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Northeast Section
NEWSLETTER
Holiday 2018

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AIPG NORTHEAST SECTION NEWSLETTER

HOLIDAY 2018

EDITION No. 154

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(Executive Committee continued on page 7)



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(Executive Committee continued from page 5)

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Legislative Liaison and Registration: Tom West (NY), Russell Slayback (CT), Sam Gowan (NY), Tim Stone (NY), Dorothy Richter (NH), Laurie Scheuing (NY)

Membership: Open

Mentoring: Dennis McGrath (Chairperson), Chris Brown

Nominating: Bob Blauvelt, Dennis McGrath

Public Affairs: Dennis McGrath (Chairperson)

Scholarship: Dennis McGrath (Chairperson), Sam Gowan, Dean Herrick, Len Rexrode, Craig Werle, Laurie Scheuing, Tom West

Section Directory: Curt Kraemer, Editor, Dick Young, Publisher

Section Meetings: Jessica McEachern, Bob Blauvelt, Chris Brown

Section Newsletter: Brandon Tufano, Editor; Dick Young, Publisher

Screening Board: Charles Rich (Chairperson), Don Bruehl, Carol Graff, William Penn, Daniel Toder, Andrews Tolman, William Prehoda

2019 Executive Committee Meeting Schedule:

January 7th

March 11th

May 13th (date moves to accommodate Spring Meeting on-site)

July 8th

September 16th (or September 17th; during National Meeting @ Burlington)

October 7th

December 9th

*Meetings are typically held from
4:00 to 6:00 pm via teleconference.*

(End)

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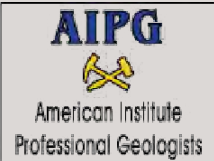
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**Presidential
Ramblings
August 2018**
By Jessica McEachern



**2018 Presidential Ramblings
Holiday Newsletter**

With the year just about ready to draw to a close (honestly, where did the time go?!), we are about to wrap up a term here on the NE-AIPG Executive Committee and welcome in a new one. I would like to thank the outgoing members for their exemplary service to the Section. To those who will remain on the Committee, we look forward to continuing to work side-by-side with you. Finally, I would like to welcome all the new Executive Committee members to their posts:

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Mike Grifasi - President

Jen Becker - President Elect

Jessica McEachern - Past President

Robert Blauvelt - Treasurer

Adelina Prentise - Secretary

Jeffrey Frederick - Member-at-Large

Luanne Whitbeck - Member-at-Large

Kelly Weyer - Member-at-Large

I'd like to thank all for the opportunity to allow me to serve as President of the Northeast Section this past term. It has been a very rewarding and enriching experience. I look forward to continuing my work on the Executive Committee as Past President with new and returning members alike!

Our Fall Meeting was held on October 19th in Burlington, Vermont as a "test run" for the 2019 Annual Meeting. The meeting included a field trip led by Marjorie Gale of the Vermont Geological Society, giving an opportunity to view a slice of western Vermont bedrock geology. The meeting was well-attended and was a great stepping stone for next year's Annual Meeting. I'd like to thank our generous sponsors for their financial commitment to the section in support of geologic activities and academic scholarships! Special thanks goes to:

(Ramblings continued on Page 13)

(Ramblings continued from page 12)

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Wishing you all a happy, safe and healthy holiday!!

- Jessica

(End)

Have an idea for a Newsletter Article?

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ideas and experiences

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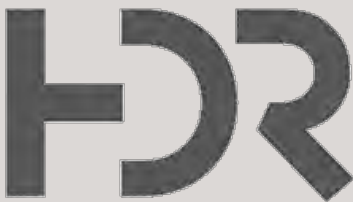
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JULY 2018 MEETING AGENDA

NE SECTION – AIPG EXECUTIVE COMMITTEE MEETING MONDAY JULY 9, 2018

Dial In: 1 (872) 240-3311 Access Code: 162-669-869

Distribution:

Jessica McEachern	Michael Grifasi	Bob Blauvelt
Jeff Frederick	Luke Mahier	Luanne Whitbeck
Laurie Scheuing	Chris Brown	Brandon Tufano
Dennis McGrath	Dick Young	Jennifer Becker

Call to Order (4:07 PM)

Secretary's Report- Minutes prepared by Jennifer Becker. The May 2018 meeting minutes were reviewed and minor edits recommended. A motion was made, seconded and there was no further discussion. Meeting minutes were approved for publication in the newsletter, with the recommended edits.

Treasurer's Report- The ATGMS fund is bouncing back as of May 2018 from the January – April decline. The NE Section is in good financial standing. The section fund interest increased from May 2018 to June 2018 due to the stock market rise. Recent payables for the section fund include the bank card fee, star fund fee, and both the catering and administration fee for Sterling Mine Spring Meeting. Recent deposits include the Spring Meeting registration and sponsorship revenue. Dues from National for the NE Section were received in June. Currently there are approximately 480 members with 181 student members.

Correspondence: Student Chapter Updates-

o Brooklyn College (New Student Chapter) - Dennis provided the update of a new student chapter requiring NE AIPG sponsorship.

(July Minutes continued on page 17)

They are in process of filling out the necessary paperwork and will get the final version to the NE section in a few weeks. Prior to the submission and approval by National, they will require a section sponsor. Jen Becker has expressed interested in sponsoring the student chapter, and will discuss further with Dennis offline.

- o SUNY Genesco – Michael will reach out to the school and provide an update next meeting.

