia; Roberts, Jessica; *PROGRESS IN DEVELOPING A HYPERSPECTRAL REMOTE SENSING LIBRARY AND SOFTWARE TOOL FOR FINDING PERSONS IN THE ENVIRONMENT*

### SESSION NO. 328


**328-1** 1:30 PM Solomon, D. Kip*; Gardner, Philip M.; Nelson, Nora C.; Heilweil, Victor M.; Manning, Andrew H.; *ENVIRONMENTAL TRACER IN ARID AND SEMI-ARID BASINS: HISTORICAL PERSPECTIVES AND FUTURE TRENDS (Invited Presentation)*

**328-2** 1:50 PM Pankratz, Hannah Gayle*; Sultan, Mohamed; Alefry, Saleh; Karem, Al-Harbi; Hassan, Eldakir, Rachaa; Emad, Mustafa Kemal; Gebremichael, Eysid; *REMOTE SENSING AND GEOPHYSICAL CONSTRAINTS ON THE DISTRIBUTION AND DEFORMATION ASSOCIATED WITH SALT DOME INTRUSIONS ALONG THE SOUTHERN RED SEA COASTLINE, SAUDI ARABIA*
Wednesday, 25 October 2017

MID-MONTANE AREA OF THE COQUIMBO REGION, NORTH-CENTRAL CHILE

2:00 PM

BREAK

328-6 3:05 PM

Jasechko, Scott; Perrone, Debra; Befus, Kevin M.; Cardenas, M. Bayani; Ferguson, Grant; Luijendijk, Elco; Gleeson, Tom; McDonnell, Jeffrey J.; Taylor, Richard; Wada, Yoshihide; Welker, Jeff; Kirchner, James W.∗: FRESH WATER AGES IN GLOBAL ARID AND MOUNTAINOUS REGIONS (Invited Presentation)

328-7 3:25 PM

Ruybal, Christopher J.; Hogue, Terri S.; McCray, John E.: SPATIO-TEMPORAL ASSESSMENT OF GROUNDWATER RESOURCES IN THE SOUTH PLATTE BASIN, COLORADO

3:40 PM

BREAK

328-8 3:55 PM

Zhan, Hongbin∗; Liang, Xiuyu: BASEFLOW RECEDSION FROM UNSATURATED-SATURATED FLOW

328-9 4:10 PM

Wang, Quanrong∗; Zhan, Hongbin: SINGLE-WELL PUSHPULL TESTING FOR A PARTIALLY PENETRATING WELL IN A FLOW FIELD WITH A FINITE HYDRAULIC DIFFUSIVITY

328-10 4:25 PM

Szynekiewicz, Anna∗; Ma, Lin; Garcia, Sandra; Sie beck, Matthew S.: NATURAL AND ANTHROPOGENIC FACTORS CONTROLLING GROUNDWATER SALINITY IN THE MESSILA VALLEY OF THE SEMI-ARID RIO GRANDE WATERSHED

328-11 4:40 PM

Lerback, Jory C.; Hynek, Scott A.; Bowen, Brenda B.: MULTI-TRACER APPROACH TO CHARACTERIZING THE CHEMICAL EVOLUTION OF SPRINGWATER IN BLUE LAKE, UTAH

328-12 4:55 PM

Knappert, P.S.K.; Li, Yanmei; Hernandez, Horacio; Giardino, J.R.; Mahlknecht, Jurgen; Datta, Saugata: INCREASING FLUORIDE CONCENTRATIONS AND CHANGING RECHARGE PATHWAYS WITHIN AN INTENSIVELY PUMPED AQUIFER IN CENTRAL MEXICO

328-13 5:10 PM

Lluria, Mario R.∗: THE DEVELOPMENT AND PROGRESS OF MANAGED AQUIFER RECHARGE IN ARIZONA: A GUIDE FOR OTHERS TO FOLLOW

SESSION NO. 329

T36. Asthenosphere to Atmosphere: Tectonics, Topography, and Climate (GSA Structural Geology and Tectonics Division)

1:30 PM, Washington State Convention Center, Room 609

A. Alexander G. Webb and Peter D. Clift, Presiding

329-1 1:30 PM

Webb, A. Alexander G.; Clift, Peter D.; Guo, Hongcheng; Husson, Laurent: CHICKEN OR EGG? CLIMATE AND MANTEL TECTONICS ALONG THE HIMALAYA

329-2 1:45 PM

Boos, William R.; Hu, Shineng: MECHANISMS GOVERNING THE EFFECT OF PLATEAUS ON LOW-LATITUDE REGIONAL CLIMATE (Invited Presentation)

329-3 2:00 PM

Huntington, Katharine W.; Lang, Karl A.; Turzewski, Michael D.: INTERACTIONS OF FLUVIAL EROSION, CLIMATE AND TECTONICS IN THE EASTERN HIMALAYAN SYNTAGM (Invited Presentation)

329-4 2:15 PM

Laskowski, Andrew∗; Taylor, Michael H.; Kapp, Paul; Campbell, Clay: DUXELING IN SOUTHERN TIBET AND BIRTH OF THE YARLUNG RIVER: A STRUCTURAL MODEL FOR DEVELOPMENT OF Oligocene—Miocene RELIEF IN THE GANGDASE MOUNTAINS

329-5 2:30 PM

Heermann, Richard V.; Pearson, Jozi; Vilkas, Marius; Moé Annelsia; Liu, Langtao; Xu, Jianhong; Chen, Jie; Richter, Fabiana; Garzione, Carmala; Nie, Junsheng; Bogue, Scott: 14.6 MA ARIDIFICATION AND DEVELOPMENT OF THE ANCESTRAL TAKLIMAKAN DESERT BETWEEN THE PAMIR AND TIAN SHAN OROGENS, WESTERN CHINA

329-6 2:45 PM

Clift, Peter D.; Zheng, Hongbo; Jonell, Tara N.; Carter, Andrew; Böning, Philipp; Shan, Xin; Pahnke, Katharina; Wei, Xiaochun: MODERN AND CENOZOIC EROSION RECORDS OF NORTHWEST TIBET AND PAMIR

SESSION NO. 330

T52. Biotic Revolutions Recorded in the Trace Fossil Record, Neoproterozoic to Recent II (Paleontological Society; Paleontological Research Institution)

1:30 PM, Washington State Convention Center, Room 606

James Lehane and Leif Tapanila, Presiding

330-1 1:30 PM

Labandeira, Conrad C.; Feng, Zhou; Röfler, Ronny; Ślipiński, Adam; Wang, Jun: THE PERMIAN ORIGIN OF WOOD-BORING BEETLES AND THEIR ECOLOGICAL CONTEXT

330-2 1:45 PM

Hsieh, Shannon∗: MORE SNAILS, MORE TRAILS?: THE RELATIONSHIP BETWEEN TRACE AND TRACEMAKER DENSITIES

330-3 2:00 PM

Curran, H. Allen∗; Buynevich, Ilya V.; Kojs; Kopczynski, Karen; Sparacino, Christopher A.; Glumac, Bosiljka; Rodriguez-Tovar, Francisco J.: MODIFICATION OF TROPICAL COASTAL LANDSCAPES BY BRACHYURAN CRABS: NEOCHINOLOGY OF BIOTIC INNOVATION AND SPACE PARTITIONING

2:15 PM

BREAK

330-4 2:30 PM

Tyler, Carrie L.; Duxbury, Troy A.; Portell, Roger W.; Kowalewski, Michał: PREDATION ON THE MODERN ECHINOID MEOMA VENTRICOSA IN A TROPICAL MARINE ENVIRONMENT

330-5 2:45 PM

Petties, Elizabeth∗; Tyler, Carrie L.; Portell, Roger W.; Kowalewski, M.: TRENDS IN PREDATION AND PARASITISM RECORDED BY DRILL HOLES IN PALEOGENE ECHINODIDS

330-6 3:00 PM

Huntley, John Warren∗; Linehan, Liane Christine; De Baets, Kenneth: PHANEROZOIC TRENDS IN PARASITE-HOST...
INTERACTIONS AMONG COMMON MARINE BENTHOS: MOUNTING RISK OR SPURIOUS CONSEQUENCE OF A BIASED RECORD?  
3:15 PM  
**DISCUSSION**  
*330-7 3:30 PM* Wistort, Zachary P.*; Ekdale, Allan A.; Ritterbush, Kathleen A.; Silicified Trace Fossils and ichnofabrics in the Permian of Northwes...  
*330-8 3:45 PM* Buatois, Luis A.*; Mangano, Mario Gabriela; The Trace-fossil record of Major evolutionary radiations (Invited Presentation)  
*330-9 4:00 PM* Ekdale, A.A.*; Significance of ichnofabric in the grand (Phanerozoic) scheme of things (Invited Presentation)  
4:15 PM  
**CONCLUDING REMARKS**  

**SESSION NO. 331**  

**T57. Mercury in the Geologic Record (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)**  
1:30 PM, Washington State Convention Center, Room 607  
Stephen E. Grasby, Presiding  

**331-1 1:30 PM** Thibodeau, Alyson M.*; Bergquist, Bridget A.; Corsetti, Frank A.; Yager, Joyce A.; West, A. Joshua; Bottjer, David J.; Berelson, William M.; Kah, Linda C.; Hazen, Robert M.; Ono, Shuhei; HG isotopes as tracers of depositional environments in marine sediments from the Precambrian to the Phanerozoic  

**331-2 1:45 PM** Zheng, Wang*; Gilleaudeau, Geoffrey J.; Kah, Linda C.; Anbar, Ariel D.; Mercury stable isotopes as a novel proxy for photic zone euxinia  

**331-3 2:00 PM** Sun, Guangyi*; Feng, Xinbin; Yin, Runsheng; Fu, Xuewu; Isotopic signatures of mercury contamination in the Ediacaran Doushantu formation  

**331-4 2:15 PM** Faggetter, Luke E.*; Wignall, Paul B.; Pruss, Sara B.; Jones, David S.; Grasby, Stephen E.; Mercury enrichments coincident with trilobite extinction at the Cambrian Series 2–3 boundary: An imprint of the Kalkarindji lip? (Invited Presentation)  

**331-5 2:30 PM** Gong, Qing*; Zhao, Laishi; Wang, Xiangdong; Chen, Zhong Qiang; Grasby, Stephen E.; Lyu, Zhengyi; Mercury spikes suggest volcanic driver of the Ordovician-Silurian mass extinction  

**331-6 2:45 PM** Huang, Yuangeng*; Chen, Zhong Qiang; Wignall, Paul B.; Grasby, Stephen E.; Zhao, Laishi; Wang, Xiangdong; Kaiho, Kunio; Reef ecosystem collapse and biotic extinction coincide with volcanic volcanism and anoxia over Guadalupian-Lopingian (Permian) transition  

**331-7 3:00 PM** Wang, Xiangdong*; Zhao, Laishi; Chen, ZhongQiang; Grasby, Stephen E.; Cawood, Peter A.; Mercury anomalies show precise coincidence of Siberian and the end-Permian mass extinction in South China  

3:15 PM  
**BREAK**  

**331-8 3:30 PM** Zhao, Laishi*; Wang, Xiangdong; Cawood, Peter A.; Chen, Zhong Qiang; Lv, Zhengyi; Liu, Shijie; Global mercury spike indicates one volatile pulse of the Siberian traps corresponding to the end-Permian mass extinction  

**331-9 3:45 PM** Yager, Joyce*; West, A. Joshua; Bergquist, Bridget A.; Thibodeau, Alyson M.; Corsetti, Frank A.; Berelson, William M.; Bottjer, David J.; Mercury concentrations and isotopes from the Triassic-Jurassic boundary: A lithologic and depositional discussion  

**331-10 4:00 PM** Percival, Lawrence M.E.*; Jenkyns, Hugh C.; Mather, Tamson A.; Hesselbo, Stephen P.; Ruhl, Micha; Whiteside, Jessica H.; Dickson, Alex J.; Barclay, Richard S.; Jarvis, Ian; Mercury as a proxy for large igneous province volcanism: A comparison of Mesozoic events  

**SESSION NO. 332**  

**T65. Eco-Evolutionary Dynamics in the Fossil Record (Paleontological Research Institute; Paleontological Society)**  
1:30 PM, Washington State Convention Center, Room 608  
Peter D. Roopnarine and Ashley A. Dineen, Presiding  

**332-1 1:30 PM** Novack-Gottshall, Philip M.*; What we know, think we know, and don’t yet know about ecological diversity during the Phanerozoic (Invited Presentation)  

**332-2 1:45 PM** O’Neil, Gretchen R.*; Tackett, Lydia S.; Schiffbauer, James D.; Huntley, John Warren; Cai, Yaoping; Changing ecosystem dynamics in the terminal Eodi carbonan verimforma fauna: An analysis using sedimentological and diversity data from the Gojiashan Lagerstatte of South China  

**332-3 2:00 PM** Finneegan, Seth*; Droser, Mary L.; Gehling, James G.; Unusual patchiness of Eodi carbonan benthic assemblages relative to Phanerozoic and modern benthic assemblages  

**332-4 2:15 PM** Kempf, Hannah L.*; Castro, Ian O.; Tyler, Carrie L.; Dineen, Ashley A.; Roopnarine, Peter D.; Using Food Webs to understand the effects of biotic invasion on late Ordovician marine community structure  

**332-5 2:30 PM** Opazo, L. Felipe*; Marquet, Pablo A.; Dunne, Jennifer; Arroyo, Jose I.; Brito, Gabriel A.; Dannemann, Teodoro; Rivera, Carla N.; Structure and functionality: Analysis of the Triassic-Jurassic food web  

**332-6 2:45 PM** Dineen, Ashley A.*; Fraiser, Margaret L.; Roopnarine, Peter D.; Functional space occupation after the permo-triassic mass extinction: A study of the early Triassic virgin limestone member (moenkopi formation)  

**332-7 3:00 PM** Angeliczyk, Kenneth D.*; Roopnarine, Peter D.; Olroyd, Savannah L.; Nesbitt, Sterling J.; Botha-Brink, Jennifer; Peecook, Brandon R.; Day, Michael O.; Smith, Roger M.H.; Comparing the ecological dynamics of permain-triassic tetrapod communities from the Karoo, Luangwa, and Ruuhu basins of Southern Africa  

**332-8 3:15 PM** Roopnarine, Peter D.*; Weik, Allen S.; Angeliczyk, Kenneth D.; Dineen, Ashley A.; Eco-evolutionary dynamics and community response, recovery and replacement during and after the permain-triassic mass extinction in the Karoo basin, South Africa  

**332-9 3:30 PM** Maguire, Kaitlin Clare*; Niche dynamics in space and time: The nexus of ecology and evolution (Invited Presentation)  

**332-10 3:45 PM** Smiley, Tara M.*; Moroz, Molly; Badgley, Catherine; Cerling, Thure; Ecological response to environmental change: Insights from the Miocene small-mammal record of Southern California
SESSION NO. 333

T33. Geoscience and the Law: Exploring the Legal and Ethical Issues of Geologic Research and Practice (GSA Geology and Society Division; GSA Academic and Applied Geoscience Relations Committee; GSA Environmental and Engineering Geology Division)

1:30 PM, Washington State Convention Center, Room 611

1:30 PM

Murray, Kyle E.*: WHOSE FAULT IS IT? PROBABLY NO ONE’S

1:45 PM

Reckendorf, Frank F.*: KEYS TO BEING SUCCESSFUL IN PRE-LITIGATION AND LITIGATION AS AN EXPERT WITNESS

2:00 PM

Mogk, D.W.*: GEOETHICS AND PROFESSIONALISM IN THE GEOSCIENCES: BE AWARE, BE PREPARED, BE READY TO ACT (Invited Presentation)

2:15 PM

Strewtall, Gerry L.*: ADDRESSING GEOLOGIC SITE CHARACTERIZATION ISSUES IN PUBLIC HEARINGS REQUIRED BY LAW FOR LICENSING NUCLEAR POWER PLANTS AT THE U.S. NRC - A PRACTICAL EXAMPLE

2:30 PM

Doss, Paul K.*: IMPLICATIONS FROM THE INTERSECTION OF “GEOLOGICAL PRACTICE” AND INTERNSHIPS IN HIGHER EDUCATION (Invited Presentation)

2:45 PM

Stover, Susan G.*: GEOSCIENCE FOR LAWMAKERS

SESSION NO. 334

T34. Engaging Students through Course-Based Undergraduate Research Experiences (CURE) across the Geoscience Curriculum (GSA Geoscience Education Division; Council on Undergraduate Research Geosciences Division)

1:30 PM, Washington State Convention Center, Room 2B

1:30 PM

INTRODUCTORY REMARKS

1:35 PM

Reinen, Linda A.*; Brenner, Kerry: BENEFITS AND CHALLENGES OF COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCES (CURES) FOR STEM STUDENTS: A REPORT FROM THE NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE (Invited Presentation)

1:45 PM

Stover, Susan G.*: “MOM, DON’T EAT THOSE TOMATOES” OR WHAT A COURSE-BASED RESEARCH EXPERIENCE AT FLORIDA GULF COAST GEOLGY COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCES (CURES): SCANNING ELECTRON MICROSCOPE TO INSPIRE STUDENTS WITH REAL SCIENCE IN THE CLASSROOM

2:00 PM

Freile, Deborah: “MOM, DON’T EAT THOSE TOMATOES” OR WHAT A COURSE-BASED RESEARCH EXPERIENCE ON BACKYARD SOIL TESTING TAUGHT STUDENTS IN A ONE-SEMESTER BREAK

2:15 PM

Kortz, Karen M.*; Savage, Brian; Rieger, Duayne; Cardace, James: A JOINT 2YC-4YC CURE TO IMPROVE STUDENT RETENTION AND SUCCESS (Invited Presentation)

2:30 PM

MacDonald, James H.; Savarese, Michael; Muller, Joanne; Barbosa, Alayde A.; Abercrombie, Mary I.; Ryan, Jeffrey G.: GEOLOGY COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCES AT FLORIDA GULF COAST UNIVERSITY: A CURRICULUM INVESTMENT IN CURES

2:45 PM

Beck, Mary A.*; Ryan, Jeffrey; Vidito, Chris: DISCUSSION
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<td>2:15 PM</td>
<td>Famoso, Nicholas A.: EXPERIENCE YOUR PREHISTORIC AMERICA: THE MUSEUM PROGRAM AT JOHN DAY FOSSIL BEDS NATIONAL MONUMENT</td>
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<td>335-5</td>
<td>2:30 PM</td>
<td>Nesbitt, Elizabeth A.; Martin, Ruth A.: TESTING THE INSIDE-OUT MODEL OF A NATURAL HISTORY MUSEUM</td>
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<td>BREAK</td>
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<td>335-6</td>
<td>3:00 PM</td>
<td>McKee, Melissa*; Palakarn, Sajirat; Thomas, Ellen: THE JOE WEBB PEOPLES MUSEUM PROJECT AT WESLEYAN UNIVERSITY (MIDDLETOWN, CT)</td>
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<td>Farke, Andrew A.: EVOLVING THE ROLE OF HIGH SCHOOL STUDENTS IN RESEARCH AT THE RAYMOND M. ALF MUSEUM OF PALEONTOLOGY</td>
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<td>335-8</td>
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<td>Tapanila, Leif*: VIRTUAL MUSEUM OF IDAHO AND REACHING THE POTENTIAL OF THE DIGITAL REVOLUTION</td>
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<td>335-9</td>
<td>3:45 PM</td>
<td>Clary, Renee M.*; Moe Hoffman, Amy: MAINTAIN THE MESSAGE, ADAPT THE DELIVERY: OPTIMIZING OUTREACH FOR SMALL MUSEUM SUCCESS</td>
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<td>335-10</td>
<td>4:00 PM</td>
<td>Johnson, Kirk*: DIGITIZATION OF MUSEUM COLLECTIONS AND THE FUTURE OF NATURAL HISTORY SCIENCE (Invited Presentation)</td>
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**SESSION NO. 337**

