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MESSAGE FROM THE PRESIDENT

Gaining a Balance

Last year during a summer trip to Acadia National Park in Maine, I learned that Florence Bascom was the first professional female geologist to survey Mount Desert Island, publishing *The Geology of Mount Desert Island* in 1919. (She was also the first woman to receive a doctorate from Johns Hopkins University in 1893 and only the second US woman to earn a PhD in geology – note that back then women had to sit behind a screen in the corner of the room so they didn't distract men from their education.)



Recently, I also read that NASA plans to land the first black and first female astronaut on the moon in 2025 (this being the first moon landing since 1972). Jessica Watkins, a geologist and astronaut from Colorado, earned a Bachelor of Science in Geological and Environmental Sciences from Stanford and a Doctorate in Geology from UCLA.

A quick web search revealed that in between Florence and Jessica, female geologists have done some pretty amazing work through the years. When I was still studying Geosciences at Penn State, I recall my mother telling me that if she knew growing up that she could be anything other than a teacher or a nurse she would have been a geologist. Even being the daughter of a university art professor and librarian, she felt this way – it was the 50's.

While at PSU, I recall thinking that the gender balance was about equal in the geology department. I wanted to see where things fall with respect to the gender of Pennsylvania geologists as a whole. According to information obtained from the Department of State, of the almost 2,000 inactive P.G. licenses in PA (most of which were grandfathered between 1993 and 1997), less than 14% were women. Current active P.G. licenses held by women (issued between 1993 through 2001) make up approximately 18%. Currently, the list of G.I.T. is about 47% women. Considering women make up just over half of the US population, that's close to what you'd expect simply based on statistics (and, yes, we all know three data points alone don't provide strong evidence of trend, but that looks pretty good to me!).

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UPCOMING PCPG EVENTS

October 31, 2022

[Forensic Geophysical Methods
Used to Assist Law Enforcement
Agencies with Locating
Clandestine Graves](#)

Webinar: 1:00 - 2:00 PM

January 12, 2023 - Save the Date

[Ethics in the Geosciences](#)

Webinar: 1:00 - 2:00 PM

February 28, 2023 - Save the Date

[PCPG Annual Meeting,
Education Program and Networking](#)

Harrisburg, PA

FOR A COMPLETE LIST OF UPCOMING
EVENTS OR TO REGISTER ONLINE,
CHECK OUR [HOME PAGE](#) EVENT
CALENDAR, OR VISIT [PCPG'S
COURSES AND EVENTS](#) WEB PAGE.

Nominations being accepted *for upcoming* PCPG Board of Directors Election

PCPG is accepting nominations for candidates to serve on the PCPG board of directors to a three year term ending December 31, 2025.

To be considered for the ballot you must be a PCPG member in good standing with an Individual/Academic, Government, or Corporate membership, and complete and return a Board Candidate Interest Form by 5:00 PM on November 16. Questions? [Email Vincent Carbone](#), PCPG President Elect, or contact anyone currently serving on the [PCPG Board of Directors](#). [Download Board Candidate Interest Form](#).

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PRESIDENT'S MESSAGE *Continued from Page 1*

While it looks as though Pennsylvania P.G.s will soon be relatively balanced with respect to gender, I think at this point, most of us realize that there is a long way to go until we see the same balance with historically underrepresented groups within the field of geology. PCPG recognizes the importance of encouraging a younger generation's interest in the field of geology and doing what we can to foster that interest with anyone who finds this field as amazing as we do.

Very truly yours,

Tiffani Doerr, P.G.
PCPG President

GEOSCIENCE EDUCATION PERSPECTIVES

By Barbara Dunst, P.G.†

The American Geosciences Institute's (AGI) yearly survey, [Status of Recent Geoscience Graduates 2021](#) notes that undergraduate enrollment in Geoscience continues to decline. This trend started in 2017, and is attributed to the slowdown in oil and gas employment and the overall decline in undergraduate enrollment in higher education. [U.S. News](#) reports that the pandemic accelerated the decline with a two-year undergraduate loss of 9.4%, a drop of 1.4 million students, but total post-secondary student enrollment has been declining since 2010 ([EducationData.org](#)). In Pennsylvania, overall enrollment has declined 13.8% since 2010, the highest decline of any of PA's surrounding states. Although a declining birth rate has contributed to the enrollment drop, a [Gallup research survey](#) found that only half of U.S. adults consider a college education to be "very important," down from 70% of adults in 2013. The most pronounced drop was among those aged 18-29. College tuition has increased at twice the rate of inflation and many young adults may wonder if the investment is worth the cost. Research by [collegeboard.org](#) indicates that a college degree leads to a higher paying job with benefits like retirement & health insurance, increased job security and healthier behaviors.

