



PCPG Newsletter

Communicating Key Information & Concerns
to Geologists and Environmental Professionals

Issue 2 / 2016

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MESSAGE FROM THE PRESIDENT



Our March 15th 2016 annual meeting was an excellent networking event and a productive and enlightening experience. The speakers were an excellent source of information. The professional ethics presentation and discussion was informative as well as humbling. Unfortunately, we had to cancel our Job Fair this year. It was very disappointing for the students. We are considering it for next year, but we will be requesting information from our members much earlier in the year to ensure the proper level of interest.

More than 10 years ago PCPG targeted some goals for this organization. *"Unify & Diversify the Membership and network the geological community."*

Starting in 2007 we changed our membership policy by adding the individual membership category and dropping our PG requirement. This has definitely changed our organization and we feel for the better. Our board is much more diverse than it used to be, but still there is room for improvement. Our outreach to students is improving and we make strides on a regular basis. That said, PCPG general membership could help immensely in expanding our outreach. So PCPG members are encouraged to visit their alma mater and discuss job opportunities in the work place to create a better student understanding of the market. If that cannot be arranged, then please forward the information and we will schedule a board member to attend. Students are PCPG's and the Geoscience profession's future. Recently GEOLOGY magazine published an article stating that the average age of geologists in the USA is 57 years. There are jobs in this profession, but in the near future there will be a shortfall thereby creating huge opportunities. We at PCPG need your help getting the word out. Please consider this request. Again, I encourage comments about PCPG's vision, mission and operation. gkribbs@verizon.net

Sincerely,

Gary M.B. Kribbs, P.G.
PCPG President

GEOLOGY IN COSTA RICA: PURA VIDA!

By Russell Losco

This spring I was asked by Daria Nikitina, professor of geomorphology at West Chester University, to join her to assist in teaching her Study Abroad: Geology of Costa Rica course. This led to one of the most interesting educational experiences of my career in the Earth Sciences and one of the highlights of my teaching career. I am a former student of Dr. Nikitina and she is a friend, collaborator and co-author, so I was thrilled by the invitation to join her and 20 students from West Chester University and Moscow State University. Costa Rica holds a fond place in my heart since 2006 when I visited the country on vacation with my family. I was a professional soil scientist when I arrived there but came back determined to become a geologist. The inspiration for this career shift included spending three days near an erupting volcano, Mt. Arenal. It didn't take much convincing to get me to sign on to return there.



Volcano Irazu seen from San Jose on a beautiful morning.

We arrived in the capitol city, San Jose, after escaping a snow storm in Philadelphia that delayed our flights for de-icing and made catching connecting flights something akin to an Olympic sprint. The change to the slower pace and tropical environment was very welcome. The next morning we were joined by Adolfo Quesada Roman, a professor of geomorphology at Universidad Nacional Costa Rica. Day One on the road took us to the erupting volcano Turrialba, one of approximately 200 volcanos in the nation. Attempts to approach the summit were thwarted by heavy clouds but we were able see the steam plume coming out of the crater and took time to examine the felsic rocks and pyroclastic deposits on the flank of the volcano. Our day of travel involved stops along the way to view various landscapes including fluvial deposits but ended at sunset south of the city of Limon on the Caribbean coast. An earthquake in 1991 uplifted sections of coastline by over six feet, stranding now-dead coral reefs above sea level. Many of the buildings destroyed in the earthquake can still be seen in their damaged state.

Day Two had us hiking along the shoreline examining coastal geomorphology in the Cahuita area and encountering sloths, large spiders, monkeys and coatis. From there we traveled north by road and then by boat to a remote biological research station at Cano Palmas in Tortuguera. This station is run by the Canadian Organization for Tropical Education & Rainforest Conservation (COTERC) and the staff welcomed us warmly. We spent two days with this group helping with a beach debris survey and visiting their various research projects studying the wildlife of this region. Along the way we encountered many interesting species including

