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7 February 2024–7:00 PM - In-Person & Virtual Options Available Dr. Mark Holland (St. Lawrence University) will present:

2 BILLION YEARS IN 2 WEEKS: A Geologic Tour of Grand Canyon

During a two-week tour of the Grand Canyon Dr. Holland and his colleagues had the opportunity to study the spectacular geology of the region. This talk presents a summary of the tour and summarizes two billion years of geology observed and studied over a two-week period. The geography and geology of the region will be presented.

Dr. Mark Holland is an Assistant Professor in the Geology Department at St. Lawrence University. Mark's geological education began at the University of Massachusetts, when in the summer of 2011 he spent seven weeks as a field assistant in remote northernmost Saskatchewan examining granulite grade Archean rocks of the East Athabasca Mylonite Zone. This formative experience led him to pursue graduate studies in structural geology and tectonics at the University of New Mexico, where he completed a M.S. and Ph.D. Before coming to SLU, Mark was briefly a post-doctoral researcher at the New Mexico Bureau of Geology and Mineral Resources, and an assistant professor at West Texas A&M University. When not geologizing, Mark spends time with his wife, son, and pets (a dog and a cat). He is also a drummer of over 25 years, and is gradually becoming a passable guitar player.

An application has been submitted to NYSCPG for this presentation to count for 1 NY PDH

BOTH IN-PERSON and VIRTUAL options are available!- Zoom link will be sent the morning of 1/3/24

Location: Spaghetti Warehouse, 689 North Clinton Street, Syracuse, New York or ZOOM **Time:** 5:00—6:00p.m. social hour: 6:00-7:00 p.m. dinner; 7:00 p.m. technical presentation

RSVP: https://cnyapg.org/



SAVE THE DATE!!! April 26, 2024 GEOLOGY FIELD DAY!!!



The Central New York Association of Professional Geologists and the American Institute of Professional Geologists will be hosting a Geology Field day for Students and Professionals. This all day event will have presentations ranging from environmental drilling technology to aerial drone applications in the geosciences to environmental field sampling, and more!



For students there will be the opportunity to meet local geoscience professionals from area employers, and talk to them about career and employment opportunities.

Professional Geologists, Engineers and Land Surveyors, there will be presentations offering 5 or more PDH credits.

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Early Registration

CNYAPG /AIPG Members - \$100 Non-members - \$130 Students - \$20

Late Registration

CNYAPG / AIPG Members - \$120

Non-members - \$150 Students - \$25

* PDH certificate for 5 hours - \$50

Scheduled Topics & Presenters:

MIP drilling technology [Parratt-Wolff]
Slug testing [Yuri Veliz, & Gould Groundwater]
low flow, PDBs, PFAS Groundwater sampling [ERM]
Borehole geophysics [Hager-Richter]
Health & Safety [Ramboll]

Other presentations will include:

- Soil logging, classification & grain size analyses
- Monitoring Well design
- Aerial Drone use in field investigations and monitoring
- GeoTech demo



<u>Location:</u> Parratt-Wolff 5879 Fisher Road

East Syracuse, New York

For general questions, please contact us at: info@cnyapg.org

And visit us at WWW.CNYAPG.Org and join us on



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CNYAPG Newsletter

The CNYAPG Newsletter is a monthly publication of the Central New York Association of Professional Geologists dedicated to sharing upcoming events, delivering regular articles of interest and providing the Membership a forum for discussion.

The newsletter is prepared by the Officers and Board of Directors of CNYAPG (listed below).

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President's Message-February 2024

Welcome to February, which this year has 29 days instead of its usual 28 days. February comes from the Latin word februa, which means "to cleanse." It was the month in which ancient Rome was supposed to be purified by making offerings and sacrifices to the god of the dead. In today's world, we use the month to observe African-American History, the Lunar New Year, Love, and the Super Bowl for you sports fans. However, before I jump into some of the other topics I need to address, I have to say that this newsletter is jampacked with important information (Note the length!), so I suggest you read through it carefully. First, I want to thank Dr. Jim Stewart of John P. Stopen Engineering, who gave a very interesting presentation last month on some of the significant engineering considerations for working in areas of the Camillus and Utica Shales. It was a great talk, and all of us got a lot out of the presentation. Thanks again, Jim. This month, we are happy to announce that Dr. Mark Holland from St. Lawrence University will bring us on a geologic tour of the Grand Canyon. I know his research focuses on the interrelationships between structural, magmatic, and sedimentary processes during the deformation of continental crust, and he has an interest in the Cenozoic evolution of the North American Cordillera, the Grenville province, and the Adirondack Mountains. I am sure it will be exciting and informative, and I hope all of you will attend either in-person or via Zoom this February 7th. The event begins at 6:00 pm. Please keep an eye out for announcements regarding PDHs.