**SESSION NO. 336**

**T131. Translating Professional Development Experiences into the Classroom II (GSA Geoscience Education Division; National Association of Geoscience Teachers)**

1:30 PM, Washington State Convention Center, Room 2A

Megan H. Jones, Jacquelyn Hams and Richard M. Jones, Presiding

1:30 PM INTRODUCTORY REMARKS

336-1 1:40 PM Clary, Renee M.*; Dunne, James A.; Wax, Charles: MUTUALISTIC PROFESSIONAL DEVELOPMENT: BUILDING A COLLABORATIVE LEARNING EXPERIENCE THROUGH CO-TEACHING (Invited Presentation)

336-2 2:00 PM Callahan, Caitlin N.*: SHARING THE IDEA OF ADAPTATIONS WITH PRE-SERVICE TEACHERS: REFLECTIONS ON A PROFESSIONAL DEVELOPMENT WORKSHOP RELATED TO INCLUSIVE EDUCATION

336-3 2:15 PM Quesada, David*: TRANSLATING CLIMATE-ORIENTED PROFESSIONAL DEVELOPMENT EXPERIENCES INTO LIBERAL ART EDUCATION VIA CONTENT EMBEDDING ACROSS CURRICULUM

336-4 2:30 PM Bristol, Denise*: DISCIPLINE-BASED PROFESSIONAL DEVELOPMENT AND MENTORING AS A CATALYST FOR TRANSFORMATIONAL CHANGE IN TEACHING PRACTICE

336-5 2:45 PM Gill, Thomas E.*; Collins, Joe D.: PROFESSIONAL DEVELOPMENT WORKSHOPS AS A FORCE MULTIPLIER: AN EXAMPLE FROM PALEOClimatology

3:00 PM BREAK

336-6 3:15 PM Moosavi, Sadredin Cyrus*: INTRODUCING MARINE SCIENCE TO THE K-12 CLASSROOM VIA AN IN-SERVICE TEACHER PROFESSIONAL DEVELOPMENT WORKSHOP

336-7 3:30 PM Glancy, Sarah Elizabeth*; St. John, Kristen; Jones, Megan H.; Gill, Thomas E.: THE IMPORTANCE OF PROFESSIONAL DEVELOPMENT OPPORTUNITIES FOR ADJUNCT INSTRUCTORS

336-8 3:45 PM Idowu, Ayonnde*: A CASE STUDY ON EDUCATION CURRICULUM DEVELOPMENT OF EARTH – ATMOSPHERE GEOSCIENCES AT UNIVERSITY OF HOUSTON-DOWNTOWN (UH-D): A PRESENTATION AT THE GEOLOGICAL SOCIETY OF AMERICA (GSA) ANNUAL MEETING, 22-26 OCTOBER 2017 IN SEATTLE, WA

336-9 4:00 PM Petsche, Joseph*; Jones, Megan: USING AUTHENTIC CLIMATE DATA PROXIES TO INCREASE STUDENT ENGAGEMENT AND OVERALL SUCCESS RATES IN EARTH SCIENCE COURSES DESIGNED FOR NON-MAJORS

336-10 4:15 PM Taylor, Stephen V.; Hovan, Steven A.; Jones, Megan: A BIG LESSON FROM TINY FORAMS: A SIMPLE HANDS-ON ACTIVITY FOR HOW SCIENTISTS INFERR CLIMATE OF THE PAST

4:30 PM DISCUSSION

4:45 PM CONCLUDING REMARKS

**SESSION NO. 338**


1:30 PM, The Conference Center, Skagit 4

Amy L. Weislogel and Joshua J. Schwartz, Presiding

1:30 PM INTRODUCTORY REMARKS

338-1 1:35 PM Banik, Tenley J.; Carley, Tamara L.; Coble, Matthew A.: TEMPORAL AND GEOCHEMICAL EVOLUTION OF SUBGLACIALLY DERIVED DETRITAL ZIRCON ALONG THE ÖREVI VOLCANIC BELT, ICELAND

338-2 1:50 PM Kushnir, B.*; Soreghan, G.S.; Soreghan, M.J.: HETEROGENEITY OF CLASTIC PROVENANCE TO THE PENNSYLVANIAN ANADARKO BASIN AND IMPLICATIONS FOR PALEOGEOmorphology

338-3 2:05 PM Hutter, Alex*; Beranek, Luke P.: MAGMATIC EVOLUTION OF THE AVALONIAN ARC SYSTEM REVEALED BY EDIACARAN STRATA IN EASTERN NEWFOUNDLAND: NEW RESULTS FROM LASER ABLATION SPLIT STREAM (LASS) DETRITAL ZIRCON U-Pb GEOCHRONOLOGY AND HF ISOTYPE GEOCHEMISTRY


338-5 2:35 PM Capaldi, Tomas N.*; Horton, Brian K.; McKenzie, N. Ryan; Alvarado, Patricia A.: TRACKING ANDEAN ARC MAGMATISM AND CRUSTAL SHORTENING DURING A SHIFT TO FLAT-SLAB SUBDUCTION USING DETRITAL ZIRCON GEOCHRONOLOGY FROM THE RETROARC FORELAND BASIN SYSTEM OF WESTERN ARGENTINA (30.5°S)

338-6 2:50 PM Surpless, Kathleen D.*; Clemens-Knot, Diane; Barth, Andrew; Gevedon, Michelle L.; Wooden, Joseph L.: THE VIEW FROM THE FOREARC: A SURVEY OF SIERRA NEVADA MAGMATISM USING GREAT VALLEY DETRITAL ZIRCON TRACE ELEMENT GEOCHEMISTRY (Invited Presentation)

338-7 3:10 PM McKay, Matthew P.*; Weislogel, Amy L.; Jackson, William T.; Dean, Justin; Fildani, Andrea: STRUCTURAL AND MAGMATIC CONTROLS ON THE TURBIDITES OF THE KAROO BASIN, SOUTH AFRICA

3:25 PM BREAK

338-8 3:40 PM Holland, Mark E.*; Karlstrom, Karl E.; Gehrels, George E.; Pecha, Mark: PAIRED U-PB AND LU-HF ISOTOPE ANALYSIS OF DETRITAL AND PLUTONIC ZIRCON TRACK BASIN FORMATION AND SUBSEQUENT CRATONIZATION IN THE PALEOPROTEROZOIC MOJAVE PROVINCE OF SOUTHWESTERN LAURENTIA

338-9 3:55 PM Murray, Bryan P.*; Hanes, Willis E.: EARLY MIocene SYNEXTENSIONAL VOLCANISM AND DEPOSITION IN THE NORTHERN CALIco MOUNTAINS, CENTRAL MOJave METAMORPHIC CORE COMPLEX, SOUTHERN CALIFORNIA

338-10 4:10 PM Andrews, Graham D.M.*; Davila-Harris, Pablo; Brown, Sarah R.: THE STRATIGRAPHIC RECORD OF SYN- AND POST-VOLCANIC EXTENSION ADJACENT TO
THE SIERRA MADRE OCCIDENTAL SILICIC LARGE IGNEOUS PROVINCE, NORTHERN MEXICO (Invited Presentation)

337-11 4:30 PM Cope, Tim D.*: THE HEARTBEAT OF AN ARC

337-12 4:45 PM Zhou, Tengfei*; Zhou, Yaoqi; Zhang, Zhenkai; He, Chuan: THE COUPLED EVOLUTION OF VOLCANIC AND SEDIMENTARY SYSTEMS IN EARLY CRETACEOUS OF EASTERN SHANDONG COASTAL RIFT BASIN, EAST CHINA

337-13 5:00 PM Li, Zengda*: TRIASSIC MAGMATISM IN SOUTHERN BEISHAN OROGEN, NW CHINA: ZIRCON U–PB GEOCHRONOLOGY, PETROGENESIS AND TECTONIC IMPLICATIONS

5:15 PM CONCLUDING REMARKS

SESSION NO. 338

T170. Rock Transforming to Soil—The Weathering Engine Intersects with the Carbon Cycle (GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology & Geomicrobiology Division; Paleoclimatology/Paleoceanography)

1:30 PM, The Conference Center, Skagit 3

Zsuzsanna Balogh-Brunstad and Marjorie Schulz, Presiding

1:30 PM INTRODUCTORY REMARKS

338-1 1:35 PM Montgomery, David R.*; Biklé, Anne: GROWING A REVOLUTION WITH THE HIDDEN HALF OF NATURE (Invited Presentation)

338-2 1:55 PM Creamer, Courtney*; Foster, Andrea L.; Lawrence, Corey; McFarland, Jack; Schulz, Marjorie; Waldrop, Mark P.: MINERALOGY CONTROLS THE MECHANISM AND EXTENT OF MICROBIAL C STABILIZATION (Invited Presentation)

338-3 2:15 PM James, Jason*; Harrison, Rob: INTERACTION BETWEEN CARBON AND NUTRIENT CYCLES IN DEEP SOILS OF THE PACIFIC NORTHWEST

338-4 2:30 PM Hasenmueler, Elizabeth A.*; Gu, Xin; Weitzman, Julie N.; Adams, Thomas S.; Stinchcomb, Gary E.; Eissenstat, David M.; Drohan, Patrick J.; Bantley, Susan L.; Kaye, Jason P.: WEATHERING OF ROCK TO RGOLITH: THE ACTIVITY OF DEEP ROOTS IN BEDROCK FRACUTURES

338-5 2:45 PM Schulz, Marjorie S.*; Dohnalkova, A.; Lawrence, Corey; Stonestrom, David A.: EFFECTS OF ROOT AND RHIOSPHORE PROCESSES ON DEEP SOILS AND BEDROCK

338-6 3:00 PM Palmer, Corey*: Markstein, Katherine; Tanner, Lawrence H.: EXPERIMENTAL STUDY OF SOIL CO2–FLUX DEPENDENCE ON TEMPERATURE AND MOISTURE: PRELIMINARY RESULTS

3:15 PM BREAK

338-7 3:30 PM Balogh-Brunstad, Zsuzsanna*: Keller, C. Kent; Shi, Zhenqing; Wallander, Håkan; Stipp, Susan L.S.: RHIZOSPHERIC WEATHERING: COLUMN EXPERIMENTS WITH SCOTS AND RED PINE SEEDLINGS

338-8 3:45 PM Testa, Maurice P.*; Garner, Brittany M; Kirkland, Brenda L.: IMAGING THE INTERFACE BETWEEN ORGANIC MOLECULES AND CARBONATE MINERAL GROWTH

338-9 4:00 PM Gorony, Shorish Mustafa Abdullah*: Kolo, Kamal: TEXTURAL AND MINERALOGICAL MICROBIAL DIAGENETIC ALTERATIONS AND SECONDARY METABOLITES AS BIOSIGNATURES IN NATURAL ROCK SUBSTRATES A CASE STUDY OF LICHENS–ROCK SURFACES INTERACTION IN HASAN BEG AND GRDMANDIL MOUNTAINS, KURDISTAN, IRAQ

338-10 4:15 PM Webb, Richard M.T.*; Clow, David W.; Mast, M. Alisa: USE OF WEIGHTED REGRESSIONS ON TIME, DISCHARGE, AND SEASON TO ELUCIDATE THE ROLE OF DIFFUSION, PHENOLOGY, AND COLOIDS IN THE WEATHERING OF A SUB-ALPINE WATERSHED

338-11 4:30 PM Evans, Andrew; Jacobs, Michael B.: LIGAND EXCHANGE PROCESSES IN ALPINE TUNDRA SOIL - IMPLICATIONS FOR SOIL ACIDIFICATION AND ALUMINUM TRANSPORT

338-12 4:45 PM Cuozzo, Nicolas*; Sletten, Ronald S.; Hu, Yan; Teng, Fang-Zhen: CHEMICAL WEATHERING IN PERMAFROST ASSESSED USING MAGNESIUM ISOTOPES

5:00 PM CONCLUDING REMARKS

SESSION NO. 339

T183. Advances and Challenges in Quantifying Sediment Budgets for River Systems (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Chelan 4

Christopher Magiri, Allen C. Gellis and Jon Major, Presiding

1:30 PM INTRODUCTORY REMARKS

339-1 1:35 PM Topping, David J.*; Griffiths, Ronald E.; Dean, David J.; Grams, Paul E.; Buscombe, Daniel D.; Mueller, Erich R.: ON-DEMAND CONTINUOUS MASS-BALANCE SEDIMENT BUDGETS FOR RIVER SCIENCE AND MANAGEMENT (Invited Presentation)

339-2 1:55 PM Curran, Christopher A.*; Jaeger, Kristin L.; Anderson, Scott W.; Morris, Scott T.: A SUSPENDED SEDIMENT BUDGET FOR A GLACIER-FED RIVER: SAUK RIVER, WASHINGTON, USA

339-3 2:10 PM O’Connor, Jim E.*; Wise, Daniel C.; Mangano, Joseph F.: WASTING (AND DISSOLVING) AWAY IN WESTERN OREGON

339-4 2:25 PM Warrick, Jonathan A.*; Ritchie, Andrew; East, Amy; Magiri, Christopher S.; Bountr, Jennifer; Randle, Tim; Stevens, Andrew W.; Duda, Jeffrey; Hilldale, Robert C.; Curran, Chris A.; Gelfenbaum, Guy: FLUVIAL AND COASTAL MORPHODYNAMIC EVOLUTION FOLLOWING A MASSIVE SEDIMENT RELEASE FROM THE WORLD’S LARGEST DAM REMOVAL

339-5 2:40 PM Pitlick, John*: Bizi, Simone; Schmitt, Rafael: MODELING CHANGES IN THE FLUX AND GRAIN SIZE DISTRIBUTION OF THE BED SEDIMENT IN A LARGE GRAVEL-BED RIVER

339-6 2:55 PM Dethier, Evan N.*; Renshaw, Carl E.; Magilligan, Francis J.: QUANTIFYING SUSPENDED SEDIMENT CONCENTRATION FROM SPACE: GLOBAL VARIABILITY AND TRENDS

339-7 3:10 PM Gran, Karen B.*; Bevis, Martin A.: HOW FAR CAN YOU EXPAND YOUR SEDIMENT BUDGET? ATTEMPTS TO TAKE AN INTEGRATED SEDIMENT BUDGET AND extrapolate it to neighboring basins in an agricultural watershed in the Upper Midwest, USA (Invited Presentation)

3:30 PM BREAK

339-8 3:45 PM Dunne, Thomas*: SEDIMENT TRANSPORT AND STORAGE ALONG AMAZON RIVER VALLEYS (Invited Presentation)

339-9 4:00 PM Sickmann, Zachary*: Grams, Paul E.; Paul, Christopher; Gelfenbaum, Guy: ANTHROPOGENIC EFFECTS ON SEDIMENT BUDGETS MANIFESTED IN DRETIAL ZIRCON PROVENANCE SIGNATURES

339-10 4:15 PM Beck, William; Moore, Peter*; Schilling, Keith; Wolter, Calvin; Isenhart, Tom: EFFECTS OF CHANNEL GEOMETRY ON FLOODPLAIN INUNDATION FREQUENCY AND SEDIMENT ACCRETION, WALNUT CREEK, IOWA, USA

339-11 4:30 PM Gellis, Allen C.*; Fuller, Christopher C.; Van Metre, Peter C.; Filstrup, Christopher; Toner, Mark D.; Cole, Kevin: THE SOURCES AND AGES OF FINE-GRAINED SEDIMENT USING ELEMENTAL ANALYSIS AND FALLOUT
SESSION NO. 340

T186. Heterogeneity in Landscape Evolution: Geomorphic Response to Spatially and Temporally Variable Forcings (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division; GSA Structural Geology and Tectonics Division; Future of Tectonics Initiative)

1:30 PM, The Conference Center, Chelan 2

Sarah A. Schanz and Charles M. Shobe, Presiding

340-1  1:30 PM  Harbert, Sarah A.*; Duvall, Alison R.; Tucker, Gregory E.: THE IMPORTANCE OF NEAR-FAULT RELIEF ELEMENTS IN DEVELOPING A “CLASSIC” STRIKE-SLIP LANDSCAPE

340-2  1:45 PM  Covington, Matthew D.*; Perne, Matija; Thaler, Evan; Myre, Joseph: MODELING LANDSCAPE EVOLUTION WITHIN LAYERED ROCKS: WITHER EQUILIBRIUM?

340-3  2:00 PM  Forte, Adam M.*; Yanites, Brian J.; Whipple, Kelin X.: INFLUENCE OF DEFORMED STRATIGRAPHY ON DRAINAGE NETWORK STRUCTURE (Invited Presentation)

340-4  2:20 PM  Aldred, Jennifer L.*; Eppes, Missy; Kayser, Brandt; Diemer, John A.; Deal, Rebecca: SOIL HETEROGENEITY PROVIDES EVIDENCE OF SPATIAL AND TEMPORAL VARIANCE IN CLIMATE-DRIVEN LANDSCAPE CHANGE, SOUTHEAST SAN JUAN MOUNTAINS, CO, USA

340-5  2:35 PM  Bingham, Nina L.*; Bookhagen, Bodo; Chadwick, Oliver A.: SPATIAL AND TEMPORAL PATTERNS OF ANTROPOGENIC-DRIVEN EROSION CONTROLLED BY ROCK TYPE

340-6  2:50 PM  Schenk, Edward R.*; Tobin, Benjamin W.; Tanoki, Natalie; Marineau, Mathieu: DETERMINING THE PROCESS OF DESERT STREAM RECOVERY FOLLOWING DEBRIS FLOW AND IMPLICATIONS OF CLIMATE CHANGE

340-7  3:05 PM  Dente, Elad; Lensky, Nadav; Morin, Efrat; Grodek, Tamir; Sheffer, Nathan; Enzel, Yehouda*: GEOMORPHIC RESPONSE OF A LONG-LOW-GRADE CHANNEL TO MODERN, DECADES-LONG AND CONTINUOUS BASE-LEVEL LOWERING: NAHAL HAARAVA, THE DEAD SEA BAY

340-8  3:20 PM  Rossi, Matthew W.*; Anderson, Robert S.; Anderson, Suzanne P.; Tucker, Gregory E.: GEOMORPHIC IMPLICATIONS OF THE OROGRAPHIC TRANSITION FROM SNOWMELT TO RAINFALL TRIGGERED EXTREME EVENTS IN THE COLORADO FRONT RANGE

340-9  3:40 PM  DiBiase, Roman A.*; Rossi, Matthew W.; Neely, Alexander B.: BEDROCK CLIFFS, COLLUVIAL SLOPES, AND FLUVIAL RELIEF CONTROLLED VIA FRACTURE DENSITY AND GRAIN SIZE (Invited Presentation)

340-10 4:10 PM  Shobe, Charles M.*; Tucker, Gregory E.; Rossi, Matthew W.: VARIABLE THRESHOLDS IN MOUNTAIN RIVERS IMPOSED BY HILLSLOPE-DERIVED BLOCKS

SESSION NO. 341

T192. Mountain Glaciation and Climate Change of the Past and Present in the Western Americas (GSA Quaternary Geology and Geomorphology Division)

1:30 PM, The Conference Center, Chelan 5

Benjamin J. Laabs, Eric M. Leonard and Mitchell Plummer, Presiding

341-1  1:30 PM  Licciardi, Joseph M.*; Pierce, Kenneth L.: NEW PERSPECTIVES ON THE HISTORY AND DYNAMICS OF LATE PLEISTOCENE GLACIATION IN GREATER YELLOWSTONE AND THE TETON RANGE (Invited Presentation)


341-3  2:10 PM  Dahms, Dennis*; Egli, Markus; Fabel, Derek; Harbor, Jon; Brandova, Dagmar; Portes, Raquel; Christl, Marcus: NEW "BE EXPOSURE AGES FOR PLEISTOCENE GLACIAL STRATIGRAPHY, SOUTHERN WIND RIVER RANGE, WYOMING, USA

341-4  2:25 PM  Laabs, Benjamin J.*; Licciardi, Joseph M.; Marchetti, David W.; Munroe, Jeffrey S.; Leonard, Eric M.: COSMOGENIC NUCLIDE EXPOSURE AGE LIMITS ON THE PENULTIMATE GLACIATION IN THE CONTERMINOUS WESTERN U.S.

