Manchester, New Hampshire | 17–19 March

www.geosociety.org/ne-mtg
We are grateful to several societies, companies, and agencies that made substantial contributions to underwrite the cost of the 2024 meeting. Please take time to thank these sponsors for their contributions to help make this meeting a success. Listed below are sponsorship organizations.

**PLATINUM LEVEL**

Yale Earth & Planetary Sciences

**GOLD LEVEL**

Sanborn Head

Penn Master of Science in Applied Geosciences

Dartmouth

**SILVER LEVEL**

Earth & Environmental Sciences Boston College

HRGS Hager-Richter Geoscience, Inc.

Geophysics for the Engineering & Environmental Communities
FINAL PROGRAM
FOR

59th Annual Meeting
NORTHEASTERN SECTION MEETING
GEOLOGICAL SOCIETY OF AMERICA
17–19 MARCH 2024
DoubleTree by Hilton Manchester Downtown
Manchester, New Hampshire USA
with
Eastern Section, Society for Sedimentary Geology
Eastern and New England Sections, National Association of Geoscience Teachers

Hosted By:
Yale University Department of Earth and Planetary Sciences
Department of Earth Sciences, Dartmouth College
Sanborn, Head & Associates
University of Pennsylvania Master of Science in Applied Geosciences
Boston College, Dept. of Earth & Environmental Sciences
Hager-Richter Geoscience, Inc.

Committee for the 2024 Meeting

General Chair: .................................................. David West
Technical Program Co-Chairs: .................. Shane Csiki, Anne Lightbody, Sara Mana
Student and Volunteer Help Chair: .................. Sara Mana

Northeastern Section GSA Officers for 2023–2024

Chair: ........................................ Nancy Price
Secretary – Treasurer: ........................................ David West
Members at Large: ........................................ Amber T.H. Whittaker, Michelle Markley
Past Chair: .................................................. Howell Bosbyshell

NOTICE

By registering for this meeting, you have acknowledged that you have read and will comply with the GSA Code of Conduct for Events (full code of conduct listed on inside back cover).
If you have any concerns about behavior that may violate the Code:
- Please ask questions or report concerns—openly or anonymously—to our third-party hotline provider via:
  - Internet: geosociety.ethicspoint.com
  - Phone: +1-844-237-8688
  - Mobile: geosociety.navexone.com
- Or, direct any questions or concerns to ethics@geosociety.org or any GSA staff member or RISE Liaison.
REACH NEW HEIGHTS
With Your GSA Membership

LEARN
• Expand your career by attending professional meetings
• Amplify science by publishing in our top-rated scientific journals
• Explore with our field trips and short courses while earning CEUs

GROW
• Discover internships, research grants, and scholarships
• Build your network to improve your future
• Connect with an international community doing cutting-edge science

LEAD
• Express yourself—We advocate on your behalf to affect change
• Support and promote diversity, equity, and inclusion
• Make your résumé stand out with GSA membership

GIVE
• Guide and motivate others to inspire the future
• Gain recognition as an active leader
• Find your place where everyone is welcome and respected

JOIN or RENEW your MEMBERSHIP in person at the GSA Membership & Publications Booth and SAVE 20%!
The meeting will be held in Manchester, New Hampshire, USA, the largest city in northern New England. Manchester is situated on the Merrimack River about 50 miles northwest of Boston and 60 miles south of the White Mountains. The meeting location is the DoubleTree by Hilton, Manchester Downtown (700 Elm Street, Manchester, New Hampshire 03101) less than 10 miles from the Manchester-Boston Regional Airport (MHT) and proximal to a wide variety of shops and restaurants. This location, situated between the Atlantic coast and White Mountains, offers many opportunities to experience picturesque New England. We invite you to join us at Manchester 2024, where we have developed a strong technical program that covers a broad scope of geologic topics and discussions on the recruitment of the next generation of geoscientists.

Accommodations
Rooms have been reserved at the DoubleTree by Hilton, Manchester Downtown, 700 Elm Street, Manchester, New Hampshire, which will serve as the location of all the meeting technical programs, exhibits, and associated activities. The hotel offers many amenities, including restaurants, bar, pool, fitness center. Discounted self-parking is available for $14/day.

Registration
Registration is required to participate in all events associated with the meeting, including technical sessions, short courses, exhibits, special meetings, and planned social events. Registration badges must be worn for access to all activities, and guest registration is required for attendance at the welcoming reception, scheduled lunches, breakfasts, dinners, and field trips. A current student ID is required to obtain student registration rates. K–12 professionals are invited to attend at reduced rates.

On-site Registration Fees shown in U.S. dollars.

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<thead>
<tr>
<th></th>
<th>Full</th>
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<tbody>
<tr>
<td>Professional Member</td>
<td>$250</td>
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<td>Guest/Spouse</td>
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Guest registration is intended for non-geoscientists accompanying a registered professional, student or K–12 professional. All guests, volunteers, exhibitors, GSA staff, service providers and others in attendance are expected to abide by the GSA Events Code of Conduct, which outlines specific expectations for participants at GSA supported events.

Cancellations, Changes, and Refunds
Requests for additions, changes, and cancellations must have been made in writing to GSA Headquarters by 19 February 2024. No refunds will be made on cancellation notices received after this date. GSA cannot provide refunds for on-site registration or event ticket sales. Refunds will be mailed from GSA after the meeting; refunds for fees paid by credit card will be credited to the card identified on the registration form.

Meeting Program and Abstracts
A web-based program is available for this meeting. This program allows you to view and search in the meeting and create your own schedule of events to attend. You can also view the full abstracts text from this program. You can access the online meeting program by visiting: https://gsa.confex.com/gsa/2024NE/meetingapp.cgi/Home/0

Accessibility
GSA is committed to ensuring full participation for all meeting attendees. You may indicate special requirements on your registration form; please inform the local organizing committee of these requirements at least one month prior to the meeting. Accessible rooms at the hotel are available and can be reserved.

Continuing Education Units (CEU credit)
Continuing Education Unit (CEU) credits are available for attending GSA meetings, field trips, and short courses. This is an excellent opportunity to earn CEUs toward your requirements for your employer, K–12 school, or professional license. A contact hour is defined as a typical 60-minute classroom instructional session or its equivalent. Each meeting day equals 0.8 CEU, offering 2.4 CEUs for the joint meeting technical program, with additional CEUs available from field trips and short courses. Please check the meeting website after the meeting to download your CEU certificate.

Special Events & Activities
Saturday, 16 March

Welcoming Reception. 5–7 p.m. Please join us in the Armory of the Manchester DoubleTree Hotel to visit with friends and colleagues and officially kick-off the 59th Annual Meeting of the Northeastern Section of the Geological Society of America. Exhibits will be open, and hors d’oeuvres and one complementary drink are included with each registration. A cash bar is also available. Food and cash bar
Sunday, 17 March

Morning Fitness Class. 6:15–7 a.m., Hale Room. Enjoy a 45-minute full-body workout with GSA Finance Director, Anita Monk-Ryan. Each class includes a warm-up, low-impact cardio, muscle toning, and a cool-down. Please wear athletic shoes and comfortable clothing, and bring a water bottle and hand towel.

Geoscience Career Program Workshop Part 1: Career Planning and Networking. 9–10 a.m., Stark Room. This workshop will help you prepare for your career in the geosciences and practice your networking skills. See Opportunities for Students section for additional details.

Geoscience Career Program Workshop Part 2: Geoscience Career Exploration. 10–11 a.m., Stark Room. Workshop presenters and professionals in the field will be present to discuss career opportunities. See Opportunities for Students section for additional details.

National Association of Geoscience Teachers (NAGT) Luncheon. noon–1:30 p.m., Pierce Room. This is a ticketed event. Professional $35.

Roy J. Shlemon Mentors Program in Applied Geosciences. noon–1:30 p.m., Webster Room. GSA student members will have the opportunity to discuss career prospects and challenges with applied geoscientists from various sectors over a FREE lunch. First come, first served.

Geology Club Meet-up. 2–3 p.m. Stark Room. If you are a geology club member or are interested in starting a club on your campus, plan to meet up and chat with other representatives about their activities, goals, and accomplishments.

Northeast Tectonics Reception honoring Sandra Barr. 5:30–7 p.m., Pemigewasset and Assembly Rooms. All are welcome to join us in a celebration of the career of Sandra Barr and for informal networking amongst students and professionals. Light hors d’oeuvres and cash bar. This is a non-ticketed event.

LGBTQ Reception. 5:30–7 p.m. Webster Room. Stop by for conversation and informal networking. This is a non-ticketed event.

ES-SEPM Meeting and Reception. 6:30–8 p.m., Stark Room. Join the Eastern Section of the Society for Sedimentary Geology (ES-SEPM) and the Sedimentary Geology Division of GSA for their annual meeting and reception. The keynote speaker for the event is Dr. Dennis Terry, Associate Professor, Dept. of Earth and Environmental Science, Temple University, and Chair-elect of the GSA Soils and Soil Processes Division. This is a non-ticketed event, and everyone is welcome. Snack/hors d’oeuvres will be served, and beverages available nearby.

Monday, 18 March

Morning Fitness Class. 6:15–7 a.m., Hale Room. Enjoy a 45-minute full-body workout with GSA Finance Director, Anita Monk-Ryan. Each class includes a warm-up, low-impact cardio, muscle toning, and a cool-down. Please wear athletic shoes and comfortable clothing, and bring a water bottle and hand towel.

Geoscience Career Program Workshop Part 3: Cover Letters, Résumés, and CVs. 9–10 a.m., Stark Room. This workshop focuses on how to prepare the best résumé possible. See Opportunities for Students section for additional details.

John Mann Mentors Program in Applied Hydrogeology. noon–1:30 p.m., Webster Room. GSA student members interested in applied hydrogeology or hydrology as a career will have the opportunity to network with professionals in these fields over a FREE lunch. First come, first served.

Northeastern Section Management Board Meeting. Noon–1:30 p.m., Pierce Room.

Town Hall Panel Discussion: Recruiting the New Generation of Geoscientists. Time 5:30–7 p.m., Pemigewasset and Assembly Rooms. All are invited to this panel discussion that will feature individuals from colleges/universities, the K–12 community, federal and state geologic agencies and the private consulting industry discussing the future needs across all sectors of the geoscience community, and the importance of recruiting younger individuals into the geosciences to fulfill these needs.

Map and Art Blast. 7–9 p.m., Armory. Originating at the Portland NEGSA meeting in 1998, this annual event invites all meeting attendees to post and informally discuss newly published and in progress geologic maps, digital images, and geo-artwork of all sorts. No abstract submission is required. Cash bar and light hors d’oeuvres available.

Tuesday, 19 March

Morning Fitness Class. 6:15–7 a.m., Hale Room. Enjoy a 45-minute full-body workout with GSA Finance Director, Anita Monk-Ryan. Each class includes a warm-up, low-impact cardio, muscle toning, and a cool-down. Please wear athletic shoes and comfortable clothing, and bring a water bottle and hand towel.

Opportunities for Students

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GSA Career Workshops

Geoscience Career Program Workshop Part 1: Career Planning and Networking. Sun., 17 March, 9–10 a.m., Stark Room. Your job-hunting process should begin with career planning, not when you apply for jobs. This workshop
will help you begin this process and will help you to practice your networking skills. This section is highly recommended for freshmen, sophomores, and juniors. The earlier you start your career planning the better.

Geoscience Career Program Workshop Part 2: Geoscience Career Exploration. Sun., 17 March, 10–11 a.m., Stark Room. What do geologists in various sectors earn? What do they do? What are the pros and cons to working in academia, government, and industry? Workshop presenters and professionals in the field will address these issues.

Geoscience Career Program Workshop Part 3: Cover Letters, Résumés, and CVs. Mon., 18 March, 9–10 a.m., Stark Room. How do you prepare a cover letter? Does your résumé need a good edit? Whether you are currently in the market for a job or not, learn how to prepare the best résumé possible. You will review numerous examples helping you to learn important résumé dos and don’ts.

Student Volunteers
Students accepted as meeting volunteers must check in at the Student Volunteer and Information Desk, located in the Assembly Room.

Exhibits
Exhibits are located in the Armory of the hotel.

Hours of Exhibits
Set up: Saturday, 16 March, 12–4 p.m.
Open: Saturday, 16 March, 5–7 p.m.
Open: Sunday, 17 March, 8 a.m.–5 p.m.
Open: Monday, 18 March, 8 a.m.–5 p.m.
Open: Tuesday, 19 March, 8 a.m.–noon
Tear Down: Tuesday, 19 March, noon–5 p.m.

As of mid-February, Exhibitors include:
2025 Joint NEGSA-NCGSA Meeting
Geological Society of America Bookstore
GSA Foundation
GSA Divisions
New York State Museum / Geological Survey
New York State Board of Engineering, Land Surveying and Geology
Beta Analytics
Geological Society of New Hampshire
GSA Divisions
Holcim
New York State Geological Survey
NYS Board for Geology Professional Licensure
RELION - MonSun GeoSci
Temple University
The Geological Society of America 2025 Northeast Section
The Geological Society of America Bookstore x2
The Geological Society of America Foundation
University of Massachusetts Lowell Environmental, Earth & Atmospheric Sciences
Verder Scientific
Sanborn, Head & Associates, Inc.
U.S. Geological Survey

University of Pennsylvania
Master of Science in Applied Geosciences
Yale University Department of Earth and Planetary Sciences

Technical Program
The technical program consists of Symposia, Theme, and Discipline sessions, organized into oral and poster sessions. The technical program begins at 8 a.m. on Sunday, 17 March and concludes by noon on Tuesday, 19 March. All technical sessions (oral and poster) are located at the DoubleTree by Hilton Manchester Downtown.