So, on to other news. With great difficulty, the CNYAPG Student Grant Committee has evaluated and debated all of the applicant proposals for the 2023-

2024 CNYAPG Grant for Earth Science Student Research Grant and has finally announced a winner. I am pleased to inform you that this year's recipient of the \$1000 Earth Science Student Research Grant will be Connor Hanington of SUNY Oneonta. Conner is majoring in Adolescent Education in Earth Science. Conner's research proposal entitled: "Securing Rice Nutrition in a Changing Climate: Understanding the Impact of CO2, Temperature, and Water Dynamics on Nutrient Uptake" focuses on developing a bench-scale to explore rice micronutrients, arsenic contamination, and the efficacy of alternate wetting and drying as a method for rice cultivation under changing climate conditions. Congratula-



tions, and we are all looking forward to your presentation next year. To all the other great students who applied, keep up the excellent work, and please reapply next year if you are eligible.

In other news, I am happy to announce that due to the tireless work of Gerry Gould (the current CNYAPG treasurer), CNYAPG is now registered with New York State Charities. This means that any donations to CNYAPG for our student grants and awards are **now tax deductible!** This will help us offer more student grants and awards, such as field camp assistance for students in

President's Message (continued...)

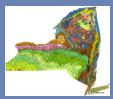
need, and increase the number and amount of awards we can give each year. Thanks, Gerry, for putting in the hard work to get this done for us and the students who will benefit from this in the coming years. I also wish to announce that CNYAPG will be updating its webpage in the coming months. Board members Olivia Botting and Gerry Gould have been working together to upgrade our webpage to make it more beneficial to our members. It will have links and resources that will be of service to all our members and to the broad

er central New York geoscientist community. Thank you, Olivia and Gerry, for working on that for all of us. We all look forward to the launch of the new webpage soon.

The re-scheduled Geology Field Days event is now set! CNYAPG and NE-AIPG will host A Geology Field Day for professionals and students on April 26th (please see the flyer in this newsletter). There will be field demonstrations and presentations, and PDH credits will be available for those who register to receive them. I encourage everyone to sign up as soon as possible. If you, your company, or your institution would like to support CNYAPG's Geology Field Day by being a sponsor, please contact me or one of the other board members. We are also seeking volunteers to help during the event (directing traffic, setting up tables, assisting presenters, etc.). As I have noted before, this will be a ton of fun and a terrific opportunity for students. I encourage college faculty to get their students to join CNYAPG as a student member and have them attend our talks virtually or in person. It is a way for them to meet potential future employers in the region and for employers to get a peek at some of the upcoming local geoscience talent. I hope to see you all there.

Also, as I mentioned last month, CNYAPG will be holding elections for its board of directors, including for our next president, next month. If you are thinking about serving our local geosciences community, contact us. If you are an active member, please vote when the ballot is presented in March. There will, as usual, be an opportunity for you to be a write-in candidate. Please consider serving.

The New York State Council of Professional Geologists (NYSCPG) has made a decision on the date and location for the 2024 Annual Geology Days Conference. Because of the success of the past two events in Saratoga Springs, it has been decided to hold this year's event there one more time. Geology Days is now slated for November 11th through the 13th. NYSCPG has been negotiating with the hotel and neighboring hotels to reserve more rooms for attendees and have a shuttle bus service to and from a nearby parking facility to address last year's parking issues. This event is getting bigger and bigger each year, and I am sure this year will top last year's. If you or your organization are interested in presenting at this event or wish to be a sponsor, please get in touch with John Nadeau at jnadeau@nyscpg.com. At this event, there will be numerous environmental and geotechnical consulting firms, state and local agencies, college and university geoscience faculty, and vendors and suppliers from across the northeast. Please visit their webpage for upcoming details (https://nyscpg.com). Also, NYSCPG will host its annual Geology Rocks fundraising event in White Plains, New York, on April



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President's Message (continued...)

18th. It will have cover bands featuring the music of Led Zeppelin and the Rolling Stones (how appropriate J). For more details, please don't hesitate to contact Michael Burke at mburke@langan.com.