Declining student enrollment has led to cuts across many departments and to entire programs. During the 2022 spring term, Allegheny College in northwest PA announced the elimination of four programs including the geology major. The geology program had experienced declining enrollment and the limited faculty were only able to teach upper-level classes every other year, yet the school was well known for its excellent geology training. Allegheny College was ranked as one of the top ten best schools for Geological and Earth Science in PA by [Collegefactual](#), a company that ranks programs nationwide.

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To counteract the trend in declining enrollment, Pennsylvania [restructured](#) six universities in the state system into two combinations of three: California, Clarion and Edinboro Universities merged and are now Western Pennsylvania University (PennWest) while Bloomsburg, Lock Haven and Mansfield Universities became Commonwealth University. Students at each school's location will have access to all the academic majors and minors from their partner institutions. This is good news for geology majors in Pennsylvania as Collegefactual ranked four of these schools on the [2022 National Best Value Colleges](#) for geology (Edinboro #21 Clarion #30, Bloomsburg #38, and California #39). The consolidation of these schools should help the geology programs thrive and stave off declining enrollment. Also note that two other PA state universities made the same list: Slippery Rock #8 and Kutztown #16.

Another issue for enrollment in geology is the lack of awareness of geology as a career. According to AGI's 2021 [student survey](#), although 30% of majors decided on geology before entering college, about 50% of all geoscience students only chose this major after their freshman or sophomore years. Part of the reason for this trend is the lack of exposure to geology in high school. Middle school curriculums contain earth science but it is rare to have geologic concepts taught at the high school level in Pennsylvania.

Several professors (personal communication) from both public and private universities explained that they spend a lot of time developing freshman classes to fulfill students' general science requirements. To help advertise the department, these entry level classes focus on topics that might attract students to the major. Classes about dinosaurs, geology in the movies, climate change issues and freshman overnight field experiences show students the interesting side of geology and its applicability to today's world.

Since September 2019, the Pennsylvania State Board of Education (Board) has been updating the existing Academic Standards for

College tuition has increased at twice the rate of inflation and many young adults may wonder if the investment is worth the cost.



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PGPG 2022 STUDENT POSTER SESSION RECAP

This past April, at PCPG's annual meeting in Harrisburg, PA, ten undergraduates presented their research posters. The Student Poster Session included five students from Kutztown University of Pennsylvania, two students came from Indiana University of Pennsylvania, and one student from each Bryn Mawr College, Bucknell University, and Shippensburg University.

Six PCPG professional geologists geared up with clip boards and pens and split into three teams of two to visit each student, hear their research, ask a few questions, and sometimes share their critiques or related work experiences. The posters were evaluated on various criteria including clear statement of the research objectives, appearance (organization, illustrations, grammar), the logic of presentation on the poster, and the author's ability to explain the research to the judges.

After the poster judging session, all PCPG meeting attendees were able to visit the poster hall over lunch. The undergraduates prepared to join the professionals for lunch, but just before they could hit the buffet line, PCPG Outreach Services Chair, Vincent Carbone, P.G. hosted a quick and informative student panel. The panel session focused on tips for preparing for graduation, searching for jobs, and how to ace an interview. Many of the students present were bound for graduate school, but a handful of them were looking forward to entering the workforce after graduation.

Later in the day, as the afternoon meeting session was wrapping up, PCPG Board Member and Poster Session Coordinator Stephen Zbur, P.G. announced the winners of the undergraduate poster session. The first-place prize of \$1,500 was awarded to Molly O'Halloran from Bucknell University. Molly's research was titled, "Evaluating the relationship between floodplain complexity and channel avulsion: evidence from the Devonian Catskill Formation, north-central Pennsylvania, USA. The second-place prize of \$750 was awarded to Noah Workman from Kutztown University. Noah's work was titled "Outcrop-Scale Structural Analysis on the Blue Mountain Ridge near Port Clinton, PA."