341-5  2:40 PM  Ruleman, Chester A.*; Caffee, Marc W.; Brugger, Keith A.; Hudson, Adam M.; Thompson, Ren A.; Frothingham, Michael G.; Passehl, Candice D.: MIS 6 AND YOUNGER GLACIAL DYNAMICS WITH IMPLICATIONS ON THE GROWTH AND DEVELOPMENT OF THE MIDDLE TO LATE PLEISTOCENE CENTRAL COLORADO ICEFIELD AND ASSOCIATED REGIONAL INCISION, SAWATCH RANGE, CO, USA

341-6  2:55 PM  Doughty, Alice Marie*; Kelly, Meredith A.; Russell, James M.; Anderson, Brian; Jackson, Margaret S.; Modeling Glacial Extent During the Last Glacial Maximum in Uganda (Invited Presentation)

341-7  3:15 PM  Break

341-8  3:30 PM  Quirk, Brendon J.*; Moore, Jeffrey R.; Laabs, Benjamin J.; Plummer, Mitchell A.; Taylor, Jenna: WASATCH RANGE, UT GLACIER RECONSTRUCTIONS FOR THE LAST GLACIAL MAXIMUM AND LATEGLACIAL

341-9  3:45 PM  Brugger, Keith A.*; Ruleman, Chester A.; Caffee, Marc W.: GLACIATION AND CLIMATE DURING THE LAST GLACIAL MAXIMUM IN THE MOUNT MASSIVE REGION, NORTHERN SAWATCH RANGE, COLORADO

2017 GSA Annual Meeting & Exposition
SESSION NO. 342

**T199. Basalt Weathering on Earth and Mars (GSA Planetary Geology Division)**

1:30 PM, The Conference Center, Tahoma 1

Melissa S. Rice, Leslie L. Baker and Michael D. Kraft, Presiding

**342-1** 1:30 PM Hausrath, Elisabeth M.*;Ralston, Stephanie J.;Bamisile, Toluwalope;Ming, Douglas W.;Peretyazhko, Tanya;Rampe, Elizabeth B.;Gainey, Seth R.: INVESTIGATING WEATHERING OF BASALTIC MATERIALS IN GALE CRATER, MARS: A COMBINED LABORATORY, MODELING AND TERRESTRIAL FIELD APPROACH (Invited Presentation)

**342-2** 1:45 PM Buczkowski, Debra L.*;Seelos, Kimberly D.;Viviano-Beck, Christina E.;Seelos, Frank P.;Murchie, Scott L.: ANOMALOUS PHYLLOSILICATE-BEARING OUTCROP SOUTH OF COPRATES CHASMA: A STUDY OF POSSIBLE ECLIPSMENT MECHANISMS

**342-3** 2:00 PM Achilles, Cherie N.*;Downs, Robert T.;Rampe, Elizabeth B.;Morris, Richard V.;Bristow, Thomas F.;Ming, Douglas W.;Blake, David F.;Vaniman, David T.;Morrison, Shauna M.;Sutter, Brad;McAdam, Amy;Arch, Daniel R.;Dow, Thompson;Lucy M.;Gelert, Ralf;Chiperia, Steve;Teiman, Allan H.;Yen, Albert S.;Hazen, Robert M.;Craig, Patricia J.;Crisp, Joy A.;Grotzinger, John P.: THE AMORPHOUS COMPOSITION OF THREE MUDSTONE SAMPLES FROM GALE CRATER: IMPLICATIONS FOR WEATHERING AND DIAGENETIC PROCESSES ON MARS

**342-4** 2:15 PM Jackson, Ryan S.*;Newsom, Horton;Cousin, Agnes;Payne, Valérie;Wiens, Roger C.: CHANGES IN TRACE ELEMENT COMPOSITION BETWEEN FLOAT BASALTAS AND THE SEDIMENTS OF YELLOWKNIFE BAY, GALE CRATER, MARS

**342-5** 2:30 PM Schmidt, Mariek*;Bray, Samantha;Bradley, Nicholas;Perrett, Glynis;Campbell, J.L.;Tesselaar, Dustin: DUSTY ROCKS IN GALE CRATER: ESTIMATING COVERAGE ON APXS TARGETS FROM MAHLI IMAGES AND THE INFLUENCE OF DUST ON ELEMENTAL COMPOSITIONS

**342-6** 2:45 PM Wong, Gregory M.*;McAdam, Amy;Eigenbrode, Jennifer L.;Lewis, James M.T.;House, Christopher H.: INVESTIGATING THE EFFECTS OF CHLORINE MINERALS ON HYDROGEN SULFIDE FORMATION FROM SULFUR MINERALS DURING EVOLVED GAS ANALYSIS (EGA) TO CONSTRAIN MARTIAN BASALTIC MINERALOGY

**342-7** 3:00 PM Kraft, Michael D.*;Spencer, Madison N.;Fristad, Kirsten;Rice, Melissa S.: VARIABILITY IN BASALTIC WEATHERING RINGS FROM A SINGLE WEATHERING ENVIRONMENT: INTERPRETING COLOR DIFFERENCES ON WEATHERED ROCKS ON EARTH AND MARS

3:15 PM BREAK

SESSION NO. 343

**T214. Late Paleozoic and Early Mesozoic Tectono-Stratigraphy and Biostratigraphy of the NW Pangea Margin: In Dedication to Jim Trelux (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division)**

1:30 PM, The Conference Center, Tahoma 2

Walter S. Snyder, Charles M. Henderson and Scott Ritter, Presiding

**343-1** 1:40 PM Colpron, Maurice*;Nelson, JoAnne L.: SETTING THE STAGE IN NW PANGEA – EARLY TO MID-PALaeozoic TRANSLATION OF TERRANES AND ONSET OF THE CORDERILLERAN CONVERGENT MARGIN (Invited Presentation)

**343-2** 2:00 PM Beauchamp, Benoît*: THE SUB-GUADALUPIAN (SUB-MIDDLE PERMIAN) UNCONFORMITY IN ARCTIC CANADA AND ALONG NW PANGEA: A MAJOR PLATE REORGANIZATION LINKED TO THE URALIAN OROGENY

**343-3** 2:15 PM Henderson, Charles M.*: PALEOGEOGRAPHY AND CORRELATION OF LATE PALEOZOIC CRATONIC MARGIN TECTONO-STRATIGRAPHIC UNITS FROM NEVADA TO WESTERN CANADA

**343-4** 2:30 PM Snyder, Walter S.*;Davydov, Vladimir;Schippa, Tamra A.;Spinosa, Claude: LATE PALEOZOIC OF THE WESTERN U.S.: AN ACTIVE CONTINENTAL MARGIN

2:45 PM BREAK

**343-5** 3:00 PM Schippa, Tamra A.*;Spinosa, Claude;Snyder, Walter;Davydov, Vladimir: USING LATE PALEOZOIC AMMONOIDS AS PROXIES FOR BASIN DEVELOPMENT AND CHARACTERIZATION ALONG THE WESTERN MARGIN OF THE UNITED STATES

**343-6** 3:15 PM Ritter, Scott M.*: SEQUENCE STRATIGRAPHY AND BIOSTRATIGRAPHY OF CARBONIFEROUS-PERMIAN BOUNDARY STRATA IN WESTERN UTAH
344-7  3:30 PM  Boyer, Steven E.*; Cheney, Eric S.: STRUCTURE AND TECTONIC SIGNIFICANCE OF THE NORTHEASTERN WASHINGTON FOLD AND THRUST BELT (NEWAFT)

344-8  3:45 PM  Blakely, Ronald*: LINKING LATE PALEOZOIC PLATE-TECTONIC SETTING WITH GEOLOGIC EVENTS, SOUTHWEST NORTH AMERICA

4:00 PM  DISCUSSION

344-9  4:15 PM  Stevens, Calvin H.*; Stone, Paul: "LAST CHANCE" INTERPRETATION OF THE PERMIAN LAST CHANCE THRUST, EAST-CENTRAL CALIFORNIA


4:50 PM  CONCLUDING REMARKS

SESSION NO. 344 $ T225. New Perspectives on Cordilleran Tectonics, Paleogeography, and Metallogeny (GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); Society of Economic Geologists; GSA Structural Geology and Tectonics Division)

1:30 PM, The Conference Center, Tahama 5
Luke P. Berneran, Justin V. Strauss and Stephen J. Piercey, Presiding

344-1  1:30 PM  Nelson, Lyle L.*; Smith, Emily F.; Macdonald, Francis A.; Hodgins, Eben Blake: A PORPOISING CRYOGENIAN BASIN IN THE PANAMINT RANGE, CALIFORNIA

344-2  1:45 PM  Sears, James W.*; NEOPROTEROZOIC-EARLY CAMBRIAN PULL-APART BASINS ALONG CORDILLERAN TRANSFORM MARGIN, NORTH AMERICA, AND IMPLICATIONS FOR SIBERIAN CONJUGATE CONNECTION

344-3  2:00 PM  Hart, Craig J.R.*: ANCIENT RIFTED LAURENTIAN MARGIN CONTROLS ON MESO-CENOZOIC CORDILLERAN METALLOGENY (Invited Presentation)


344-5  2:35 PM  Dusel-Bacon, Cynthia*; Holm-Denoma, Christopher S.; Jones, James V.; Aleinikoff, John N.; Mortensen; James K.: DETRITAL ZIRCON GEOCHRONOLOGY AND PROVENANCES OF QUARTZOSE METASEDIMENTARY ROCKS FROM PARAUTOCHTHONOUS NORTH AMERICA, EAST-CENTRAL ALASKA


344-7  3:05 PM  Finzel, Emily S.*; Enkelmann, Eva; Falkowski, Sarah; Reid, Mattie M.; McClleland, William C.: FOREARC BASIN DETRITAL RECORD OF MESOZOIC-CENOZOIC TECTONICS IN THE NORTHERN CORDILLERA, SOUTH-CENTRAL ALASKA (Invited Presentation)

344-8  3:25 PM  Vice, Liamm E.D.*; Gibson, H. Dan; Israel, Steve A.; Crowley, James L.: EVOLUTION OF JURA-CRETACEOUS BASINS IN SOUTHWEST YUKON, WITH IMPLICATIONS FOR MESOZOIC ACCREATIONARY PROCESSES IN THE WESTERN NORTH AMERICAN CORDILLERA

344-9  3:40 PM  Long, Sean P.*: A SUMMARY OF RECENT PROGRESS ON UNDERSTANDING THE STRUCTURAL EVOLUTION AND PALEOGEOGRAPHY OF THE NEVADADPLANO (Invited Presentation)

344-11  4:15 PM  Balgord, Elizabeth*; Yonkee, Adolph; Wells, Michael: EVALUATING ARC PERIODICITY AND GEOCHEMICAL EVOLUTION WITHIN THE CENTRAL NORTH AMERICAN CORDILLERA: CONSTRAINTS FROM THE U-PB AND HF ISOTOPE RECORD OF DETRITAL ZIRCONS IN FORELAND STRATA

344-12  4:30 PM  Schermer, Elizabeth*; Labadie, Julia E.; Griesel, Gerald E.; Fitts, Aaron; Isaacson, Robert G.: GEOCHRONOLOGIC CONSTRAINTS ON THE HISTORY OF MAGMATISM, METAMORPHISM, AND DEFORMATION IN THE CHELAN MOUNTAINS TERRANE, NW CASCADES CRYSTALLINE CORE, WA


344-14  5:00 PM  Hampton, Brian A.*; Jacobs, Makayla R.; Stopka, Cody J.: U-PB DETRITAL GEOCHRONOLOGY AND HF ISOTOPE ANALYSES FROM UPPER CRETACEOUS STRATA OF THE NORTHERN TALKETEENA MOUNTAINS, SOUTHERN ALASKA: SEDIMENT DISPERSAL AND MAGMATISM DURING THE FINAL ACCRETIONARY PHASE OF THE WRANGELIA COMPOSITE TERRANE

344-15  5:15 PM  Israel, Steve A.*; Murphy, Donald C.; Crowley, James L.; Benowitz, Jeffrey A.: CHARACTERIZATION OF PALEOCENE TO EOCENE MAGMATISM AND TECTONICS IN THE NORTHERN CANADIAN CORDILLERA AND THEIR ROLE IN REGIONAL METALLOGENY

SESSION NO. 345 T233. Tectonics, Geohazards, and Morphodynamics from High-Resolution Topography and Imagery (GSA Quaternary Geology and Geomorphology Division; GSA Environmental and Engineering Geology Division; GSA Structural Geology and Tectonics Division)

1:30 PM, The Conference Center, Tahama 4
Amit Mushkin and Edwin Nissen, Presiding

345-1  1:30 PM  Madin, Ian P.*; Edwards, Jacob: HIGH RESOLUTION LIDAR IMAGERY FROM THE OREGON LIDAR CONSORTIUM: A UNIQUE RESOURCE FOR GEOSCIENCE RESEARCH

345-2  1:45 PM  LaHusen, Sean Richard*; Booth, Adam M.; Duvall, Alison R.; Montgomery, David R.: DEVELOPING A REGIONAL LANDSLIDE CHRONOLOGY NEAR OSO, WASHINGTON (USA) USING TOPOGRAPHIC ROUGHNESS MEASURED FROM LIDAR IMAGERY (Invited Presentation)

345-3  2:05 PM  Shemesh, Ran*; Mushkin, Amit; Crouvi, Orni; Katz, Oded; Enzel, Yehouda; Lensky, Nadav: THE SEDIMENT BUDGET OF CLIFF-DOMINATED BEACHES IN THE EASTERN MEDITERRANEAN AT SINGLE-STORM TO SEASONAL TIME SCALES

345-4  2:20 PM  Howe, Julia Corbett*; Jewell, Paul; Bruhn, Ronald: AUTOMATED SHORELINE ELEVATION MEASUREMENT FROM HIGH-RESOLUTION TOPOGRAPHY: APPLICATIONS TO QUANTIFYING LANDSCAPE DEFORMATION

345-5  2:35 PM  Paine, Jeffrey G.*; Collins, Edward W.; Costard, Lucie: DISCRIMINATING QUATERNARY COASTAL-PLAIN STRATA USING AIRBORNE LIDAR AND NEAR-SURFACE HIGH-RESOLUTION LIDAR

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POSTERS WEDNESDAY

345-6 2:50 PM Greenbaum, Noam; Mushkin, Amit; Porat, Naomi; Amit, Rivka. TIME-SCALE AND GEOMORPHIC PROCESSES OF GULLY EROSION ON ABANDONED ALLUVIAL SURFACES IN THE HYPER ARID NEGEV DESERT, SOUTHERN ISRAEL

345-7 3:05 PM Sholes, Steven F.∗; Mushkin, Amit; Catling, David C. BOULDER-SIZE DISTRIBUTIONS AS INDICATORS FOR DEPOSITION PROCESSES ON EARTH AND MARS

345-8 3:20 PM Swanson, Erika M.∗; Schultz-Fellenz, Emily S.; Sussman, Aviva; Wilson, Jennifer. PERMANENT DEFORMATION FROM UNDERGROUND EXPLOSIONS: INTEGRATING SUBSURFACE AND SURFACE OBSERVATIONS

345-9 3:35 PM Willis, Michael J.∗; Higman, Bretwood; Shugar, Dan H.; Lynett, Patrick; Barba, Magali; Tiamo, Kristy; Clark, Marin K.; Zheng, W.; Pritchard, M.E.; Ramage, Joan M.; Stearns, Leigh A.; Morin, Paul. LANDSLIDE, EARTHQUAKE AND CRYOSPHERE STUDIES USING HIGH RESOLUTION DIGITAL SURFACE MODELS FROM COMMERCIAL IMAGERY AND DRONES (Invited Presentation)

345-10 3:55 PM Scott, Chelsea Phipps∗; Arrowsmith, J. RAMON; Lajoie, Lia; Nissen, Edwin; Maruyama, Tadashi; Chiba, Chiba; Tatsuori, THE M7 2016 KUMAMOTO, JAPAN, EARTHQUAKE: 3D COSEISMIC DEFORMATION FROM DIFFERENTIAL TOPOGRAPHY (Invited Presentation)

345-11 4:15 PM Johnson, Kendra; Nissen, Edwin∗; Lajoie, Lia; SCARP MORPHOLOGY, SLIP DISTRIBUTION, AND SHALLOW FAULT STRUCTURE OF THE M∗, 7.2 1959 HEBGEN LAKE EARTHQUAKE RUPTURE FROM AIRBORNE LIDAR (Invited Presentation)

345-12 4:30 PM Xie, Surui; Gailant, Elisabeth; Wetmore, Paul∗; Owen, Lewis A.; Dixon, Timothy H. A NEW GEOLOGICAL SLIP RATE ESTIMATE FOR THE CALICO FAULT, EASTERN CALIFORNIA: IMPLICATIONS FOR GEODETIc VERSUS GEOLOGIC RATE ESTIMATES IN THE EASTERN CALIFORNIA SHEAR ZONE

345-13 4:45 PM Trexler, Charles C.∗; Cowgill, Eric; Spencer, Joel Q.G.; Godoladze, Tea; Gogoladze, Salome. DEFORMED RIVER TERRACES SHOW ACTIVE SHORTENING IN THE WESTERN GREATER CAUCASUS, REPUBLIC OF GEORGIA

345-14 5:00 PM Bunn, Michael D.∗; Leschinsky, Ben; Olsen, Michael J. RAPID AND FLEXIBLE LANDSLIDE INVENTORY MAPPING WITH CCM FLOW

5:15 PM LIGHTNING TALKS FOR POSTER SESSION

SESSION NO. 346

T255. The Co-Evolution of Life and Its Environment during the Precambrian: The Late Proterozoic Rise of Animals; Climate, Tectonic, and Environmental Dynamics, and the Transition into the Early Paleozoic (Paleontological Society; GSA Sedimentary Geology Division)