AIPG will be hosting a free student/ECP webinar via Zoom on February 6th at 3 pm. The presenter will be Brigitte Petras, who will be speaking about geoscience careers. For more information, visit the link: https://aipg.org/events/EventDetails.aspx?id=1821662&group=.

To answer the question regarding the Geoparks Bill. All I have heard is that a committee is, or will, be forming to identify sites of geologic interest across the state.

Finally, I want to remind all the college faculty that Syracuse University will be hosting its annual Central New York Earth Sciences Student Symposium and Job fair. There are no dates announced yet, but it is usually held in Heroy Hall on the Syracuse University campus in early April. CNYAPG will again be offering a \$200 prize for the best student poster presentation during the symposium, so get your student's research posters ready and keep an eye out for the announcement.

Ok, now that all of that is out of the way, some interesting stuff in geology. As most of you probably have heard, there was a magnitude 1.7 seismic event in New York City on January 2nd. It was located in Astoria, Queens, with a hypocenter of approximately 3.1 miles. There were no reported injuries, structural damage, or disruptions to transit, traffic, or utility services. The New York City area has experienced seismic events in the past and will in again in the future. NYC has a substantial seismic hazard, with some researchers believing it could have a magnitude 6 or greater event within the next hundred years. The largest known event in the NYC area occurred in 1884 and had a determined magnitude of approximately 5. Research into the history of NYC indicates that events in the magnitude 5 range occurred in 1737. For those interested in the subject, I refer you to "Earthquake Activity in the Greater New York City Area: Magnitudes, Seismicity, and Geologic Structures" by Kafka, Miller, and Barstow, published in October 1985 in the Bulletin of the Seismological Society of America, Volume 75, No. 5, pages 1285 through 1300. A similar event, magnitude 1.8, occurred on January 20th, approximately 1.24 miles southeast of Brewerton, New York. This event had a hypocenter of approximately 4.7 miles. Just for comparison, there have been two events of magnitude 7 or higher this year, with the worst being a 7.5 in Ishikawa, Japan, on New Year's Day, killing 236.

On a lighter note, as always, I asked people to submit articles and photos for the newsletter. Since the weather has been decent so far, I encourage people to get out and visit the local state parks. If you come across research, scholarship, or internship opportunities for students (high school, undergrad, grads, or post-docs), please post them or let us know so we can get the word out. If you or your company would like to support CNYAPG, your contributions are now tax deductible and will get you space in our newsletter for geoscience-related ads. Also, you will be supporting student research and our



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President's Message (continued...)

planned Field Day.

Finally, as I have done to note previous African-American History Months, I would like to introduce you to another African-American who has contributed to the field of geology. In the United States, as a percentage, there are very few African-American geologists. There were even fewer in the 1970s, and even fewer who specialized in uranium deposits and groundwater; however, please meet Zelma Maine-Jackson.

Mrs. Jackson was born in the mid-1950s in the low-country of South Carolina known as the Gullah-Geechee Nation (a historically African-American area that was able to preserve much of their African cultural heritage despite being enslaved. Supreme Court Justice Clarence Thomas is among their most noteworthy members). She grew up a military brat, spending much of her early years in Germany and becoming fluent in German. Mrs. Jackson became interested in geology due to the influence of her grandmother, a midwife who taught her how consuming the red clays of the low-country helped women with iron deficiencies. She earned a bachelor's degree in geology at Virginia State University, studying under Dr. Mack Gipson (A noted African-American geologist I have featured in last February's newsletter). She earned her master's degree in economic geology from the University of Washington in 1980.

Mrs. Jackson started her career as an exploration geologist for ARCO, working in the oil fields and moving on to uranium mining, where she faced both racism and sexism from her "Roughneck" male coworkers. In the 1980s, she worked for the Washington State Department of Ecology and Nuclear Waste Program, performing groundwater investigation work at the Handford Nuclear storage facility, sitting drill rigs, analyzing core samples, and contributing to groundwater models that aided in a better understanding of contaminant pathways beneath the site. She is now retired but still is active, dedicating her time to helping young people from diverse backgrounds advance their careers in the geosciences. Mrs. Jackson is a trustee of the Nature Conservancy in South Carolina, where she works to protect loggerhead sea turtles and wildlife in the Ashepoo, Combahee, and Edisto Basin. She is also very involved in social justice, ecology, and advocacy in Washington State and is a founding member of the National Association of Black Geoscientists. Her most noted quote, which I found personally most delightful, is, "Get with it or get out of my way!"