The high level of work and care and commitment to the projects from each of the students was evident in all the research projects. PCPG recognizes every student in the competition

for their excellent submissions,

thank you for showing up and we wish you luck! Pictures from the poster session can be viewed on PCPG's [Facebook](#) page.

In addition, the students were interviewed by PCPG Board Member, Greg Rosenzweig, P.G. The students were able to talk freely about their projects and reflect on what they may have gained from their research that they would not have gotten through classroom experience alone. The interviews are currently being prepared for an upcoming PCPG podcast. Lookout for an announcement in PCPG's eblasts or set your podcast platform to send an alert when a new PCPG podcast drops.

Many thanks have been given, but are ongoing for this special effort to provide young geologists with an opportunity to step into the world of a Pennsylvania P.G. for a day. Thanks again to the poster judges who sacrificed their attention from the morning meeting: Emily Glick, P.G., Andrew Klingbeil, P.G., Gary Kribbs, P.G., Martin Helmke, PhD, P.G., Mark loos, P.G., and Rick Wardrop, P.G. Thanks to the student panel, your candid communication surely left an impression on the students: Michelle Cooney, P.G., David Crotsley, P.G., Jenny Kachel, P.G., and Vincent Carbone, P.G. Thanks to our Student Poster Scholarship Chair: Stephen Zbur, P.G. Finally, thanks to Rose Jeffries, PCPG President Tiffani Doerr, P.G., and PCPG Past President Barb Dunst, P.G. for support and their words of encouragement along the way.



NEW PCPG ASSOCIATE MEMBER

Please join us in welcoming our newest
PCPG Associate Member:



Interested in becoming a PCPG Associate Member? Visit our [Join PCPG](#) page to review Benefits of Membership and enroll online. Associate Members qualify for up to four (4) membership contacts, one complimentary half-page digital ad in a quarterly newsletter, and a complimentary display table at our Annual Meeting along with appearing in our Associate Member Directory in each quarterly newsletter. Telephone PCPG by dialing (717) 730-9745 for more information.

PASSHE UPDATE!

PCPG is supporting the Pennsylvania State Health System of Higher Education (PASSHE) in completing their inaugural year of providing college-level summer field camp for geology students. Their summer program covers the entire state with various stops for education. Earlier in the summer, PCPG sent the call to our membership for people to assist in the field camp experience, and our membership responded. A special “Shout-Out” goes to Peter Mueller of Mueller Geological Consulting LLC in Pottstown, PA and to Joshua Ellingworth and folks at Parratt Wolff, Inc. for helping to make the program a success.

Peter is an independent structural geologist that now focuses his business on mineral resource exploration. On a PASSHE stop in Reading, PA in May, Peter talked about the structural geology of the area and discussed his career path and professional experience. According to Dr. Sarah Tindall “This kind of role-model contact is invaluable as students form their own plans for the future.”

Joshua and the folks at Parratt Wolff Inc. also stepped up by providing a drill rig and installing a bedrock well right in front of the students using hollow stem and air rotary techniques, providing a split spoon demonstration, and showing off the tools of the trade. In a true team effort, students were able to speak with professors and professionals about what it takes to install a monitoring well and classify soils.

PCPG is working with PASSHE to support next year summer’s field camp endeavors. Members! Geoscientists! This is a perfect opportunity to support the next generation and perhaps meet an undergraduate in need of a job. Please reach out to PCPG’s Outreach Services Chair at Vincent.carbone@hdrinc.com if are interested in getting involved with the PASSHE program.