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PCPG's COLLEGES OUTREACH: DICKINSON COLLEGE, CARLISLE, PA

Martin F. Helmke, PhD, PG, West Chester University of Pennsylvania



PCPG Board Member Martin Helmke met with students and faculty at the Dickinson College Department of Earth Sciences on March 31, 2016. Dickinson is a liberal arts college with a long tradition of student-focused scientific research for undergraduates. Martin, who taught geology at Dickinson in 2004/2005, toured the department and delivered a 40-minute presentation to discuss career opportunities for geologists, PCPG's mission, curriculum recommendations, and how students can earn the GIT Certification and PG License. Students and faculty asked numerous questions related to licensing, the job market, and the requirements for field and structural geology. We are pleased to report that Dickinson's Earth Sciences program is strong and growing. They recently added a 5th tenure-track faculty member. All of their students are actively engaged in research with faculty. PCPG looks forward to continuing to work with Dickinson and other geology programs across the Commonwealth.

Dickinson College Earth History students and department chair, Dr. Marcus Key, investigate field geology at the Pole Steeple in Pine Grove Furnace State Park. Photo credit: Dr. Marcus Key.

PCPG's GOVERNMENT AFFAIRS COMMITTEE (GAC) UPDATE

Mark loos, P.G. (Skelly & Loy)

Legislatives Bills

Ten months overdue, but in April Governor Wolf allowed a companion budget bill that passed the House and Senate with veto-proof majority votes to become law without his signature. Since the adoption of the 2015-2016 fiscal year budget our legislators in Harrisburg have once again focused their attention to acting on new legislation.

The GAC follows legislative action in both the House and Senate. The following bills of interest to geologists are being tracked. A more inclusive list of current bills is included on PCPG's website, under Government Affairs, and clicking on "Members-Only content". The bills highlighted in yellow-colored shading are the only ones where legislative activity has occurred since March 2016.

House

• Commerce Committee

HB726 - Contractor and Subcontractor Payment. New legislation that will amend the Contractor and Subcontractor Payment Act (Act 7 of 1994), intended to strengthen the law and provide additional incentives to pay contractors and subcontractors on time. Referred to Commerce Committee on March 6, 2015. No Action

• Environmental Resources & Energy committee

HB 81 - Water Well Construction Standards; proposed legislation submitted on January 21, 2015. No Action.

HB 398 - Vehicular Transportation of Leachate; proposed legislation submitted on February 9, 2015, Re-committed to Appropriations, June 2, 2015, Referred to Environmental Resources & Energy committee, June 12, 2015. (See Senate Bill 513 which was signed by the Governor on October 7th, 2015.

HB 500 - Hybrid Severance Tax on Natural Gas Extraction (updated former HB 2020); Proposed legislation to enact a 4% hybrid severance tax—divided between the value and the volume—on the extraction of natural gas in Pennsylvania. This would be in addition to the current "impact fee". Resolution to discharge committee from further consideration of this bill presented, April 11, 2016 [House].

HB 577 - Potomac River Basin Commission; Introduction of new legislation that provides for a General Assembly member of the Interstate Commission on the Potomac River Basin to have a designee with voting rights. Proposed legislation submitted on February 23, 2015. Reported as committed on March 16, 2016; First consideration, March 16, 2016; Laid on the table, March 16, 2016; Removed from table, March 21, 2016; Second consideration, March 22, 2016; Re-committed to APPROPRIATIONS, March 22, 2016; Re-reported as committed from APPROPRIATIONS, April 4, 2016; Third consideration and final passage, April 4, 2016 (189-0). In the Senate, Referred to ENVIRONMENTAL RESOURCES AND ENERGY, April 12, 2016.

HB 1743 – An Act amending Title 58 (Oil and Gas) of the Pennsylvania Consolidated; Introduction of new legislation imposing a severance tax on natural gas extraction in Pennsylvania. The proposed legislation charges a tax of 4% of the gross value of units severed. This tax is in addition to our current Unconventional Gas Well Fee, resulting in a total assessment that remains competitive with other states. Proposed Legislation submitted December 6, 2015. No Action.

HB 1825 - An Act amending the act of May 19, 1995 (P.L.4, No.2), known as the Land Recycling and Environmental Remediation Standards Act; Introduction of new legislation amending our Act 2 "Brownfields" environmental cleanup law to extend liability protection to County Conservation Districts and private firms working to reclaim abandoned mine sites. Proposed legislation submitted on February 2, 2016.