Lastly, as is my practice with these newsletters, a quote. I heard this particular quote just the other day, and it stuck with me. It was so profound that I had to look into it and discovered it was a paraphrasing of a statement by the Dalai Lama from an interview. The quote goes: "What surprises me the most about humankind is that we get bored of our childhood, rush to grow up, and then long to be children again. We lose our health to make money, then lose our money to restore our health. That by thinking anxiously about the future, we forget the present such that we live in neither the present nor the future. That we live as if we were never going to die and die as though we've never lived."



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AIPG Student/ECP Webinar Series

LAUNCHING YOUR GEOSCIENCE CAREER



February 6, 2024 - Tuesday

12:00 pm Pacific, 1:00 pm Mountain, 2:00 pm Central, 3:00 pm Eastern
- One Hour Webinar -

Presented by Brigitte Petras, AIPG ECP-0539, AIPG National Early Career Professional Board Member

FREE WEBINAR - NO REGISTRATION REQUIRED
JUST CLICK ON ZOOM LINK TO ATTEND

No CEUs are included for this webinar.

LAUNCHING YOUR GEOSCIENCE CAREER

February 6th at 3 PM EST

Are you a student or early career professional starting your geoscience career? This webinar includes panelists who are early career professionals or students who will give insights on topics such as:

- · graduate programs,
- · how AIPG professional connections can help jumpstart your career
- · how to find and succeed in an internship opportunity, and/or
- · finding your first geoscience career opportunity

STAY TUNED

Another career advancement webinar is planned for AIPG's Early Career Professionals on March 5th! Details to follow.

Please click the link below to join the webinar:

https://us06web.zoom.us/j/84133453968?pwd=AT1-7sVkIre90Y8mg9ZLGQ7_opv39g. ImCROZifzvtBaBab

Passcode: 456018

Or One tap mobile:

- +17193594580,,84133453968#,,,,*456018# US
- +12532050468,,84133453968#,,,,*456018# US

Webinar ID: 841 3345 3968

International numbers available: https://us06web.zoom.us/u/kcEgHiSRG

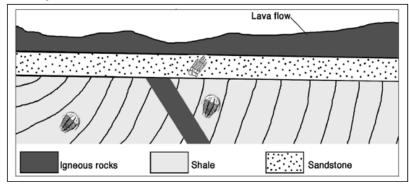
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Test Your Geologic Knowledge

The following ten questions are from one of my final exams in Physical Geology. I know a lot of us took physical geology many moons ago, so don't be embarrassed if you have to look up some of the answers.

- 1) If a first-generation sandstone consisted almost entirely of rounded quartz grains, it would indicate what?
 - a) physical disintegration of a granite source rock nearby
 - b) the reconstitution of the original clay into quartz
 - c) its origin as a chemical precipitate
 - d) the removal of non-quartz minerals by decomposition or abrasion
 - e) a diagenetic accumulation of quartz grains
- 2) An artesian water well would MOST likely result from tapping which of the following?
 - a) A bed of clay near a large lake
 - b) The water table beneath the surface of the ground
 - c) An underground stream in limestone
 - d) An inclined water-bearing stratum underlying shale
 - e) An underground flow of water beneath a dry stream valley
- 3) The following section shows fossilized bones of an early whale flipper embedded in sandstones and fossil trilobites in the underlying shales. The dike is 437 million years old. The eroded lava flow is 42 million years old.



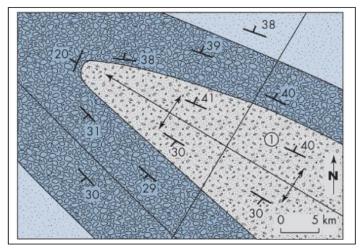
How old are the whale bones?

- a) you can't say without more information.
- b) less than 42 million years.
- c) older than 42 million years but younger than 437 million years.
- d) older than 437 million years.
- e) whales don't have flippers.

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- 4) Which of the following groups correctly associates a nonmetallic material, its geologic occurrence, and its principal industrial use?
 - a) Phosphorite-marine sediment-fertilizer
 - b) Bentonite-volcanic eruption-abrasive
 - c) Novaculite-hot springs-source of lubricants
 - d) Andalusite-placer deposits-source of aluminum
 - e) Asbestos-granite-insulation
- 5) You are on a field trip with Mr. Prothro. On a stop, Mr. Prothro hands you an aphanitic rock that contents significant amounts of Pyroxene, Olivine, and large amounts of Calcium-rich Plagioclases. What is MOST likely the name of the rock and the temperature range at which it could have formed?
 - a) Granite 600 to 800°C
 - b) Basalt 1,000 to 1,250° C
 - c) Andesite 800 to 1,000°C
 - d) Rhyolite 1,000 to 1,250°C
 - e) Gabbro 600 to 800°C
- 6) You are buying a large piece of property in central Pennsylvania when your lawyer asks you to look at the geologic map of the property (see geologic map below).