1:30 PM, The Conference Center, Skagit 5

Michael Kipp, J. Alex Zumberge and Timothy W. Lyons, Presiding

346-1 1:30 PM Rooney, Alan D.; Strauss, Justin V.; Cohen, Phoebe; Condron, Daniel; Schmitz, Mark D. NEW RE-OS AND U-PB AGE CONSTRAINTS FOR THE BIOLOGICAL INNOVATIONS AND GEOCHEMICAL AND CLIMATIC PERTURBATIONS OF THE NEOPROTEROZOIC (Invited Presentation)

346-2 1:45 PM Huang, Kang-Jun∗; Shen, Bing; Teng, Fang-Zhen; Lang, Xianguo; Ma, Haoran; Peng, Yongbo; Fu, Yong. CHEMICAL WEATHERING DURING THE MARINOAN SNOWBALL EARTH

346-3 2:00 PM Partin, Camille A.; Sadler, Peter M. SLOW NET SEDIMENT ACCUMULATION SETS SNOWBALL EARTH APART FROM ALL YOUNGER GLACIAL EPISODES (Invited Presentation)

346-4 2:15 PM Zhao, Zhouqiao∗; Zhu, Jianming; Lang, Xianguo; Wu, Guangling; Zhang, Shuwang; Huang, Tianzheng; Ning, Meng; Ma, Haoran; Shen, Bing. NICKEL ISOTOPE EVIDENCE INDICATING ACTIVITY METHANOGENESIS DURING THE MELTING OF MARINOAN SNOWBALL EARTH

346-5 2:30 PM Hurtgen, Matthew T.; Wang, Jiuyuan; Jacobson, Andrew D.; Sageman, Bradley B. RADIOGENIC AND STABLE SR ISOPOE RECORDS REVEAL CHANGES IN WEATHERING AND CARBONATE BURIAL RATES FOLLOWING MARINOAN GLACIATION (Invited Presentation)

346-6 2:45 PM Schrag, Daniel P.; Laakso, Thomas A. METHANOTROPHY, AUTHIGENIC CARBONATE, AND THE NEOPROTEROZOIC CARBON CYCLE

346-7 3:00 PM Zhao, Mingyu∗; Planavsky, Noah J.; Wei, Guangyi; Gong, Zheng. SIMULATING METEORIC AND MIXING-ZONE DIAGENESIS OF MARINE CARBONATES VIA A TWO-DIMENSIONAL REACTIVE TRANSPORT MODEL

3:15 PM BREAK

346-8 3:30 PM Tsukui, Kaori∗; Ramezani, Jahandar; Bowring, Samuel A. DEVELOPING AN ENHANCED CHRONOLOGY FOR THE TERMINAL EDIACARAN-CAMBRIAN TRANSITION ON A GLOBAL SCALE

346-9 3:45 PM Maloof, Adam; Mehra, Akshay∗. CONSTRAINING THE ROLE OF AN EDIACARAN BIOMINERALIZER USING A MULTISCALE METHODOLOGY

346-10 4:00 PM Pehr, Kelden∗; Love, Gordon D.; Kuznetsov, Antion; Podkorytov, Victor; Junium, Christopher K.; Bekker, Andrey. EXCEPTIONALPreservation Preservation of Lipid Biomarkers REVEALS NEW INSIGHTS INTO LATE EDIACARAN OLIGOTROPHIC SHALLOW-MARINE COMMUNITIES AND ENVIRONMENTS ON BALTICA

346-11 4:15 PM Huang, Jing∗; Farquhar, James; Shen, Yanan. MULTIPLE SULFUR ISOTOPE RECORDS ASSOCIATED WITH THE “SHURAM EXCURSION” FROM SOUTH CHINA

346-12 4:30 PM Diamond, Charles Wilson∗; Zhang, Feifei; Shen, Yan; Lyons, Timothy W. THE EVOLVING REDOX LANDSCAPE OF THE NANNHUA BASIN ACROSS THE NEOPROTEROZOIC/ CAMBRIAN TRANSITION

346-13 4:45 PM Wei, Guangyi∗; Kaleron-Asael, Boriana; Shen, Jun; Ling, Hongfei; Planavsky, Noah J. ENHANCED CONTINENTAL WEATHERING INTENSITY IN THE EARLY CAMBRIAN AND ITS EFFECTS ON MARINE OXYGENATION AND PRODUCTION

346-14 5:00 PM Jacobs, David K.∗; Speck, Hayden P. COLD CRADLES AND WARM GRAVES: HOW TEMPERATURE CONSTRAINTS OXYGEN IMPACTING DIVERSITY

POSTER TECHNICAL SESSIONS

SESSION NO. 347 $ T79. Geologic Energy Research (Posters) (GSA Energy Geology Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 1:30 AM and 4:30 to 6:30 PM

Booth #

347-1 1 Hood, Madison M∗; Hower, James C.; Dai, Shileng. MACERAL-BASED ENVIRONMENT OF DEPOSITION MODELS: EXAMPLES FROM ANALYSIS OF A LITHOTYPE SUITE FROM A CRETACEOUS COAL, INNER MONGOLIA AUTONOMOUS REGION, CHINA
SESSION NO. 348  

T80. Geothermal Energy (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

348-1 17 Ritzinger, Brent*; Glen, Jonathan; Steely, Alexander N; Anderson, Megan L. ; Forson, Corina: APPLICATION OF POTENTIAL FIELD GEOPHYSICAL DATA TO STUDY THE GEOTHERMAL RESOURCES IN THE WIND RIVER VALLEY, WA

348-2 18 Golla, Jon K.*; Tepper, Jeffrey H.: SUBSURFACE CHARACTERIZATION OF THERMAL SPRINGS IN CASCADE RANGE AND OLYMPIC MOUNTAINS, WASHINGTON USING MULTIPLE MINERAL EQUILIBRIA GEOTHERMOMETRY

348-3 19 Sadowski, Andrew J.; Faulds, James E.; Coolbaugh, Mark F.; Siler, Drew L.: GEOTHERMAL PLAY FAIRWEATHER ANALYSIS OF THE SOU HILLS, CENTRAL NEVADA

348-4 20 Scanlon, Darby P.*; Bershaw, John; Burns, Erick R.; Wells, Ray E.; Cladouhos, Trenton T.: BASIN ANALYSIS AND RESERVOIR CHARACTERIZATION FOR GEOTHERMAL DEEP DIRECT USE THERMAL ENERGY STORAGE (DDU-TES) IN PORTLAND, OREGON

348-5 21 Harper, Thomas B.*; Liberty, Lee: SEISMIC CONSTRAINTS ON GEOTHERMAL RESOURCES BENEATH THE WESTERN AND CENTRAL SNAKE RIVER PLAIN

348-6 22 Whittington, Alan*: Roy, Derick; Kenderes, Stuart M.; Merriam, Jesse; Hofmeister, Anne: THE DEPENDENCE OF ROCK THERMAL PROPERTIES ON COMPOSITION AND TEMPERATURE

348-7 23 Villegas, Gabriela*: Fairley, Jerry P.; Price, Adam: DEGREE OF INFLUENCE OF THE BIOT NUMBER OVER NEAR-SURFACE TEMPERATURE ANOMALIES

348-8 24 Liu, Shaowen*: Zhu, Ge: ESTIMATION OF DEEP FORMATION TEMPERATURE AND GEOTHERMAL RESOURCE POTENTIAL ASSESSMENT IN THE LOWER YANGTZE AREA, EAST CHINA

348-9 25 Renaud, Evan D.; Harris, Nicholas B.; Banks, Jonathan C.: GEOTHERMAL RESOURCE CHARACTERIZATION OF THE SLAVE POINT FORMATION IN CLARKE LAKE FIELD, FORT NELSON, B.C., CANADA

348-10 26 Çalli, Süleyman Selim*: APPLICABILITY AND SUSTAINABILITY OF SEAWATER INJECTION IN ORDER TO PRODUCE GEOTHERMAL ENERGY

SESSION NO. 349

D7. Environmental Geoscience (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

349-1 27 Ademeso, Odunyemi Anthony*; Afelemu, Ademola John: INVESTIGATING THE INTEGRITY OF THE SUBSOIL AS FOUNDATION SUPPORT MATERIALS FOR A HOSTEL BUILDING, FUTA, SW, NIGERIA

349-2 28 Jovanelly, Tamie J.*: WATER QUALITY AND ENDANGERED IMPALAS: CASE STUDY FOR KENYA WILDLIFE SERVICE

349-3 29 Bowen, Brenda B.: Pechmann, Jessie; Kipnis, Evan; Leback, Jory C.; Stinson, Hannah; Wetterlin, Lily; Bernau, Jeremiah A.: EVALUATING CHANGE AT THE BONNEVILLE SALT FLATS, UTAH

349-4 30 Rezaie Boroon, Mohammad Hassan*; Ramirez, Christian; Nguyen, Henry: ANTHROPIC CONTAMINANTS IN THE WATER AND SEDIMENTS OF URBANIZED LAGOONS OF LOS ANGELES

349-5 31 Merrill, Alyssa*; Murphy, Jacob; Widmer, Julia; Harford, Ashley; Ruiz, Elena; Roote, Carol; Brown, Beverly; Giachero, David; Zamule, Stephanie; Das, Padmini: THE FATE AND TOXICITY OF BPA IN SWITCHGRASS (PANICUM VIRGATUM), A NATIVE PLANT, TO EXPLORE THE PHYTOREMEDIATION POTENTIAL
Wednesday, 25 October 2017

SESSION NO. 350

T33. Sections of Sustainability and Geosciences (Posters) (GSA Geology and Society Division; GSA Karst Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

350-1 38 Hefley, Ryan J.*; Shroot-Lewis, René A.; Ruhl, Laura: THE IMPACT OF HUMAN VISITS ON WATER QUALITY IN LIGHTHOUSE CAVE, SAN SALVADOR, THE BAHAMAS

350-2 39 Page, Robert F.*; THE INFLUENCES OF SOIL CHARACTERISTICS ON NEST-SITE SELECTION IN PAINTED TURTLES (CHRYSEMY S PICTA)

350-3 40 Harris, Katherine*; Coaiffe, Jon; Bricker, Stephanie: THE USE OF GEO-RESOURCES UNDERNEATH CITIES FOR RESILIENT AND SUSTAINABLE URBAN DESIGN

350-4 41 Stabile, Paola; Paris, Eleonora*: Ansaloni, Francesco; Reda, Francesco; Giuli, Gabriele; Carroll, Michael: SUBSTITUTING RAW MATERIALS WITH WASTE FOR NEW ECO-SUSTAINABLE BUILDING MATERIALS (ECOTILES)

350-5 42 Watson, Andrew L.*; O’Reilly, Catherine M.; Perry, William L.; Heath, Victoria E.; Bruening, Benjamin G.: EFFECTS OF PRECIPITATION ON NUTRIENT STORAGE IN A COVER CROPPED AGRICULTURAL WATERSHED

350-6 43 Morales, Alan*; Watson, Andrew L.; Perry, William L.; O’Reilly, Catherine M.; O’Reilly, Catherine M.: ANALYZING THE INFLUENCE OF PRECIPITATION ON BUFFER ZONE TILE DRAIN SYSTEMS IN CENTRAL ILLINOIS

350-7 44 Johnson, Linnea L.*; O’Reilly, Catherine M.; Peterson, Eric W.; Heath, Victoria E.; Miller, Joseph J.; Gregorich, Holly G.; Twalt, Richard: FIELD DRAIN TILE DIVERSION INTO A RIPARIAN BUFFER ZONE EFFECTS ON SPATIAL DISPERSION OF NITRATE IN GROUNDWATER

SESSION NO. 351

T150. Chemical Scene Investigations of Large Igneous Provinces II (Posters) (GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #


351-3 47 Quevy, Amber L.*; Price, Jonathan D.: SUSTAINED MARGINAL DYES IN THE WICHITA LIP, SOUTHWESTERN OKLAHOMA

351-4 48 Matos, Javier*: STUDY OF ALKALINE BRECCIATIONS, DYKES AND SILLS FROM EASTERN CORDILLERA, BOLIVIA

SESSION NO. 352

T155. Improvements and Challenges in Geochronology: Organizing the Past while Planning for the Future (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

352-1 49 Condon, Daniel*; Kuiper, Claudia; Morgan, Leah E.; Renne, Paul R.; Schmitz, Mark D.; Schoene, Blair; Singer, Bradley S.: EARTHTIME 2.0, ACCELERATING THE DEVELOPMENT AND APPLICATION OF INTEGRATED METHODOLOGIES FOR THE QUANTIFICATION OF GEOLOGICAL TIME


352-4 52 Singer, Brad S.*; Jicha, Brian R.; Mochizuki, Nobutatsu; Coe, Robert S.*: 40AR/39AR MULTI-COLLECTOR REVOLUTION AND AGE OF THE MATUYAMA-BRUNhes BOUNDARY

352-5 53 Holland, Mark E.*; Heizler, Matthew T.; Amato, Jeffrey M.; Karlstrom, Karl E.: MAXIMIZING THE THERMOCHRONOLOGICAL POTENTIAL OF MUSCOVITE THROUGH MULTIPLE DIFFUSION DOMAIN MODELING: EPISODIC 40AR LOSS IN THE BURRO MOUNTAINS, SOUTHERN NEW MEXICO

SESSION NO. 353

T143. Curating Physical Samples in a Digital World (Posters)
(GSA Geoinformatics Division; Paleontological Society; Society for the Preservation of Natural History Collections; Paleontological Research Institution; Cushman Foundation; GSA Geobiology & Geomicrobiology Division; Association of American State Geologists)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

353-1 63 Wyborn, Lesley*; Klump, Jens: A NEW ROLE FOR PHYSICAL SAMPLES IN THE GEOSCIENCES BIG DATA WORLD

353-2 64 Newman, Tyler*; Cozart, Gabrielle; Bigelow, Robert; Bowring, James F.; Mclean, Noah M.: CHRONO: ENGINEERING A MOBILE APP FOR GEOCHRON.ORG

353-3 65 Marotta, Jake*; Bigelow, Robert; Bowring, James F.; Mclean, Noah M.: TOPSOIL: COMMUNITY-DRIVEN REPLACEMENT FOR ISOPLOT DATA VISUALIZATION

353-4 66 Thompson, Richard H.*; Karadkar, Umpl P.: IMPLICATIONS OF EARTH CORE REPOSITORY PRACTICES FOR BUILDING A GEOSCIENCES CYBERINFRASTRUCTURE

SESSION NO. 354 $

T144. Drones in Geoscience (Posters) (GSA Environmental and Engineering Geology Division; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

354-1 67 Ellett, Nicholas*; Pierce, Jennifer L.; Goode, Jaime; Glenn, Nancy F.: QUANTIFYING POST-FIRE HILLSLOPE AND DEBRIS FLOW EROSION IN A steep CATCHMENT USING HIGH-RESOLUTION STRUCTURE FROM MOTION

354-2 68 Lundine, Mark*; Dohner, Stephanie; Trembanis, Arthur; Miller, Douglas: OPTIMIZING UAV SURVEYS FOR COASTAL MORPHODYNAMICS: ESTIMATION OF SPATIAL UNCERTAINTY AS A FUNCTION OF FLIGHT ACQUISITION AND POST PROCESSING FACTORS

354-3 69 Pearson, Paul; Haddrill, Keri; Gorgenson, Ian; Brophy, Erin E.; Huffman, Max*; DeVries-Zimmerman, Suzanne J.; Fast, Kathleen M.; Catrider, Kaitlyn; Hansen, Edward: USING REMOTELY ACQUIRED IMAGES TO MAP VEGETATION DENSITIES IN OPEN DUNE ENVIRONMENTS: A CASE STUDY FROM COASTAL DUNES ALONG THE SOUTHEASTERN SHORE OF LAKE MICHIGAN

354-4 70 Barbieri, Lindsay*: INTEGRATED SUAS MEASUREMENTS AND IMAGERY FOR LAND USE MONITORING

354-5 71 Allen, Phillip P.*; Ramsrott, Matthew E.: NEW VIEWS ON AN OLD LANDSCAPE: EMPLOYING AN UNMANNED AIRCRAFT SYSTEM (UAS) FOR RAPID HIGH RESOLUTION DATA ACQUISITION TO AID GEOMORPHOLOGICAL RESEARCH

354-6 72 Duncan, Casey James*; Wheatly, David Fairchild; Chesebrough, Sam W.: BEST-PRACTICES FOR THE INTEGRATION OF DRONE/UAV DATA PRODUCTS INTO FIELD GEOLOGY CURRICULUM

354-7 73 Baker, Gregory*: UTILIZING SUAS (DRONES) IN NEAR-REAL TIME TO ENHANCE GEOLOGY FIELD CAMP LEARNING OUTCOMES

354-8 74 Rasmussen, Dirk*; Mohrmann, Jacob: APPLIED UAV PHOTOGRAMMETRY AS AN INTEGRATIVE MINE RECLAMATION TOOL

354-9 75 Meighani, Nooreen A.*; Miller, Douglas A.; Holderman, Brennan: ACCURACY OF SUAS OPERATIONS IN DENSELY FORESTED AREAS WITH USE OF EMLID REACH RTK SYSTEM

354-10 76 Finnegang, John P.*; Becker, Richard H.: USING UAV BASED DIGITAL PHOTOGRAMMETRY AND CLASSICAL TECHNIQUES TO MAP STRUCTURAL FEATURES EXPOSED IN THE HANSON-2 QUARRY, SYLVANIA, OH

354-11 77 Stright, Lisa*; Durkin, Paul R.; Southern, Sarah J.; Romans, Brian W.; Hubbard, Stephen M.: APPLYING OUTCROP ANALOGUE STATISTICS TO SUBSURFACE MODELING WORKFLOWs

354-12 78 Truksa, Tyler*; Bowman, Jake; Goode, Jaime: CAN DRONES MEASURE LWD?: HIGH RESOLUTION AERIAL IMAGERY AND STRUCTURE FROM MOTION AS A METHOD FOR QUANTIFYING INSTREAM WOOD

354-13 79 Pitts, Alan*; Bentley, Callan; Di Celma, Claudio: USING UAV BASED PHOTOGRAMMETRY TO MAP STRATIGRAPHIC ARCHITECTURE IN SEDIMENTARY SYSTEMS

354-14 80 Young, James R.*, Watts, Chester F.: IDENTIFYING SINKHOLES USING INFRARED AERIAL IMAGERY

354-15 81 McDonald, Kristian*; Fletcher, Charles H.; Barbee, Matthew; Habel, Shellie L.; Anderson, Tiffany; Tavares, Kamme-Dominique A.: UAV SURVEYS TO MONITOR VOLUMETRIC BEACH CHANGES OVER AN EXTREME HIGH-TIDE EVENT: WAIIKIKI, HAWAII

SESSION NO. 355

T147. What Can You Do with Geoinformatics? (Posters) (GSA Geoinformatics Division; Geoscience Information Society; American Geosciences Institute; American Geophysical Union; GSA Environmental and Engineering Geology Division; GSA Geosciences Education Division; Association of American State Geologists; GSA Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

355-1 82 Hsu, Leslie*: LEARNING ABOUT GEOINFORMATICS WITH YOUR PEERS

355-2 83 Rose, Shea*: DEVELOPING UNDERGRADUATE RESEARCH THROUGH INTEGRATING THE R-LANGUAGE INTO AN APPLIED CLIMATOLOGY COURSE
SESSION NO. 356

T183. Advances and Challenges in Quantifying Sediment Budgets for River Systems (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)