Additional New Student Chapter Development (SUNY Binghamton, etc.) Binghamton- Brandon will reach out to the student body when school begins.

Old Business

AT Scholarship - Online Application Host – Wendy (AIPG National) offered to turn the scholarship application into a google form. Using a google form would allow students to submit the application and supporting documentation at different times. Dennis has been in contact with Wendy but is unsure of how the NE section can utilize the form and the overall logistics. Once the form is complete, we can discuss implementation for the 2019 scholarship applicants. It was discussed that it may be an improvement over the pdf, and that there is no request for confidential information, therefore security would not be an issue. More information will be provided at the next meeting.

New Business

2018 Annual Meeting, Colorado Springs - NEAIPG's sponsorship:
The ExCom reviewed the scholarship donation levels from \$750-\$1,500 for the 2018 annual meeting. The three options discussed included a fee of \$750 for the welcoming reception signage, \$1,000 option including the name on sponsor page program, sign at entrance, acknowledgment during break and on the website, and a third option of \$1,500 for a booth. The \$1,000 contribution would list us as a sponsor and show the NE section support. The motion was made to donate \$1,000 to the 2018 National meeting, seconded and passed unanimously.

2019 Annual Meeting, Burlington, VT - Planning Committee Updates- Jeff, Chris, and Jessica held a planning call with National regarding the 2019 Annual Meeting. The hotel has been confirmed as the Doubletree by Hilton, where the GSA held their March 2018 meeting. The hotel has a shuttle service to the downtown area, and is significantly cheaper than the surrounding hotels. Luanne pointed out that the shuttles typically run in the evening and we may

want to look into including a transportation option during the day. Kathy and Wendy (National) are interested in attending the Fall 2018 NE Section meeting to get a feel for the area and help with the 2019 meeting planning.

Fall Meeting - Logistics and Updates- Michael Grifasi provided an update of the 2018 Fall Meeting to the ExCom. The meeting will be held on Friday October 19th, 2018 and will include a field trip and presentation. Steve Revel from the USGS and Marjorie Gale of VTGS were contacted to present or setup a field trip on the topic of geology of the western Champlain Valley. Michael is currently working out the details with a hotel and will provide an update in the coming weeks.

ExCom Election- The ExCom committee member terms up for election include those held by Luke Mahier, Jennifer Becker, Bob Blauvelt and Luanne Whitbeck. Currently there is one committee member vacancy, as well as a need for a new president elect nominee. Bob Blauvelt and Jennifer Becker confirmed they would committee to another two year term as treasurer and secretary for the NE Section. Interested candidates for all positions should contact Jessica and Dennis prior to the NE Section draft ballot.

Publications

Newsletter – Brandon will create a write up of the Sterling Mine field trip for the upcoming issue. The deadline for content for the next newsletter is July 27th. Jessica volunteered to submit a piece for the News of Members section.

Advertising Sales Update & Income- Dick Young will go through the checks and provide an update at the September NE Section meeting. He will continue to pursue missing advertisers that will show up in the July treasurer's report.

Adjournment (6:19 PM)

(End)



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OCTOBER 2018 MEETING MINUTES

NE SECTION – AIPG EXECUTIVE COMMITTEE MEETING FRIDAY OCTOBER 19, 2018

Dudley H. Davis Center, Livak Ballroom
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590 Main Street, Burlington, VT 05405

Distribution:

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Jeff Frederick	Adelina Prentice	Wendy Davidson
Luanne Whitbeck	Kelly Weyer	Cathy Duran
Dennis McGrath	Jennifer Becker	

Call to Order (4:28 PM)

Secretary's Report- Minutes prepared by Jennifer Becker. The September 2018 meeting minutes were reviewed and minor edits recommended. A motion was made and seconded and the September 2018 minutes were approved with minor revisions.

Treasurer's Report- The NE Section budget is currently in good standing. The September treasurer's report includes fall meeting registration and sponsorship deposits. Payables to the fund include bank card, star chapter fees, and the meeting venue. A motion was made, and seconded, to file the August and September 2018 treasurer's report. Projections following the Fall Meeting will increase revenue from advertisers and sponsors to make a healthy contribution to the ATMGS. Thank you to all advertisers for sponsoring the Fall meeting. Bob provided all necessary paperwork to Wells Fargo and will provide an update next meeting regarding the continued process.

Correspondence: Student Chapter Updates

Brooklyn College – Jennifer has been in contact with the geology club president who is currently registering student board members as AIPG members. Dennis and Jennifer will coordinate an

(October Minutes continued on page 23)

on-campus visit for a Wednesday during the fall semester.

SUNY Geneseo/Binghamton – There are no new updates with these student chapters.

New Paltz- Chris Brown updated the ExCom that the field trip scheduled for 10/18/18 to a local remediation site was canceled due to low student participation. The field trip will be rescheduled after mid-terms later in the Fall. The student resume workshop Chris hosted in September was successful and well attended.

Publication-

Newsletter/Advertising Sales Update & Income- Dick Young and Brandon Tufano were unable to attend the meeting and an update will be provided to the ExCom at the next meeting.

Old Business

AT Scholarship - Online Application Host Updates- The website portal is currently accepting ATMGS applications until the early December 2018 deadline. Dennis has received one faculty recommendation from Brooklyn College. Upgrades to the application process will be monitored for efficiency and issues encountered going forward.