HR 908 - Water Use Fee Resolution directing the Legislative Budget and Finance Committee to conduct a study of the establishment, implementation, and administration of fees for the consumptive use and the use and return of "Waters of the Commonwealth" by industrial and commercial users; Referred to ENVIRONMENTAL RESOURCES AND ENERGY, May 24, 2016.

HB 2103 - Natural gas severance tax and establishing the Severance Tax Restricted Account; New legislation that will enact a severance tax on the value of wet and dry natural gas extracted in Pennsylvania; Referred to ENVIRONMENTAL RESOURCES AND ENERGY, May 25, 2016.

• Professional Licensure committee

HB 92 – Granting State Licensing Boards the Power to Expunge Technical Violations; legislation submitted on January 21, 2015, Approved by Committee vote on April 1, 2015; Passed House vote on April 21, 2015 (194-0); Referred to Consumer Protection and Professional Licensure committee in the Senate on May 1, 2015.

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COSTA RICA *Continued from Page 2*

more monkeys, crocodiles, caimans, toucans and other birds. Although COTERC is devoted to research, none of it is aimed at geology, so there are gaps in their knowledge of the processes affecting this area. We plan to set up projects and send students to implement them to fill this gap.

A day's journey brought us to La Fortuna in Alajuela Province where I was able to re-visit the inspiration for my career shift, the impressive strato-volcano Mt. Arenal. This volcano erupted explosively and unexpectedly in 1968 killing 87 people and leveling two villages. Arenal continued erupting until 2010 when it went silent, shortly before Turrialba began erupting. Two days in the La Fortuna area had us hiking over the lava flows from a 1992 eruption at Arenal, sampling soils for future research and visiting a system of caves. Unfortunately I needed to return to San Jose and then to the USA a day earlier than the rest of the group due to a prior commitment to teach a seminar, so I said goodbye to the group as they headed west to visit the ophiolites and pillow lavas of the Pacific coast.



The class with Mt. Arenal in the background, note the lenticular cloud.



The experience of being in such a geologically young and active area with a group of enthusiastic, bright, motivated students as well as two other excellent geologists was incomparable. There were down-sides, of course. We had some mild dysentery cases and one unfortunate encounter between myself and some fresh, falling monkey feces, but the experience as a whole was incredible. I feel that I gained as much new knowledge from this trip as the students did. The relationships formed on this trip will continue and there is already a plan afoot for further collaboration between us and the people of Costa Rica. I cannot wait to go back. Perhaps it is time to plan a PCPG fieldtrip there?

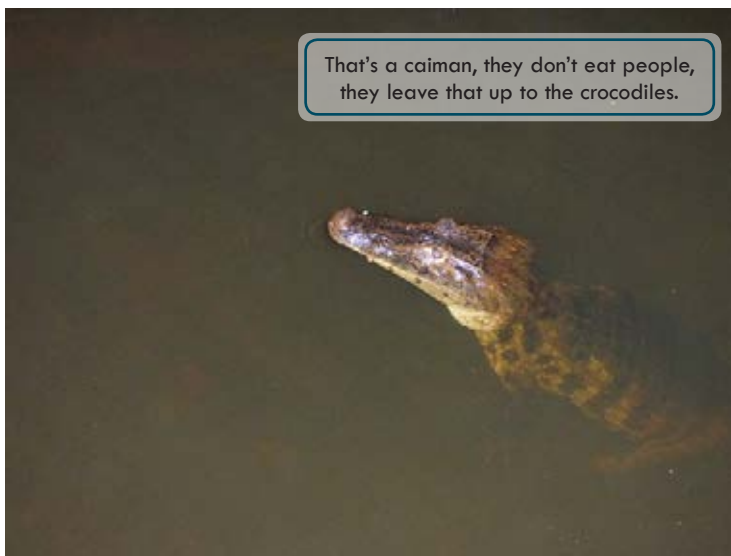
*They have big bugs
in Central America.*

[See more photos on Page 6.](#)