Wednesday, 25 October 2017

Booth #

357-1  100 Neagu, Nathalie*; Matmon, Ari; Enzel, Yehouda; Porat, Naomi: CONTROLS ON QUATERNARY AGRADATION-INCISION CYCLES IN A HYPERARID WATERSHED, NORTHEASTERN NEGEV, ISRAEL

357-2  101 Ryan, James J.*; Hayward, Nathan; Jackson, Lionel E.: INVESTIGATING LANDSCAPE ANTIQUITY AND CENOZOIC DRAINAGE DEVELOPMENT OF SOUTHERN YUKON (CANADA), THROUGH RESTORATION MODELING OF THE CORDILLERAN-SCALE TINTINA FAULT

357-3  102 Schanz, Sarah A.*; Montgomery, David R.; Collins, Brian D.: Duvall, Alison R.: MULTIPLE PATHS TO CLIMATIC STRATHS: HOW LOCAL CONDITIONS AND DATING METHODS OBSCURE TERRACE CORRELATION WITH CLIMATE CYCLES

357-4  103 Mitchell, Nate A.*; Yanites, Brian J.: LANDSCAPE TRANSIENCE IN THE CLEARWATER AND SALMON WATERSHEDS: INSIGHTS FROM BEDROCK RIVER MORPHOLOGY

357-5  104 Sheehan, Christopher E.*; Ward, Dylan J.: A NEW MECHANISM OF ESCARPMENT RETREAT: QUANTIFYING THE PROCESSES OF LATERALLY-PROPAGATING “WAVES OF EROSION”


357-7  106 Mistick, Katherine Ann*; Hampton, Samuel J.; Borella, Josh: HOW PRIMARY VOLCANIC EMPLACEMENT AND COOLING MECHANISMS INFLUENCE ROCKFALL HAZARD

357-8  107 Carnes, Lorraine K.*; Pazzaglia, Frank; Pratt, Thomas: SPECTRAL ANALYSIS OF RIVER SINUOSITY FOR IDENTIFYING INTRAPLATE CRUSTAL DEFORMATION

357-9  108 Martin, Caroline*: EVALUATION OF TOPOGRAPHIC WETNESS INDEX AND CATCHMENT CHARACTERISTICS ON SPATIALLY AND TEMPORALLY VARIABLE STREAMS ACROSS AN ELEVATION GRADIENT

357-10 109 Fratkin, Mulu*; Segura, Catalina; Bywater-Reyes, Sharon: INVESTIGATING THE HILLSLOPE AND IN-CHANNEL DRIVERS OF TRANSPORT CAPACITY IN VARIABLE LITHOLOGY: A CASE STUDY IN THE OREGON COAST RANGE

357-11 110 Shaw, George H.*; Mooers, Howard D.; Smrz, Josef; Pavez, Zdenek; Svitik, Martin; Krotky, Antonin; Shoemaker, Peter: AN OPEN-SOURCE CODE FOR NUMERICAL SIMULATION OF DRAINAGE BASIN DEVELOPMENT

SESSION NO. 358

T188. Interrelationship between Tectonic Uplift and Quaternary Glaciations on the Tibetan Plateau and Its Surrounding Mountains (Posters)

Wednesday, 25 October 2017

Booth #

358-1  111 Liu, Jinhua*: Yi, Chaolu; Li, Yingkui: GLACIAL FLUCTUATIONS IN THE KAROLA PASS, EASTERN LHASO KANGRI RANGE, SINCE THE LAST GLACIAL MAXIMUM

358-2  112 Zhang, Qian*: Yi, Chaolu: GLACIATION OF THE LOPU KANGRI AREA, CENTRAL GANGLIDE RANGE: TIMING THE EXTENTS

358-3  113 Huang, Xianmei*: LATE QUATERNARY SLIP RATE OF THE MIDDLE SEGMENT OF THE GANZI-YUSHU FAULT ZONE CONSTRAINED BY NUMERICAL (CRN AND OSL) DATING OF OFFSET MORaines AND TERRACES

358-4  114 Zhang, Jiafu*: Han, Yesong; Cui, Zhijiu, Liu, Gengnian: TIMING OF LANDSLIDES IN THE UPPER REACHES OF THE MINJIANG RIVER, EASTERN TIBETAN PLATEAU: DEFINED BY OPTICAL DATING OF DAMMED LAKE SEDIMENTS

358-5  115 Wang, Jie*: Cui, Hang; Yao, Pan; Cao, Bo; Yu, Beibei: QUATERNARY GLACIAL HISTORY OF THE QILIAN SHAN,
NORTHEASTERN TIBETAN PLATEAU, CONSTRAINED BY 10BE SURFACE EXPOSURE DATING

SESSION NO. 359
T189. Landscapes in the Anthropocene (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Sedimentary Geology Division; GSA Limnogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

359-1 117 Bernau, Jeremiah A.*; Wetterlin, Lily; Bowen, Brenda B.: UTILIZING SURFACE TEXTURES TO UNDERSTAND CHANGE DYNAMICS AT THE BONNEVILLE SALT FLATS

359-2 118 Bowen, Mark W.*; Johnson, W.C.: ANTHROPOGENICALLY ACCELERATED SEDIMENT ACCUMULATION WITHIN HIGH PLAINS PLAYA WETLANDS

359-3 119 De Rego, Kathryn Grace*; Eaton, Brett; Lauer, J. Wesley; Hassan, Marwan: MODELING THE EFFECT OF SEDIMENT SUPPLY ON CHANNEL WIDTH CHANGE ALONG ELWHA RIVER, WASHINGTON

359-4 120 Skoglund, Rannveig*; Koller, Max: FLUVIAL CHANNEL MORPHOLOGY IN WESTERN NORWAY AND RESILIENCE TO CHANGE

359-5 121 Koller, Max*; Skoglund, Rannveig: AN APPROACH TO ANALYZING THE VULNERABILITY TO ENVIRONMENTAL CHANGE IN CATCHMENTS IN SOUTHWESTERN NORWAY - RESEARCH DESIGN AND PRELIMINARY RESULTS

359-6 122 McManimon, Caitlin T.*; Ouimet, William B.: OSL AND ESR AGES FOR GLACIER FLUCTUATIONS SINCE THE LATE QUATERNARY IN THE XIATE RIVER VALLEY, TIANSHAN RANGE, CHINA

359-7 123 Miller, Nari*: SOIL RESIDENCE TIMES OF UNCULTIVATED HILLSLOPES IN NAVARRES, SP, AND ARIZONA, US, USING METEORIC 10-BERYLLIUM

359-8 124 Eckes, Samantha W.*; Shepherd, Stephanie: EXPLORING APPLICATIONS OF GPR METHODOLOGY AND USES IN DETERMINING FLOODPLAIN FUNCTION OF RESTORED STREAMS IN THE GULF COASTAL PLAIN, ALABAMA

359-9 125 Guo, Changbao*; Yang, Zhihua; Liu, Xiaoyi; Ren, Sanshao: STUDY ON CREEPING LANDSLIDES DISTRIBUTION CHARACTERISTICS WITH SBAS-INSAR METHOD ALONG THE XIANSHUAI FAULT ZONE, TIBETAN PLATEAU, CHINA

359-10 126 Yang, Zhihua*; Zhang, Yongshuang; Guo, Changbao; Wang, Tao: PREDICTING LANDSLIDE SCENARIOS UNDER POTENTIAL EARTHQUAKE SCENARIOS IN THE XIANSHUAI FAULT ZONE, SOUTHWEST CHINA

SESSION NO. 360
T190. Linking Physical and Ecological Processes from Source-to-Sink to Investigate Multi-Scale Response to Restoration (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Limnogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

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360-1 127 Peterman, Cara L.*; Fryar, Alan E.; Edwards, Dwayne: DETERMINING THE PROVENANCE OF A CONTEMPORARY SEDIMENT LOAD WITHIN THE OTTER CREEK WATERSHED, KENTUCKY

360-2 128 Murr, Marissa*; Alexander, Jason S.; McElroy, Brandon: PIPING PLOVER AND LEAST TERN NESTING LOCATION COMPARED TO RIVERINE HABITAT ON GREAT PLAINS RIVERS

360-3 129 Hunter, Brooke*; Kozarek, Jessica; MacGregor, Kelly; Hornbach, Daniel J.: FRESHWATER RIVER MUSSUL GASPING RESPONSE BEHAVIOR TO INCREASED WATER VELOCITY AND TOTAL SUSPENDED SOLID CONCENTRATIONS

360-4 130 Brown, Elizabeth R.; Upton, Margaret M.*; LaBonne, Nolan; Labuz; Stephen; Scott, Larissa; Sinner, Kate; Shaster, Andrew; Treat, Ian H.: Voigt, Thomas; Gran, Karen B.: RESTORATION DESIGN EVALUATION OF THE EAST BRANCH OF THE BEAVER RIVER, SILVER BAY, MINNESOTA: A STUDENT-LED INVESTIGATION COMPARING TWO DESIGNS

360-5 131 Nattal, Jennifer L.*; Sytsma, Anneliese: RESTORATION OF AGING CONCRETE CHANNELS THROUGH A WATERSHED-SCALE APPROACH TO GREEN INFRASTRUCTURE: “A FIFTY-YEAR PLAN”

360-6 132 Das-Toke, Shyam*; Jungers, Matthew Cross; Persico, Lyman P.; Grane, Sarah B.; O’Bryan, Spencer: QUANTITATIVELY ANALYZING THE GEOMORPHIC PARAMETERS OF SUITABLE BEAVER HABITAT, ADIROUNDACK MOUNTAINS, NY WETLANDS

360-7 133 Yeager, Amelia*: Segura, Catalina: EXAMINING HOW STREAM SIZE INFLUENCES THE RELATIVE GEOMORPHIC CHANGE TRIGGERED BY LARGE WOOD INTRODUCTIONS

360-8 134 Gombert, Carolyn E.*; Lancaster, Stephen T.; Grant, Gordon E.; Filtcroft, Rebecca L.: DEVELOPING METRICS TO CHARACTERIZE HEAT BUDGETS IN OFF-CHANNEL HABITATS, WILLAMETTE RIVER, OR

SESSION NO. 361
T192. Mountain Glaciation and Climate Change of the Past and Present in the Western Americas (Posters) (GSA Quaternary Geology and Geomorphology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

361-1 135 Crump, Sarah E.*; Larsen, Darren: EVIDENCE FOR YOUNGER DRYAS GLACIER ACTIVITY IN THE TETON MOUNTAIN RANGE, WYOMING

361-2 136 Vavrus, Claire*; Barth, Aaron M.; Marcott, Shaun A.; Cepeley, Elizabeth G.; Shukum, Jeremy D.; Caffe, Marc W.: A LATE HOLOCENE 10BE BASED GLACIAL CHRONOLOGY FOR THE BEARTOOTH MOUNTAINS, SOUTHWESTERN MONTANA

361-3 137 Ferragut, Gabriell: Laabs, Benjamin J.; Amidon, William H.; Munroe, Jeffrey S.: Constraining Late Pleistocene Climate of the Northern Great Basin Using Mass Balance Modeling of Paleolakes and Glaciers

361-4 138 Gray, Christina E.*; Fountain, Andrew G.; Menounos, Brian: REGIONAL MODELING OF GLACIERS IN THE OLYMPIC MOUNTAINS, WASHINGTON

361-5 139 Brett, Melissa*; Fountain, Andrew G.; Fagre, Dan; McKeon, Lisa; Menounos, Brian: GLACIER AREA AND VOLUME CHANGE IN GLACIER NATIONAL PARK

361-6 140 Stock, Greg M.*; Anderson, Robert S.; Painter, Thomas H.; Henri, Brian; Lundquist, Jessica D.: IMPENDING LOSS OF LITTLE ICE AGE GLACIERS IN YOSEMITE NATIONAL PARK

361-7 141 McConnell, Joseph R.*; Chellman, Nathan J.; Sigl, Michael; Eckhardt, Sabine; Stohl, Andreas; Nolan, Matt: ICE CORE RECORDS OF CONTINENTAL DUST, SEA SALT, BIOMASS BURNING, AND POLLUTION FROM MCCALL GLACIER, ALASKA DURING THE PAST TWO CENTURIES
### SESSION NO. 362

#### T101. Better Together: Partnerships That Facilitate or Enhance Experiential Learning in Undergraduate Geoscience Education (Posters) (GSA Geoscience Education Division; National Association of Geoscience Teachers)

9:00 AM, Washington State Convention Center, Halls 4EF

**Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM**

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<td>Theissen, Kevin M.; Hickson, Thomas A.</td>
<td>SCIENCE FOR THE COMMON GOOD: AN UNDERGRADUATE GEOSCIENCE PROGRAM PARTNERS WITH WATERSHED DISTRICTS IN THE TWIN CITIES METRO AREA</td>
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<td>Latimer, Jennifer C.*; Fu, Peng; Kile, Bethany L.; Donahue, Robert; Starbuck, Emily C.M.; Xie, Yanhua; Beijer, Caz; Millan, Josue G.</td>
<td>COMMUNITY GARDENS PROVIDE OPPORTUNITIES FOR COMMUNITY ENGAGEMENT, SERVICE LEARNING, AND STUDENT LEARNING</td>
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<td>Romo, Iris S.*; Churchill, Alyson N.; Robles Rivera, Angelica; Walczak, Maureen H.; Yalcin, Kaplan; Mix, Alan C.; Stoner, Joseph S.</td>
<td>UNDERGRADUATES ON SHIPS: OREGON STATE UNIVERSITY'S R/V OCEANS AND THE NSF RESEARCH EXPERIENCES FOR UNDERGRADUATES PROGRAM</td>
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<td>Bauer, Jennifer E.*; Lam, Adrianne R.; Bryant, Raquel M.; Fraass, Andrew Jeffrey; Golder, Keenan B.; Hartshorn, Kyle R.; Hils, J. Mike; Limbeck, Maggie R.; Sheffield, Sarah L.</td>
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<td>Hughes, Richard O.*</td>
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<td>Sherman, Sarah Bean*</td>
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### SESSION NO. 364

#### T110. Engaging Students through Course-Based Undergraduate Research Experiences (CURE) across the Geoscience Curriculum (Posters) (GSA Geoscience Education Division; Council on Undergraduate Research Geosciences Division)

9:00 AM, Washington State Convention Center, Halls 4EF

**Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM**

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<td>Ryan, Jeffrey*</td>
<td>ALIGNING LEARNING OBJECTIVES AND CONTENT COVERAGE TOWARD CREATING SUSTAINABLE GEOSCIENCE CURES: TWO EXAMPLES USING REMOTELY OPERABLE MICROBEAM INSTRUMENTS</td>
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<td>Stempfen, Jennifer A.*; Abbott, Lon D.</td>
<td>CREATING A COLLABORATIVE UNDERGRADUATE GEOSCIENCE RESEARCH COMMUNITY USING A HYBRID RESEARCH EXPERIENCE APPROACH</td>
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<td>Shroat-Lewis, René A.*; Ruhl, Laura S.</td>
<td>CHALLENGES OF IMPLEMENTING A COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCE (CURE) ON SAN SALVADOR ISLAND, THE BAHAMAS</td>
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<td>DEVELOPING RESEARCH BASED LABORATORIES FOR INTRODUCTORY PHYSICAL AND HISTORICAL GEOLOGY</td>
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### SESSION NO. 365

#### T114. Getting It Done: Experiences of Implementing the Framework and NGSS in Earth and Space Science (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

**Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM**

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<td>INQUIRY BEYOND FOUR WALLS: EARTH SCIENCE OUTDOOR LEARNING FOR PRE-SERVICE AND IN-SERVICE TEACHERS</td>
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<td>Lopez, Leilani*; Villanueva, Destinee; Van Natta, Danielle; Gonzalez, Cristina; Diaz, Ana; Hendy, Austin J.W.; Estes-Smargiassi, Kathryn; Walker, Lindsay J.*</td>
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**Wednesday, 25 October 2017**

22–25 October • Seattle, Washington, USA
Wednesday, 25 October 2017

SESSION NO. 366
T4. Approaches to Applied Modeling for Industry and the Public (Posters) (GSA Hydrogeology Division; GSA Geology and Society Division; National Ground Water Association (NGWA); GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

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366-1 169 Underdown, Carrie G.*; Boutt, David F.; Hynek, Scott; Munk, LeeAnn: THE IMPORTANCE OF HYDROLOGIC TRANSIENCE IN CONCEPTUAL AND NUMERICAL GROUNDWATER MODELING IN THE GREAT BASIN

366-2 170 Freeman, Kyra M.*; Mitchell, Robert J.; Yearsley, John R.: CALIBRATION OF A HYDROLOGIC AND STREAM TEMPERATURE MODEL TO THE NORTH FORK OF THE STILLLAGUAMISH RIVER FOR CLIMATE CHANGE MODELING

366-3 171 Porter, Matthew J.*; Koger, Curtis J.; Saltonstall, Jennifer H.; Brown, J. Michael: MODELING INFILTRATION INTO THE UNSATURATED VASHON ADVANCE OUTWASH FROM CLASS-V UIC WELLS

366-4 172 Park, Jai-Yong*; Lee, Sungho; Lee, Yong Il; Kim, Jung-Hwi; Kim, Jun-Mo: SENSITIVITY ANALYSIS OF GROUNDWATER FLOW AND LAND DEFORMATION DUE TO LEAKAGE AND DRAINAGE THROUGH URBAN UNDERGROUND ARTIFICIAL STRUCTURES

366-5 173 Vaughn, Tyler L.*; Datta, Saugata; Langston, Abby; Adam, Claudia: MAPPING FLOOD EXTENT AND UNDERSTANDING MECHANISMS OF SURFACE INUNDATION IN AREAS OF IMPERMEABLE SOILS USING ANUGA HYDRODYNAMIC MODEL: A STUDY FROM FREDONIA, KANSAS

366-6 174 Chien, Nathaniel Patrick; Lautz, Laura K.: LINEAR DISCRIMINANT ANALYSIS AS A REGIONAL SCREENING TOOl TO FINGERPRINT SOURCES OF CHLORIDE CONTAMINATION IN GROUNDWATER

366-7 175 Jahan, Khurshid*; Pradhanang, Soni: PREDICTION OF TOTAL PHOSPHORUS CONCENTRATION IN NEW YORK CITY USING ARTIFICIAL NEURAL NETWORK

366-8 176 Kihm, Jung-Hwi*; Park, Jai-Yong; Lee, Sungho; Kim, Jun-Mo: PREDICTION OF INJECTION EFFICIENCY OF CARBON DIOXIDE IN THE JANGGI BASIN, KOREA USING INTEGRATED NUMERICAL METHODS

366-9 177 Shabani, Babak*; Vilcaez, Javier: AN IMPROVED TOUGH2 MODULE TO SIMULATE GEOLOGICAL CO2 STORAGE IN SALINE AQUifers

366-10 178 Sowers, Theron*; Boyd, Oliver S.: A PETROLOGIC DATABASE FOR THE USGS NATIONAL CRUSTAL MODEL

366-11 179 Smart, Nicholas Hunter*; Everett, Mark E.: APPLYING INDUCED POLARIZATION TO IMAGE STEEL INFRASTRUCTURE

SESSION NO. 367
T9. Groundwater Flow in Coastal and Marine Settings: From the Intertidal Zone to the Deep Seafloor (Posters) (GSA Hydrogeology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Geobiology & Geomicrobiology Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

