

**Dr. David Valentino, SUNY  
Oswego**

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- **2023 Geology Field Days Announcement**

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**4 October 2023– 7:00 PM - In-Person & Virtual Options Available**

Dr. David Valentino (SUNY Oswego) will present:

## **A NEOPROTEROZOIC BASIN BENEATH ITHACA, NEW YORK (?)**

An exploratory geothermal borehole (ESH No. 1; 31109-30003-00) was drilled in Ithaca, NY on the campus of Cornell Univ. in 2022, and was completed at a depth of 2984 m in crystalline low-grade meta-sedimentary/volcanic rocks, below the Paleozoic Appalachian Basin strata. Borehole imagery and the BHI dip log are consistent with seismic profiles, with subhorizontal reflectors (Paleozoics) overlying rocks with possible bedding/foliation, dipping NNW to N. About 120 m of rock was penetrated below the unconformity. Accounting for dip, the true thickness is less than 60 m. In addition to ubiquitous younger rock fragments, petrographic and SEM analyses of cuttings revealed that most of the rocks below the unconformity are fine-grained (silt-sized) lower greenschist facies pelitic/semipelitic phyllites (white mica, chl, minor bi), intermingled with felsite, greenstone and minor crystalline dolostone. Minor calcite, quartz and granitic micro-veins (100-200 microns) were observed. The lithologies and metamorphic fabric that occurs in ESH No. 1 are not typical of the Grenvillian basement of the NY promontory. The USGS magnetic map shows a low anomaly that spans the Ithaca, NY region, and is surrounded by magnetic highs that can be traced to Grenvillian high-grade rocks in the Adirondack Mountains, while the extensive, Scranton Gravity high occurs ca. 75 kilometers to the SE. We propose that the Ithaca magnetic low is caused by these siliciclastics within a remnant Iapetan Neoproterozoic basin. A basement well (31109-03973-00) located south of Ithaca, NY was reported to contain hydrothermally altered granitoid, and zircons from a kimberlite dike in the Ithaca area show decoupling of U-Pb and Lu-Hf isotopes, and U-Pb resetting with lower intercept ages of ca. 600 Ma. These data support an extensive pre-Iapetan basin well inland of the Iapetan margin. The low grade metamorphism and steep dips of the rocks suggest considerable burial and heating of this basin related to crustal extension during the early/initial continental breakup in a possible basin and range style event. Further, a thick section of less metamorphosed and deformed rock would have to have been eroded to create the abruptness of the Paleozoic unconformity. This suggests a possible highly active and complex Neoproterozoic extensional tectonic history in Central New York of deep burial, uplift and extensive erosion.

**NYSCPG is currently reviewing an application 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 10/4/23***

**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/> or Bonnie (Parratt Wolff) [bolney@pwinc.com](mailto:bolney@pwinc.com) or (315) 437-1429

**Next dinner meeting - November 2023**

# 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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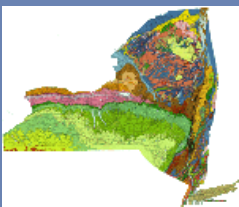
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## President's Message– October 2023

October is here! Can you believe there are only two months left in 2023? The sensation of Fall is starting to be felt in the air. Soon, the trees will begin to present the oranges, browns, and reds that are the hallmark of the Fall colors. I hope all of you have the opportunity to enjoy a hike or stroll through our local state parks and nature preserves before the holiday season sets in. First, I want to thank Felicia Bechtel of RETTEW for her talk on September 6th on finding, mapping, and managing your subsurface investigations. It was a valuable talk for anyone interested in digging, drilling, or performing foundation constructions. It was a great talk, thanks again, Felicia. For our October 4th meeting, CNYAPG is pleased to be hosting Dr. David Valentino from SUNY Oswego's Atmospheric and Geological Sciences Department. Dave will be speaking on the question of a Neoproterozoic Basin Beneath Ithaca, New York. This sounds very interesting, and I hope to see all of you there.