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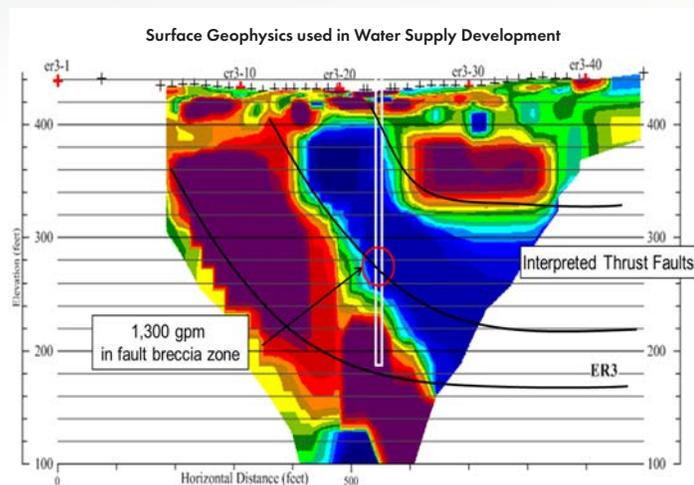
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EDUCATION *Continued from Page 3*

Science and Technology and for Environment and Ecology (Grades K-12). PCPG commented several times throughout the process. The final-form amendments were published in the [Pennsylvania Bulletin](#) on July 16, 2022 and will implemented July 1, 2025. Academic standards establish goals for what students should learn and be able to do at specific grade levels but they do not specify a particular curriculum or methodology. The schedule for implementation will allow the Board and school districts time to develop the curriculum and update exams.

The new standards attempt to integrate student learning across disciplines and develop methods for inquiry, problem-solving and critical thinking to understand the interconnectedness of scientific study and also the relationship between humans and the environment. Sprinkled throughout the new standards, including at the high school level, are concepts such as plate tectonics, energy and groundwater resources, natural hazards and human activity, availability of natural resources and geoscience data for global climate models. The new [Pennsylvania Integrated Standards \(Grades K-5\)](#), [Standards for Science, Environment and Ecology \(Grades 6-12\)](#), and the [Technology and Engineering Standards \(Grades 6-12\)](#) will hopefully bring additional awareness of geology so that more students will choose geology as a major at the beginning of their college education. Professionals should try to get involved as much as possible with the development of the new curriculum in their school district to ensure that students gain exposure to geology as a career.

PCPG ANNUAL PHOTO CONTEST

The 2022 Annual Photo Contest is open and will remain open until Saturday, October 1, 2022. There is no specific theme for this year's contest. Photos showing interesting geology from the field, laboratory, your office, personal collection or even a photo from the past may be submitted.

PCPG members may submit their photos by downloading and completing the Photo Contest Entry Form, located on our [Photo Contest](#) webpage, under Resources. Note that we ask for a description of the image on the Entry Form; please provide context but limit the explanation to under 100 words. Email your photo and Entry Form to photocontest@pcpg.org.

A member of the PCPG Photo Committee will contact the winner(s) at the conclusion of the contest. The winning photo(s) will be shared on the PCPG website and announced in the next newsletter.

Stay Curious Geos!
PCPG Photo Committee



DEADLINE FOR OUR NEXT NEWSLETTER IS NOVEMBER 28, 2022

Articles are suggested to be about 700 words maximum. For more information, contact our PCPG Newsletter Editor and Communications Committee Co-Chair - Emily Glick, P.G., by [eMail](#).

PCPG ASSOCIATE AND CORPORATE MEMBER SPONSORSHIP RATE

(Rates are listed as amount per issue)

Size	Commitment:	1x	4x
1/2 Page Horizontal (8" x 4.7")		\$225	\$150
1/2 Page Vertical (3.875" x 9.375")		\$225	\$150
1/4 Page Horizontal (4.7" x 3.875")		\$140	\$95
1/4 Page Vertical (3.875" x 4.7")		\$140	\$95
Business Card (H or V)		\$75	\$50

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1/2 Page Vertical (3.875" x 9.375")		\$300	\$240
1/4 Page Horizontal (4.7" x 3.875")		\$185	\$150
1/4 Page Vertical (3.875" x 4.7")		\$185	\$150
Business Card (H or V)		\$100	\$80

ADS MUST BE SUBMITTED AT CORRECT SIZE AS STATED ABOVE AND MUST BE PRINT-READY, 300 DPI

FILE FORMATS ACCEPTED: .PDF, .TIF, .JPG, OR .PNG

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