COSTA RICA *Continued from Page 5*



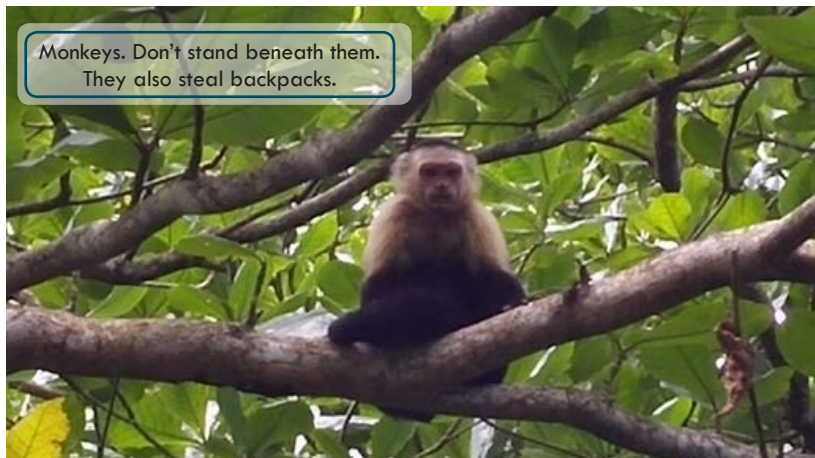
Arriving at
Cano Palma.



That's a caiman, they don't eat people,
they leave that up to the crocodiles.



Geologists hard at work.
This profession is really tough.



Monkeys. Don't stand beneath them.
They also steal backpacks.



A sloth. Don't run
to see him, even
if he's running
away, you have
time to stop for
lunch and he'll
still be there.

GAC UPDATE *Continued from Page 4*


HB 209 – Requiring all licensees to report convictions within 30-days; legislation submitted on January 23, 2015; Passed House vote on February 25, 2015 (198-0); Referred to Consumer Protection and Professional Licensure committee in the Senate on February 27, 2015.

HB 802 - Carryover of Continuing Educational Credits; New legislation to amend Act 48 of 1993 (Bureau of Professional and Occupations Affairs Act) restricting the carryover of excess CE credits for one biennial renewal term only. Proposed legislation submitted on March 17, 2015. Committee Vote on October 20, 2015, Approved (24-0). Removed from table, Nov. 25, 2015; Laid on the table, Nov. 25, 2015; Removed from table, Dec. 9, 2015; Laid on the table, Jan. 11, 2016; Removed from table, Jan. 11, 2016; Laid on the table, Feb. 8, 2016.


HB 1253 - Continuing Education Restrictions; Introduction of new legislation that changes to current exemptions and cleans up some loose continuing education language. Change #1 - proposes to eliminate the broad exemption from licensure for engineers that work in industrial settings whether or not the engineering work affects safety, health or welfare. The elimination of this exemption will make for less confusion and better public protection. Change #2 - This bill also replaces antiquated terms like “correspondence courses” and “tutorials” with “distance learning”. The intent is to strengthen the integrity of the continuing education requirements for licensees under this act. This legislation is supported by the Pennsylvania Society of Professional Engineers and the Pennsylvania Society of Professional Engineers and the Pennsylvania Society of Land Surveyors. Proposed legislation submitted on May 28, 2015. No Action.

HB 1704 - Engineer, Land Surveyor and Geologist Registration Law – Amendment; New legislation that amends the Engineer, Land Surveyor and Geologist Registration Law. The legislation makes a number of changes to current exemptions and cleans up some loose continuing education language. This is similar to a bill (HB 1253) introduced earlier this session that removed an exemption commonly referred to as the “industrial exemption”. This new bill drops that change. This bill also replaces antiquated terms like “correspondence courses” and “tutorials” with “distance learning”. The intent is to strengthen the integrity

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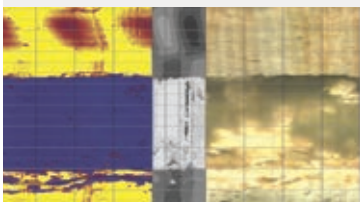

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of the continuing education requirements for licensees under this act. Referred on Nov. 16, 2015 [House]; Reported as amended from PROFESSIONAL LICENSURE, March 16, 2016; Third consideration and final passage, May 18, 2016 (187-3); In the Senate: Referred to CONSUMER PROTECTION AND PROFESSIONAL LICENSURE, May 26, 2016.