Spring Meeting- The NYS Counsel supports a joint 2019 spring meeting with the NE Section. Cheryl updated the section that they are considering hosting the event at a winery in the lower Hudson Valley. It was suggested that any sponsors from the spring meeting could receive a platinum level sponsorship for the National meeting at a reduced rate.

New Business

2019 Annual Meeting, Burlington, VT (See additional handout)- Wendy and Cathy provided an overview of the planning stages for the 2019 AIPG National Meeting in Burlington, VT. In the next month the Northeast Section will finalize a theme for the meeting, establish a planning committee, and review a draft schedule that National will provide. The northeast section will begin scheduling national planning meetings separate from the bimonthly calls and provide updates to Cathy and Wendy in the coming weeks.

Adjournment 5:40 PM) A motion was made to adjourn to setup the field demonstrations and seconded with no discussion. Motion for adjournment passed and the meeting adjourned.

(End)

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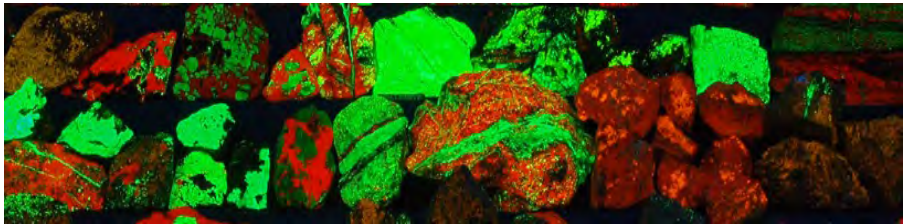


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News of Members

Jessica McEachern (CPG-11869) has been working as an associate geologist at the engineering firm JR Holzmacher PE, LLC, since Spring of 2015. She has worked on a variety of projects, most notably performing SWPPP (Storm Water Pollution Protection Plan) inspections at a construction site on Long Island, New York, and training other geologists, engineers and environmental scientists at the firm to use the EDMS (Environmental Database Management System) software to prepare project data for submittal to the NYSDEC. Jessica has also been working on her own firm, ARC Geoscience Consulting, LLC, which is technically “on hold” until she obtains her PG licensure. This in itself has been a long, involved process, but one which will no doubt yield big dividends. The main goal of the firm is becoming a WBE (Women Business Enterprise). Once it is completely set up and ready for business, it will offer professional environmental consulting services to a host of clients.

(End)

What are the AIPG Goals?

AIPG Purposes

The purposes of the Institute shall include:

- advance the geological sciences and the profession of geology;
- establish qualifications for professional geologists;
- certify the qualifications of specific individual Member geologists to the public;
- promote high standards of ethical conduct among its Members and Adjuncts, and within the profession of geology; and
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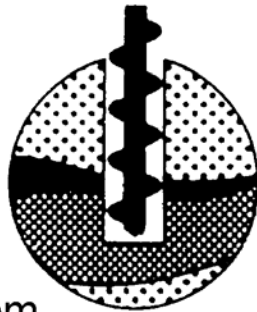
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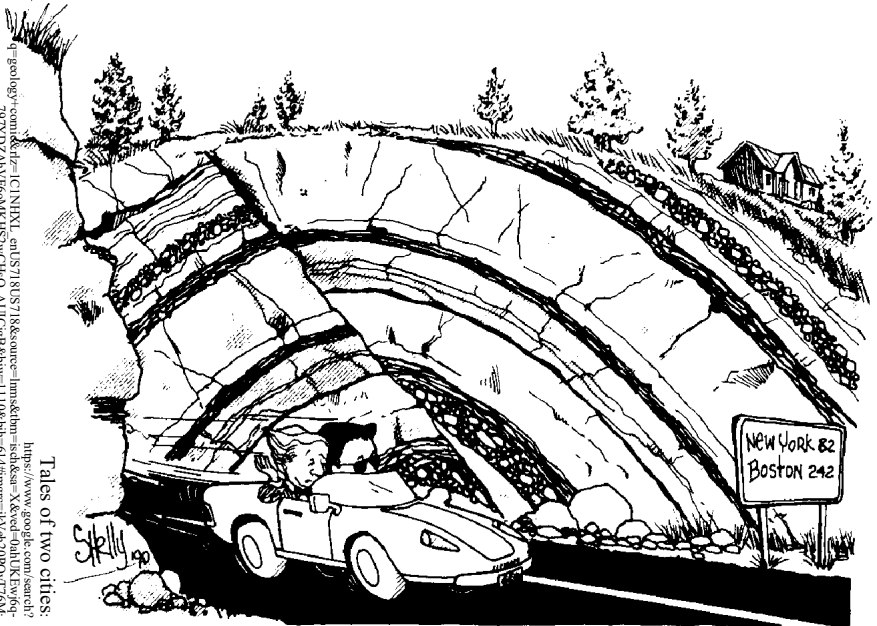
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It is always an honor to present the thank you letters we receive from the recipients of the Angelo Tagliacozzo Memorial Geological Scholarship Trust Fund”.

Below are two of the most recent thank you letters received by the Executive committee

Reilly M. Blocho
6172 Shongo Valley Road
Fillmore, New York 14735

August 28, 2018

Dear Scholarship Committee,

I would like to take this opportunity to thank each member of the Scholarship Committee for selecting me as the recipient of the Angelo Tagliacozzo Memorial Geological Scholarship. In addition to being a great honor, the scholarship money will allow me to continue pursuing my goal of becoming a geophysicist.

