

Phactum

“Education is the key to unlock the golden door of freedom. “

~ George Washington Carver (1864 - 1943),
American botanist and chemist

The Newsletter and Propaganda Organ of the
Philadelphia Association for Critical Thinking
April 2012

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Webmaster: Wes Powers <http://phact.org/>

PhACT Meeting - Saturday, April 28, 2012

at Community College of Philadelphia in The Large Auditorium (BG-1) on the ground floor of the
Bonnell Building. This is the large building on the east side of 17th St. At 2:00 PM.
All are Welcome. This event is Free and Open to the Public. Handicap accessible.

Dr. David Cattell, Chairman of the Physics Department of Philadelphia Community
College, will host
Toxicologist David Cragin, Ph.D. who will discuss

The Good Old Days: They were Terrible: Toxicology and the Modern World.

Popular perception is that the world is being overrun by "toxics." Arsenic in apple juice, mercury, pesticides, and other "toxics" regularly garner headlines. What is the real story? How does the modern world compare to the "good old days"?

Dr. David Cragin works full-time as an Occupational and Environmental Toxicologist assessing risks to human health. In addition, he teaches a graduate course on risk assessment, critical thinking, and health as an Adjunct Professor of Health Policy and Public Health for the University of the Sciences in Philadelphia. He also teaches as a Professor of the International Program in Pharmaceutical Engineering Management of Peking University in Beijing, China. He is certified by the American Board of Toxicology, is Past President of the Mid-Atlantic Society of Toxicology, and serves as a Councilor for PhACT.



Chamberlain's Colic Remedy from "the good old days". Contains alcohol, chloroform, and ether.

“Upon the subject of education, not presuming to dictate any plan or system respecting it, I can only say that I view it as the most important subject which we as a people can be engaged in.”

~ Abraham Lincoln

Saturday, May 19, 2012

PhACT Scientific Expedition to the **Blue Hole**

On Saturday, May 19, 2012, you are invited to join PhACT for a scientific expedition deep into the South Jersey Pine Barrens where we will investigate the legend of the Blue Hole. This pool of water is said to be icy cold in some places, even in summer, and warm in other spots, even in winter and bottomless.

In addition, the Jersey Devil allegedly lurks within and pulls down those foolish enough to enter its waters. We will also look for any remains of Inskip, once the site of a nearby sawmill. Our guide will be Don Nigrone who has explored much of the Pine Barrens, and Eric Krieg, the president of PhACT, will lead the scientific investigative team. Armed with scientific equipment, like thermometers and fishing lines with sinkers, we will test the legendary properties of the mysterious Blue Hole.

We will meet at the outdoor firing range parking lot off Piney Hollow Road at 10:00 AM and will be hiking about a mile each way on sandy roads. We may not find the Jersey Devil but will be sure to have a good time and learn some history of the area along the way. Bring insect repellent, sturdy shoes, lunch, and a camera.

The event is free - let us know if you can make it.

For more about the Blue Hole see article by Don Nigrone in Phactum May/June 2009 page 13:
<http://www.phact.org/data/phactums/Phactum%202009-05.pdf>



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Stay tuned in for the
Annual PhACT Picnic
 on Saturday, July 7, 2012.



The local ants are healthy and eager to party again with a friendly bunch of skeptics. Bring plenty of food. No RAID!!!

Letters to the Editor

Editor: The randomness of a coin toss is not 50-50 heads-tails, even for a fair coin seemingly tossed fairly, many feet in the air, with many flips (number of flips not under control). See for yourself by working through the physics and the math at <http://www-stat.stanford.edu/~susan/papers/headswithJ.pdf>. Or you can just do what I did, and take cracked.com's word for it at http://www.cracked.com/article_19747_5-ways-to-beat-old-school-games-using-math.html, to wit: "It turns out that a coin is always more likely to land on the side that's facing up when you flip it ... The reason ... is actually pretty simple ... flip a coin with heads facing up. As it turns in the air, heads will be facing up as many or more times as tails, but never less."

Howard J. Wilk
Philadelphia

Editor's note: Thank you Howard. I have long been aware of the slight difference in probability but never knew why. I assumed wrongly that it was because of an imbalance in the coin itself.

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Various Ruminations

Collected/Written by Ray Haupt
(with help from others)

John Morgan, M.D.

I recently came upon knowledge of John Morgan, an interesting but not well known figure in Philadelphia and American History.

John Morgan was born in Philadelphia in 1735, the son of Evan Morgan, a wealthy Philadelphia merchant. He received a classical education at Nottingham Academy in Chester County, Pennsylvania, a bit south of Philadelphia. In 1754 Morgan entered the College of Philadelphia with eleven other

students. During the school years of 1755 and 1756 Morgan studied medicine at Pennsylvania Hospital under Dr. John Redman who eventually became the first President of the Philadelphia College of Physicians. In 1757 Morgan was in the first graduating class from the College of Philadelphia.