Oral Sessions
All oral sessions have 20 minutes per presentation (17 minutes, presentation; 3 minutes, question and discussion). Presentations must be prepared using PowerPoint or PDF formats, using a 16:9 screen ratio. One laptop with Windows 7 (no Macs available) with PowerPoint, one LCD projector, and one screen is provided for all oral sessions. In addition, each room is equipped with a lectern, microphone, wireless computer mouse and slide advance, and a speaker timer. Laptops in oral session rooms do not have internet access, so please do not include external links in your presentation.

Speaker Ready Room
All oral session presenters should visit the Speaker Ready Room located in the Spaulding Room before their scheduled presentation to ensure their PowerPoint or PDF file is properly configured and operating and load it on one of the laptops. Failure to do so may result in presentations being omitted from sessions. Speaker Ready Room hours are as follows:

Saturday, 16 March: 4–8:30 p.m.
Sunday, 17 March: 7 a.m.–6 p.m.
Monday, 18 March: 7 a.m.–6 p.m.
Tuesday, 19 March: 7–10 a.m.

Each speaker must bring their PowerPoint or PDF presentation on a USB-compatible flash drive (a.k.a. thumb drive or memory stick) to the Speaker Ready Room to upload to the appropriate session folder according to the deadlines above. Morning presentations must be uploaded by the end of the day prior to the presentation. All afternoon presentations must be uploaded by noon on the day of the presentation.

If you aren’t able to make it to the Speaker Ready Room by the times listed above for your presentation time, please stop by at your earliest convenience when the SRR is open, and the staff there will assist you to get your talk uploaded in the correct location.

Session Chair Orientations
Each Session Chair is requested to attend a 15-minute “Session Chairs Orientation” held in Pemigewasset Room, from 7–7:15 a.m. on the morning of the day on which your session is to take place. This meeting will include a review of session time management, AV procedures, and other information affecting the conduct of the day’s sessions.
Session chairs are asked to strictly adhere to the technical program schedule and to limit speakers to their allotted time. If a speaker does not appear for an assigned time slot, session chairs should call a break or discussion period and begin the following presentation at its scheduled time.

A student volunteer is assigned to each oral session. Session chairs are asked to meet with the assigned student volunteer before the start of the session. The volunteers are there to help the sessions run smoothly and to contact the AV Coordinator in the event of technical problems.

**Poster Sessions**

Poster Sessions are located in the Armory Room of the Hotel. Poster presenters have one 4’ x 8’ horizontal (landscape) poster display surface. Please check the program for specific times and locations. Numbers on the display surfaces correspond to the poster booth numbers listed in the Program. Push pins are recommended to mount posters, and some pins will be provided for each poster board.

**Technical Sessions**

**Discipline Sessions:**
- D1. General Geology (Posters)
- D2. Paleontology (Posters)

**Theme Sessions:**
- T1. Unveiling Pathways into the Geological, Atmospheric, Marine, and Environmental Sciences
- T2. What is the Future of Field Camp?
- T3. Northern Appalachian Magmatism: From the Precambrian to the Cretaceous
- T5. Deciphering a cryptic geologic record: New insights from field and lab investigations of the Appalachians in the United States and Canada.
- T7. Unraveling Appalachian Orogenic Events Using Geological and Geophysical Methods
- T14. Phanerozoic Paleoceanographic and Climatic Changes (Posters)
- T15. Improvements to our Understanding of Past Climate and Environments through the Development of Proxies, the Generation of New Biomarker Records, and the Interpretation of Sedimentary Archives
- T19. Recent Advances in PFAS and Emerging Contaminant Science: From Human Health Risk Assessment to Fate and Transport.
- T20. Groundwater and Surface Water Characterization through Modeling and Field Methods
- T23. Watershed Processes and the Fluvial Forms and Dynamics they Produce
- T25. Estuary and Tidal Marsh Dynamics, Resiliency, and Restoration
- T26. Current Research in Coastal and Nearshore Processes
- T28. Mapping in the Geosciences: Processes and Products (Posters)
- T29. Geohazards in the Northeastern U.S.: Investigation and Mitigation
- T31. Economic Geology and Critical Mineral Resources Symposium:
  - S1. Applied Investigations by Northeastern State Geological Surveys: Honoring the Tradition of Robert Marvinney
  - S2. Neoproterozoic and Paleozoic Geological Connections Among Northwest Africa, Europe, and Eastern North America – A Session Honoring the Career of Sandra M. Barr

**Short Courses**

**SC1. Teaching Environmental Justice with Geoscience.**

Sat., 16 March, 1:30–5:00 p.m. in the Stark Room of the DoubleTree Hotel. Gary Gomby, Central Connecticut State University, garygomby@ccsu.edu.

**Description:** This highly relevant and timely afternoon short course describes the rationale for and process involved in teaching environmental justice with a geoscience focus. Case studies contextualize geoscience within a framework of justice and equity, thereby increasing the relevance of basic geoscience to addressing societal issues.

**SC2. Using GMDE and LiDAR texture shading in the field and lab.** Sat., 16 March, 1:30–5:00 p.m. in the Pierce Room of the DoubleTree Hotel. Richard W. Allmendinger, Cornell University, rwal1@cornell.edu.

**Description:** This highly relevant and timely afternoon short course covers how to use the GMDE family of desktop and iOS programs for field work and in your teaching with emphasis on workflows. Examples will use texture shaded LiDAR digital terrain models (DTMs) which are reminiscent of X rays through tree cover.

**Cultural and Regional Attractions**

**Currier Museum of Art**

The Currier is an internationally recognized art museum located right in Manchester. The Currier features European and American paintings, decorative arts, photographs and sculptures, including works by Picasso, Monet, O’Keeffe, and Wyeth. Exhibitions, tours, and events are scheduled year-round. The museum also owns Frank Lloyd Wright’s Zimmerman House, the only residence in New England that was designed by the acclaimed American architect and is open to the public.

**Millyard Museum**

The Millyard Museum tells the history of Manchester, located in Mill No. 3 in the historic Amoskeag Millyard. Operated by the Manchester Historic Association, the Millyard Museum is housed in Mill No. 3 at the corner of Commercial and Pleasant Streets in the historic Amoskeag Millyard. The Museum’s Henry M. Fuller State Theatre Gallery features rotating exhibitions on a variety of topics. The Millyard Museum also features the Discovery Gallery, a multi-purpose space used for school groups, family programs, lectures, temporary exhibits and other activities.
Massabesic Center
The 5,000 square foot Massabesic Center is located on a historic farm site. The Center is just minutes from downtown Manchester and is bordered by 130 acres of rolling fields and mature deciduous forest with woodland wetlands, a pond, streams, and marshes. The site has been preserved as a wildlife sanctuary that encompasses a diverse array of upland habitats. There are more than five miles of trails that lead to scenic Lake Massabesic, and the property is adjacent to thousands of undeveloped acres of Manchester Water Works land.

McIntyre Ski Area
McIntyre Ski Area is Southern NH’s gateway to winter adventure. Conveniently located in Manchester, NH Exit 8 off I-93 and 15 minutes from Manchester-Boston Regional Airport. The mountain’s best feature is the ski-school program. Children ages 3+, all the way up to adults, can learn to ski and ride at McIntyre. Private lessons and weekday/weekend programs available. Snow Tubing at the Bonneville Family Thrill Hill offers up to 10 lanes of snow tubing fun in 2-hour sessions.
## Schedule of Events

<table>
<thead>
<tr>
<th>EVENT</th>
<th>TIME</th>
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<tbody>
<tr>
<td><strong>SATURDAY, 16 MARCH</strong></td>
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<tr>
<td>Short Courses 1. Teaching Environmental Justice with Geoscience</td>
<td>1:30-5:00 pm</td>
<td>Stark Room</td>
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<td>Short Courses 2. Using GMDE and LiDAR Texture Shading in the Field</td>
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<td>and Lab (Short Course)</td>
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<td>Welcoming Reception (Ticketed Event)</td>
<td>5:00-7:00 pm</td>
<td>Armory Ballroom</td>
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<td><strong>SUNDAY, 17 MARCH</strong></td>
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<tr>
<td>Morning Fitness Class: Enjoy a 45-minute Full-body Workout with GSA</td>
<td>6:15-7:00 am</td>
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<td>Finance Director, Anita Monk-Ryan</td>
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<td>Geoscience Career Program Workshop Part 1: Career Planning and</td>
<td>9:00-10:00 am</td>
<td>Stark Room</td>
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<td>Networking (Workshop)</td>
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<tr>
<td>Geoscience Career Program Workshop Part 2: Geoscience Career</td>
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<td>Exploration (Workshop)</td>
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<td><strong>Morning Oral Technical Sessions</strong></td>
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<td>P2. Neoproterozoic and Paleozoic Geological Connections Among</td>
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<td>Pemigewasset Room</td>
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<td>Northwest Africa, Europe, and Eastern North America I – A Session</td>
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<td>Honoring the Career of Sandra M. Barr</td>
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<td>T12. Current Research in Lacustrine Sedimentary Records and Processes</td>
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<td>for Understanding Climate and Environmental Change</td>
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<td>T23. Watershed Processes and the Fluvial Forms and Dynamics They</td>
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<td>T29. Geohazards in the Northeastern U.S.: Investigation and Mitigation</td>
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<td><strong>Morning Poster Sessions:</strong></td>
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<td>D1. General Geology (Posters)</td>
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<tr>
<td>T10. Glacial Geology and Geomorphology of Northeastern North America</td>
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<td>: Current Gaps and Future Directions (Posters)</td>
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<td>T19. Recent Advances in PFAS and Emerging Contaminant Science: From</td>
<td>9:00 am-1:00 pm</td>
<td>Armory Ballroom</td>
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<td>Human Health Risk Assessment to Fate and Transport (Posters)</td>
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<td>T31. Economic Geology and Critical Mineral Resources (Posters)</td>
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<td>P2. Neoproterozoic and Paleozoic Geological Connections Among</td>
<td>1:30-5:30 pm</td>
<td>Pemigewasset Room</td>
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<tr>
<td>Northwest Africa, Europe, and Eastern North America II – A Session</td>
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<tr>
<td>Honoring the Career of Sandra M. Barr</td>
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<tr>
<td>T10. Glacial Geology and Geomorphology of Northeastern North America</td>
<td>1:30-5:30 pm</td>
<td>Contoocook Room</td>
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<td>: Current Gaps and Future Directions (Posters)</td>
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<td>T19. Recent Advances in PFAS and Emerging Contaminant Science: From</td>
<td>1:30-5:30 pm</td>
<td>Merrimack Room</td>
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<td>Human Health Risk Assessment to Fate and Transport</td>
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<tr>
<td>T31. Economic Geology and Critical Mineral Resources</td>
<td>1:30-5:30 pm</td>
<td>Piscataquog Room</td>
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<td><strong>Afternoon Poster Sessions:</strong></td>
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<td>T3. Northern Appalachian Magmatism: From the Precambrian to the</td>
<td>1:30-5:30 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>Cretaceous (Posters)</td>
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<tr>
<td>T12. Current Research in Lacustrine Sedimentary Records and Processes</td>
<td>1:30-5:30 pm</td>
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<td>for Understanding Climate and Environmental Change (Posters)</td>
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<tr>
<td>T23. Watershed Processes and the Fluvial Forms and Dynamics They</td>
<td>1:30-5:30 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>Produce (Posters)</td>
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<tr>
<td>T29. Geohazards in the Northeastern U.S.: Investigation and Mitigation</td>
<td>1:30-5:30 pm</td>
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<td><strong>MONDAY, 18 MARCH</strong></td>
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<tr>
<td>Morning Fitness Class: Enjoy a 45-minute Full-body Workout with GSA</td>
<td>6:15-7:00 am</td>
<td>Hale Room</td>
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<td>Finance Director, Anita Monk-Ryan</td>
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<tr>
<td>Geoscience Career Program Workshop Part 3: Cover Letters, Résumés,</td>
<td>9:00-10:00 am</td>
<td>Stark Room</td>
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<td>and CVs (Workshop)</td>
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<td><strong>Morning Oral Technical Sessions</strong></td>
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<td>T2. What is the Future of Field Camp?</td>
<td>8:00 am-noon</td>
<td>Contoocook Room</td>
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<td>Geophysical Methods</td>
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<td>Geochronology, and Tectonics Across Scales</td>
<td>8:00 am-noon</td>
<td>Piscataquog Room</td>
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<td>T20. Groundwater and Surface Water Characterization through</td>
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<td><strong>Morning Poster Sessions</strong></td>
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<tr>
<td>T1. Unveiling Pathways into the Geological, Atmospheric, Marine,</td>
<td>9:00 am-1:00 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>and Environmental Sciences (Posters)</td>
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<tr>
<td>T26. Current Research in Coastal and Nearshore Processes (Posters)</td>
<td>9:00 am-1:00 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>T28. Mapping in the Geosciences: Processes and Products (Posters)</td>
<td>9:00 am-1:00 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>Northeastern Section Management Board Meeting (Ticketed Event)</td>
<td>12:00-1:30 pm</td>
<td>Pierce Room</td>
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<tr>
<td>John Mann Mentors Program in Applied Hydrogeology (Workshop)</td>
<td>12:00-1:30 pm</td>
<td>Webster Room</td>
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<td><strong>Afternoon Oral Technical Sessions</strong></td>
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<tr>
<td>P1. Applied Investigations by Northeastern State Geological Surveys:</td>
<td>1:30-5:30 pm</td>
<td>Pemigewasset Room</td>
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<tr>
<td>Honoring the Tradition of Robert Marvinney</td>
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<tr>
<td>T1. Unveiling Pathways into the Geological, Atmospheric, Marine,</td>
<td>2:30-5:30 pm</td>
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<td>and Environmental Sciences</td>
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<td>1:30-5:30 pm</td>
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<td>T5. Deciphering a Cryptic Geologic Record: New Insights from Field</td>
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<td>and Lab Investigations of the Appalachians in the United States and</td>
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<tr>
<td>Canada (Posters)</td>
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<td>T14. Phanerozoic Paleoclimatic and Climatic Changes (Posters)</td>
<td>1:30-5:30 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>T15. Improvements to our Understanding of Past Climate and</td>
<td>1:30-5:30 pm</td>
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<td>Environments through the Development of Proxies, the Generation of</td>
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<td>New Biomarker Records, and the Interpretation of Sedimentary</td>
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<tr>
<td>Archives (Posters)</td>
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<tr>
<td>T17. Trace Elements in the Environment (Posters)</td>
<td>1:30-5:30 pm</td>
<td>Armory Ballroom</td>
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<tr>
<td>T25. Estuary and Tidal Marsh Dynamics, Resiliency, and Restoration</td>
<td>1:30-5:30 pm</td>
<td>Armory Ballroom</td>
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<td>(Posters)</td>
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<tr>
<td>Town Hall Panel Discussion: Recruiting the New Generation of</td>
<td>5:30-7:00 pm</td>
<td>Pemigewasset and Assembly Rooms</td>
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<td>Geoscientists (Ticketed Event)</td>
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<tr>
<td>Map and Art Blast (Ticketed Event)</td>
<td>7:00-9:00 pm</td>
<td>Armory Ballroom</td>
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### Technical 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.