The lawyer then says to you, "It has been a long time since I took geology in school. Do you know what this map is showing us?" You reply, "An____"

- a) Asymmetrical Syncline
- b) Asymmetrical Plunging Anticline
- c) Asymmetrical Plunging Syncline
- d) Asymmetrical Anticline
- e) None of the Above

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- 7) The geological concept that "the present is the key to the past" is known as:
 - a) the principle of evolution
 - b) the principle of wishful thinking
 - c) the principle of vegetarianism
 - d) the principle of uniformitarianism
 - e) the principle of sectarianism
- 8) What is the correct order in the transformation of Mud into Magma through the process of metamorphism?
 - a) mud, gneiss, shale, slate, phyllite, schist, magma
 - b) mud, slate, shale, schist, gneiss, phyllite, magma
 - c) mud, schist, slate, shale, phyllite, gneiss, magma
 - d) mud, shale, slate, phyllite, schist, gneiss, magma
 - e) none of the above
- 9) While driving to the future site of your Boss's new two-billion-dollar resort complex after a major seismic event. You and your boss notice the feature in the image below (circled in red) on the road ahead.



Knowing you told a course in geology; she asks you what type of feature it is. Carefully examining the scene before you, you reply?

- a) A Monocline
- b) A Right-lateral Strike-Slip Fault
- c) A Left-lateral Strike-Slip Fault
- d) A Horizontal Basin
- e) The work of an intoxicated road crew
- 10) What gas is a radioactive daughter in the U-238 decay series that can accumulate to unhealthful levels in poorly ventilated uranium mines and home basements?
 - a) xenon-143
 - b) carbon-14
 - c) radon-222
 - d) argon-40
 - e) lead-206

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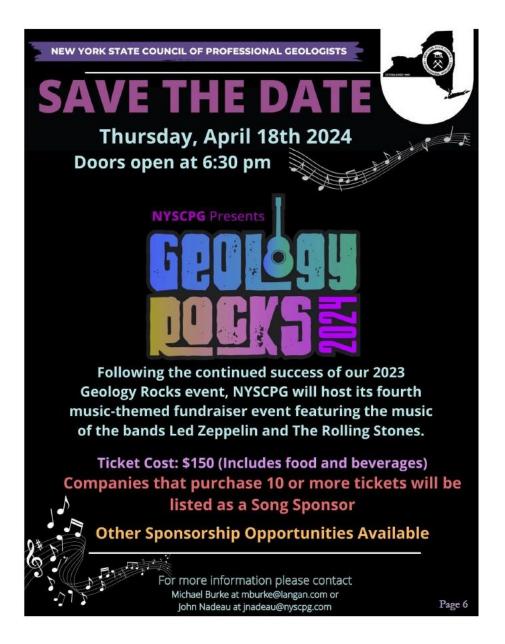
Environmental Geology

- Geologic and Water Resources
- Geologic Hazards
- Contamination









ANSWERS:

- 1) d
- 2) d
- 3) c
- 4) a
- 5) b
- б) b
- 7) d
- 8) d
- 9) b
- 10) c

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Upcoming Events

February 7 2024 7:00 PM- CNYAPG- Dr. Mark Holland — (St. Lawrence University) — Dinner Meeting—www.cnyapg.org

March 6 2024 7:00 PM- CNYAPG- Bill Kappel & John Williams — (USGS) —Dinner Meeting—www.cnyapg.org

April 3 2024 7:00 PM- CNYAPG- Scott Maguffin —(SUNY Oneonta) — Dinner Meeting—www.cnyapg.org



Thank you to David Eckhardt for your donation!

CNYAPGGovernance

Membership Renewal

CNYAPG's membership period follows the CNYAPG meeting year from September through August. Renewals are due in September. To renew or become a new member, simply complete the membership form, available on our website at www.cnyang.org. Membership is only \$25 per year and all money received is used in support of our organization.

Join CNYAPG at our social networking groups on Facebook and Linkedin. These sites (always under development) will provide online forums for discussion, as well as another way to inform our members and networking opportunities. For more information about our social media sites e-mail us at admin@cnyapg.org.

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