Furthermore, I would also like to mention that NEAIPG scholarship program is incredibly valuable because of the opportunities it provides students in the geology field in helping them reach their goals. I will be forever grateful for the opportunities and assistance that NEAIPG have provided to me.

Sincerely,

Reilly M. Blocho

(Thank You Notes continued on page 32)



May kindness
return to you
in the same
beautiful
way that it
was given.

Dear Mr. McGrath,

I hope you are well this summer time period. I have just returned from a long journey abroad where I sailed from the South Island of NZ to Tahiti, flew back to New Zealand and after a couple of days of researched geological sight seeing, I traveled on for 6 weeks of research on an NSF grant in rural Mongolia. I apologize then, for the tardiness of this thank you card. I am so deeply thank ~~ed~~ for your support of my wintertime research at WHOI on the biological pump in the North Atlantic as part of habitat research. I theorized and developed my research project that I followed through with on my voyage from NZ to French Polynesia sampling zooplankton and water chemistry. I also made great connections with biogeochemists and professional oceanographers that

I deeply value as both professional and personal connections. I owe this opportunity to ADPG, and I know that the Angelo Tagliacozzo Memorial Geological Scholarship has given me the opportunity to understand the field of oceanography and professional at a R1 institution that Wellesley could never afford me. Thank you again for the opportunity with great gratitude,

Sarah Smith - Tripp
Wellesley MA



(End)





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Krakatau and Global Catastrophes

By Brandon Tufano

Global Catastrophe — this is not the headline you want to see running across the CNN or Fox News “breaking Now” banner but it, or a derivative thereof, is not completely uncommon in modern times. In just 2017 alone there were over 10,000 lives lost to significant natural phenomena and \$330 billion dollars accrued in damages. These stories, stories like the earthquake that leveled Haiti in 2010, the tsunami that triggered the Fukushima meltdown in 2011, or hurricanes Sandy, Maria, or Irma, are just a few recent examples that still hurt to think about.

But what makes it a global catastrophe? There are a few definitions but the underlying theme is that they are deadly, cost significant sums of money, and perhaps most importantly for the definition, are covered globally by news feeds.

Arguably, the first global catastrophe occurred in August of 1883 (just a few decades after the telegraph was invented and being widely used). This event was the eruption Krakatau on a small island in the Sunda Strait. Thanks to the telegraph, the eruption of Krakatau was the first news story to span the globe.

To put this in perspective, news of the eruption and its ensuing tsunami, was covered by the Dutch Java Bode the same day. International media wasn't far behind, The Illustrated London News published drawings of the region before the devastation. These articles survivor stories published in the newspaper made the catastrophe to a world wide event and would make it one of the most notorious eruptions of all time.

The Krakatau eruption produced an eruption column between 25 and 43 miles high, and within two weeks the

(Global Catastrophes continued on Page 36)

ash and gases had blown westwards along the equator. For months after the eruption the ash cloud spread from the equator to the mid-latitudes. And the fine grains, trapped in the higher layers of earth's atmosphere, would scatter sunlight for years to come. This scattering would cause optical phenomena, like blood-red skies. It is hypothesized that famous paintings like "The Scream" were inspired by these red skies. In addition, the aerosols caused a drop in global temperatures influencing weather patterns and bringing climate change to places as far away as the Arizona deserts.

The Sunda Strait was and still is an important passage from the Indian Ocean to the Chinese Sea, and news about the eruption and destruction of harbors and lighthouses in the area were of special interest to merchants, politicians, and the public in general. Since nearly two thirds of telegraph lines controlled by the British, British agencies could rely on a vast network to gather news about the worldwide effects and disturbances of the eruption. News from Australia to London traveled in just half a day on cable. In comparison, a letter delivered by ship would have needed 45 days for the same distance. The newspaper, fueled by this quick and constant stream of eyewitness reports and eager to satisfy the interest of the public, wrote in great detail about the catastrophe. AS a result, geologists would be able to use this information to compile a detailed report of the eruption.

As a result, the Krakatau eruptions was one of the first scientifically well recorded and studied eruption of a volcano. In May of 1883, the first clouds of vapor were noted above the crater, followed by a phase of quiescence until August of the very same year. During this phase, authorities organized geological expeditions to document the volcano and gather some samples of volcanic rocks. For the first time, the deadly effects of pyroclastic flows were noted, but not yet recognized as such.

Between August 26 and 27, 1883 a series of explosions

(Global Catastrophes continued from Page 36)

almost totally annihilated the entire volcano, causing a series of tsunamis that killed 36,000 people along the coasts of Java and Sumatra. Pumice from the eruption would wash ashore along the coast of Africa months after the disaster. It was then that geologists would come to realize the true danger of subduction and arc volcanism.

This can be considered the first global catastrophe because only 70 years earlier the eruption of Tambora in a similar region is all but forgotten, despite being more powerful. Since the telegraph was only in its inception then it was only merchant sailors and the like who brought news of the catastrophe to the world.

It wasn't just the global coverage that made this particular even a global catastrophe however. The final explosion of Krakatau produced the loudest sound ever recorded in modern history. This explosion was heard on over ten percent of Earth's area. Reports of the explosion can be found from Australia and the island of Mauritius, more than ,650 km distant. Scientific instruments recorded sudden peaks in Britain as well as in America that would later be attributed to the explosions pressure wave.