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**NOTE INDEX SYSTEM**

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

* denotes speaker

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### MORNING ORAL TECHNICAL SESSIONS

#### SESSION NO. 1

**S2. Neoproterozoic and Paleozoic Geological Connections Among Northwest Africa, Europe, and Eastern North America I – A Session Honoring the Career of Sandra M. Barr (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)**

**8:00 AM, Doubletree by Hilton, Pemigewasset Room**

Yvette Kuiper, Margaret Thompson, Chris E. White, Belkacim Saïd, Faouziya Haissen and Pilar Montero, Presiding

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<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>8:00 AM</td>
<td><strong>INTRODUCTORY REMARKS</strong></td>
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<tr>
<td>8:05 AM</td>
<td>Lin, Shoufa*</td>
<td>FOLLOWING THE STEPS OF SANDRA BARR: MY WORK IN THE CANADIAN APPALACHIANS</td>
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<tr>
<td>8:25 AM</td>
<td>van Rooyen, Deanne*; White, Chris E.; Barr, Sandra M.; Sunatori, Évelyne*</td>
<td>STRUCTURAL AND METAMorphic HISTORY OF THE CENTRAL CAPE BRETON HIGHLANDS, NOVA SCOTIA, CANADA: IMPLICATIONS FOR THE SALINIAN AND ACADIAN OROGENIES</td>
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<td>8:45 AM</td>
<td>Miller, Brent*; Barr, Sandra M.</td>
<td>U-PB AGE, TRACE ELEMENT AND HF ISOTOPIC COMPOSITIONS OF ZIRCON FROM SILURIAN AND EARLY DEVONIAN GRANITE, GABBRO, AND PYROXENITE IN(?) THE BLAIR RIVER INLIER, NORTHERN CAPE BRETON ISLAND, NOVA SCOTIA, CANADA</td>
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<tr>
<td>9:05 AM</td>
<td>Zagorevski, Alex*; van Staai, Cees R.; Joyce, Nancy L.</td>
<td>THE PROVENANCE AND TECTONIC HISTORY OF DASHWOODS</td>
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<td>9:25 AM</td>
<td>Kerr, Andrew*</td>
<td>TREKKING THROUGH AVALONIA: NEWFOUNDLAND’S EAST COAST TRAIL AS A SCENIC WINDOW INTO NEOPROTERozoic STRATIGRAPHY AND TECTONICS</td>
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| Time   | Break                                                                                          |                                                                                                |

#### SESSION NO. 2

**T12. Current Research in Lacustrine Sedimentary Records and Processes for Understanding Climate and Environmental Change (GSA Limnogeology Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)**

**8:00 AM, Doubletree by Hilton, Contoocook Room**

Michael Retelle, Tim Cook, Catherine Beck and Brad Hubeny, Presiding

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<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
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<tr>
<td>10:00 AM</td>
<td>van Staai, Cees R.; Lin, Shoufa; Valverde-Vaquero, Pablo; Dunning, Greg; Burgess, Jerry; Schofield, D.I.; Joyce, Nancy</td>
<td>TECTONIC EVOLUTION OF SALINIC AND ACADIAN HIGH GRADE METAMORPHIC TECTONITES OF THE MEELPAEG NAPPE NEAR PORT AUX BASQUES, SOUTHWESTERN NEWFOUNDLAND: SILURIAN SALINIC UNDERTHrustING OF THE GANDER MARGIN BENEATH COMPOSITE LAURENTIA AND LOCHKOVIAN EDUCTION, FOLLOWED BY BI-VERGENT NAPPE FORMATION AND DEXTRAL TRANSPRESSION DURING THE ACADIAN OROGENY</td>
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<td>10:20 AM</td>
<td>Reusch, Douglas M.*</td>
<td>BASE AND TOP OF THE BOTWOOD GROUP, NEWFOUNDLAND: IMPLICATIONS FOR SLAB BREAKOFF, NET SLAB PULL, AND CLIMATE</td>
</tr>
<tr>
<td>10:40 AM</td>
<td>Ludman, Allan*; Wang, Chunzeng; Whittaker, Amber; O’Sullivan, Paul; McFarlane, Chris</td>
<td>TIMING OF ORDOVICIAN VOLCANISM IN NORTHEASTERN MAINE: RETHINKING REGIONAL TECTONIC MODELS</td>
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<tr>
<td>11:00 AM</td>
<td>Thompson, Margaret*; Crowley, James L.*</td>
<td>WEST AVALONIAN AFFINITY OF PLUTONS IN SOUTHEASTERN-MOST MASSACHUSETTS, USA</td>
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<tr>
<td>11:20 AM</td>
<td>Wintsch, Robert*; McAleer, Ryan; Wathen, Bryan; Walters, Jesse; Growdon, Martha; Matthews, Jessica A.*; Deasy, Ryan</td>
<td>AN ACADIAN-ALLEGHANIAN-MESOZOIC STRETCHING FAULT, SOUTHERN NEW ENGLAND, LOCALIZED BY RODINIAN STRUCTURAL INHERITANCE</td>
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**SUNDAY, 17 MARCH 2024**
 SESSION NO. 3

**T23. Watershed Processes and the Fluvial Forms and Dynamics They Produce**

8:00 AM, Doubletree by Hilton, Merrimack Room
Rebecca M. Diehl, Kristen L. Underwood, Sean Smith and Anne Lightbody, Presiding

**SESSION NO. 4**

**T29. Geohazards in the Northeastern U.S.: Investigation and Mitigation**

8:00 AM, Doubletree by Hilton, Piscataquog Room
Lindsay Theis and Peter Slovinsky, Presiding
SESSION NO. 5

D1. General Geology (Posters)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM
Booth #

5-1 1 Epstein, Samuel*; Herman, Gregory: STRUCTURAL EFFECTS OF CHICXULUB AND CHEMESAPEAKE-TOMS RIVER ASTEROID IMPACT EVENTS: RISKS TO HYDROCARBON ENTRAPMENTS- SOUTHEASTERN BAHAMAS

5-2 2 Epstein, Samuel*; Herman, Gregory; Buthman, David: EFFECTS OF MULTIPLE METEOR IMPACTS ON PETROLEUM SYSTEMS TARIM, ORDOS AND SICHUAN BASINS CHINA

5-3 3 DiMascio, Grey*; Byrne, Timothy; Conkin, Zoe M.: REVISIONS IN THE NARRATIVE PERTAINING TO THE SHOUFENG FAULT IN THE TAIWANESE OROGEN

5-4 4 Harneit, Isabella*; Martin, Samantha; Brunstad, Keith: ANALOGUE MODELING OF INFLATION AND DEFLATION FEATURES IN THE TIETON ANDESITE LAVA FLOW

5-5 5 Weih, Kaetu*; Harms, Tekla; Brooks, Hanna L.: METAMORPHISM OF KYANITE SCHISTS IN THE NORTHERN GRAVELLY RANGE OF SW MONTANA DURING THE PALEOPROTEROZOIC BIG SKY OROGENY

5-6 6 Ver Straaten, Charles*: PRESERVATION POTENTIAL OF AIRFALL VOLCANIC TEPHRAS, TERRESTRIAL SETTINGS/DEVONIAN

5-7 7 Naher, Jasmin*: Fielding, Christopher: STRATIGRAPHIC ARCHITECTURE OF THE LOPINGIAN SUCCESSION IN THE BOWEN BASIN OF EASTERN AUSTRALIA

5-8 8 Brown, Seth*; Quick, James D.; Wizevich, Michael; Hogan, John: STABLE ISOTOPE ANALYSES OF LIMESTONE BEDS IN THE LATE CRETACEOUS IRON SPRINGS FORMATION, SOUTHWEST UTAH

5-9 9 Simiganoschi, Pierre*: Vaez-zadeh Asadi, Nima; Brand, Uwe: CLIMATE CHANGE MODELS: YOU WILL NEVER GUESS WHICH ONE IS RIGHT!

5-10 10 Lambert, Kimberly*: Swanger, Kate: CONSTRAINING BEDROCK SOURCE REGIONS OF SURFICIAL DEPOSITS IN THE MCMURDO DRY VALLEYS, ANTARCTICA

5-11 11 Knuepfer, Peter*: Reja, Anika; Knuepfer, Peter L.K.: MONITORING GLACIER CHANGE USING GOOGLE EARTH

5-12 12 Jensen, McKelvie: Carl, Brian; Wolfe, Stephen*; Gontz, Allen; Pantoja Flores, Gladys; Gifford, Neil: GEOMORPHOLOGY OF PARABOLIC DUNES IN THE ALBANY PINE BUSH DUNE FIELD, NEW YORK

SESSION NO. 6

D2. Paleontology (Posters)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM
Booth #

6-1 20 Reinhold, Mark E.*: HOW OUR INTERPRETATION OF DINOSAURS HAS CHANGED THROUGH THE EYE OF POPULAR CULTURE

6-2 21 Haye, Justin*: Siegler, Sorin; Nabavizadeh, Ali; Voegele, Kristyn: THE ROLE OF THE PREDENTARY BONE IN EUOPLEOCEPHALUS TUTUS DURING MASTICATION USING BIOMECHANICAL MODELING

6-3 22 Canden, Maxwell Miles*: Wilhelm, Freya S.: THE PODOKESAURUS PROJECT: REDISCOVERING HOLYOKE’S SWIFT-FOOTED LIZARD

6-4 23 Gross, Maria*: Sunderlin, David: NEW MEASUREMENTS OF TRACKWAYS IN THE PASSAIC FORMATION, MILFORD, NJ: CONSIDERATION OF TRACKMAKER SOCIALITY

6-5 24 Kibeistis, Brian*: Terry, Dennis O.; Ullmann, Paul: SEM-EDS ANALYSES OF SOFT TISSUES PRESERVED IN FOSSIL BONES FROM THE PALEOGENE WHITE RIVER GROUP OF NEBRASKA AND SOUTH DAKOTA

6-6 25 Solomon, Avigail*: Monecke, Katrin; Buchholtz, Emily: CONSERVATION EFFORTS AND CHALLENGES OF A FOSSILIZED EOSPERMATOPTERIS TREE STUMP FROM GILBOA, NEW YORK

6-7 26 Locke, Evelyn*: Sunderlin, David: EXPLORING VARIATION IN MARINE INVERTEBRATE PALEOCOMMUNITIES IN THE DEVONIAN MAHANTANGO FORMATION USING NEW DATA FROM EASTERN PENNSYLVANIA

17–19 March 2024 • Manchester, New Hampshire, USA 15
SESSION NO. 7
T70. Glacial Geology and Geomorphology of Northeastern North America: Current Gaps and Future Directions (Posters) (GSA Quaternary Geology and Geomorphology Division)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM
Booth #
7-1 30 Lasker, Maya*; Briner, Jason: MAPPING LAURENTIDE ICE SHEET POSITIONS IN CENTRAL NEW YORK USING LDAR
7-2 31 Eberhardt, Heidi*; Briner, Jason: RE-MAPPING LATE PLEISTOCENE SHORELINES IN THE LAKE ERIE BASIN USING LDAR
7-3 32 Dienstfrey, William*; Holisch, Nicholas; Shapero, Daniel: EFFECTS OF HETEROGENEITY IN SUBSURFACE PROPERTIES ON FUTURE THINNING OF PETERMANN GLACIER, N. GREENLAND
7-4 33 Hertz, Naomi*; Pietras, Jeffrey T.; Schmitkons, Jonathan; Meyer, Louis: FORMATION MECHANISMS OF FAYETTEVILLE GREEN LAKE AND ROUND LAKE: GLACIAL EROSION, WATERFALLS, AND SINKHOLES?
7-5 34 Jordan, Teresa*: SEDIMENTOLOGY OF QUATERNARY SEDIMENTS WITHIN AND ADJACENT WESTERNMOST FALL CREEK VALLEY, TOMPKINS COUNTY, NEW YORK
7-6 35 Walcott, Caleb K.; Brown, Nathan D.; Prince, Karlee K.; Briner, Jason*: CAN THE ICE-SHEET CHRONOLOGY IN WESTERN NEW YORK BE IMPROVED WITH INFRARED STIMULATED LUMINESCENCE DATING?