A few geoscience updates: New York State has been seismically quiet so far this September. There was a magnitude 1.0 event on August 25th located 2.48 miles east-northeast of Greece, New York, with a hypocenter of approximately 3.1 miles in depth. The USGS noted another event of 1.6 magnitude on August 30th, with an epicenter located approximately 0.7 miles west-northwest of Lyon Mountain in the Adirondacks. The event had a hypocenter of approximately 3.5 miles. These events, of course, pale in comparison to the magnitude 6.8 earthquake that struck Al-Haouz, Morocco on September 8th. As of the writing of this letter, the number of victims stands at over 2,200 dead and 2,400 injured. This level of suffering was due mainly to building and construction practices in the region. As if to remind all of us of the importance of sound engineering and infrastructure in the age of rapid climate change, torrential rains in northeastern Libya led to the catastrophic failure of two dams. The resulting 20-foot-high wall of water destroyed the city of Derna. The death toll from that event stands at over 5,000 and is expected to reach over 11,000, given the number still reported as missing. This is sadly reminiscent of the Jamestown Dam Collapse flood of 1889 in Pennsylvania. According to the National Performance of Dams Program, Department of Civil and Environmental Engineering report by Stanford University (September 2018 – NPDP-01-V1), U.S. Dam failures are a somewhat frequent occurrence and average about ten failures per year. Most of the failures are of small dams with limited impacts. The report also notes that New York State has 1,951 dams and has had 55 dam failures between 1848 and 2017. We all need to keep infrastructure in our minds as we roll into this uncertain future of climate change.

On a lighter note, here is an update on the geologist licensing in New York State. As of July 2023, there are 1,197 licensed professional geologists in New York State. 538 are residents of other states, and 4 are from outside of the U.S. There are 49 licensed geologists in Onondaga County, 5 in Cortland County, 1 in Oswego County, 10 in Madison County, and 2 in Cayuga County. I hope they are all members of CNYAPG.

As you probably already know, CNYAPG and NE-AIPG will host A Geology Field Day for students and professionals on October 6th. Field demonstrations and presentations will be held, and PDH credits will be available for all li

## President's Message (continued...)

censed design professionals who register to receive them. I encourage everyone to sign up as soon as possible. I want to give a shout-out and heartfelt thank you to all our sponsors and especially to Parratt-Wolff for allowing us to use their facilities for this event. If you, your company, or your institution would like to support CNYAPG's Geology Field Day by being a sponsor, don't hesitate to contact me or one of the other board members. There is still time. We are still looking for volunteers to help during the event (directing traffic, setting up tables, assisting presenters, etc.). This is building to be a fantastic event and a terrific opportunity for students to meet 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.

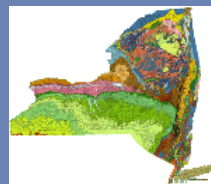
Please remember that from November 13th through 16th, the New York State Council of Professional Geologists (NYSCPG) will host its 2nd annual Geology Days Conference. It will be held once again in Saratoga Springs. This event will be even bigger than last year's, with representatives from numerous environmental and geotechnical consulting firms, state and local agencies, college and university geoscience faculty, and vendors and suppliers from across the northeast. I hope to see you all there. It is hoped that NYSCPG will be holding the event closer to the Syracuse area next year. Fingers crossed.

I also would like to remind you of CNYAPG's Earth Science Student Research grant. We will soon be sending out a call for student proposals from central New York colleges and universities. If you are an educator in higher-ed, keep an eye out for both our email call-out and those students doing research in any of the Earth Sciences. Also, if you or your firm would like to sponsor the student grant, your help would be much appreciated. CNYAPG awards a yearly grant totaling \$1,000 to a talented student or students. Last year, because the abstracts for the research were so good, we elected to award \$1,500 in total to two students. We are looking forward to seeing both Benjamin Lewin and John Brigham present their work later this year to CNYAPG. For more information on the grant proposal process, visit the CNYAPG website ([www.cnyapg.org](http://www.cnyapg.org)). Like all educators, please encourage your students to be more and put themselves out there, and we look forward to reading those proposals.

Lastly, here is a quote and lesson I feel the world needs at this moment in time: "There are no secrets to success. It is the result of preparation, hard work and learning from failure." – General Colin Powell (Four-star general and Chair of the Joint Chiefs of Staff, National Security Advisor to President Reagan, Secretary of State under George W. Bush, and a B.S. in geology from City College of New York).