The study of the remains of the former island of Krakatau also gave birth to a new scientific discipline: Disturbance Ecology. Following the devastation, colonization by plants and animals of the virgin island was documented in great detail across numerous scientific disciplines including geologists, zoologists, and botanist.

The documentation of this eruption would come to serve humanity later on as well when colonization of devastated or new formed terrain, like the volcanic island of Surtsey in Iceland and Mount St. Helens.

Krakatau it seems is not done telling its story...In 1927, in

(Global Catastrophes continued on Page 48)

(Global Catastrophes continued from page 37)

the caldera left by the 1883 eruption a new volcano, Anak Krakatoa, started to grow.

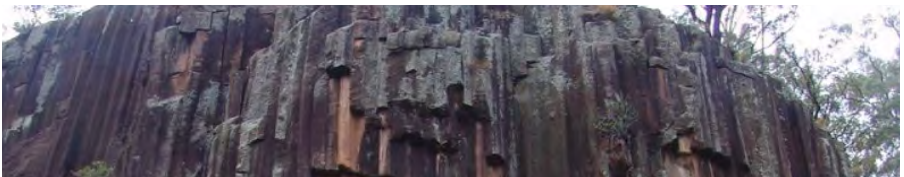
Anak Krakatoa has been active over the past several years with a new series of eruptions only last month.



The Anak Krakatau sends up clouds of hot gasses, rocks, and lava on Nov. 8, 2007, file photo, in the Sunda Straits between Java and Sumatra, Indonesia. (AP Photo/Ed Wray/FILE)

What does the future hold, we are not certain — but it would be wise to keep an eye on this legendry volcano.

(End)





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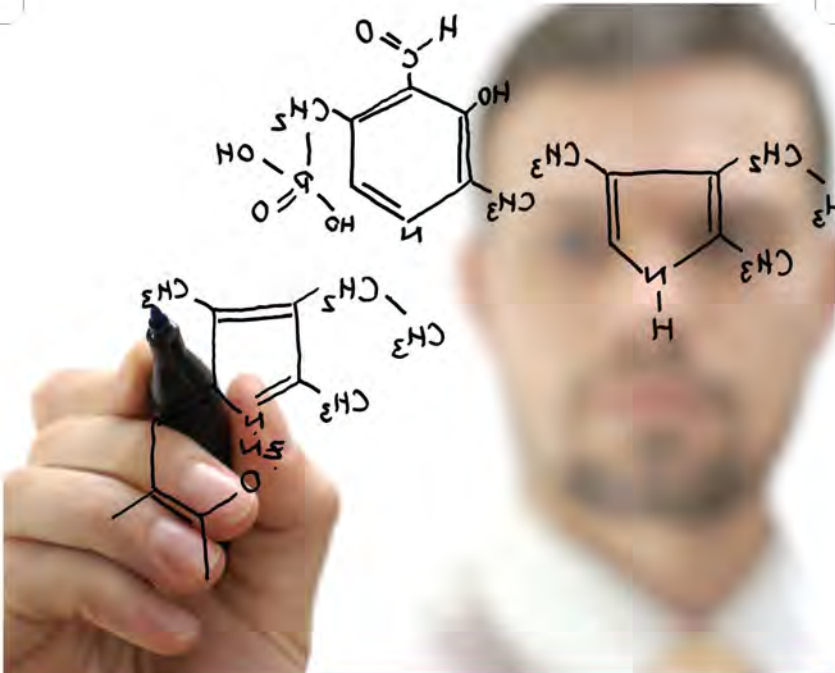
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Krakatau — Activity

By Brandon Tufano

Adapted from BBC upload on December 25, 2018

On Saturday December 22, 2018 tsunami waves crashed into coastal towns on the islands of Sumatra and Java. It is believed that volcanic activity at Anak Krakatau set off undersea landslides which in turn generated the waves which have claimed the lives of at least 429 people in the region with about 150 people still missing, and more than 16,000 displaced by damage and unsafe conditions

Coastal residents near the volcano have been warned to keep away from beaches amid fears it could trigger a new tsunami. Anak Krakatau erupted again on Sunday December 23, spewing ash and smoke into the sky.



A satellite image of Anak Krakatau erupting in August

Anak Krakatau emerged from the caldera of its predecessor Krakatau Volcano in 1927. This new volcano has seen increased activity in recent months with people asked to avoid the area around its crater.

Sadly there was little to no early warning for this tsunami. Indonesia's early warning system is set up to monitor earthquakes but not undersea landslides and volcanic eruptions. It is the mechanism and the avoidance of early detection systems that make these landslides and volcanic eruptions especially deadly.

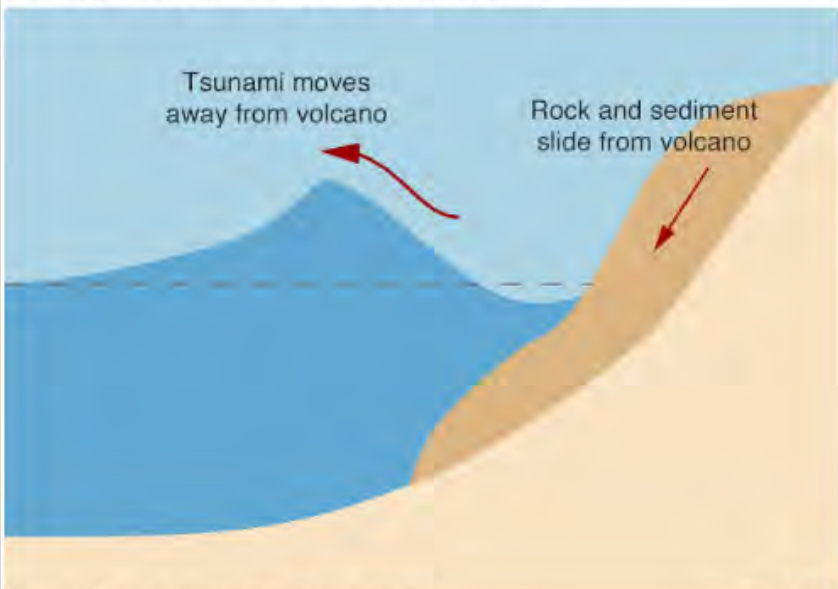
(Krakatau Tsunami continued on page 44)