SESSION NO. 8
T19. Recent Advances in PFAS and Emerging Contaminant Science: From Human Health Risk Assessment to Fate and Transport (Posters)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM
Booth #
8-1 36 Romanok, Kristin M.; Bradley, Paul; Smalling, Kelly L.*: DIRECT COMPARISON OF CONTAMINANT EXPOSURES AND POTENTIAL RISK IN PUBLIC AND PRIVATE TAPWATER IN A SOLE-SOURCE AQUIFER SETTING
8-2 37 Costa, Sydneyn*; Arnold, Thomas: MICROPLASTIC CHARACTERIZATION IN THE CHESAPEAKE AND DELAWARE BAY WATERSHEDS
8-3 38 Cadieux, Sarah*; Knazik, Isabella; Desaulnier, Charlotte; Davies, Alex: FROM SOURCE TO TAP: MICROPLASTICS IN A SUB-WATERSHED OF THE HUDSON RIVER ESTUARY

SESSION NO. 9
T31. Economic Geology and Critical Mineral Resources (Posters) (GSA Energy Geology Division; GSA Geophysics and Geodynamics Division)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM
Booth #
9-1 39 Kirschenmann, Jacob*; Hart, Kenneth; Homewood, Timothy; Wilmot, Jessica; Severs, Matthew J.: FLUID INCLUSION INVESTIGATION OF SHAWANGUNK MINERAL DEPOSITS
9-2 40 Homewood, Timothy*; Wilmot, Jessica; Kirschenmann, Jacob; Hart, Kenneth; Ficken, Michelle; Severs, Matthew J.: MINERAL GEOCHEMISTRY AND ECONOMIC POTENTIAL OF THE SHAWANGUNK MINES, NEW YORK

SESSION NO. 10
S2. Neoproterozoic and Paleozoic Geologic Connections Among Northwest Africa, Europe, and Eastern North America II – A Session Honoring the Career of Sandra M. Barr (GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)
1:30 PM, Doubletree by Hilton, Pembigwasset Room
Yvette Kuiper, Margaret Thompson, Chris E. White, Belkacim Said, Faouziya Haissen and Pilar Montero, Presiding
1:30 PM INTRODUCTORY REMARKS
10-1 1:35 PM Alvaro, J. Javier*; Mills, Andrea; Martinez-Benitez, Blanca: STRATIGRAPHIC ARCHITECTURE OF THE EARLIEST RIFT (HALF-)GRABEN TROUGHS FROM EDIACARAN-CAMBRIAN TRANSITION IN THE AVALON ZONE (NEWFOUNDLAND) AND THE ATLAS MOUNTAINS (MOROCCO)
10-2 1:55 PM Kuiper, Yvette D.*; Barr, Sandra M.; Waldron, John; White, Chris E.; Germain, Rémi; Haissen, Faouziya; El Hassani, Ahmed; Said, Belkacim; Martinez, David; Accotto, Cristina; Montero, Pilar: A COMPARISON AMONG THE MEGUMA TERRANE OF EASTERN CANADA, THE SEHOUL BLOCK OF NW AFRICA, THE HARLECH DOME OF NORTH WALES, AND THE SOUTH PORTUGUESE ZONE OF SOUTHERN SPAIN AND PORTUGAL
10-3 2:15 PM Waldron, John*; DuFrane, S. Andrew; Schofield, David J.; Barr, Sandra M.; White, Chris E.: IS BRITAIN DIVIDED BY AN ACADIAN SUTURE?
10-4 2:35 PM Wang, Lijun*; Lin, Shouta; Xiao, Wenjiao: POSITION OF SOUTH CHINA IN GONDWANA
10-5 2:55 PM BREAK
10-6 3:10 PM Bloch, Roger*: A PLATE MODEL AND KEY UNCERTAINTIES FOR PERI-GONDWANAN TERRANES IN RELATION TO WEST AFRICA CRATON, BALTICA AND AMAZONIA
10-7 3:30 PM Linnemann, Ulf*: Gärtnert, Andreas; Hofmann, Mandy; Ziegèr, Johannes; Haschke, Jessica; Zweig, Maren: THE HARZ MOUNTAINS (GERMANY) – CADOMIA MEETS AVALONIA AND BALTICA: U-PB AGES OF DETRITAL AND MAGMATIC ZIRCON AS A KEY FOR THE DECODING OF PANGEA’S CENTRAL SUTURE
10-8 3:50 PM Gärtnert, Andreas*; Sagawe, Anja; Hofmann, Mandy; Ziegèr, Johannes; Linnemann, Ulf: CRATONAL INTERPLAYS IN THE MIRROR OF PRE-MESOZOIC ZIRCON AGE DATABASES
10-9 4:10 PM Murphy, J. Brendan*; Nance, R.; Mitchell, Ross N.: THE ASSEMBLY OF PANGEA: GEODYNAMIC CONUNDRUMS REVISITED
4:30 PM DISCUSSION

SESSION NO. 11
T10. Glacial Geology and Geomorphology of Northeastern North America: Current Gaps and Future Directions (GSA Quaternary Geology and Geomorphology Division)
1:30 PM, Doubletree by Hilton, Contoocook Room
Simon Pendleton, Alia Lesnek and Aaron Barth, Presiding
1:30 PM INTRODUCTORY REMARKS
11-1 1:35 PM Davis, P. Thompson*; Keeley, Joshua; Thompson, Peter J.; Fowler, Brian K.: TILL BENCHES MARK RECEDING LATE WISCONSINAN ICE MARGINS IN MOUNTAINOUS TERRAIN: A CASE STUDY FROM MOUNT MOOSILAUKA, NH
SESSION NO. 14

T3. Northern Appalachian Magmatism: From the Precambrian to the Cretaceous (Posters)
1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

Booth #

14-1 1 Chrzaniowski, Stan; Charney, Allison*; Steinen, Randolph P.: MINERALOGY OF UPPER CRUSTAL XENOCLASTS FROM A LAMPROPHYRE DIKE

14-2 2 Hollocher, Kurt*: REVIEW OF BROAD-SCALE GEOCHEMICAL CHARACTERISTICS OF THE ORDOVICIAN-TACONIAN VOLCANIC ARC OF WESTERN NEW ENGLAND

14-3 3 Amidon, William*; Marks, Amanda; Webb, Laura: TIMING OF CRETACEOUS MAGMATISM IN THE CHAMPLAIN VALLEY

14-4 4 Chernowsky, Bianca*; Cooper Boemmel, Jennifer: PHOTOGRAMMETRY AND OUTCROP-SCALE MAPPING OF BRITTLE STRUCTURES IN THE ORENAUG BASALT, POMPERAUG BASIN, CONNECTICUT

14-5 5 Penny, Ryan*; VanTongeren, Jill: NO LATERAL GEOCHEMICAL VARIABILITY BETWEEN WESTERN AND EASTERN WHITE MOUNTAIN BATHOLITH DESPITE 10-15 MYR AGE GAP

14-6 6 Parsons, Levben*; Black, Benjamin; Hickey, Jacob; Arceneaux, Aster Asyra: SULFUR EMISSIONS FROM THE CENTRAL ATLANTIC MAGMATIC PROVINCE FROM GLASSY MELT INCLUSIONS

14-7 7 Gilbert, Sean*; Severs, Matthew: CONTINUING STUDIES INTO DIKES OF THE CORTLANDT-BEEMERVILLE TREND

SESSION NO. 15

T12. Current Research in Lacustrine Sedimentary Records and Processes for Understanding Climate and Environmental Change (Posters) (GSA Limnogeology Division; GSA Quaternary Geology and Geomorphology Division; GSA Sedimentary Geology Division)
1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

Booth #

15-1 8 Retelle, Michael*; Roof, Steve; Werner, Al: ENVIRONMENTAL MONITORING IN A HIGH ARCTIC PROGLACIAL LACUSTRINE WATERSHED IN A WARMING HYDROCLIMATIC REGIME: LINNÉVATNET, SVALBARD

15-2 9 Niewierowski, Samantha*; Lowell, Thomas V.: FRESHWATER DIATOM TEMPERATURE-SIZE RELATIONSHIP: A PALEOTEMPERATURE TOOL?

15-3 10 Hou, Changhai*; Griffiths, Michael L.; Seki, Osamu; Zhou, Aifeng; Patterson, Elizabeth; Ryan, Sabrina; DaSilva, Michael; Bendle, James: A MULTI-PROXY RECORD OF LATE-GLACIAL TO HOLOCENE CLIMATE FROM LAKE BLAUVELT, NEW JERSEY

15-4 11 Wall, Natalie*; Gaudio, Sarah; Michelson, Andrew V.; Wittmer, Jacalyn M.: INVESTIGATING CARBONATES IN THE SEDIMENTARY RECORD OF CONESUS LAKE, LIVINGSTON COUNTY, NY

15-5 12 Regnier, Anna*; Snyder, Noah P.; Bahr, Julie; Cook, Tim; Dahl, Travis; Edgington, Anthony; Landis, Joshua; Seal, Dylan; Willis, Katherine S.: ANALYSIS AND INTERPRETATIONS OF SEDIMENT CORES FROM LAKE SEMINOLE, GEORGIA

SESSION NO. 16

T23. Watershed Processes and the Fluvial Forms and Dynamics They Produce (Posters)
1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

Booth #

16-1 24 Soma, Mohamed; Dolla, Canton T.; Harris, Madeline; Kelly, Christopher; Miranda, Ariana; Buynевич, Ilya*: SCIURID BURROWS AS ZOOGEMORPHIC ELEMENTS AT MILL RUN (BUCKS COUNTY, PA): NEW DATASET IN THE UPSTREAM REACH

16-2 25 Hedayaatar, Armin; Marshall, Jesse; Pointer, Isaac; Vo, Vinh; Miranda, Ariana; Buynевич, Ilya*: ZOOGEMORPHIC ASSESSMENT OF AN ABANDONED BEAVER COLONY: CHEW-STUMP TAPHONOMY AND RECOGNITION POTENTIAL

16-3 26 Patel, Ansh; Bui, Liem T.; Laraia, Devin J.; Hampton, Bryce E.; Miranda, Ariana; Buynевич, Ilya*: CERVID PEDITURBATION AS EROSIONAL-DEPOSITIONAL MECHANISM ALONG A SMALL CREEK (MILL RUN, PENNSYLVANIA)

16-4 27 Smith, Sean; Thompson, Neil P.; King, Robert*: Casella, Angeline; Libby, Hayden; Oehler, Morgan; Roberts, Samuel; Van Darn, Beazley
SESSION NO. 17

T29. Geohazards in the Northeastern U.S.: Investigation and Mitigation (Posters)

1:30 PM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 3 to 5 PM

Booth #

17-1 41 Moriarty, Sophia; Sajonia, Tassilo; Kiernan, Audrey; Ebel, John E.*: INVESTIGATING THE SUBSURFACE STRUCTURE OF THE CHESTNUT HILL EARTH EMBANKMENT DAM USING MAGNETIC AND RESISTIVITY MEASUREMENTS

17-2 42 Olawoyin, Victor; Jorgensen, Eamon; Ebel, John E.*: INVESTIGATING THE SUBSURFACE STRUCTURE OF THE CHESTNUT HILL EMBANKMENT DAM USING THE GROUND PENETRATING RADAR (GPR) METHOD

17-3 43 Valencius, Ilan; Bader, Michael; Brune, Sean; Ebel, John E.*: INVESTIGATING THE SUBSURFACE STRUCTURE OF THE CHESTNUT HILL EARTH EMBANKMENT DAM USING GRAVITY MEASUREMENTS

17-4 44 Emerly, Emerson; Hilliker, Joby*: Lutz, Timothy: EXPLORING WHETHER LOCALIZED FLASH FLOODING EVENTS HAVE RECENTLY INCREASED OVER SOUTHEASTERN PENNSYLVANIA USING SEMIVARIOGRAMS

17-5 45 Myrick, Emma P.; Klepeis, Keith A.; Springer, George; Kim, Jonathan; Berkenkotter, Bernard; Cresant, Lauren; Karins, Spencer: CHARACTERIZING MECHANISMS OF MASS WASTING AT THE COTTON BROOK LANDSLIDE IN WATERBURY, VERMONT USING REMOTE SENSING AND FIELD-BASED METHODS

MONDAY, 18 MARCH 2024

MORNING ORAL TECHNICAL SESSIONS

SESSION NO. 18

T2. What is the Future of Field Camp? (GSA Energy Geology Division)

8:00 AM, Doubletree by Hilton, Contoocook Room
Sara Mana, Lauren Neitzke Adamo and Morgan Schaller, Presiding

8:00 AM INTRODUCTORY REMARKS

18-1 8:05 AM Tully, Lancen*: Ryker, Katherine; Barbeau, David; Rademacher, Laura: FROM ROCKS TO RESILIENCE: ASSESSING STUDENT PERCEPTIONS OF SKILL DEVELOPMENT AND PERSONAL GROWTH FROM A TRADITIONAL GEOLOGY FIELD CAMP

18-2 8:25 AM Allen, Douglas*: Mana, Sara; Hubeny, Brad; Toraman, Erkan; Cullen, James; Hanson, Lindley: MAKING A SMALL STATE UNIVERSITY FIELD EXPERIENCE MORE SUSTAINABLE

18-3 8:45 AM Smith, Joshua B.: AN ARGUMENT FOR MAINTAINING PACER-AND-COMPASS LAND NAVIGATION AND MAP READING AS TOPICS WITHIN GEOSCIENCE FIELD CAMP CURRICULA

18-4 9:05 AM Hogan, John*: Kaiser, Jason; Wizevich, Michael: INCORPORATING STUDENT-LED “GSA STYLE” FIELD TRIPS INTO TRADITIONAL FIELD CAMP MAPPING PROJECTS

18-5 9:25 AM Beck, Catherine*: Bailey, David; Kusnerik, Kristopher: EARLY AND OFTEN: FIELD COURSE OPPORTUNITIES ENHANCE EXPERIENCES FOR STUDENTS ACROSS THE CURRICULUM

18-6 9:45 AM Markley, Michelle*: Callahan, Caitlin: WHAT ARE THE ETHICS OF GOING INTO THE FIELD?