367-1 180 Xiao, Kai*; Li, Hailong: HYDROCHEMISTRY CHARACTERISTICS OF INTERTIDAL POROWATER: A CASE STUDY IN A MANGROVE SWAMP IN DAYA BAY, CHINA

367-2 181 Xiao, Kai*; Wu, Jiapeng; Li, Hailong; Hong, Viguo: SEAWATER-GROUNDWATER EXCHANGE: POTENTIAL ASSOCIATION WITH NITROGEN CYCLING PROCESSES IN A MANGROVE SWAMP

367-3 182 Carlson, Charles*; Georgen, Jennifer; Hutt, Sheila: SUBMARINE GROUNDWATER DISCHARGE IN THE CHESAPEAKE BAY: CONSTRAINTS FROM NUMERICAL MODELS

367-4 183 Hutt, Sheila*; Georgen, Jennifer; Carlson, Charles: DETERMINING HOW SEA LEVEL RISE IMPACTS SALWATER INTRUSION WITHIN COASTAL GROUNDWATER FLOW SYSTEMS IN THE SOUTHERN CHESAPEAKE BAY

367-5 184 Lorenson, Thomas D.*; Conaway, Christopher H.; Fitzpatrick, John; Choy, Doug; Oberger, Ferdinand; Johnson, Cordell; Richmond, Bruce; Gibbs, Ann; Swarzenski, Peter W.: CHEMISTRY OF CRYOPEGS ON BARTER ISLAND, NORTH SLOPE ALASKA

SESSION NO. 368
T10. Groundwater Influenced Ecosystems: Springs, Gaining Streams, and Terrestrial Ecosystems (Posters) (GSA Hydrogeology Division; GSA Karst Division; GSA Geobiology & Geomicrobiology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

368-1 185 Nourse, Jonathan A.*; Miranda, Danny: RUNOFF AND SPRING DISCHARGE MEASUREMENTS RECORD WATERSHED RECOVERY FROM A FIVE-YEAR DROUGHT IN ICEHOUSE CANYON, SAN GABRIEL MOUNTAINS, CALIFORNIA

368-2 186 Raley, Kristina Marie*; Hays, Phillip D.: CALCULATING THE AGE OF THE WATER IN HOT SPRINGS NATIONAL PARK, AR BY USE OF 14C ISOTOPES

368-3 187 Shama, Charles P.*; Shaw, Glenn D.: MOUNTAIN FRONT RECHARGE IN A SEMI-ARID CLIMATE; SOUTHWEST MONTANA

368-4 188 Lee, David Robert*; Stuart, Marilyn; Bellan, Lee; Haughton, Jennifer; Valente, Andrew: GROUNDWATER-BORNE SS IN BONE OF TREE SWALLOW NESTLINGS

SESSION NO. 369
T11. Hydrogeology of Island Environments in a Changing Climate (Posters) (GSA Hydrogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

369-1 189 Shuler, Christopher K.*; Duliay, Henrietta; Kirs, Marek; Glenn, Craig R.; DeWees, Randel: AN ISOTOPIC AND MICROBIOLOGICAL MULTI-TRACER APPROACH TO ASSESSING RECHARGE MECHANISMS IN SURFACE WATER AFFECTED WELLS ON TUTUILA, AMERICAN SAMOA

369-2 190 Rotz, Rachel R.*; Milewski, Adam M.: INLAND FRESHWATER LENS OCCURRENCE AND LONGEVITY IN RESPONSE TO RECHARGE RATE IN DRYLAND ENVIRONMENTS USING A PHYSICAL LABORATORY MODEL

369-3 191 Tachera, Diamond K.*; Lautze, Nicole: INTEGRATING PRECIPITATION AND GROUNDWATER CHEMISTRY TO INTERPRET GROUNDWATER FLOW IN THE HAWAIIAN ISLANDS

369-4 192 Quiroga, Allison*; Polk, Jason; Thorsteinsson, Thorsteinn; Kaiser, Rachel: MEASURING CARBON FLUX IN ICELANDIC GLACIAL RIVERS UNDER A CHANGING CLIMATE
SESSION NO. 370

T12. Hydrogeology, Geochemistry, and Wetland Processes: A Session in Honor of the Career of Donald I. Siegel (Posters) (GSA Hydrogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

370-1 197 Guimond, Julia*; Michael, Holly A.: SPATIAL AND TEMPORAL IMPACTS OF CRAB BURROWS ON GROUNDWATER-SURFACE WATER INTERACTIONS AND REDOX CONDITIONS IN A TIDAL WETLAND

370-2 198 Shoup, Bryce O.*; Whittecar, G. Richard: ACTUAL EVAPOTRANSPIRATION (AET) RATES FOR DIFFERENT VEGETATION GROUPS MAY CONTROL GROUNDWATER DOME ASYMMETRY, FIRST LANDING STATE PARK, VIRGINIA

370-3 199 McGibbon, Chris*; Crossley, Laura J.; Karlstrom, Karl; Grulke, Tanner: GROUNDWATER CONTROLS ON WATER CHEMISTRY IN THE JEMEZ RIVER

370-4 200 DeVries-Zimmerman, Suzanne J.; Fast, Kathleen M.; Caltrider, Kaiyit*, Bodenbender, Brian E.: GENGENWALLE RIDGES: AN ECOHYDROLOGICAL CHRONOSEQUENCE IN MORFA DYFFRYN, WALES, UNITED KINGDOM

370-5 201 Smith, Serena*; Hopes, Sydney; Houghton, Sydney; Ormond, Daniel; Gherasim, Janelle; Wang, Weihong; Cadet, Eddy: QUANTIFYING NUTRIENT AND TRACE METAL INPUT TO UTAH LAKE FROM THE OEM WASTEWATER TREATMENT EFFLUENT

370-6 202 Shamrani, Ali*: GEOCHEMISTRY OF ARTIFICIAL WETLANDS IN AN ARID CLIMATE

370-7 203 Francis, Hannah*; Little, Josie L.; Hecox, Casey L.; Rhodes, Amy L.: EXPERIMENTS INVESTIGATING NA-CA EXCHANGE ON PEAT TO UNDERSTAND ROAD SALT RETENTION IN A CALCAREOUS FEN

SESSION NO. 371

T15. Monitoring the Complex Nature of Water Balances and Solute Transport at the Groundwater–Surface Water Interface (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

371-1 204 Porter, Misty E.*; Hill, Mary C.; Li, Xingong: MULTIVARIATE SPATIO-TEMPORAL VISUALIZATION OF IMPACTS ON THE HIGH PLAINS AQUIFER AND ARKANSAS RIVER DUE TO PUMPING FOR IRRIGATION

371-2 205 Shaljian, Michael C.*; Keller, C. Kent; Brooks, Erin S.; Huggins, David R.: HYDROLOGIC LOSSES AND CONCENTRATION-FLOW RELATIONSHIPS OF NUTRIENTS AND MAJOR IONS IN A SEMI-ARID AGRICULTURAL CATCHMENT

371-3 206 Barsdley, Audra I.; Hammond, Douglas E.: DEVELOPING A RADIUM CHRONOMETER FOR SHALLOW GROUNDWATER: COMPARISON WITH ²³⁴/²³⁸U IN URBANIZED COASTAL WATERSHEDS

371-4 207 Williams, Noah N.*; Detthier, David P.; Fields, Jordan: INFILTRATION VARIABILITY AND SHALLOW GROUNDWATER RESPONSE TO SNOWMELT IN HEADWATER CATCHMENTS, NIWOT RIDGE, COLORADO

371-5 208 Yang, Yong*: INFLUENCE OF ARTIFICIAL RECHARGE BY SOUTH TO NORTH WATER ON AQUIFER OF MIUHAISHUN AREA, BEIJING, CHINA

371-6 209 Li, Binghua*: EFFECTS OF RECLAIMED WATER INFILTRATION ON AQUIFERS IN CHAOBAI RIVER AREA, BEIJING, CHINA

371-7 210 Essaid, Hedeff I.*; Kuwabara, James S.; Carter, James L.; Topping, Brent R.: USING FLOW AND REACTIVE TRANSPORT MODELING TO DISTRESS DIFFUSION AND ADVECTION OF PHOSPHORUS FROM LAKEBED SEDIMENT INTO UPPER KALAMATH LAKE, OR

371-8 211 Thielman, Rebecka*; Smidt, Samuel J.: LIGHTWEIGHT, LOW-COST PERISTALTIC PUMP FOR STREAM TRACER INJECTIONS

371-9 212 Cascaran, Ryan N.*; Reeves, Donald M.; Henry, Mark: USE OF FLUORESCIN DYE FOR CHARACTERIZING HYDROLOGIC FLUXES AT THE GROUNDWATER - SURFACE WATER INTERFACE

371-10 213 Vattikuti, Shannon K.*; Paul, Varun: CHARACTERIZING THE GROUNDWATER OF THE UPPER PEARL RIVER WATERSHED IN CENTRAL MISSISSIPPI

SESSION NO. 372

T18. Remote Sensing Applications in Hydrology and Geology (Posters) (GSA Hydrogeology Division; GSA Geophysics Division; GSA Geology and Society Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

372-1 214 Jennings, Aurielle Daunee*; Buck, Paul E.; Rosales Lagarde, Laura; Sabol, Donald Edwin: A REMOTE SENSING APPROACH TO UNDERSTANDING THE HEALTH OF CLARK COUNTY WETLANDS PARK, NV USA

372-2 215 Baker, Emily A.*; Lautz, Laura K.; McKenzie, Jeffrey M.; Mark, Bryan G.: METHODS FOR CORRECTING GROUND-BASED TIME-LAPSE INFRARED IMAGERY

372-3 216 Caldwell, Samuel*; Kelleher, Christa: PERSISTENCE AND HETEROGENEITY: EXPLORING STREAM TEMPERATURE VARIABILITY AS OBSERVED BY UAV-COLLECTED TIR IMAGERY

372-4 217 Becker, Richard H.*: DETERMINING STREAM DISCHARGE LOCATIONS USING UAV BASED THERMAL IMAGERY

372-5 218 McKenna, Thomas E.*; Keyser, Todd A.; Asreen, Robert C.; Cargill, John G.: ENVIRONMENTAL THERMOGRAPHY DETERMINES CONTAMINANT TRANSPORT PATHWAYS AND GROUNDWATER SAMPLING LOCATIONS DURING SITE INVESTIGATIONS IN DELAWARE, USA

372-6 219 Knapp, Abigail S.*; Milewski, Adam M.; Rotz, Rachel R.; Yilmaz, Brian K.: ENVIRONMENTAL THERMOGRAPHY DETERMINES CONTAMINANT TRANSPORT PATHWAYS AND GROUNDWATER SAMPLING LOCATIONS DURING SITE INVESTIGATIONS IN DELAWARE, USA

372-7 220 Quintero, Kaydana*; Becker, Richard H.; Dehm, Dustin; Tokars, Roger; Lekki, John: AN UNMANNED AERIAL VEHICLE (UAV) BASED SPECTROMETER FOR OBSERVING WATER QUALITY INFLUENCE OF ARTIFICIAL RECHARGE BY SOUTH TO NORTH WATER ON AQUIFER OF MIUHAISHUN AREA, BEIJING, CHINA

372-8 221 Hernandez Muniz, William*; Burke, Michelle; Krekelier, Mark P.S.: REFLECTIVE SPECTROSCOPY OF GASOLINES FOR THE DEVELOPMENT OF A HYPERSONICAL LIBRARY AND DEVELOPMENT OF AGE ESTIMATION TECHNIQUES FOR SPILL INVESTIGATION
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

SESSION NO. 373

T19. Springs: Providing Insights on Critical Groundwater Quality and Quantity Issues (Posters) (GSA Hydrogeology Division; GSA Environmental and Engineering Geology Division; GSA Geobiology & Geomicrobiology Division; GSA Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

373-1 236 Deaton, Karaline*; Foster, Anna; Asante, Joseph: HYDROCHEMICAL EVALUATION OF HUMAN AND SEASONAL EFFECTS ON KARST CARBONATE GROUNDWATER

373-2 237 Banks, Sarah M.*; Florea, Lee J.; Forrey, Ferenc: CARBON TRANSPORT FROM A KARST SYSTEM IN THE PADUREA CRAIULUI, ROMANIA

373-3 238 Armanetti, Casey L.*; Hampton, Samuel J.: IMPROVING SECURITY, QUALITY, AND RESILIENCE IN A COMMUNITY SPRING-FED WATER SUPPLY; CASE STUDY FROM BANKS PENINSULA, NEW ZEALAND

373-4 239 Lee, Kyle J.*; Vesper, Dorothy J.: CO2 AND INORGANIC CARBON FLUXES FROM MINE WATERS IN WEST VIRGINIA AND PENNSYLVANIA

373-5 240 Downey, Autumn R*; Vesper, Dorothy J.: SANDSTONE SPRINGS AS CONTRIBUTORS TO KARST AQUIFERS IN THE VALLEY AND RIDGE PROVINCE

373-6 241 Engelbart, Tyler W.*; Dugas, Stephen; Ward, James W.; Straub, Raymond L.; Moss, Clayton A.: SUBSURFACE GROUNDWATER STUDIES IN THE SAN SOLOMON SPRINGS REGION, REEVES COUNTY, TEXAS

373-7 242 Hargie, Kirstin*; Rudolph, Maxwell: HYDROGEOLOGICAL CHARACTERIZATION OF SPRINGS OF THE HARNEY BASIN, OREGON

SESSION NO. 374

T20. The Critical Zone As Heterogeneous Media: Implications for Physical, Chemical, and Biological Processes (Posters) (GSA Hydrogeology Division; GSA Soils and Soil Processes Interdisciplinary Interest Group; GSA Geobiology & Geomicrobiology Division; GSA Karst Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

374-1 243 Pevehouse, Katie J.*; Sweet, Dustin E.: ASSESSING THE UTILITY OF WELL CUTTINGS TO CHARACTERIZE WEATHERING PROFILES OF CRYSTALLINE BASEMENT

374-2 244 Spooner, Emmett A.*; Kennedy, David R.; Rains, Nichole; Ward, James W.; Scott, Cody: INFILTRATION STUDIES OF MECHANICALLY ALTERED BRINE SPILL IMPACTED SOILS

374-3 245 Crist, Clarissa*: Hanes, Margaret: ANALYZING GEOGRAPHIC DISTRIBUTION MODELS OF MADAGASCAR PLANT SPECIES USING GEOLOGICAL DATA TO UNDERSTAND SPECIATION

374-4 246 Rea, Patrick*; Jin, Lixin; Gill, Thomas E.; Gardea-Torresdey, Jorge; Tamez, Carlos: CYCLING OF GYPSIFEROUS WHITE SANDS AEROSOLS IN SHALLOW CRITICAL ZONE SOILS AT WHITE MOUNTAIN, NEW MEXICO

374-5 247 Fischer, Alicia*: Shepard, Christopher; Rasmussen, Craig: GEOCHEMICAL DIFFERENCES IN PETROCALCIC AND CALCIC HORIZONS DUE TO SOIL PARENT MATERIAL IN SOUTHEASTERN ARIZONA

374-6 248 Harris, F. Claire*: Peterson, Eric W.: TRENDS IN VERTICAL PORE WATER FLUX IN THE HYPORHEIC ZONE OF A LOW GRADIENT THIRD ORDER STREAM

374-7 249 Williams, Sarah G.*; Blackstock, Joshua M.; Covington, Matthew D.: CARBON DIOXIDE DYNAMICS WITHIN THE CRITICAL ZONE OF A KARST LANDSCAPE: SAVOY EXPERIMENTAL WATERSHED, ARKANSAS

374-8 250 Ferguson, Benedict W.*; Stinchcomb, Gary E.: THE ROLE OF ALLUVIAL LANDFORMS IN STORING SOIL ORGANIC CARBON: A CASE STUDY FROM HUMID-TEMPERATE WESTERN KENTUCKY
SESSION NO. 375

T96. Understanding African Environmental History through Continental Scientific Drilling: Past Successes and Future Opportunities (Posters) (GSA Limnogeology Division; GSA Sedimentary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
Booth #

375-1 251 Opioyo, Benjamin Atieno*; Cheruiyot, Vicky Chelangat: PALEOENVIRONMENTAL AND PALEOCOCLIMATIC CHANGES IN TROPICAL EAST AFRICA SINCE THE LGM, NEW RECORD FROM THE CHERANGANII HILLS, KENYA


375-3 253 Garello, Dominique*; Roman, Diana C.; Deino, Alan L.; Campisano, Christopher J.; Arowsmith, J Ramon: GEOCHEMICAL CHARACTERIZATION AND CORRELATIONS OF UPPER HADR FORMATION CORE AND OUTCROP TEPHRA: NORTHERN AWASH SITE, HOMININ SITES AND PALEOLAKES DRILLING PROJECT (HSPDP)

375-4 254 Upadhyay, Deepshikha*; Caraveo, Clara Alvarez; Gomis, Ernest; Hailemichael, Million; Bedaso, Zelalem K.; Aronson, James L.; Cohen, Andrew S.; Tripathy, Aradhna: TESTING HYPOTHESES FOR THE ROLE OF CLIMATE CHANGE IN HOMININ EVOLUTION USING THE GEOCHEMISTRY OF CARBONATES FROM THE EAST AFRICAN RIFT SYSTEM

375-5 255 Foerster, Verena*; Asrat, Asfawossen; Brink Ramsey, Christopher; Chapot, Melissa S.; Cohen, Andrew S.; Dean, Jonathan R.; Deocado, Daniel M.; Deino, Alan L.; Günter, Christina; Junger, Arnett; Lamb, Henry F.; Lang, Melanie; Roberts, Helen M.; Schaubitz, Frank; Trauth, Martin H.: THE CHEW BAHIR DRILLING PROJECT (HSPDP): FROM MUD, GRAINS AND CRYSTALS TO >500,000 YEARS OF CONTINUOUS CLIMATE HISTORY IN SOUTHERN ETHIOPIA

375-6 256 Ivery, Sarah*; Russell, James M.: CLIMATE, HERBIVORY, AND FIRE CONTROLS ON TROPICAL AFRICAN FOREST FOR THE LAST 60KA

375-7 257 Clark, Miriam E.*; Michel, Ellinor; Ryan, Emily; McGlue, Michael; Soreghan, Michael J.: SEDIMENTATION IMPACTS ON BIODIVERSITY OF A UNIQUE BIOTIC SUBSTRATE, THE ASTROPOD SHELL BEDS OF LAKE TANGANYIKA, EAST AFRICA

375-8 258 Ryan, Emily*; Todd, Jonathan A.; McGlue, Michael; Kimirei, Ismael; Soreghan, Michael: VARIATION IN TAPHONOMIC CHARACTER OF SHELL BEDS IN LAKE TANGANYIKA, AFRICA: PALEOENVIRONMENTAL AND STRATIGRAPHIC IMPLICATIONS OF SHELL BEDS IN LAKES

375-9 259 Westover, Karlyn; Stone, Jeffery R.*; Kingston, John D.: LATE-PLIOCENE/EARLY-PLEISTOCENE DIATOM RECORD FROM BARINGO BASIN, KENYA

375-10 260 Shilling, Andrea M.*; Ashley, Gail M.; Burel, Benjamin; Barboni, Doris; Bernhart, Owen, R.; Goman, Michelle F.; Magill, Clayton: WETLANDS, A PERENNIAL WATER RESOURCE, AND RECORD OF CLIMATE CHANGE IN ARID EAST AFRICA