Why was Saturday's tsunami so deadly?

The tsunami struck at 21:30 local time during a local holiday, with few of the warning signals that might have come had it been generated by an earthquake. Because the wave was likely caused by a landslide from the slopes of the volcano seawater did not recede as it would preceding an earthquake generated tsunami. Experts suggest that even if there had been warning buoys near the volcano, there would have been minimal alert time. The ensuing water destroyed hundreds of buildings, sweeping away cars, and uprooting trees in several popular tourist destinations, including the Tanjung Lesung beach resort, west Java.

Footage shared on social media showed a large wave crashing into a tent in the resort, in which popular Indonesian rock band Seventeen were performing.


Possible cause of the tsunami




Source: BBC and University of California, Santa Cruz





Areas affected by tsunami

 Affected areas

Population density

 25-250 people / km²

 250-1000 people / km²

 >1000 people / km²



Source: NASA Socioeconomic Data and Application Center (SEDAC), data from 2015, BNPB Information (Disasters and Emergency Agency)

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From the Editor



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On the Topic of Volcanos — Volcanic Lightning

How Do Volcanoes Make Lightning?

Reproduced by Brandon Tufano from Ethan Siegel
Forbes—February 9, 2018

As we all know, when molten rock (magma) pushes its way up through the Earth's crust it can result in a volcanic eruption. Sometimes eruptions occur as slow, steady flows like the Hawaiian shield volcanoes. In other instances however, if enough silica is present in the magma the volcanic gasses cannot escape without first obtaining massive pressures. When this pressure finally releases the result is a massive eruption that often throws ash, dust, rock, gases, and lava into the air all at once such as the Mount St. Helens eruption. The resulting clouds can be tens of kilometers high and remain for days before dispersing. In some instances, in addition to these spectacular clouds another phenomenon can occur, volcanic lightning.



(Volcanic Lightning continued on page 49)

(Volcanic Lightning continued from page 46)

Photo above—In 2015, the Chilean volcano Calbuco. This was Calbuco's first eruption in 42 years. JOSE MANCILLA/LATINCONTENT/GETTY IMAGES

While not every eruption will produce volcanic lightning, it's been observed and recorded by humans for centuries with nearly 200 sightings being recorded in the last 200 years. Only now, however, with modern advances in science can we explain why this happens.



MARCO RESTIVO/DEMOTIX/CORBIS

Magma can form in a variety of ways. Plutons or pockets of magma exist within the Earth. When this liquified rock makes its way upwards to the crust it can gather silica along the way. The silica greatly increases the viscosity of the magma and when it finally reached the surface and finds a weak point it violently erupts as the gasses try to escape. When this occurs, in addition to the lava, gasses and ash also erupt into the atmosphere

Volcanic lightning generally seems to occur around volcanoes with large ash plumes. In particular, the lightning seems to occur during active stages of the eruption where molten lava creates the

(Volcanic Lightning continued on page 50)

(Volcanic Lightning continued from page 49)

largest temperature gradients. The phenomena of lightning has been exquisitely recorded around a number of recent volcanic eruptions, including Iceland's Eyjafjallajökull, Japan's Sakurajima, Italy's Mt. Etna, and Chile's Puyehue, Calbuco and Chaiten volcanoes.

When the lightning does occur, each strike can exchange around 10^{20} electrons! At the temperatures that volcanoes achieve, it's energetically favorable for an atom to become ionized.



Here, Marco Fulle, via helicopter, photographs volcanic lightning during an eruption at night. MARCO FULLE / ASTRONOMICAL OBSERVATORY OF TRIESTE

When separated, these ions create a separation charge, which creates a voltage. It is now, when the voltage between two regions becomes too great, that the media between the regions can spontaneously become conductive. It is this exchange of charge that we see manifested as Lightning.

While this phenomena might appear to be complicated and difficult to predict there are three components necessary of it to occur at all:

(Volcanic Lightning continued on page 51)

(Article continued from page 50)

First, start with a whole lot of positively and negatively charged ions. Typically the combination of heat and the unearthed volcanic material provides a substantial amount of charges debris. In addition, the greater the temperature differential (e.g. the hotter toe volcano), the greater the chance for lightning. As discussed before, heat facilitated ionization.



Mount St. Helens shoots a column of volcanic ash into the sky during its 1980 eruption. INTERNEWTWORK MEDIA/PHOTODISC/-GETTY IMAGES

Second, you need to separate the negatively charged ions from the positively charged ones. The charged particles have different sizes and masses and in this situation this is advantageous. With the winds and temperature gradients above an eruption lighter particles will require less energy to move higher up in the column while heavier particles will stay lower... separation of ionized species!