Calvin K. Prothro; P.G., CPG  
President of CNYAPG

The CNYAPG was founded in 1993 to strengthen and advance the geological sciences. CNYAPG conducts regular meetings on the first Wednesday of each month from September to May. Meetings feature dinner and distinguished speakers whose presentations invite comment and discussion.



[www.cnyapg.org](http://www.cnyapg.org)  
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Santorini, Greece (photo courtesy of Dana Himmel)



**Central New York Association  
of Professional Geologists**

**Registrar Now! Give your students and Practical Learning Experience!**

**GEOLOGY FIELD DAY!!!**

**OCTOBER 6, 2023**



**Northeast Section  
AIPG**

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!



**CNYAPG Field Day (Fall 2017)**

**Early Registration due by September 22**  
**Final registration due by October 3**

**Cost Early Registration**  
CNYAPG / AIPG Members - \$100  
Non-members - \$130  
Students - \$20

**Late Registration**  
CNYAPG / AIPG Members - \$120  
Non-members - \$150

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

For Professional Geologists, Engineers and Land Surveyors, there will be presentations offering PDH credits.

**Scheduled Topics & Presenters:**  
MIP drilling technology [Parratt-Wolff]  
GPR [NY leak detection/GPRS]  
low flow, PDBs, PFAS Groundwater sampling [ERM]  
Field screening using PID, FID, and UV fluorescence [Pine Environmental]  
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  
and  
GeoTech demo

**Catered Lunch is included!**

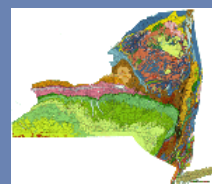
**Location of Event:**  
**Parratt-Wolff facilities**  
**5879 Fisher Road**  
**East Syracuse, New York 13057**

For general questions, please contact us at: [info@cnyapg.org](mailto:info@cnyapg.org)  
And visit us at [WWW.CNYAPG.Org](http://WWW.CNYAPG.Org) and join us on Facebook and LinkedIn



**CNYAPG Field Day (Fall 2017)**

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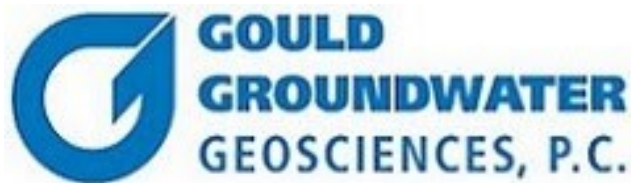
We characterize the mineralogy/chemistry, texture, structure, porosity, and organic matter content of rock, soil, or sediment to assist and enhance environmental investigation

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- ❖ Scanning Electron Microscopy
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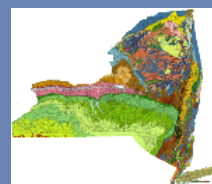
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- ❖ Geochemical Calculations/Modeling
- ❖ Statistical Analysis



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## Upcoming Events

**October 4 2023 7:00 PM**– CNYAPG– Dr. David Valentino—(SUNY Oswego) —**A NEOPROTEROZOIC BASIN BENEATH ITHACA, NEW YORK (?)** - Dinner Meeting—[www.cnyapg.org](http://www.cnyapg.org) Co-authors:

Jeffery Chiarenzelli, St. Lawrence University  
Teresa Jordan, Cornell University  
Robert Jacobi, University of Buffalo  
Alexander Gates, Rutgers University  
Sean Fulcher, Cornell University

**October 6 2023** – CNYAPG– Field Day!

**November 13-15 2023 7:00 PM**– NYSCPG– Geology Days— <https://nyscpge.wildapricot.org/>

*Thank you to David Eckhardt for your donation!*

**A Call for Abstracts!**

For any questions about the event later this year, or about submitting abstracts for presentations, please contact John Nadeau at 518-579-6580 or at [jnadeau@nyscpge.com](mailto:jnadeau@nyscpge.com)  
The New York State Council of Professional Geologists Presents

# **GEOLOGY DAYS CONFERENCE 2023**

**Saratoga Springs, NY  
November 13<sup>th</sup> - 15<sup>th</sup>**

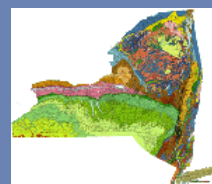
## CNYAPG Governance

### 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.cnyapg.org](http://www.cnyapg.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](mailto:admin@cnyapg.org).

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