SESSION NO. 376

D47. Marine/Coastal Science (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM
Booth #

376-1 261 McDougall, Kristin*; Miranda-Martinez, Adriana Yanet: TRANSITION FROM MARINE ESTUARY TO SALINE LAKE RECORDED BY THE BOUSE FORMATION IN THE BLYTHE BASIN

376-2 262 Kilibarda, Zoran*; Kilibarda, Vesna: PLASTIC DEBRIS ON THE ADRIATIC SEA BEACHES IN SOUTHERN MONTENEGRO

376-3 263 Wingard, G. Lynn*: THE ROLE OF HOLOCENE SEA LEVEL IN SHAPING SOUTH FLORIDA ENVIRONMENTS

376-4 264 Barnes, Tyler*; Aiello, Ivan: USING HIGH-RESOLUTION BEACH SURVEYS TO ASSESS GEOMORPHOLOGIC CHANGE WITHIN THE SALINAS SUB-CELL (MONTEREY BAY, CA) BEFORE AND AFTER THE 2015/2016 EL NIÑO

376-5 265 Ramos, Sara A.*; Zarillo, Gary A.; Allen, Kerri: SEDIMENT ANALYSIS OF AN ARTIFICIAL BERM NEAR FT. MYERS BEACH, FLORIDA

376-6 266 Schlaerth, Hannah L.*; Auvort, Dulci; Flanagan, David; Brandt, Marilyn E.; Smith, Tyler B.; Al, K. Adem; Ortiz, Joseph D.: REMOTE SENSING OF BIOGEOPHYSICAL FACTORS INFLUENCING LOCAL WATER QUALITY AND CORAL REEF HEALTH, U.S. VIRGIN ISLANDS

376-7 267 Gregor, Arturo*; Kimbrough, David L.; Kimbrough, Joan; Keller, Barry: ARE LITTORAL CELLS FROM CENTRAL CALIFORNIA BEACHES CLOSED SYSTEMS? INSIGHT FROM DETRITAL HEAVY MINERAL DISTRIBUTIONS AT ANDREW MOLERA AND EL CAPITAN STATE BEACHES

376-8 268 Wright, Eric*: Shen, Zhixiong; Harris, M. Scott: STRATIGRAPHY AND NEW OSL CHRONOLOGY OF A NORTHEASTERN SOUTH CAROLINA BARRIER SYSTEM: WAITS ISLAND


376-10 270 Michalopoulos, Panagiotis*; Stanica, Adrian; Schultz, Michael: DANUBIUS-R1: INTERNATIONAL CENTRE FOR ADVANCED STUDIES ON RIVER-SEA SYSTEMS. A PAN-EUROPEAN INITIATIVE FOR THE DEVELOPMENT OF AN INTERDISCIPLINARY RESEARCH AND INNOVATION INFRASTRUCTURE FOR RIVER-SEA SYSTEMS

SESSION NO. 377

T251. Tsunami Hazards: Innovations in Mapping, Modeling, and Outreach (Posters) (GSA Environmental and Engineering Geology Division; Washington Division of Earth and Resources; GSA Geoinformatics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 PM and 4:30 to 6:30 PM
Booth #

377-1 271 Harris, Ron*; Prasetyadi, Carolus; Hall, Sarah; Putra, Purna; Buds, Michael P.; Rafaelina, Irina; Horns, Daniel; Yulianto, Eko; Ahmad, Arif; Sulaiman, Hanif; Setiadi, Gilang; Deng, May; Stuart, Kevin; Mesery, William; Frethis, Julian: BRIDGES OVER TROUBLED WATERS: FROM DISCOVERING TSUNAMI DEPOSITS TO EVALUATING TSUNAMI MITIGATION EFFICACY IN INDONESIA

377-2 272 Becerra, Rebeca Isabel*; MacInnes, Breanyn; Ely, Lisa L.: APPLICATIONS OF TSUNAMI MODELING: ASSESSING THE VALIDITY OF MATCHING ON-LAND OBSERVATIONS TO EARTHQUAKE SOURCE SCENARIOS, SOUTH-CENTRAL CHILE

377-3 273 Arcos, Nicolas Paulo*; Dunbar, Paula; Kong, Laura; Stroker, Kelly J.: INTERNATIONAL TSUNAMI SURVEY TEAM’S IMPACT ON THE NCEI GLOBAL HISTORICAL TSUNAMI DATABASE

377-4 274 Raulerson, Andrew*; MacInnes, Breanyn: TSUNAMI DEPOSITS AND TSUNAMI MODELING OF THE 900 AD SEATTLE FAULT EVENT IN NORTHERN PUGET SOUND

377-5 275 Motos-Llavana, Pedro*; Lopez-Venegas, Alberto; Jaffe, Bruce E.; Richmond, Bruce: ASSESSING POTENTIAL TSUNAMI SOURCES FOR EXTREME WAVE DEPOSITS ON SOUTHWEST ISLA DE MONA, PUERTO RICO, USING NUMERICAL SIMULATIONS AND HYDRODYNAMIC BOULDER TRANSPORT EQUATIONS

377-6 276 Tang, Hui*: TSUNAMI SOURCE INVERSION BASED ON TSUNAMI WAVEFORMS, TSUNAMI INUNDATION AREA AND
SESSION NO. 378

T44. Insights from Microfossils, from Traditional to Novel Approaches (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

Booth #

378-1 278 King Phillips, Ezekiel J. ; Cohen, Phoebe; Junipher, Christopher K.; Uveges, Benjamin Thornton Iglar: EXAMINING THE MARINE ISOTOPIC GRADIENT THROUGH THE LATE DEVONIAN USING MICROFOSSIOS FROM THE KELLWASSER HORIZONS

378-2 279 Sheng, Qingyi*: MISSISSIPPIAN FORAMINIFERS FROM SOUTH CHINA

378-3 280 Richardson, Susan L. : LIFE HISTORY EVOLUTION IN FUSULINACEA

378-4 281 Cotton, Laura J. ; Rivero-Cuesta, Lucia; Franceschetti, Gloria; Iakovleva, Alina; Hooker, Jerry J.; Alegret, Laia; Dinarés-Turell, Jaume; Vager, Stacy L.; Fluegeman, Richard H.; Monechi, Simonetta: REASSESSING THE BARTONIAN UNIT STRATOTYPES: AN INTEGRATED APPROACH

378-5 282 Cobb, Bethany*: Clark, M.W. : MICROGENE BIOSTRATIGRAPHIC TRANSPECT BETWEEN ALAMINOS CANYON AND MISSISSIPPI CANYON, GULF OF MEXICO

378-6 283 Carter, Eliza*; O'Connell, Suzanne; Hemming, Sidney; Cai, Merry Yue; Kaplan, Michael R.; Liu, Tzanzhuo; Liang, Jingzhi: TIMESCALE AND PROVENANCE OF PLEISTOCENE SEDIMENT FROM ODP LEG 113 SITE 693

378-7 284 Pendergrass, Emily*: Powell, Sarah J.; Bieglow, Nancy H.; Westbrook, Rachel E.: PALYNOLOGICAL EVIDENCE FOR THE PRESENCE OF COASTAL TUNDRA WITH STANDS OF BOREAL TREES ON THE SOUTHERN MARGIN OF CENTRAL BERINGIA DURING GLACIAL STAGES 2 - 16

378-8 285 Twarog, Michael*; Culver, Stephen J.; Lecor, Eduardo; Mallinson, David J.; Horsman, Eric; Parham, Peter R.; Shazili, Noor A.M.: PALEOENVIRONMENTAL RECONSTRUCTION OF LATE QUERNARY SEDIMENTS FROM THE CENTRAL SUNDA SHELF OFF PENINSULAR MALAYSI

378-9 286 Sarkar, Rita*; Neitzke Adamo, Lauren; Wright, James D.: VARIATIONS IN PLANKTONIC FORAMINIFERA ASSEMBLAGES ACROSS THE LAST DEGLACIATION: A HIGH-RESOLUTION EXAMINATION OF A NORTH ATLANTIC DEEP-SEA SEDIMENT CORE

378-10 287 Shmrhorun, Nina M.E. ; Culver, Stephen J.; Farrell, Kathleen M.; Mallinson, David J.; Riggs, Timothy: MODERN AND FOSSIL FORAMINIFERAL ASSEMBLAGES OF ONSHORE AND OFFSHORE SUBENVIRONMENTS FROM BEAR ISLAND AND BOGUE BANKS, NORTH CAROLINA, USA

378-11 288 Rubin, Margaret*: Borella, Josh; Grimson, Chris; Hampton, Samuel J.: PHYTOLITH RECONSTRUCTION OF THE ENVIRONMENT SURROUNDING THE KAWAKAWA TEPHRA IN BANKS PENINSULA, SOUTH ISLAND

378-12 289 Sorenson, Adrienne*; Martin, Ruth A.; Nesbitt, Elizabeth A.: RECENT BENTHIC FORAMINIFERAL ASSEMBLAGES FROM HOOD CANAL, PUGET SOUND, WASHINGTON STATE

378-13 290 Verlaak, Zoe R.F.*; Collins, Laurel S.: SPATIAL DISTRIBUTION OF MODERN FORAMINIFERAL ASSEMBLAGES IN THE SOUTHWESTERN EVERGLADES, FLORIDA, USA

378-14 291 Little, Shawna N.*; van Hengstum, Peter J.: SHALLOW WATER (<4 M) FORAMINIFERA AND SEDIMENT IN TWO BERMUDIAN ANCHALINE CAVES: IMPLICATIONS FOR RECONSTRUCTING CAVE PALEO ENVIRONMENTS

SESSION NO. 379

T46. North Pacific Environment and Paleoclimate from the Late Pleistocene to Present (Posters) (GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Archaeological Geology Division; GSA Limnogeology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

Booth #

379-1 296 Pratt, Jacob W.*; Cowan, Ellen A.; Zellers, Sarah D.: TESTING A QUARTZ GRAIN MICROTEXTURE PROXY FOR PALEO-SEA-ICE IN COASTAL ALASKA

379-2 297 Lofton, Connor James*; Reece, Bobby; Gulick, Sean; LeVoir, Maureen; Haeussler, Peter J.; Sausstrup, Steffen; O'Brien, Nicholas S.; McCall, Naoma: THE EFFECT OF GLACIAL RETREAT ON FJORD DEPOSITIONAL REGIMES, TAAN FJORD, ICY BAY, ALASKA

379-3 298 Mitchell, Kayla A.*; Cowan, Ellen A.: COMPARING THREE NEW IRD MAR RECORDS FROM IODP EXPEDITION 341 IN THE GULF OF ALASKA

379-4 299 Keller, Katherine J.; Jones, Mireim C.; Woolfer, Matthew: HOLOCENE CLIMATE RECONSTRUCTION FOR THE BERING SEA REGION FROM PEAT OXYGEN ISOTOPES, ST. MATTHEW ISLAND, ALASKA

379-5 300 Stein, Rebeckah*; Sheldon, Nathan D.; Smith, Selena Y.: STABLE ISOTOPE ECOLOGY AND PALEOClimATe IMPLICATIONS OF MODERN THUJA PLICATA IN THE PACIFIC NORTHWEST

379-6 301 Bakkelund, Aleesha*: Porter, Trevor J.; Feikins, Sarah J.; Pisaric, Michael; Prince, Tyler: HOLOCENE CLIMATE CHANGE AT SPINDLY PINE LAKE, SOUTHWESTERn YUKON, INFERRED FROM THE HYDROGEN ISOTOPe COMPOSITION OF PLANT WAXES

379-7 302 Whicker, Chloe A.*; Ibarra, Daniel E.; Lora, Juan M.; Mering, John; Tripati, Aradhna: CLUMPED ISOTOPE THERMOMETRY CONSTRAINTS ON LATE PLEISTOCENE HYDROCLIMATES FOR LAKE SURPRISE, CALIFORNIA

SESSION NO. 380

T63. Cephalopod Paleobiology and Paleoecology: A Tribute to Royal H. Mapes (Posters) (Paleontological Society; SEPM (Society for Sedimentary Geology); Paleontological Research Institution)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

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SESSION NO. 381

T161. Petrology Across the Inner Solar System: In Honor of Roebling Medalist Ed Stolper (Posters) (Mineralogical Society of America; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; GSA Planetary Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

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381-1 311 Ustunisik, Gokce*; Nielsen, Roger L.; Walker, David: PHASE EQUILIBRIA OF PLAGICLASE ULTRAPHYRIC BASALTS: CONSTRAINTS FROM HIGH-PRESSURE EXPERIMENTS

381-2 312 Catalano, Tristan*; Schaub, Douglas R.; Lockwood, Oliver; DiFrancesco, Nicholas; Nekvasil, Hanna; Lindsley, Donald: CRYSTALLIZATION DURING THE AT WHICH AN AZEOTROPE CONTROLS THE COMPOSITIONAL EVOLUTION OF CALCIC PLAGICLASE

381-3 313 Schaub, Douglas R.*; Catalano, Tristan; Lockwood, Oliver; Nekvasil, Hanna; Lindsley, Donald: CRYSTALLIZATION ANORTHITIC PLAGICLASE: IMPACT OF Mg# ON THE PSEUDO-AZETROPE IN THE OLIVINE-PLAGICLASE SYSTEM


381-5 315 McCanta, Molly C.*; Beckett, John: ZONING OF PHOSPHORUS AND OTHER MINOR ELEMENTS IN OLIVINE: AN EXPERIMENTAL STUDY

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T173. Change Detection Photogrammetry in Earth Science (Posters) (GSA Geoinformatics Division; GSA Environmental and Engineering Geology Division)

9:00 AM, Washington State Convention Center, Halls 4EF

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382-1 316 Anderson, Scott W.*; Keith, Mackenzie K.; Magiri, Christopher S.; Wallick, J. Rose: FLUVIAL EROSION AND SEDIMENT DELIVERY AFTER THE 2014 OSO LANDSLIDE BASED ON REPEAT STRUCTURE-FROM-MOTION PHOTOGRAMMETRY
SESSION NO. 385

D41. Structural Geology (Posters): Analysis of Faulting, Deformation and Flow

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
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385-3 330 Tanigawa, Koichiro*; Sawai, Yuki; Bobrowsky, Peter; Huntley, David H.; Goft, James; Shiozaki, Tetsuya: GEOLOGICAL EVIDENCE FOR TSUNAMIS PRIOR TO THE 1700 CASCADIA EARTHQUAKE FROM VANCOUVER ISLAND, CANADA

385-4 331 Sawai, Yuki*; Momohara, Arata: COASTAL SUBMERGENCE AT UKISHIMA-GA-HARA ADJACENT TO THE SURUGA TROUGH (EASTERN NANKAI TROUGH), CENTRAL JAPAN

385-5 332 Patton, Annette I.; Rathburn, Sara L.; Capps, Denny M.; Ruleman, Chester A.: PRELIMINARY SURFICIAL MAPPING OF THE DENALI NATIONAL PARK AND PRESERVE ROAD CORRIDOR: IMPLICATIONS FOR LANDSLIDE HAZARDS IN A CHANGING CLIMATE

385-6 333 Greene, H. Gary*; Barrie, Vaughn; Todd, Brian J.; Conway, Kim: CASCADIA UPPER PLATE FAULTING IN THE SAN JUAN-SOUTH GULF ISLANDS ARCHIPELAGOS

385-7 334 Taylor, Wanda J.*; Chameroy, Eric J.; Ely, Rebecca N.; Konkright, Joshua; Struble, William; Black, Bryan: FORMATION AND RECONSTRUCTION EFFORTS ALONG THE MIDDLE TENNESSEE RIVER VALLEY, USA

385-8 335 Gontz, Allen*; Karlsson, Keene; Cambron, Jaziel; Rockwell, Thomas K.; Fletcher, John M.: GPR IMAGERY AND IDENTIFICATION OF NEOTECTONIC FEATURES OF THE CHUPAMIERTOS FAULT SYSTEM, BAJA CALIFORNIA, MEXICO

385-9 336 Guns, Katherine A.*; Bennett, Richard A.; Bilinski, Kim: INVESTIGATING STRAIN TRANSFER ALONG THE SOUTHERN SAN ANDREAS FAULT: A GEOMORPHIC AND GEODETIC STUDY OF BLOCK ROTATION IN THE EASTERN TRANSVERSE RANGES, JOSHUA TREE NATIONAL PARK, CA

385-10 337 Johnston, Amanda*; Zhang, Rui; Gottardi, Raphael; Dawers, Nancy H.: INVESTIGATING THE RELATIONSHIP BETWEEN TECTONICS AND LAND LOSS NEAR GOLDEN MEADOW, LOUISIANA BY UTILIZING 3D SEISMIC AND WELL LOG DATA

385-11 338 Bartlett, Marie*; Hawkes, Andrea D.; Bobrowsky, Peter; Sawai, Yuki; Tanigawa, Koichiro: QUANTITATIVE PALEOENVIRONMENTAL RECONSTRUCTIONS OF PAST COASTAL SUBSIDENCE ALONG THE NORTHERN MARGIN OF THE CASCADIA SUBDUCTION ZONE

385-12 339 Jeong, Gi Young*: RECURRENT EVENTS ON A QUATERNARY FAULT RECORDED IN THE CLAY MINERALOGY OF RAISED MARINE TERRACE SEDIMENTS

385-13 340 Stewart, C. Lance*: Stinchcomb, Gary E.; Forman, Steven L.; Davis, Lisa; Lombardi, Rachel: PALEOFLUID RECONSTRUCTION EFFORTS ALONG THE MIDDLE TENNESSEE RIVER VALLEY, USA

385-14 341 Wetherell, Logan R.*; Ely, Lisa L.; Walsh, Megan; Roering, Joshua; Struble, William; Black, Bryan: FORMATION AND SEDIMENTATION OF LANDSLIDE-DAMMED LAKES WITHIN SMALL WATERSHEDS OF THE CENTRAL OREGON COAST RANGE

385-15 342 Nemeth, Laurny Nicole*: EFFECTS OF RIO GRANDE RIFT RELATED FAULTS ON DOMINANT FRACTURE TRENDS OF EL PASO’S THREE SISTERS INTRUSIVE FORMATION

385-16 343 Brink, Shannon E*: MAPPING MAGMATIC FLOW VIA ENCLAVE DEFORMATION IN THE THREE SISTERS ANDESITE: EL PASO, TEXAS

385-17 344 Horsman, Eric*: CONSTRUCTION OF HIGH-SYMMETRY SHEET-LIKE INTRUSIONS IN THE UPPER CRUST THROUGH AMALGAMATION OF LOW-SYMMETRY LOBES

385-18 345 Bate, Charlotte E.*; Tikoff, Basil; Housen, Bernard: FABRIC AND PALEOMAGNETIC ANALYSES OF THE SW LOBE OF THE TUOLUMNE INTRUSIVE SUITE, SIERRA NEVADA BATHOLITH, CALIFORNIA, USA

385-19 346 Morales, Victor M.*; Solar, Gary S.; Tomasack, Paul B.: THE GRANITE BOUDINAGE STRAIN RECORD IN DEFORMED MIGMATITES IN THE NORUMBEGA SHEAR ZONE SYSTEM, SOUTHERN MAINE

385-20 347 Biesiada, Veronica C.; Price, Nancy A.: ANALYSIS OF DEFORMATION IN PILLOW BASALTS OF THE CRESCENT FORMATION, OLYMPIC MOUNTAINS, WASHINGTON, USA