(Article continued on page 55)



Lightning often occurs between two disconnected points, as huge numbers of voltage passes across a medium. The strike above is from Japan's Sakurajima is one of the brightest single strikes ever recorded. ASAHI SHIMBUN / GETTY IMAGES

Lastly, the now separated ions create a voltage difference. With enough of these charges separated the charge gradient becomes too much and even in an insulative matrix like air, the voltage flows and we see a lightning strike.

What we still don't know:

- why it sometimes occurs in the virtual absence of ash clouds,
- why many strikes will occur in bursts, while others occur at relatively constant frequencies,
- and why some volcanoes don't appear to have it at all.

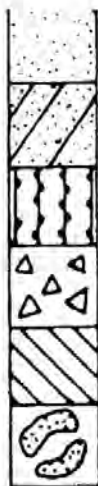
Despite the remaining questions, one thing is certain... volcanic lightning make for one of the most *striking* displays on earth and with improvements in photography and photographic techniques I think we can expect even more spectacular pictures in the years to come.

(End)

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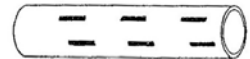
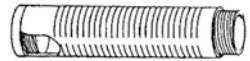
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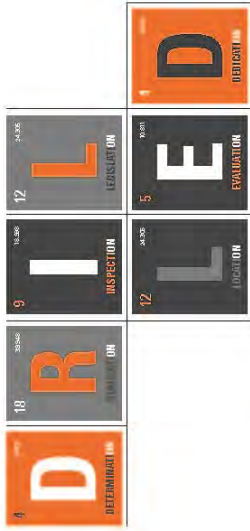
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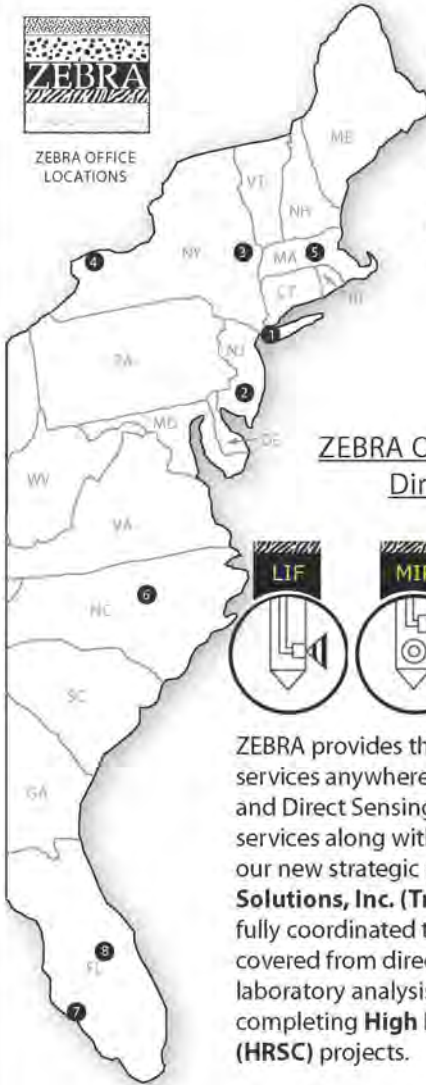
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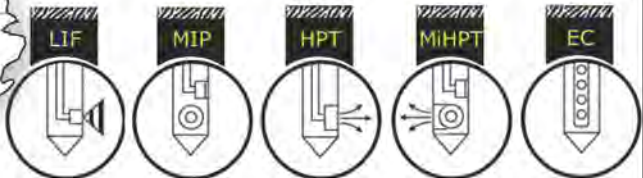
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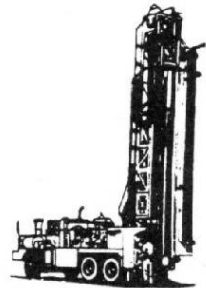
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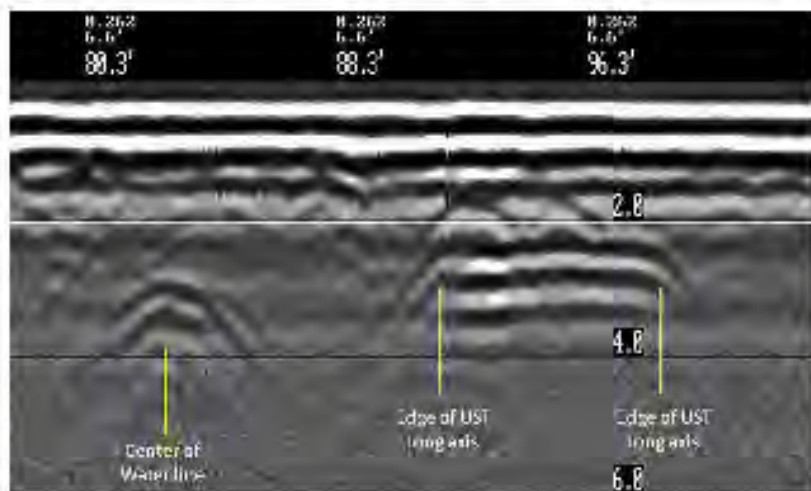
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NE/AIPG 2019 PUBLICATION SCHEDULE

Winter Newsletter

January 11	Deadline (Material to Editor)
January 25	Content to Publisher
February 11	E-mail to Members

Directory of Members

February 11	Deadline (Material to Editor)
March 15	Content to Publisher
April 15	E-mail to Members

Spring Newsletter

March 22	Deadline (Material to Editor)
April 5	Content to Publisher
April 22	E-mail to Members

Indian Summer Newsletter

July 26	Deadline (Material to Editor)
August 16	Content to Publisher
September 3	E-mail to Members

Holidays Newsletter

October 11	Deadline (Material to Editor)
October 25	Content to Publisher
November 11	E-mail to Members

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Celebrating 32 Years of Scholarships!