10:05 AM BREAK

18-7 10:20 AM Valhey, Taylor*: THE FUTURE OF FIELD CAMP: ATTRACTING INTERDISCIPLINARY STUDENTS TO ENGAGE IN CLIMATE ACTION

18-8 10:40 AM Salazar, Chase*: GHOSTS IN THE GEOSCIENCE SCHOOLYARD: A REEVALUATION OF PEDAGOGY IN THE FIELD

18-9 11:00 AM Cornell, Sean*: Lewis, Jon; Harris, Daniel; Schiappa, Tamra; Nikitina, Daria: INNOVATING THE FUTURE OF GEOSCIENCE FIELD COURSES: INTEGRATING PRE-COLLEGE STUDENT AND TEACHER TRAINING EXPERIENCES INTO A COLLABORATIVE LEARNING ECOSYSTEM FOR THE PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION (PASSHE)
SESSION NO. 19

T7. Unraveling Appalachian Orogenic Events Using Geological and Geophysical Methods (GSA Geophysics and Geodynamics Division; GSA Structural Geology and Tectonics Division)

8:00 AM, Doubletree by Hilton, Merrimack Room

Maureen Long, Yvette Kuiper, Paul Karabinos and Laura Webb, Presiding

8:00 AM INTRODUCTORY REMARKS

19-1 8:05 AM Waldron, John*; Barr, Sandra M.; White, Chris E.: NOT THE NEOACADIAN OROGENY

19-2 8:25 AM Valley, Peter*; Walsh, Greg J.; Merschat, Arthur; McAleer, Ryan: GEOCHEMICAL AND TECTONIC EVOLUTION OF THE ORDOVICIAN BRONSON HILL ARC AND SILURIAN AND DEVONIAN CONNECTICUT VALLEY TROUGH: EASTERN VERMONT AND WESTERN NEW HAMPSHIRE, USA

19-3 8:45 AM Schwangler, Martin*; Waldron, John: KINEMATICS OF THE ROUND HEAD THRUST, WESTERN NEWFOUNDLAND: INTEGRATING 2D SEISMIC INTERPRETATION AND 3D MODELING

19-4 9:05 AM Scorsolini, Ludovico*; van Staal, Cees; Yakymchuk, Chris; Hanchar, John: TECTONO-METAMORPHIC EVOLUTION OF THE TACONIC OROGEN IN THE NEWFOUNDLAND APPALACHIANS, INSIGHTS FROM THE BAIE VERTE PENINSULA EOCLOGITES

19-5 9:25 AM Hillenbrand, Ian*; Williams, Michael; Peterman, Emily; Jercinovic, Michael J.; Dietsch, Craig: PETROCHRONOLOGIC CONSTRAINTS ON INVERTED METAMORPHISM, TERRANE ACCRETION, THRUST STACKING, AND DUCTILE FLOW IN THE GNEISS DOME BELT, NORTHERN APPALACHIAN OROGEN

19-6 9:45 AM Jiang, Dazhi*: INTEGRATING GEOLOGY, GEOPHYSICS, AND MICROMECHANICS IN THE STUDY OF SEISMIC ANISOTROPY OF THE LITHOSPHERE

10:05 AM BREAK


19-8 10:40 AM Karabinos, Paul M.;*; Webb, Laura; Luo, Yantao; Long, Maureen; Masis Arce, Roberto: LITHOSPHERIC-SCALE REACTIVATION OF ACCRETED TERRANES IN THE NEW ENGLAND APPALACHIANS

19-9 11:00 AM Luo, Yantao*: Long, Maureen; Link, Frederik; Karabinos, Paul; Kuiper, Yvette D.: INSIGHTS FROM LAYERED ANISOTROPY BENEATH SOUTHERN NEW ENGLAND: FROM ANCIENT TECTONISM TO PRESENT-DAY MANTLE FLOW

19-10 11:20 AM Jordan, Teresa*; Fulcher, Sean; Gustafson, Olaf; Fulton, P.M.; Valentin, David; Chiarenzelli, Jeffrey; Pinilla Granados, D.; Clairmont, Roberto; Tester, Jefferson W.; Jacob, Robert: DEEP ROCKS AND STRUCTURES OF THE ALLEGHENY PLATEAU REVEALED BY GEOTHERMAL EXPLORATION IN ITHACA NY


SESSION NO. 20

T8. Micro to Macro: Linking Structural Geology, Petrology, Geochronology, and Tectonics Across Scales (GSA Geochronology Division; GSA Structural Geology and Tectonics Division)

8:00 AM, Doubletree by Hilton, Piscataquog Room

Emily Peterman and Nicolas Roberts, Presiding

8:00 AM INTRODUCTORY REMARKS

20-1 8:05 AM Srogio, LeeAnn*; Withjack, Martha O.; Lutz, Timothy; Finch, Elizabeth; Patel, Isabella; Pollack, Meagen; Smith, Robert C.: DETAILED STRUCTURAL AND PETROLOGIC ANALYSIS OF THE DEEP PART OF THE MORGANTOWN INTRUSION PROVIDES INSIGHTS INTO MAGMA PROPAGATION AND CRYSTALIZATION

20-2 8:25 AM Withjack, Martha*; Srogio, LeeAnn; Lutz, Timothy; Patel, Isabella; Finch, Elizabeth: LINKING STRUCTURAL GEOLOGY AND PETROLOGY AT MULTIPLE SCALES TO BETTER UNDERSTAND THE EVOLUTION OF THE MORGANTOWN (AND OTHER) CAMP INTRUSIONS

20-3 8:45 AM Gervais, Felix*; Kavanagh-Lepage, Charles; Lambert, Christopher; Beaudry, Alexandre; Moukhissi, Abdelali: THE LONG-HOT RIGOLET PHASE OF THE GRENVIILLIAN OROGENY

20-4 9:05 AM Morin, Katherine D.*; Castro, Adriana; Thomas, Jay B.; Janet, Steven; Talby, Nicholas D.; Hammond, Keiji: (REE) XAMINING NYC: MONAZITE PETROCHRONOLOGY OF THE MANHATTAN PRONG

20-5 9:25 AM Bosshell, Howell*; Ford, Andrew C.; Boyd, Joseph: INVERTED METAMORPHISM BELOW THE EMBREEVILLE THRUST IN THE CENTRAL APPALACHIAN PIEDMONT OF SOUTHEASTERN PENNSYLVANIA

20-6 9:45 AM Molitor, Zachary*; Jagouzt, Oliver; Cross, Andrew; Cruz-Uribe, Alicia M.; Moser, Amy: CONSTRAINING THE 3D GEOMETRY OF CONJUGATE OROCENIC SLICE-LIP SHEAR ZONES IN THE NEW ENGLAND APPALACHIANS

10:05 AM BREAK

20-7 10:20 AM Anderson, Erik*; Song, Won Joon; Johnson, Scott; Gerbi, Christopher C.: APPLICATION AND EXPLORATION OF THE PERIMETER-AREA FRACTAL DIMENSION OF RECRYSTALLIZED QUARTZ GRAIN BOUNDARIES: A CASE STUDY FROM THE SANDHILL CORNER SHEAR ZONE

20-8 10:40 AM Feng, He*; Gerbi, Christopher C.; Johnson, Scott; Cruz-Uribe, Alicia M.; Yates, Martin: RHEOLOGICAL BRIDGE ZONE, STRESS AMPLIFICATION, AND INITIALIZATION OF STRAIN LOCALIZATION

20-9 11:00 AM Roberts, Nicolas*; Seixas, Veronica: DISTINGUISHING DISTINCT DEFORMATION DOMAINS WITHIN A GRANITIC STRUCTURAL DOME USING EBSD-DERIVED CRYSTALLOGRAPHIC VORTICITY AXIS (CVA) ANALYSIS

20-10 11:20 AM Johnson, Scott*; Song, Won Joon; Vel, Senthil S.: ANISOTROPIC ELASTIC STRESSES, CRITICALITY, AND ROCK FAILURE

11:40 AM CONCLUDING REMARKS

SESSION NO. 21

T20. Groundwater and Surface Water Characterization through Modeling and Field Methods (GSA Geophysics and Geodynamics Division)

8:00 AM, Doubletree by Hilton, Pemigewasset Room

James Heiss, Janet Barclay, Andrew Reeves and Kalle Jahn, Presiding

8:00 AM INTRODUCTORY REMARKS

21-1 8:05 AM Benton, Joshua*: Doctor, Daniel: DYNAMIC BASEFLOW STORAGE ESTIMATES AND THE ROLE OF TOPOGRAPHY, SURFICIAL GEOLOGY, AND
T1. Unveiling Pathways into the Geological, Atmospheric, Marine, and Environmental Sciences (Posters) (GSA Energy Geology Division)

9:00 AM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 9:30 to 11:30 AM

Booth #

22-1 1 Pallatroni, Lauryln*; Chiarennelli, Jeffrey R.: DR. WILLIAM ROMYE’S SCANDINAVIAN SUITE

22-2 2 Davis, Tim*: Thornburg, Jesse; Peterson, Steve; Morris, Justin: COMPARING STUDENT OUTCOMES IN GENERAL EDUCATION GEOHAZARDS COURSES THROUGH SUMMATIVE AND FORMATIVE ONLINE AND IN-PERSON ASSESSMENTS

22-3 3 Mahar, Valerie*; Monecke, Katrin: COMMUNICATING EARTH SCIENCES TO THE WELLESLEY COLLEGE COMMUNITY USING A RASPBERRYSHAKE SEISMOGRAPH

22-4 4 Froburg, Erik*: Gengarelly, Lara; Clyde, Malin; Horwad, Sameer; Glenn, Megan; Andreozzi, Haley: EMPOWERING K-5 TEACHERS TO DESIGN CITIZEN SCIENCE BASED CURRICULA THROUGH THE SCHOOLYARD SITES MODEL

22-5 5 Hale, Stephen*; Bauer, Christopher; Gengarelly, Lara; Graham, Karen; Shanken, Judy; Varner, Ruth: USING COMMUNITY ASSETS TO PROVIDE MEANINGFUL CONTEXT IN SECONDARY EARTH AND ENVIRONMENTAL SCIENCE CLASSES

22-6 6 Bryce, Julia*: Ortmieer-Hooper, Christina; Silva, Bethany: SLATE Team, The: STEM PATHWAYS FOR MULTILINGUAL STUDENTS AND ENGLISH LEARNERS THROUGH STEM-LANGUAGE ARTS TEACHING/LEARNING ECOSYSTEMS (SLATE)

SESSION NO. 23

T26. Current Research in Coastal and Nearshore Processes (Posters) (GSA Marine and Coastal Geoscience Division; GSA Geophysics and Geodynamics Division)

9:00 AM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 9:30 to 11:30 AM

Booth #

23-1 7 Gentile, Olivia*; Oakley, Bryan A.: COMPARISON OF MEASURED AND CALCULATED WAVE RUN-UP ELEVATIONS ON A MICROTIDAL PARAGLACIAL COASTLINE USING BEACH PROFILES

23-2 8 DeMarco, Gabriella*: Sellers, Hannah; Oakley, Adrienne; Cornell, Sean: GPR AND VIBRACORE ANALYSES FROM CUSTIS POND, SAVAGE NECK DUNES NATURAL AREA PRESERVE (SNPD), EASTERN SHORE, VIRGINIA REVEAL LATE PLEISTOCENE-HOLOCENE ENVIRONMENTAL CHANGE IN THE LOWER CHESAPEAKE BAY

23-3 9 Senderoff, Preston*: Ouimet, William; Rivera, Allison: INVESTIGATING MID-HOLOCENE TO PRESENT RELATIVE SEA-LEVEL RISE IN SOUTHWESTERN CONNECTICUT

23-4 10 Sellers, Hannah*; DeMarco, Gabriella; Oakley, Adrienne; Cornell, Sean: DETAILED MICRO AND MACRO-FOSSIL ANALYSES OF VIBRACORES FROM CUSTIS POND, SAVAGE NECK DUNES NATURAL AREA PRESERVE (SNPD), EASTERN SHORE, VIRGINIA REVEAL LATE PLEISTOCENE-HOLOCENE ENVIRONMENTAL CHANGE IN THE LOWER CHESAPEAKE BAY