John Morgan, M.D.
(1735 - 1789)

Morgan went to Edinburgh in 1760 to continue his medical education, earning his M.D. in 1763. In the spring of 1764, in the company of the Duke of York, Morgan traveled to Italy where they had a private audience with Pope Clement. Morgan was elected a member of the Royal Academy of Surgery at Paris in 1764 and of the Royal College of Physicians of Edinburgh and of London in 1765.

In 1765 Morgan returned to Philadelphia and along with Dr. William Shippen, Jr. founded the first medical school in the colonies. With the 1765 founding of the first American medical school, Penn became America's first university since the institution now consisted of two departments or schools: the collegiate and the medical. On May 3, 1765, Morgan was elected by the trustees of the College to the Chair of Theory and Practice of Physic, the first medical professorship in the country.

During the American Revolution, Morgan and Shippen had a feuding relationship with Shippen eventually gaining the upper hand having replaced Morgan in most positions of authority in the Continental Army. In 1779 Morgan succeeded in obtaining vindication from Congress; after formally charging Shippen with fraud and speculation in hospital supplies. Shippen was court-martialed and resigned in 1781.

In poor health by this time, Morgan became retiring and in October of 1789 he died in Philadelphia.

Morgan was active involved in Philadelphia institutions and organizations. He was a founding member of the American Philosophical Society in 1766, a member of the Medical staff of the Pennsylvania Hospital from 1773 to 1783, one of the original fellows of the Philadelphia College of Physicians.

"We have to abandon the idea that schooling is something restricted to youth. How can it be, in a world where half the things a man knows at 20 are no longer true at 40 - and half the things he knows at 40 hadn't been discovered when he was 20?"

~ Arthur C. Clarke (1917 - 2008), British science fiction author, inventor, and futurist

Lyme Disease Surge Predicted for Northeastern US: Due to Acorns and Mice, Not Mild Winter

Don Nigrone, an enthusiastic outdoorsman, submitted this item from Science Daily that should be of some interest to all of us in Northeastern United States. It is something to keep in mind when in woods and fields and at Blue Holes in New Jersey.

ScienceDaily (Mar. 16, 2012) — The northeastern U.S. should prepare for a surge in Lyme disease this spring. And we can blame fluctuations in acorns and mouse populations, not the mild winter. So reports Dr. Richard S. Ostfeld, a disease ecologist at the Cary Institute of Ecosystem Studies in Millbrook, NY.

What do acorns have to do with illness? Acorn crops vary from year-to-year, with boom-and-bust cycles influencing the winter survival and breeding success of white-footed mice. These small mammals pack a one-two punch: they are preferred hosts for black-legged ticks and they are very effective at transmitting Borrelia burgdorferi, the bacterium that causes Lyme disease.

"We had a boom in acorns, followed by a boom in mice. And now, on the heels of one of the smallest acorn crops we've ever seen, the mouse population is crashing," Ostfeld explains. Adding, "This spring, there will be a lot of Borrelia burgdorferi-infected black-legged ticks in our forests looking for a blood meal. And instead of finding a white-footed mouse, they are going to find other mammals -- like us."

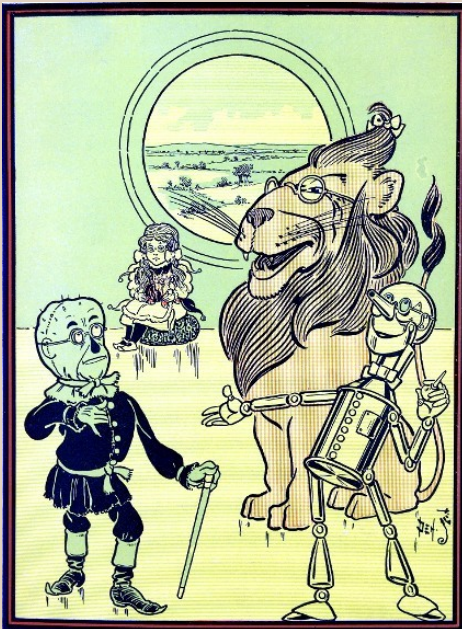
For more than two decades, Ostfeld, Cary Institute forest ecologist Dr. Charles D. Canham, and their research team have been investigating connections among acorn abundance, white-footed mice, black-legged ticks, and Lyme disease. In 2010, acorn crops were the heaviest recorded at their Millbrook-based research site. And in 2011, mouse populations followed suit, peaking in the summer months. The scarcity of acorns in the fall of 2011 set up a perfect storm for human Lyme disease risk.