385-21 348 Mezger, Jochen E.: CONTRACTIONALLY DEFORMED BELEMNITES AS INDICATORS FOR THRUST FAULTING IN MECHANICALLY WEAK SEDIMENTARY LAYERS – AN EXAMPLE FROM THE LOWER CRETACEOUS OF THE TALKEETNA MTS., CENTRAL ALASKA


385-23 350 Jarrett, Corey B.*; Miller, Marli B.: Price, Nancy A.: MYOLITE MÉLANGE IN AN EXTENSIONAL SHEAR-ZONE: A DESCRIPTIVE HISTORY AND STRAIN ANALYSIS

385-24 351 Iosso, Chantal*: Rahi, Jeffrey M.: A MICROSTRUCTURAL ANALYSIS OF THE UPPERMOST UNIT OF CRETE, GREECE

385-25 352 Cashman, Susan M.*; Bradshaw, Tomia H.; Browne, Brandon L.: ANATOMY OF THE LA GRANGE DETACHMENT FAULT, KLMATH MOUNTAINS, CALIFORNIA, FROM CALTRANS CORES

385-26 353 Schusler, Kyle L.*; Pearson, David M.; McCurry, Michael: WHOSE FAULT IS IT? A KINEMATIC ANALYSIS OF HIGH ANGLE FAULTS ADJACENT TO THE EASTERN SNAKE RIVER PLAIN NEAR ARCO, ID

385-27 354 Cooper, Jordan M.*: PALINSPSATIC RECONSTRUCTION OF THE EASTERN SAN GABRIELS, CALIFORNIA UP TO 12 MYA

385-28 355 Baran, Zeynep*: Gesualdo, Anthony M.: STRUCTURAL CONTROLS ON GOLD MINERALIZATION IN MARIGOLD MINING SITE, HUMBOLDT COUNTY, NV

385-29 356 Hoffman, Charles C.*; Greene, David C.; Klemetti, Erik W.; Toth, Conner; Worm, Thomas J.: COMPOSITION OF NEW AND EXISTING AGE DATA INDICATES LARGE SCALE STRUCTURAL IMBRICATION IN THE MINERAL KING PENDANT, SOUTHERN SERRA NEVADA, CALIFORNIA

385-30 357 Greene, David C.*; Hoffman, Charles F.; Klemetti, Erik W.; Toth, Conner; Worm, Thomas J.: PERSIAN DUELING DURING CRETEOUS DEFORMATION IN THE MINERAL KING PENDANT, SOUTHERN SERRA NEVADA, CALIFORNIA

385-31 358 Wyatt, Michael P.*; Singleton, John S.; Seymour, Nikki M.: EVIDENCE FOR DEXTRAL TRANSTENSION IN THE SOUTHERN PLOMOSA MOUNTAINS, WEST-CENTRAL ARIZONA

385-32 359 Wang, Yijun*; Cooke, Michele L.; Titus, Sarah: ECHELON FAULT DEVELOPMENT DEPENDS ON STRAIN RATE IN WET KAOLIN

385-33 360 Mayberry, Camille*: GEOLOGIC MAPPING ALONG THE GUMDROP HILLS FAULT: DEXTRARLY OFFSET TUFF-FILLED PALEOVALLEYS IN THE CENTRAL WALKER LANE

385-34 361 Webber, Amy*: Oldow, John S.: TWO PERIODS OF MIOCENE TO CONTEMPORARY FLATTENING STRAIN DURING DISPLACEMENT ON A LOW-ANGLE DETACHMENT AND ON SUPERPOSED CURVED HIGH-ANGLE FAULTS, VOLCANIC HILLS, SOUTHWEST NEVADA

385-35 362 Mueller, Nicholas J.*; Oldow, John S.: PLOECNE CHANGES IN KINEMATICS AND LONG-TERM GEOLOGIC SLIP RATES ALONG THE FURNACE CREEK – FISH LAKE VALLEY FAULT ZONE, CALIFORNIA AND NEVADA
SESSION NO. 386


9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM
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386-1 375 Wang, Lu*; Wang, Songjie; Brown, Michael; Zhang, Junfeng; Fung, Peng: ON THE SURVIVAL OF INTERGRANULAR COESITE IN UHP ECLOGITE

386-2 376 Chatzaras, Vasileios*; Kruckenberg, Seth C.; Titus, Sarah; Tikoff, Basil; Teysseyre, Christian; Drury, Martin: STRAIN LOCALIZATION PROCESSES IN THE UPPER MANTEL SECTION OF AN OCEANIC PALETORNFAULT, BOGOTA PENINSULA SHEAR ZONE, NEW CALEDONIA

386-3 377 Ma, Chong*; Gee, David G.; Benowitz, Jeffrey A.; Sjöström, Häkan; Steltenpohl, Mark G.: STRUCTURE AND EMPLACEMENT OF DEEPLY SUBDUCTED ULTRAHIGH-PRESSURE ROCKS: AN EXAMPLE FROM THE SEVE NAPPE COMPLEX OF THE SWEDISH CALEDONIDES

386-4 378 Ostwald, Claire*; Kaun, Maureen; Schmitz, Mark D.; Tikoff, Basil: FINDING STRAIN LOCALIZATION AND DATING THE ONSET OF DEFORMATION IN THE WESTERN IDAHO SHEAR ZONE USING TITANITE U-Pb GEOCHRONOLOGY AND CRYSTALLLOGRAPHIC VORTICITY AXIS ANALYSIS

386-5 379 Kruckenberg, Seth C.*; Montz, William J.: RHEOLOGICAL TRANSITIONS AND STRUCTURAL OVERPRINTING ASSOCIATED WITH CRETACEOUS PARTIAL MELTING AND STRAIN LOCALIZATION IN THE POTTERS POND MIGMATITE DOMAIN, WEST-CENTRAL IDAHO

386-6 380 Baden, Curtis William*; Hilley, George E.; Shuster, David L.; Hourigan, Jeremy: CONTRASTS IN INTEGRATED CRUSTAL STRENGTH DRIVE STRAIN LOCALIZATION WITHIN THE SANTA CRUZ MOUNTAINS RESTRAINING BEND IN THE SAN ANDREAS FAULT, NORTHERN CALIFORNIA

386-7 381 McGinn, Courtney*; Miranda, Elena A.; Hufford, Lonnie; Schwartz, Joshua J.; Klepeis, Keith A.: MICROSTRUCTURAL DEVELOPMENT WITHIN A DISTRIBUTED MID-CRUSTAL SHEAR ZONE: A NORTHERN EXTENSION OF THE GREBE MYLONITE ZONE IN FIORLAND, NEW ZEALAND?

386-8 382 Gross, Caroline E.*; Miranda, Elena A.; Klepeis, Keith: PLAQIOCLASE DEFORMATION RESULTING IN LOCALIZED STRAIN IN A LOWER CRUSTAL SHEAR ZONE, FIORLAND, NEW ZEALAND

386-9 383 Hufford, Lonnie Justin*; Miranda, Elena A.; Schwartz, Joshua J.; Klepeis, Keith: DEFORMATION MECHANISMS OF QUARTZ AND PLAQIOCLASE IN A MID-CRUSTAL TRANSPRESSIONAL SHEAR ZONE WITHIN ARC CRUST: MICROSTRUCTURAL INVESTIGATION OF THE GREBE MYLONITE ZONE IN FIORLAND, NEW ZEALAND

386-10 384 Hughes, Cameron A.*; Jessup, Micah J.; Shaw, Colin A.: DEFORMATION MECHANISMS RELATED TO STRAIN LOCALIZATION IN THE CORDILLERA BLANCA SHEAR ZONE (CBSZ), PERU

386-11 385 Cullik, Michael*; Rahl, Jeffrey M.: CRYSTALLLOGRAPHIC PREFERRED ORIENTATION AND MICROSTRUCTURAL ANALYSES ACROSS A STRAIN GRADIENT, MAGGIA NAPPE, SWITZERLAND

386-12 386 Sparks, Stephanie A.*; Thigpen, J. Ryan: EXAMINING TRANSIENT THERMAL-RHEOLOGICAL INTERACTION DURING COLLISIONAL OROGENESIS USING NUMERICAL MODELING: IMPLICATIONS FOR CHANNEL FLOW AND CRITICAL WEDGE MODELS

386-13 387 Long, Sean P.*; Gordon, Stacia; Soignard, Emmanuel: LARGE-SCALE, DISTRIBUTED STRUCTURAL THINNING IN THE HIMALAYAN OROGEN: A CASE STUDY FROM CENTRAL BHUTAN

386-14 388 Liu, Xiaobing*; Liu, Xiaohan; Leloup, P.H.; Mahéo, G.; Li, Guanwe; Wei, Lihe: STRUCTURAL CHARACTERISTICS OF THE UPPER HIMALAYA CRYSTALLINE SEQUENCE, IN NYALAM AREA, SOUTHERN TIBET AND GEOLOGICAL IMPLICATIONS

386-15 389 Nso, Peter*: Eckert, Andreas: DEFORMATION OF SEDIMENTS AT SALT FLANKS AND OVERHANGS: A NUMERICAL MODELING APPROACH

386-16 390 Davis, Joshua R.*; Chatzaras, Vasileios; Roberts, Nicolas M.; Popick, Andrew; Titus, Sarah: STATISTICS OF ELLIPSOIDAL DATA FROM RIDGE-TRANSFORM SYSTEMS

386-17 391 Howell, Samuel M.*: THE EFFECT OF FAULT LOCALIZATION ASSUMPTIONS ON EXTENSIONAL TERRAIN DEVELOPMENT IN ICY SATELLITES

386-18 392 Cao, Wenrong*: Lee, Cin-Ty A.: SCALING ANALYSIS AND NUMERICAL MODELING OF HYDROTHERMAL CIRCULATION IN COOLING AND EXHUMING HOT CONTINENTAL ARC CRUST
SESSION NO. 387 $

T212. Geologic Mapping in the Pacific Northwest and Beyond: Recent Maps, Advances, and New Insights; In Memory of Russell C. Evarts and his Extensive Contributions to Pacific Northwest Geologic Mapping (Posters)
9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

387-1 394 Polenz, Michael*; Allen, Mitchell; Legorreta Paulin, Gabriel; Eungard, Daniel W.; Cakir, Recep; Stoker, Bruce A.; Mahan, Shannon A.: GEOLoGIC MAP OF THE SHELTON VALLEY 7.5' QUADRANGLE, MASON COUNTY, WASHINGTON

387-2 395 Polenz, Michael*; Vermeer, Jessica L.; Legorreta Paulin, Gabriel; Tepper, Jeffrey H.; Mahan, Shannon A.; Cakir, Recep: GEOLoGIC MAP OF THE LITTLEROCK QUADRANGLE, THURSTON COUNTY, WASHINGTON

387-3 396 Troost, Kathy Goetz*; Brooks, Justin L.; Teague, Kathryn E.; Porter, Matthew J.; Kohn, James A.; Thompson, Lauren: GEOLOGIC HAZARD AND OTHER DERIVATIVE MAPPING FOR CITY OF KIRKLAND, WA

387-4 397 Mavor, Sklyer Pendleton*; Allen, Mitchell; Tepper, Jeffrey H.; Nesbitt, Elizabeth A.; Mahan, Shannon A.; Cakir, Recep; Stoker, Bruce A.; Anderson, M.L.: GEOLoGIC MAP OF THE MALTBY 7.5' QUADRANGLE, SNOHOMISH AND KING COUNTIES, WASHINGTON

387-5 398 Dragovich, Joe D.*; Anderson, Megan L.; Mahan, Shannon A.; MacDonald, James H.; Tepper, Jeffrey H.; Mavor, Sklyer; Koger, Curtis J.; Cakir, Recep; Stoker, Bruce A.; Smith, Daniel T.; DuFran, S. Andrew: GEOLOGY OF THE GRANITE FALLS 7.5-MINUTE QUADRANGLE AREA—A RICH HISTORY OF NEOTECTONIC BASIN DEVELOPMENT AND INVERSION TO MESOZOIC ACCRETIONARY TECTONICS IN THE FOOTHILLS OF SNOHOMISH COUNTY, WASHINGTON

387-6 399 Nandi, Sourav Krishna*; Brown, Mark Byron; Spurgeon, Derek L.; Breeding, Dalton R.; Gerik, Ashley; McKay, Matthew P.: GEOLOGIC MAP OF THE PURGATORY SADDLE 7.5' QUADRANGLE, ADAMS COUNTY, IDAHO, WESTERN IDAHO: PRE-ACCRETIONARY DEFORMATION IN THE EASTERN BLUE MOUNTAINS

387-7 400 Breedlovestrout, Renee; Lewis, Reed S.*; Isakson, Vincie; Wood, Spencer; Feeny, Dennis M.; MAPPING OF MICOCENE-PLIOCENE LAKE IDAHO AND PAYETTE SEDIMENTARY DEPOSITS NORTH OF THE WESTERN SNAKE RIVER PLAIN

387-8 401 Feeny, Dennis M.*; Isakson, Vincent H.; Lewis, Reed S.; Mertzman, Stanley A.: MAPPING MIDDLE MICOCENE VOLCANIC ROCKS IN THE WEISER EMBAYMENT, SOUTHWEST IDAHO: NEW U-PB TIMS ZIRCON AGE DATA AND ITS IMPLICATIONS

387-9 402 Goodson, Bernt*; Armstrong, Austin; Pritchard, Chad J.; O'Sullivan, Paul: EOCENE DEFORMATION AND ASSIMILATION IN THE WILLOW LAKE NATURAL AREA, SPOKANE COUNTY, WASHINGTON

387-10 403 Cleveland, Aaron B.*; Adams, Drew B.; Pritchard, Chad J.: GEOLOGIC AND ANTHROPOGENIC HISTORY OF SPOKANE REVEALED BY SUBSURFACE PROJECTIONS FOR STORMWATER DISPOSAL

387-11 404 Hendrick, Megan*; Haugerud, Ralph; O'Connor, Jim E.: MAPPING THE MISSOULA FLOODS, NORTH-CENTRAL WASHINGTON

387-12 405 Gordon, Gabriel*; Haugerud, Ralph; O'Connor, Jim E.: MAPPING THE MISSOULA FLOODS: THE COLUMBIA RIVER GORGE


SESSION NO. 388

T219. Challenges in Tectonics: Dynamic Interactions among Earth-Surface Processes, Landscape Evolution, and Tectonics (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Quaternary Geology and Geomorphology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division; SEPM (Society for Sedimentary Geology); Future of Tectonics Initiative)
9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM


388-2 413 Haeussler, Peter J.*; Saltus, Richard W.; Stanley, Richard G.; Ruppert, Natalia; Lewis, Kristen A.; Kari, Susan M.; Bender, Adrian: THE PETERS HILLS BASIN, A NEOGENE PIGGYBACK BASIN ON THE BROAD PASS THRUST FAULT, SOUTH-CENTRAL ALASKA

388-3 414 White, Emily J.*; Cassel, Elizabeth J.: PRELIMINARY RESULTS FROM VOLCANIC GLASS PALEOLATIMETRY AND MICOCENE STRATIGRAPHY OF THE CENTRAL ANDES, SOUTHERN PERU

388-4 415 Canada, Andrew S.*; Cassel, Elizabeth J.; Smith, M. Elliot; Stockli, Daniel F.: CONNECTING LANDSCAPE CHANGES IN EXHUMATION TO LACUSTRINE SEDIMENTATION AND SURFACE DEFORMATION IN A UNIQUE HINTERLAND BASIN, NORTHEAST NEVADA

388-5 416 Licht, Alexis*; Dupont-Nivet, Guillaume; Win, Zaw; Littell, Virginia; Swe, Hnin Hnin; Kay Thi, Myat; Aung, Day Wa; Roperch, Pierrick; Poblete, Fernando; Huang, Huasheng; Hoorn, Carina; Sein, Kyaing: ONSET OF INDIAN OBlique CONVERGENCE ALONG THE BURMESE SUBDUCTION MARGIN RECORDED IN UPPER EOCENE SEDIMENTARY DEPOSITS OF CENTRAL MYANMAR


388-7 418 Ma, Huimin*; Wang, Yu; Huang, Yijuan: LINKAGES BETWEEN TECTONICS AND SEDIMENTARY RECORDS OF MIOCENE INTRACONTINENTAL DEFORMATION IN CENTRAL SOUTH CHINA

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**SESSION NO. 389 $**

T225. New Perspectives on Cordilleran Tectonics, Paleogeography, and Metallogeny (Posters) (GSA Sedimentary Geology Division; SEPM (Society for Sedimentary Geology); Society of Economic Geologists; GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF

Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

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SESSION NO. 390 $T229. Paleocene-Eocene Tectonic and Magmatic Evolution of the Pacific Northwest (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 2 to 4 PM and 4:30 to 6:30 PM

SESSION NO. 391 $T233. Tectonics, Geohazards, and Morphodynamics from High-Resolution Topography and Imagery (Posters) (GSA Quaternary Geology and Geomorphology Division; GSA Environmental and Engineering Geology Division; GSA Structural Geology and Tectonics Division)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

SESSION NO. 392 $D37. Volcanology (Posters)

9:00 AM, Washington State Convention Center, Halls 4EF
Authors will be present from 9:30 to 11:30 AM and 4:30 to 6:30 PM

**SESSION NO. 390 $**

**T229. Paleocene-Eocene Tectonic and Magmatic Evolution of the Pacific Northwest (Posters) (GSA Structural Geology and Tectonics Division; GSA Sedimentary Geology Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)**

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**Booth #**

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**D37. Volcanology (Posters)**

9:00 AM, Washington State Convention Center, Halls 4EF
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T165. Recent Advances in Understanding Volcanism of the Yellowstone Hotspot (Posters)

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393-3 494 Hanna, Teresa R.; Streck, Martin J.: AREAL EXTENT AND VOLUMES OF THE DINNER CREEK TUFF UNITS, EASTERN OREGON BASED ON LITHOLOGY AND FELDSPAR COMPOSITION

393-4 495 Unruh, David W.*; Wolff, John A.; Davis, Klarissa: PHREATOMAGMATIUC TUFFS AT THE BASE OF THE COLUMBIA RIVER FLOOD BASALTS

393-5 496 Potter, Katherine E.; Sherwais, John; Champion, D.E.; Duncan, Robert: VOLCANIC STRATIGRAPHY AND AGE MODEL OF THE KIMAMA DEEP CORE HOLE (PROJECT HOTSPOT), CENTRAL SNAKE RIVER PLAIN, IDAHO

393-6 497 Spencer, Danielle Jeanette*; Christiansen, Eric H.; Colon, Dylan P.; Bindeman, Ilya N.; Sherwais, John W.: CANNIBALIZATION AND MIXING PROCESSES IN HOTSPOT RHYOLITES: ANOMALOUS TEXTURES AND GEOCHEMISTRY OF THE KIMBERLY MEMBER OF THE CASSIA FORMATION, YELLOWSTONE HOTSPOT TRACK, IDAHO

393-7 498 Kennett, James*; Behl, Richard J.; Dean, Walter E.; Sorlien, Christopher; Nicholson, Craig: SANTA BARBARA BASIN SEDIMENT RECORD OF VOLCANIC WINTERS TRIGGERED BY TWO YELLOWSTONE SUPERVOLCANIC ERUPTIONS AT 639 KA