23-5 11 Gautam, Saranya*: Ouimet, William; Anderson, Thomas S.: INVESTIGATING SUBAQUEOUS COASTAL SEDIMENT DYNAMICS ALONG CONNECTICUT COAST WITH TRACE METALS

23-7 13 Pooler, Tadhg*: Cornell, Sean: A PETROGRAPHIC ANALYSIS AND COMPARISON OF MODERN BAHAMIAN AND MIDDLE CAMBRIAN OOLIDS FROM THE CONESTOGA/ELBROOK FORMATIONS OF SOUTH CENTRAL PENNSYLVANIA AND THEIR PALEOENVIRONMENTAL SIGNIFICANCE

23-8 14 Ramos, Yaxenis*: Etterbeek, Jack; Ramos, Rovio D.; DaSilva, Michael; Mortlock, Richard; Godfrey, Linda; Griffiths, Michael L.: INDIAN MONSOON VARIABILITY DURING THE PAST MILLENNIUM REVEALED BY CORAL SKELETAL RECORDS FROM ST. MARTIN’S ISLAND, BANGLADESH

23-9 15 Prinz, Natalie*: Donnelly, Heather; Chen, Jian-Jhih; Hu, Xinping; Wang, Xingchen (Tony): USING NITRATE ISOTOPES TO TRACK ANTHROPOGENIC NITROGEN IN THE NORTHERN GULF OF MEXICO

23-10 16 Garib, Steph*: Stone, Lillian: A MARINE BIOTA AND SEDIMENT ANALYSIS OF RÅPAKI BAY, NEW ZEALAND

MORNING POSTER TECHNICAL SESSIONS

SESSION NO. 22

T1. Unveiling Pathways into the Geological, Atmospheric, Marine, and Environmental Sciences (Posters) (GSA Energy Geology Division)

9:00 AM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 9:30 to 11:30 AM

Booth #

22-1 1 Pallatroni, Lauryln*; Chiarennelli, Jeffrey R.: DR. WILLIAM ROMYE’S SCANDINAVIAN SUITE

22-2 2 Davis, Tim*: Thornburg, Jesse; Peterson, Steve; Morris, Justin: COMPARING STUDENT OUTCOMES IN GENERAL EDUCATION GEOHAZARDS COURSES THROUGH SUMMATIVE AND FORMATIVE ONLINE AND IN-PERSON ASSESSMENTS
SESSION NO. 24

T28. Mapping in the Geosciences: Processes and Products (Posters) (GSA Energy Geology Division; GSA Geophysics and Geodynamics Division)

9:00 AM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 9:30 to 11:30 AM

Booth #

24-1 17 Davis, P.; Thompson*, Keeley, Joshua; Thompson, Peter: SURFICIAL GEOLOGIC MAP OF THE MOUNT MOOSILAUKE 7¼ QUADRANGLE, NEW HAMPSHIRE

24-2 18 Thompson, Peter J.; Strauss, Justin V.; Crowley, James L.: BEDROCK GEOLOGIC MAP OF THE MOUNT MOOSILAUKE, 7¼ QUADRANGLE, NEW HAMPSHIRE

24-3 19 Deasy, Ryan; Wintsch, Robert P.: DUCTILE TERRANE ASSEMBLY EXPOSED IN THE DEEP RIVER AND ESSEX QUADRANGLES, MIDDLESEX COUNTY, CONNECTICUT

24-4 20 Thompson, Woodrow B.; Keeley, Joshua: SURFICIAL GEOLOGY OF THE BERLIN AND SHELBURNE QUADRANGLES, NORTHEASTERN WHITE MOUNTAINS, NEW HAMPSHIRE AND MAINE

24-5 21 Rayburn, John*; Saturno, Christine M.; Mangona, Maghan E.: GROUND PENETRATING RADAR MAPPING IN THE RIVERSIDE CEMETERY, SWANTON, VT REVEALS A LONG-FORGOTTEN DRAINAGE PIPE

24-6 22 Kowalski, Kristian; Vitale, Donovan; Drezwiekici, Peter*; Steinen, Randolph: USING MAGNETIC DATA TO CONTRAIN GEOLOGICAL BEDROCK MAPPING OF THE ROCKY HILL ANTICLINE, HARTFORD RIFT BASIN, CONNECTICUT

24-7 23 Eusden, J.; Dykstra*; Keeley, Joshua; Hillenbrand, Ian; Csiki, Shane; Chormann, Frederick: BEDROCK MAPPING ACROSS THE BRONSON HILL BELT, THE CENTRAL MAINE BELT AND THE WHITE MOUNTAIN PLUTONIC-VOLCANIC SERIES OF NORTHERN NEW HAMPSHIRE

24-8 24 Trani, Aurora; Gourley, Jonathan; Sussman, Hailey; Chmielowicz, Eleanor: MAPPING CARBON:NITROGEN RATIOS IN SOILS AND PEGMATITE OCCURRENCES IN EASTERN CONNECTICUT HIGHLANDS

24-9 25 Torres, Luis*; Reusch, Douglas N.; Smith, Taury; Guevara, Victor; Slack, John F.; Jones, Parker; Warburton, London; Strauss, Justin V.: PRELIMINARY GEOLOGIC MAP OF THE ISLESBORO 7½ QUADRANGLE WITH IMPLICATIONS FOR THE EVOLUTION OF THE ISLESBORO BLOCK, COASTAL MAINE

24-10 26 Waldron, John*; Barr, Sandra M.; McCausland, Phil; Wang, Chunzeng; Reusch, Douglas N.; Schofield, David I.; White, Chris E.; White, Shawna: TERRANE ASSEMBLAGE MAP OF THE NORTHERN APPALACHIAN AND WESTERN CALEDONIDE OROGENS

24-11 27 Wang, Chunzeng*; Madsen, Lauren: BEDROCK GEOLOGIC MAP OF THE NUMBER NINE LAKE QUADRANGLE, NORTHERN MAINE

24-12 28 White, Chris*; Barr, Sandra M.; van Rooyen, Deanne; Sunatori, Évelyne; Kucker, Kyle J.: A NEW GEOLOGICAL MAP OF THE GANDERIAN ASPY TERRANE, CAPE BRETON HIGHLANDS, NOVA SCOTIA, CANADA

24-13 29 Magalhaes, Kallian*; Charney, Allison; Seremet, Meghan; Steinen, Randolph P.: TESTING THE HYPOTHESIS THAT THE WESTERN TRAP-ROCK RIDGES OF CONNECTICUT ARE COMPOSED OF BOTH WEST ROCK AND BRIDGEPORT DIABASE

24-14 30 Walsh, Gregory J.*; Orndorff, Randall C.; Valley, Peter; Parker, Mercer: PRELIMINARY BEDROCK GEOLOGIC MAP OF NEW ENGLAND, USA

24-15 31 Valley, Peter*; Parker, Mercer; Walsh, Greg J.; Orndorff, Randall C.: BEDROCK GEOLOGIC MAP OF THE PORT HENRY QUADRANGLE, ESSEX COUNTY, NEW YORK AND ADDISON COUNTY, VERMONT

SESSION NO. 25

S1. Applied Investigations by Northeastern State Geological Surveys: Honoring the Tradition of Robert Marvinney

1:30 PM, Doubletree by Hilton, Pemigewasset Room

Amber T.H. Whittaker, Shane Csiki and Benjamin DeJong, Presiding

1:30 PM INTRODUCTORY REMARKS

25-1 1:35 PM Whittaker, Amber*: THE PRACTICAL, FUNCTIONAL, AND CRUCIAL ROLE OF STATE GEOLOGIC SURVEYS: A REVIEW OF ROBERT G. MARVINNEY’S LEADERSHIP


25-3 2:15 PM Theis, Lindsay*: TWO BIRDS WITH ONE STONE: CONNECTING FIELD RESEARCH WITH EDUCATION OUTREACH AT THE MAINE GEOLOGICAL SURVEY

2:35 PM REFLECTION AND COMMENTS FROM AND ON OUTREACH AT THE MAINE GEOLOGICAL SURVEY

2024 Northeastern Section Meeting
SESSION NO. 26
T3. Northern Appalachian Magmatism: From the Precambrian to the Cretaceous

1:30 PM, Doubletree by Hilton, Merrimack Room

Michael J. Dorais, Sean Kinney and Jennifer Cooper Boemmels, Presiding

1:30 PM INTRODUCTORY REMARKS

26-1 1:35 PM VanTongeren, Jill*; Kinney, Sean; Ramezani, Jahandar: THE TIMING AND SEQUENCE OF MAGMA EMLACEMENT OF THE OSCEOLA GRANITE, WHITE MOUNTAIN BATHOLITH, NEW HAMPSHIRE (INVITED SPEAKER)


26-3 2:15 PM Ross, Martin*: A NEW LATE PENNSYLVANIAN AGE FOR THE MEDFORD DIKE, MEDFORD, MASSACHUSETTS

26-4 2:35 PM Ridge, John C.*; VanTongeren, Jill; Crowley, J.L.: A NEW 238 MA CA-ID-TIMS U-PB ZIRCON AGE FOR THE MEDFORD DIKE, MASSACHUSETTS

26-5 2:55 PM Hudgins, Michael*; Ikeka, Masayuki; Olsen, Paul E.; Schaller, Morgan: AN OCEAN ACIDIFICATION EVENT LINKED TO THE CENTRAL ATLANTIC MAGMATIC PROVINCE DETERMINED THROUGH DIRECT MEASUREMENTS OF CO2 FROM FLUID INCLUSIONS IN DEEP SEA CHERTS DURING THE END-TRIASSIC EXTINCTION

26-6 3:15 PM Mazza, Sarah*: EVALUATING THE EVOLUTION OF A PASSIVE MARGIN: COMPARING JURASSIC MAGMATISM IN NEW HAMPSHIRE AND VIRGINIA

3:35 PM BREAK

26-7 3:50 PM Eby, G. Nelson*: MESOZOIC MAGMATISM IN NEW ENGLAND AND QUEBEC

26-8 4:10 PM Dorais, Michael*: Kinney, Sean: THE DRY RIVER DIORITE: INSIGHTS TOWARDS THE MANTEL CONTRIBUTION TO THE WHITE MOUNTAIN BATHOLITH, NEW HAMPSHIRE AND THE TRANSITION FROM THE CENTRAL ATLANTIC MAGMATIC PROVINCE

SESSION NO. 27
T26. Current Research in Coastal and Nearshore Processes (GSA Marine and Coastal Geoscience Division; GSA Geophysics and Geodynamics Division)

1:30 PM, Doubletree by Hilton, Piscataquog Room

Bryan Oakley and Mark Borrelli, Presiding

1:30 PM INTRODUCTORY REMARKS

27-1 1:35 PM Giese, Graham*; Borrelli, Mark; Mague, Stephen: SHOREFACE SLOPE AND LONGSHORE SEDIMENT TRANSPORT ALONG A SANDY PARAGLACIAL COAST WITH APPLICATION TO COASTAL MANAGEMENT

27-2 1:55 PM Borrelli, Mark*; Solazzo, Daniel; dos Santos, Pedro P.G.M.: USING VESSEL-BASED ACOUSTIC AND UNOCCUPIED AERIAL SURVEYS TO CREATE SEAMLESS ONSHORE/OFFSHORE MAPS; QUANTIFYING COASTAL CHANGE AND ASSOCIATED UNCERTAINTIES

27-3 2:15 PM Roberts, Kalinda*: Borrelli, Mark; Solazzo, Daniel; Levesque, Daniel: MAPPING BEACH MORPHOLOGY AND GRAIN SIZES OF SOUTHERN NEW ENGLAND BEACHES USING “3D BEACH PROFILES”

27-4 2:35 PM Lepire, Jonathan*; Oakley, Bryan A.: EVOLUTION OF A DYNAMIC COASTAL LAGOON SYSTEM NAPATREE POINT, RHODE ISLAND

27-5 2:55 PM Benson, Marina*; Lloret, Javier; Chenoweth, Kelsey: EDGARTOWN GREAT POND IS TURNING GREEN! THE DYNAMICS OF A SHOREFRONT SYSTEM NAPATREE POINT, RHODE ISLAND

27-6 3:15 PM McKeon, Kelly*: Piecuch, Christopher: RIVER DISCHARGE CONTRIBUTIONS TO HIGH TIDE FLOODS ALONG THE DELAWARE RIVER ESTUARY

3:35 PM BREAK


27-8 4:10 PM Soulaguet, Cameron*; Oakley, Bryan A.: PERSISTENCE OF SORTED BEDFORM MIGRATION ON THE NAPATREE POINT, RHODE ISLAND SHOREFACE BETWEEN 2016 AND 2021

27-9 4:30 PM Gutierrez, Benjamin*; Zeigler, Sara; Lentz, Erika: USING LINKED BAYESIAN NETWORKS TO PREDICT SEA-LEVEL RISE-DRIVEN GEOMORPHOLOGIC CHANGES TO CRITICAL BARRIER-ISLAND HABITAT

27-10 4:50 PM Cheng, Jun*: Heuser, Michael: STORM INDUCED BEACH CHANGES AND POST-STORM RECOVERY ALONG ORTLEY BEACH, NEW JERSEY

27-11 5:10 PM Oakley, Bryan*: THE BLOCK ISLAND BEACH PROFILE PROJECT 10-YEARS IN; OBSERVATIONS AND LESSONS LEARNED
SESSION NO. 28