HB 1895 - Storage Tank Indemnification Board. New legislation amending the 1989 Storage Tank and Spill Prevention Act to address a vacancy within the makeup of the Underground Storage Tank Indemnification Board. Referred on March 14, 2016 [House]; Reported as amended from ENVIRONMENTAL RESOURCES AND ENERGY, March 16, 2016; Re-committed to APPROPRIATIONS, March 22, 2016; Re-reported as committed from APPROPRIATIONS, April 4, 2016; Third consideration and final passage, April 4, 2016 (189-0); In the Senate, Referred to BANKING AND INSURANCE, April 12, 2016; Reported as committed from BANKING AND INSURANCE, May 18, 2016; First consideration, May 18, 2016.

HB 1967 - Temporary Cessation of Coal Mining Operations. New legislation to align the requirements for temporary cessation of coal mining with those in Federal regulation allowing operators to cease operations beyond 180 days for reasons other than seasonal shutdown or labor strike so that operators are not forced to either completely restart operations or permanently halt their mining sites. Referred to ENVIRONMENTAL RESOURCES AND ENERGY, April 7, 2016 [House].

- **Consumer Affairs committee**

HB 48 - Water Well Construction Standards; proposed legislation submitted on January 21, 2015, Public hearing was held on May 12, 2015. Passed Committee Vote (26-0-1) on June 24, 2015. New printer number PN 1884. Laid on the table, Nov. 30, 2015; Removed from table, Nov. 30, 2015; Laid on the table, Dec. 17, 2015; Removed from table, Dec. 17, 2015; Laid on the table, Feb. 8, 2016.

- **Labor and Industry**

HB 430 - Mechanics' Lien Law of 1963; Reintroduction of legislation expanding Pennsylvania's Mechanic Lien Laws to add design professionals as a group that would be able to place a lien on a property if they are not paid for their work. Proposed legislation submitted on February 10, 2015. No Action.

Senate

- **Environmental Resources & Energy committee**

SB 513 - Vehicular Transportation of Leachate; proposed legislation submitted on February 19, 2015. Signed in Senate, September 29, 2015, Signed in House, September 30, 2015, Presented to the Governor, September 30, 2015, Approved by the Governor, October 7, 2015. **Act No. 45**

SB 571 - Critical zones for surface water intakes and wellhead protection areas; Reintroduction of legislation mandating the establishment of local zoning rules to include wellhead protection ordinances and/or surface water protection ordinances. Proposed legislation submitted on March 2, 2015. No Action.

SB 653 - Water Well Construction & Decommissioning Standards; legislation submitted on March 23, 2015. No Action.

SB 875 - Beneficial use of treated mine water in oil and gas operations; proposed legislation submitted on June 4, 2015. Signed in Senate, September 29, 2015. Signed in House, September 30, 2015. Presented to the Governor, September 30, 2015. Approved by the Governor, October 8, 2015. **Act No. 47.**

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GAC UPDATE *Continued from Page 8*

SB 1011 - Prohibiting the PADEP and the Environmental Quality Board (EQB) from finalizing and adopting Chapter 78 conventional oil and gas drilling regulations; proposed legislation submitted on September 25, 2015. Reported as committed on April 12, 2016; First consideration, April 12, 2016.

SB 1092 – Act requiring PADEP to maintain a tracking system for applicants to monitor the status of permit applications; proposed legislation submitted on December 21st, 2015. No Action.

SB 1114 Change to Act 537 (PA Sewage Facilities Act). New legislation to amend Act 537, also known as the PA Sewage Facilities Act to allow the use of “alternative systems” for planning purposes throughout the Commonwealth. Referred to House committee on April 13, 2016.

SB 1145 – New legislation amending the Oil and Gas Conservation Law; relieving an oil or gas operator who inadvertently penetrates the Onondaga formation from paying an additional \$5,000 permitting fee. Submitted on March 4, 2016.

SR 132 - A Resolution commemorating the 20th anniversary of the passage and signing into law of Acts 2, 3 and 4 of 1995, creating Pennsylvania’s Land Recycling “Brownfields” Program on May 19, 1995.