The Angelo Tagliacozzo Memorial Geological Scholarship

The Angelo Tagliacozzo Memorial Geological Scholarship was established by the Northeast Section of the American Institute of Professional Geologists in late 1986. The first Scholarships were presented to undergraduate Geology students in 1987.

ATMGS recognizes the dedicated leadership and service which Angelo provided to NE/AIPG, to AIPG, and to the geological profession, until his untimely passing on October 11, 1986. The Scholarship furthers Angelo's goal of acquainting young geologists with AIPG and with AIPG's importance to the geological profession.

ANGELO TAGLIACOZZO (1936 - 1986)

Angelo Tagliacozzo received his doctorate in Geology from the University of Rome (Italy) in 1962. Thereafter, he worked in various positions as geologist, geophysicist, and hydrogeologist, which included assignments abroad, in the U.S., and with the United Nations. Angelo provided exemplary service to AIPG at the Section and National levels. He was a Northeast Section Executive Committee Member (1973-1982), Vice President (1977-1978), President (1979-1980), National Advisory Board Delegate (1981-1982), and Screening Board Chairman (1984-1986). Angelo's dedication to and leadership of the Northeast Section Screening Board has become the ultimate standard against which service in such a position is measured. Angelo also served as an AIPG National Executive Committeeman (1982); he was a vigorous advocate of measures to increase professionalism. Angelo was (and will be remembered as) a respected professional...and a friend.

THE SCHOLARSHIP

NE/AIPG grants Scholarships to undergraduate geology students annually. The Scholarships are designed to help with the cost of summer field courses, textbooks, and other aspects of geological education. Scholarships are awarded, both on academic achievement and on financial need, to students enrolled in recognized geology programs at colleges or universities in New England, New Jersey, & New York.

YOUR CONTRIBUTIONS

Your participation is encouraged in support of this dynamic memorial to Angelo and his recognition of the importance of AIPG to the geological profession. Contributions to the Scholarship Perpetual Trust Fund should be written to:

Angelo Tagliacozzo Memorial Geological Scholarship Trust Fund, and mailed to:

**NE/AIPG Geological Scholarship Trust Fund
c/o Dennis McGrath, CPG
P.O. Box 472
Hastings-on-Hudson, NY 10706-0472**

All Contributions are invested perpetually, with earnings thereon used solely for the Scholarship. NE/AIPG bears all costs of administration. Please ask your employer about Matching your contribution, and Additional corporate contributions.

For further information, contact Dennis McGrath:

mcgrathdg@gmail.com

Cell: 914-424-8816



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Memorandum

To: Dennis McGrath, Chairman, ATMG Scholarship, Northeast Section, AIPG

From:

Date:

Re: *I'm Taking the Pledge: I'M IN FOR 2018!*

Dear Dennis,

Just a quick note to let you know that I'm 100% with you when it comes to achieving the Section's goal of 100% participation in support of the Scholarship Perpetual Trust Fund during 2018, the 32nd Anniversary of the Scholarship! I agree with your encouragement that each and every Section Member make a contribution in accordance with their ability ... And this is the one time when I don't want to be the odd person out!

I'M IN FOR 2018!

For 2018, the 32nd Anniversary, I'm considering pledging ... Thirty Bucks A Week, Thirty Bucks A Month, or Thirty Bucks for the year!

Now, I know that it could be more ... And you know that it could be less! But I am committed to contributing as much as I can, so I'm not going to delay it any longer: ***I'M IN FOR 2018***

Yes, my personal budget is tight, but I figure that, somehow, I can set aside \$30 each month (aka the cost of a daily latte) this year to give back to the profession that has given me so much. And I just wanted to tell you that I am delighted to know that every one of those hard-earned dollars that I contribute will be INVESTED in the Scholarship Perpetual Trust Fund, so that my contribution today can keep on giving, year after year!

And that makes me feel like my contribution really means something, both now and in the long term! I have thought it over, and I know how important 100% participation is for Section pride! So, Dennis, ***I'M IN FOR 2018!***

Professionally yours,

Times are really (GREAT poor), so I am pledging:

___ 30 Bucks A Week (\$1560 for 2018)

___ 30 Bucks A Month (\$360 for 2018)

___ 30 Bucks A Year (\$30 for 2018)

Other: _____ (Every little bit is better than nothing!)

___ I'll make it easy on you; I have enclosed my check, made out to "Angelo Tagliacozzo Memorial Geological Scholarship Trust Fund".

___ Please invoice me for my 2018 pledge by 10/31/18. I'll pay by 12/1/187.

Signed: _____

Name Printed: _____

Address: _____

Mail this Pledge to: NE/AIPG Geological Scholarship Trust Fund, c/o Bob Blauvelt,
345 Stuyvesant Ave Lyndhurst, NJ 07071

- or -

Email this Pledge to: NE/AIPG Geological Scholarship Trust Fund, c/o Bob Blauvelt
blauvelt@geiconsultants.com