**T1. Unveiling Pathways into the Geological, Atmospheric, Marine, and Environmental Sciences (GSA Energy Geology Division)**

2:30 PM, Doubletree by Hilton, Contocook Room

Julia Bryce, Jennifer Bourgeault, Maria Fahnstock, Lara Gengarely, Guilnhal (Rose) Ozbay and Ruth Varner, Presiding

2:30 PM

**INTRODUCTORY REMARKS**

28-1

2:35 PM

Bourgeault, Jennifer*; Young, Beth; Wicklein, Haley: MULTI-DIMENSIONAL POP-UP TENT COMBINES SOIL CONCEPTS, ART, CAREERS, INQUIRY, AND DATA; ENGAGING K-4 STUDENTS; BROADENING IMPACT FOR SCIENCE

28-2

2:55 PM

Smith, Joshua B.*; Heestand, Mela Jones; Cates, Sharon E.: A PHENOMENON ALIGNED TO NEXT GENERATION SCIENCE STANDARDS PERFORMANCE EXPECTATION MS-ESS1-4 AT THE DESERT OF MAINE IN FREEPORT

28-3

3:15 PM

Cormas, Peter; Fredrick, Kyle*; Price, Matthew; Sezer, Ali; Valkanas, Michelle; Woznack, Kimberly: FACILITATING LEARNING COMMUNITIES FOR SCIENCE FACULTY

3:35 PM

**BREAK**

28-4

3:50 PM

Egendorf, S. Perl; Marin, Emma*; Lewis, Autumn; Metzger, Arlo; Boehm, Meaghan; Chu-Jacoby, Ilexis; Ianculovici, Daniela; Bonhotal, Jean; Scheintoch, Debbie; CHENG, Zhongqi: AN INVESTIGATION INTO THE EFFICACY OF SMALL-SCALE COMMUNITY COMPOSTS FROM NEW YORK CITY MIXED WITH CLEAN GLACIAL SUBSOILS AS CONSTRUCTED SOIL MEDIA FOR CROP GROWTH

28-5

4:10 PM

Speight, Thomas*: THE MYSTIC RIVER MONSTER - NEW ENGLAND GAS & COKE AND THE BOSTON ENERGY ECONOMY, 1894-1962

28-6

4:30 PM

Williams, Kevin*; Solar, Gary: INSIDE THE STEREONET: TEACHING 3D SPATIAL COGNITION IN STRUCTURAL GEOLOGY USING THE IMMERSIVE PLANETARIUM ENVIRONMENT

AFTERNOON POSTER TECHNICAL SESSIONS

SESSION NO. 29

**T2. What is the Future of Field Camp? (Posters) (GSA Energy Geology Division)**

1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

Booth #

29-1

1:35 PM

Luther, Amy*; Fowler, Kristoffer: TRANSFORMATIVE LEARNING AT LSU GEOLOGY FIELD CAMP: INTEGRATING COMMUNICATION SKILLS FOR PROFESSIONAL SUCCESS

29-2

2:05 PM

Leet, Kenzie*; Smith, Jason: INCREASING SELF-EFFICACY THROUGH FIELD EXPERIENCES AND UNDERGRADUATE RESEARCH: A COMMUNITY COLLEGE PERSPECTIVE

29-3

2:45 PM

Reynolds, Laura*: REIMAGINING ‘THE FIELD’: EXPLORATIONS IN URBAN GEOLOGY

29-4

3:15 PM

Tindall, Sarah; Fegely, Dane*: ANALYZING INACCESSIBLE OUTCROPS IN AN INTERACTIVE GAMING ENVIRONMENT

29-5

3:45 PM

Fredrick, Kyle*; Hess, Mitchell; Rahm, Hunter: AN EMBEDDED, AUTHENTIC RESEARCH EXPERIENCE IN A SEDIMENTARY GEOLOGY LAB COURSE

SESSION NO. 30

**T5. Deciphering a Cryptic Geologic Record: New Insights from Field and Lab Investigations of the Appalachians in the United States and Canada (Posters) (GSA Geochronology Division; GSA Geobiology Division; GSA Energy Geology Division; GSA Geophysics and Geodynamics Division; GSA Structural Geology and Tectonics Division)**

1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

Booth #

30-1

6:30 PM

Jiménez, Roberto*; Martínez, David; Azor, Antonio; Gonzalez Lodeiro, Francisco; Accotto, Cristina; Jabelal-Sánchez, Antonio; Sabar, Mohamed Salem; Lekouyrie, Ahmed: DISTINCTIVE AFRICAN AND NON-AFRICAN DETRITAL ZIRCON SOURCES IN THE MAURITANIAN BELT

30-2

7:00 PM

Summa, Lori*: Converse, David; Awiller, David; Bothner, Wallace; Perrot, Morgann: FILLING GAPS IN SILURO-DEVONIAN PALEOGEOGRAPHY OF THE NORTHERN APPALACHIANS

30-3

8:00 PM

Bradley, Dwight*; Hillenbrand, Ian; Strauss, Justin V.: THE MISSING, NEAR-MISSING, AND CRYPTIC UPPER CRUST OF THE ACADIAN ALTIPLANO

30-4

9:00 PM

Backus, Hayden*; Cao, Wentao; Garber, Joshua M.; Snye, Andrew J.: TITANITE FROM THE HIGH-PRESSURE BELT IN WESTERN GRENVILLE PROVINCE, CANADA RECORDS HOT EXHUMATION

30-5

10:00 PM

Brigham, John Mark*; Baldwin, Suzanne L.; Thomas, Jay B.: EOCLOGITE-FACIES METAMORPHIC ROCKS OF THE WORCESTER MOUNTAINS, STOWE, VERMONT, USA

30-6

11:00 PM

Haugen, Elia B.; Harris, Holly E.; Peterman, Emily*: West, David P.: U-PB ZIRCON GEOCHRONOLOGY AND EBSD ANALYSIS OF ROCKS IN THE PASSAGASSAWAKEAG GNEISS, MID-COAST MAINE

30-7

12:00 AM

Lutz, Aidan*: CONTACT METAMORPHISM OF THE KITTERY FORMATION AT CAPE NEDDICK, MAINE

30-8

1:00 AM

Cordell, William; Valentinio, David*: Chiarozzielli, Jeffrey: STRAIN HISTORY OF THE PISECO LAKE SHEAR ZONE EASTERN TERMINATION, ADIRONACK MOUNTAINS, NEW YORK

30-9

2:00 AM

Perrot, Morgann*; Davies, Joshua; Tremblay, Alain; Ducat, Thibaut; Amidon, William; Guilmette, Carl; Halverson, Galen P.; Pinon, Héloïse; Musajo, Claire: STRUCTURAL CHARACTERIZATION AND GEOCHRONOLOGY OF THE FAULT NETWORKS IN THE MONTREAL REGION (SOUTHERN QUEBEC, CANADA): A PRELIMINARY CALCITE U-PB DATING STUDY

30-10

3:00 AM

Jaret, Steven*; Castro, Adrian; Williams, Michael; Morin, Katherine D.; Taliby, Nicholas D.; Hammond, Keiji: MONAZITE GEOCHRONOLOGY OF MANHATTAN SCHIST FROM NEW YORK CITY

30-11

4:00 AM

Koran, Isabel*; McKenna, Alyssa; Maeder, James; Guevara, Victor; Schoene, Blair: MAGNETITE-APATITE MINERALIZATION IN THE CORE OF THE GRENVILLE OROGEN, NEW JERSEY HIGHLANDS, USA: A PETROCHRONOLOGIC APPROACH

SESSION NO. 31

**T14. Phanerozoic Paleoceanographic and Climatic Changes (Posters)**

1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

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Morrison, Audrey*; Lefebvre, Amy; Van Patter, Ariel; Morrison, Owen; Simeiganoschi, Pierre; Vaz-e-zadeh Asadi, Nima; Jin, Jisuo; Riechelmann, Sylvia; Blamey, Nigel; Brand, Uwe: DRIVERS OF THE LATE ORDOVICIAN MASS EXTINCTION: A MULTI-ARCHIVE APPROACH

31-2

7:00 PM

Pekar, Stephen*; Navarreta, Nicolle; Rosenthal, Yair: RECONCILING HIGH ATMOSPHERIC CO2 AND APPARENT HIGH ICE-VOLUME ESTIMATES DURING THE MIDDLE
SESSION NO. 33

T32. Trace Elements in the Environment (Posters)

1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

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33-2
29 Vaez-zadeh Asadi, Nima*; Simiganoschi, Pierre; Brand, Uwe: COAL CONSUMPTION: AN ANTHROPOGENIC LEGACY MEASURED BY MARINE ORGANISMS

33-1
29 Prevost, Zoe*; Oyewumi, Yinka: ANTHROPOGENIC RELEASE OF MERCURY AND OTHER POTENTIALLY DANGEROUS CONTAMINANTS FROM A COAL POWER PLANT IN BRIDGEPORT, CONNECTICUT

33-3
31 Hodsen, Hailey*; Oyewumi, Yinka: GEOCHEMICAL ANALYSIS OF POTENTIALLY DANGEROUS CONTAMINANTS FROM WETHERSFIELD COVE IN WETHERSFIELD, CONNECTICUT

SESSION NO. 34

T34. Estuary and Tidal Marsh Dynamics, Resiliency, and Restoration (Posters)

1:30 PM, Doubletree by Hilton, Armory Ballroom

Authors will be present from 3 to 5 PM

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34-1
40 McGauley, Katelyn*; Snyder, Noah P.; Landis, Joshua; Tedesco, Lenore P.; Charlebois-Berg, Juliana: ESTIMATES OF ACCRETION RATES OF SALT MARSH ISLANDS IN SOUTHERN NEW JERSEY

34-2
41 Rogers, Mairin*; Kilgo, Jamie; Johnson, Catherine M.; Bauman, Brooke; Rigdon, Mathew: SHARING COASTAL MARSH RESTORATION KNOWLEDGE: A SPATIAL DATABASE OF NATIONAL PARK SERVICE RESTORATION CASE STUDIES

34-3
42 Armstrong, Michael*; Raymond, Megan B.; Murac, James: TIDAL WETLAND CREATION AND RESTORATION, CHITTENDEN PARK, GUILFORD, CONNECTICUT

34-4
43 Bradley, Cassandra*; Veresh, Renee; Cullen, James; Hubeny, Brad: LATE HOLOCENE HIGH MARSH STRATIGRAPHY OF ESSEX RIVER MARSH SEDIMENTS, NORTHEASTERN MASSACHUSETTS

34-5
44 Dickson, Katarina*; Hollander, Jamie; Sarrazin, Anna; Enterline, Claire: MOORE, Stade; Puryear, Kristen; Dostie, Philip T.; Johnson, Bev: CARBON DYNAMICS UPSTREAM AND DOWNSTREAM OF A TIDAL RESTRICTION, SPURWINK MARSH, CAPE ELIZABETH, MAINE
TUESDAY, 19 MARCH 2024

MORNING ORAL TECHNICAL SESSIONS

SESSION NO. 35

T5. Deciphering a Cryptic Geologic Record: New Insights from Field and Lab Investigations of the Appalachians in the United States and Canada (GSA Geochronology Division; GSA Geobiology Division; GSA Geophysics and Geodynamics Division; GSA Structural Geology and Tectonics Division)

8:00 AM, Doubletree by Hilton, Pemigewasset Room

David Converse, Dwight Bradley and Athena Oyster, Presiding

8:00 AM INTRODUCTORY REMARKS

35-1 8:05 AM Walsh, Gregory*; Valley, Peter M.; Deasy, Ryan T.; Merschat, Arthur; Aleinkoff, John N.; McAleer, Ryan J.; Regan, Sean P.: SYNTHESIS OF THE MESOPROTEROZOIC BASEMENT OF THE SOUTHEASTERN ADIRONDACK HIGHLANDS, ESSEX COUNTY, NEW YORK

35-2 8:25 AM St-Denis, Miguel*; De Souza, Stéphane; Davies, Joshua H.F.L.; Perrot, Morgann: DETRITAL MINERAL PROVENANCE AND AGE OF THE OAK HILL GROUP IN THE SOUTHERN QUÉBEC APPALACHIANS; PALEOGEOGRAPHIC IMPLICATIONS FOR THE LAURENTIAN MARGIN FROM NEOPROTEROZOIC DETRITAL ZIRCONS

35-3 8:45 AM Lowe, David*: INCENSCENT PASSIVE MARGIN REACTIVATION OF AULACOGENS ON THE EDIACARAN TO ORDOVICIAN LAURENTIAN IAPETAN MARGIN

35-4 9:05 AM Pinon, Hélène*; Davies, Joshua H.F.L.; Musajo, Claire; Perrot, Morgann; Tremblay, Alain; Halverson, Galen P.: TEPHROCHRONOLOGY OF ORDOVICIAN BENTONITES FROM THE MONTREAL AREA: ZIRCON AND APATITE CHEMISTRY AS A TOOL FOR STRATIGRAPHIC CORRELATIONS

35-5 9:25 AM Converse, David*; Bothner, Wallace; Jahrling, Christian; Summa, Lori; Awiller, David; Perrot, Morgann; Tremblay, Alain; Koch, Philip; Keeley, Joshua: SILURO-DEVONIAN GEOLOGY IN NORTHERN NH – STRATIGRAPHY, U-PB GEOCHRONOLOGY, GEOCHEMISTRY AND REGIONAL IMPLICATIONS