SR 385 - A Resolution directing the Joint State Government Commission to conduct a study to analyze and identify which environmental laws and regulations of this Commonwealth have more stringent standards than Federal law requires; Referred to Senate on June 6, 2016.

SB 1273 - Unconventional Well Reports; new legislation which will amend the Unconventional Well Report Act (Act 173 of 2014) that will require unconventional well operators to submit a waste report to PADEP every six months; Referred to ENVIRONMENTAL RESOURCES AND ENERGY, May 25, 2016.

• **Consumer Protection and Professional Licensure committee**

SB 538 – Strengthening Licensee Reporting Requirements and Suspensions; legislation submitted on February 25, 2015; Approved by committee vote on May 12, 2015. Passed Senate vote (49-0) on June 9, 2015. Referred to House Professional Licensure committee on June 11, 2015. Re-referred to Appropriations committee on June 27, 2015. Passed House vote (192-0) on June 28, 2015. In the Senate, referred to the Rules and Executive Nominations committee on June 28, 2015.

SB 845 – Licensure of Soil Scientists; proposed legislation submitted on May 20, 2015. No Action.

Governor and House Agree To Start Over On Chapter 78 Conventional Drilling Regulations

On Wednesday June 8th, 2016, the House Environmental Resources and Energy Committee voted 18 to 5 to amend Senate Bill 279, with language repealing PADEP’s Chapter 78 conventional drilling regulations and forcing the agency to start the rulemaking process over.

Chapter 78a drilling regulations, which apply to Marcellus and Utica Shale drilling, will be allowed to move forward to final publication.

The amendment, agreed to by the Governor’s Office and legislators in the House, does not limit the content of any future regulations on conventional drilling nor does it amend any provisions of the Act 13 drilling law which applies to both conventional and unconventional (Marcellus and Utica Shale) drilling.

Part of the agreement arrived at by with the Governor’s Office was for the House to forgo any action on House Concurrent Regulatory Review Resolution #1 that would kill both Chapter 78 and 78a. The House and Senate, in fact, lost their chance to act on the resolution when it expired on June 9, 2016.

Senate Bill 279 was voted out of the Environmental Resources and Energy committee by an 18 to 5 vote. The main provisions of Senate Bill 279 create the PA Grade Crude Development Advisory Council which will advise PADEP on any future rulemakings related to conventional drilling operations, and has no authority to block any regulations. The bill now moves to the full House for consideration.

Interested in Joining/Participating on the PCPG GAC?

Historically the GAC has been involved with disseminating new regulatory information to members, providing testimony on new policy and legislative bills, and interacting with members of the Professional Engineering and Land Surveying professions on joint legislative issues. If you are interested in becoming involved with the GAC, please contact Mark Ioo, Chairperson PCPG Government Affairs Committee at mioos@skellyloy.com.

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The **DELAWARE VALLEY SCIENCE FAIR** was held this past March 30th with over 850 exhibitors. Judging for the PCPG award was done by Grover Emrich, Scott Laird and Gary Kribbs. This year was rather unusual in that we had two winners and an Honorable Mention. This year's winners were Mr. Ethan Monceaux of Orefield, PA. His project was "Is using Sand as a Foundation better for Stability of a Bridge that is near Water during an Earthquake?" The Co-winner was Mr. Neil Deshmukh of Macungie, PA. His project was "Novel Use of Smartphones for Detection and Alerting of Earthquakes". The Honorable Mention was given to Ms. Colleen Schiele of Collegeville, PA. Her project was "Stop That Wave". Another unusual component of this year's fair was that both winners are 8th grade contestants and the Honorable Mention is a 6th grade contestant.

Mr. Ethan Monceaux's project was insightful beyond his years and focused on the interaction of geological materials and their stability near water during earthquakes. Mr. Neil Deshmukh's project was extremely innovative for today's geoscience disciplines. His project involved turning the common smartphone into an early warning and an assessment tool. He also tied the tool into the USGS earthquake monitoring system to validate the data. Ms. Colleen Schiele's project was a very creative way to scale model the behavior of a large wave system. This is a rather amazing accomplishment from a 6th grader.



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