35-6 9:45 AM Strauss, Justin V.*; Bradley, Dwight; Thompson, Peter; Eusden, J.; Meyer, Edward E.; Reusch, Douglas; Town, Caleb Forrest; McClelland, William C.; Crowley, James L.: DETRITAL ZIRCON U-PB GEOCHRONOLOGY OF THE GREATER CENTRAL MAINE BASIN, NEW HAMPSHIRE AND SOUTHWESTERN MAINE

10:05 AM BREAK

35-7 10:20 AM Hillenbrand, Ian*; Williams, Michael: THE RISE AND FALL OF EASTERN NORTH AMERICA’S OROGENIC PLATEAUS: FROM THE ADIRONDACKS TO THE ACADIAN ALTIPLANO

35-8 10:40 AM Williams, Michael*; Hillenbrand, Ian; Jercinovic, Michael J.: REACTION DATING AND BAYESIAN P-T-TD AGE-SEQUENCE MODELING: A NEW TOOL FOR TECTONIC GEOCHRONOLOGY

35-9 11:00 AM Croft, Kyra*; Castro, Adrian; Baxter, Ethan F.: GARNET SM-Nd GEOCHRONOLOGICAL INSIGHTS INTO THE METAMORPHISM OF THE NASHOBA TERRANE, MASSACHUSETTS, USA

35-10 11:20 AM Brunet, Isabella*; Castro, Adrian; Walker, Stephanie; Jaret, Steven; Taliby, Nicholas D.: DATING NYC: CONSTRAINTS ON THE TIMING OF METAMORPHISM IN THE MANHATTAN SCHIST FROM GARNET PETROCHRONOLOGY

SESSION NO. 36

T15. Improvements to our Understanding of Past Climate and Environments through the Development of Proxies, the Generation of New Biomarker Records, and the Interpretation of Sedimentary Archives (GSA Energy Geology Division)

8:00 AM, Doubletree by Hilton, Contoocook Room

Boyang Zhao and Emily Titchett, Presiding

8:00 AM INTRODUCTORY REMARKS

36-1 8:05 AM Sylvia, Jillian*; Itambu, Makarius; Joniec, Acadia; Lyon, Jenaive; Smith, Matt; Roberts, Patrick; Leng, Qin; Yang, Hong; Patalano, Robert: PLANT WAX BIOMARKER PALEO-ECOLOGICAL BASELINES ACROSS THE USAMBARA MOUNTAINS, TANZANIA

36-2 8:25 AM Wilk, Alexander*; Ramirez, Briana; Johnson, Thomas; Salacup, Jeff; Castaheida, Isla S.: EVALUATING CLIMATE VARIABILITY AND PALEOTEMPERATURE PROXIES IN TROPICAL EAST AFRICA DURING THE LATE PLEISTOCENE AND MIS 5E

36-3 8:45 AM Castaheida, Isla S.*; Sun, Heeyeon; Salacup, Jeff: TEMPERATURE AND HYDROCLIMATE VARIABILITY IN MID-LATITUDE ARID CENTRAL ASIA DURING THE PAST 13,600 YEARS: A MULTI-PROXY INVESTIGATION OF ISSYK-KUL (KYRGYZSTAN)

36-4 9:05 AM Harris, Carolyn M.*; Rhiem, Jeemin; Zhang, Yujiao; Cobban, Alec; Zhou, Alice; McFarlin, Jamie; Weber, Yuri; Elling, Felix; Pearson, Anne; Kopf, Sebastian; Leavitt, William: QUANTIFYING ENVIRONMENTAL CONTROLS ON ARCHAEAL LIPID HYDROGEN ISOTOPE SIGNATURES IN AN EXTREMOPHILIC ARCHAEON

36-5 9:25 AM Tweedy, Ruth*; Shi, Sarah C.; Uno, Kevin: MACHINE LEARNING ANALYSIS OF N-ALKANES FROM WOODY AND GRASSY AFRICAN PLANTS

36-6 9:45 AM Turner, Joshua; Joniec, Acadia*; Liang, Jiaqi; Niu, Gao; Yang, Hong; Leng, Qin: IMPACT OF LEAF VARIATION ON THE FRANKS MODEL FOR ANCIENT CO2 RECONSTRUCTION

10:05 AM BREAK

36-7 10:20 AM Gallagher, Brett*; Brisson, Sarah; Fielding, Christopher; Bush, Andrew: PALEOECOLOGY AND DIVERSITY OF BRACHIPODS THROUGH THE UPPER KELLWASSER EXTINCTION EVENT (LATE DEVONIAN) AT TIOGA, PENNSYLVANIA

36-8 10:40 AM Khan, Emad Ullah*; Saleem, Maryam; Sajjad, Syed Muhammad Wasim: BIOFACIES, PALEOENVIRONMENT ENVIRONMENT AND STRATIGRAPHIC DISTRIBUTION OF EOCENE CARBONATES IN HAZARA BASIN, LESSER HIMALAYAS, PAKISTAN

36-9 11:00 AM Aho, Tzevi*; Amati, Lisa; Morse, Sarita: ENVIRONMENT OF DEPOSITION AND CHARACTER OF SHELL HASHES AT TWO SECTIONS IN THE UPPER MOUNT MARION FORMATION (HAMILTON GROUP) IN EASTERN NEW YORK STATE

36-10 11:20 AM Fielding, Christopher*; Onuoha, Oluochi I.; Frank, Tracy; Hren, Michael T.; Gibling, Martin R.: A PALEOENVIRONMENTAL REAPPRAISAL OF THE PENNSYLVANIAN (BASKHIRIAN-MOSCOVIAN) SOUTH BAR FORMATION AND LOWER SYDNEY MINES FORMATION OF CAPE BRETON, ATLANTIC CANADA

36-11 11:40 AM Cheesman, Julia*; Urbano, Lenses; Geiss, Christoph: A MODEL OF SOIL DEVELOPMENT FOR LOESSIC
SOILS SUGGESTS RAPID DEVELOPMENT OF SOIL MAGNETIC PROPERTIES

SESSION NO. 37

T17. Trace Elements in the Environment
8:00 AM, Doubletree by Hilton, Merrimack Room
Melissa Lombard, Benjamin Bostick and Maria Fahnestock, Presiding

SESSION NO. 38

T25. Estuary and Tidal Marsh Dynamics, Resiliency, and Restoration
8:00 AM, Doubletree by Hilton, Piscataqua Room
Tim Cook, Brian Yellen and Zoe Hughes, Presiding

MORNING POSTER TECHNICAL SESSIONS

SESSION NO. 39

T7. Unraveling Appalachian Orogenic Events Using Geological and Geophysical Methods (Posters) (GSA Geophysics and Geodynamics Division; GSA Structural Geology and Tectonics Division)
9:00 AM, Doubletree by Hilton, Armory Ballroom
Authors will be present from 9:30 to 11:30 AM

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SESSION NO. 40

T6. Micro to Macro: Linking Structural Geology, Petrology, Geochronology, and Tectonics Across Scales (Posters) (GSA Geochronology Division; GSA Structural Geology and Tectonics Division; GSA Mineralogy, Geochemistry, Petrology, and Volcanology Division)

Authors will be present from 9:30 to 11:30 AM

9:00 AM, Doubletree by Hilton, Armory Ballroom

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7 Fulmer, Anya*; Markley, Michelle; Pless, Claire: NEW CONSTRAINTS ON THE TIMING OF DEFORMATION IN THE MABERLY SHEAR ZONE IN THE GREN维尔 PROVINCE OF SOUTHERN ONTARIO

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8 Carabin, Jeanne*; Gervais, Felix; Sappin, Anne-Aurélie: SHAWINGAN-AGED REE-BEARING CARBONATITES IN THE GREN维尔 PROVINCE: GEOCHRONOLOGICAL CONSTRAINTS WITHIN THE CENTRAL METASEDIMENTARY BELT BOUNDARY ZONE

40-3

9 Price, Nancy*; Hoffman, Olivia: PEGMATITES OF COBBLE LOOKOUT, NORTHERN MARGIN OF THE MARCY MASSIF, ADIRONDACK MOUNTAINS, NEW YORK, USA

40-4

10 Evans, Mark*: ALLEGHIAN SYNTECTONIC LOAD ABOVE THE MASSANUTTEN SYNCLINORIUM, NORTHERN VIRGINIA

40-5

11 Solar, Gary*; Murphy, Kelsey; Tomascak, Paul B.; Tilley, Sarah R.: STRUCTURE, PETROGRAPHY AND GEOCHEMISTRY OF THE LOG JAM SCHIST, WESTERN CONNECTICUT

40-6

12 Sanders, Shaun*; Cao, Wentao; Massonne, Hans-Joachim; Jerinicovic, Michael J.: RUTILE CRYSTALLIZATION TEMPERATURE IN A GARNET-KYANITE GNEISS FROM THE SOUTHERN BRASILIA OROGEN

40-8

14 Koran, Isabel*; Schoene, Blair; Wernette, Shelly; Hughes, Nigel C.; Myrow, Paul: U-PB ZIRCON AGE CONSTRAINTS ON THE LATE CAMBRIAN AND LOWER ORDOVICIAN FAUNA OF SIBUMASUAN GNEISS FROM WESTERN NEW HAMPSHIRE

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15 Thomas, Lexi*; Kohn, Matthew J.: USING RAMAN SPECTROSCOPY TO VALIDATE METAMORPHIC P-T PATHS FROM WESTERN NEW HAMPSHIRE

40-10

16 Eyster, Athena*; Brengman, Latisia; Nichols, Claire I.O.; Bryce, Julia: FEASIBILITY OF THE U-PB HEMATITE CHRONOMETER IN SUPERIOR REGION MASSIVE IRON FORMATIONS

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18 Connor, Matthew*; Toraman, Erkan; Hanson, Lindley: PRELIMINARY PETROLOGICAL, GEOCHEMICAL, AND GEOCHEMICAL CONSTRAINTS ON THE TIMING AND ORIGIN OF MAGMATISM AT MARBLEHEAD NECK, MA

40-13

19 Perry, Madaline*; Carley, Tamara L.; Sahagian, Dork; Rossmann, Jenn Stroud: EXPERIMENTALLY SIMULATING AND ANALYZING BUBBLE DYNAMICS AND NUCLEATION IN MAGMA

40-14

20 Rivera, Serafina*; Kotler, Mikey; Carley, T.L.; Banik, Tenley; Sahagian, Dork: REFINING SUBGLACIAL EMBLACEMENT OF HÅGÖNGUR ON THE PERIMETER OF VATNAKÖKULL ICE SHEET, ICELAND

SESSION NO. 41

T20. Groundwater and Surface Water Characterization through Modeling and Field Methods (Posters) (GSA Geophysics and Geodynamics Division)

Authors will be present from 9:30 to 11:30 AM

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25 Griesel, Madelaine*; Heiss, James: EFFECT OF TIDAL SALINITY VARIATIONS ON HYPOREIC EXCHANGE IN ESTUARINE BEDFORMS

41-2

26 Roy, Asim*; Heiss, James; Raubenheimer, Britt; Elgar, Steve: EFFECTS OF COASTAL STORMS ON FLOW AND SALINITY DISTRIBUTIONS IN A BARRIER ISLAND GROUNDWATER SYSTEM

41-3

27 MacKnight, Alex*; Pietras, Jeffrey T.; Schmitkon, Jonathan: HOW LOW CAN YOU GO? CAN YOU GO DOWN LOW? - INVESTIGATING THE ROLE OF LOWSTANDS AND EVAPORATIVE CONCENTRATION IN THE ONSET OF MEROMIXIS IN GREEN LAKE, FAYETTEVILLE NY

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29 Korba, Abby; Lachhab, Ahmed*: INVESTIGATING AQUIFER HETEROGENEITY: A CASE STUDY OF CEER, SUSQUEHANNA UNIVERSITY, THROUGH THE INTEGRATION OF ERT, SRT, AND DRILLING LOGS

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30 Graves, Daniel*: Ibarra, Daniel: VARIABILITY OF GROUNDWATER RECHARGE IN VARIABLE CLIMATES: A GROUNDWATER FLOW MODEL FOR THE SOUTHern GREAT BASIN

41-7

31 Toledo-Crow, Ricardo; Kress, Michael; Zhang, Zhanyang; Schäfer, Tobias; Heris, Mehdi P.; Benimoff, Alan*: UNDERSTANDING THE FLOODING IN THE CITY: AN URBAN COMPOUND FLOODING MODEL USING MULTIPLE OPEN-SOURCED DYNAMIC DATABASES

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32 Reeve, Andrew*: Oceguera-Vargas, Ismael; Lamas-Cosío, Elizabeth; Areoga-Cabrera, Flor; Flores-Heri, Iris: MONITORING GROUNDWATER LEVELS AND SIMULATING GROUNDWATER FLOW NEAR THE RING OF CENOTES, NORTHEASTERN YUCATAN, MEXICO
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*Denotes Presenter
Field Excursions to the Appalachian Plateaus and the Valley and Ridge for GSA Connects 2023

Edited by Brett T. McLaurin

This volume offers guides for GSA Connects 2023 in Pittsburgh, Pennsylvania, USA, that cover a diverse range of geologic time and processes from the Paleozoic to Recent. Chapters address Paleozoic and Pleistocene glaciation; the interplay of geology and climate in shaping the landscape; and aspects of cultural geology, including Frank Lloyd Wright’s Fallingwater and the setting of Youngstown, Ohio, USA.

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