Black-legged ticks take three bloodmeals -- as larvae, as nymphs, and as adults. Larval ticks that fed on 2011's booming mouse population will soon be in need of a nymphal meal. These tiny ticks -- as small as poppy seeds -- are very

“An educated man is thoroughly inoculated against humbug, thinks for himself and tries to give his thoughts, in speech or on paper, some style. “

~ Alan K. Simpson , former US Senator from Wyoming

We agree with Senator Simpson as he very compactly describes what is the essence of Critical Thinking. Accordingly we invite Phactum readers and anyone else to ponder a proposition and put pen to paper to refine and share thoughts with others ... with your own style.



"How can I help being a humbug?" said the Wizard of Oz

Thoughtful Letters to the Editor and other Correspondence are highly valued for inclusion in Phactum. If you have interest in some matter that interests or bugs you, why not write your thoughts and share those thoughts with other Phactum readers? Writing is the perfect plan to ponder a problem, refine critical thinking skills, and perhaps enlighten others.

Articles, poetry, Letters and Rants to the Editor, spelling corrections, suggestions to improve Phactum, items for the calendar, and other matters of interest are wanted for Phactum. Topics in Science, History, the Occult, and Paranormal are very welcome, but please, no partisan politics.

Send submissions to the Phactum Editor at phactpublicity@aol.com



White legged mouse. Cute but is the preferred host of black-legged ticks, which carry Lyme disease.



Blacklegged ticks (*Ixodes scapularis*) adult female, adult male, nymph, and larva on a centimeter scale. Also known as deer ticks.

effective at transmitting Lyme to people. The last time Ostfeld's research site experienced a heavy acorn crop (2006) followed by a sparse acorn crop (2007), nymphal black-legged ticks reached a 20-year high.

The May-July nymph season will be dangerous, and Ostfeld urges people to be aware when outdoors. Unlike white-footed mice, who can be infected with Lyme with minimal cost, the disease is debilitating to humans. Left undiagnosed, it can cause chronic fatigue, joint pain, and neurological problems. It is the most prevalent vector-borne illness in the U.S., with the majority of cases occurring in the Northeast.

Ostfeld says that mild winter weather does not cause a rise in tick populations, although it can change tick behavior. Adult ticks, which are slightly larger than a sesame seed, are normally dormant in winter but can seek a host whenever temperatures rise several degrees above freezing. The warm winter of 2011-2012 induced earlier than normal activity. While adult ticks can transmit Lyme, they are responsible for a small fraction of tick-borne disease, with spring-summer nymphs posing more of a human health threat.

Past research by Ostfeld and colleagues has highlighted the role that intact forest habitat and animal diversity play in buffering Lyme disease risks. He is currently working with health departments in impacted areas to educate citizens and physicians about the impending surge in Lyme disease.

Lyme disease is a rather nasty affair that can in some people become an endless chronic infection causing neurologic problems, arthritis, fatigue, skin rash, and other symptoms. It is rarely fatal in otherwise healthy adults. Treatment is with antibiotics but prolonged usage introduces other problems.

In 1998 GlaxoSmithKlein introduced a vaccine that was highly effective but that vaccine met with anti-vaccine critics and was forced off the market in 2002. Today there is no vaccine available for humans although dogs are well protected.

Homeopathy is of course ready to jump into the picture with glowing claims of cure, often by 30C super dilutions of *Borrelia burgdorferi*, the bacteria that causes Lyme disease. We are skeptical of this approach to restore health as the

curative substance has been diluted out of existence.

Frankenfish come to Philadelphia

PhACT member Don Nigrone who is actively involved with controlling invasive species at the John Heinz National Wildlife Refuge near the Philadelphia International Airport will not be happy about this development. It seems that an invasive species of eel-like fish native to various parts of Asia have now take residence at the Refuge. The Northern Snakehead is voracious, will grow to about 15 pounds, will eat almost anything including mammals, and locally has no natural enemies.

<http://www.aroundphilly.com/blog/2012/03/26/frankenfish-invade-philly-waters/>

In addition to the qualities listed above snakeheads have ferocious teeth, can walk across short stretches of land from pond to pond, and are really ugly! Fortunately these pests are tasty served as fish tacos, broiled, pan-fried, or as ceviche.

Barbecued snakehead fish

Ingredients:

- 1 Snakehead fish
- 2 tbsp. canola oil
- 1 tbsp. fresh chopped cilantro
- 1 tbsp. lime juice
- 1 tsp. sugar
- jalapeno peppers (to taste)
- salt and pepper (to taste)

Recipe:

Lop head off fish. Chop tail off fish. Yank out entrails. Discard. Slice fish down the center. Rinse off blood and marrow. Set aside. Combine other ingredients in food processor. Brush onto fish. Allow to marinate for about 20 minutes. Place on hot grill, skin side down. Cook about seven minutes, or until raw fish look is gone. Eat, but be careful not to swallow bones. **Buon appetito!**



At the Creation Museum

In February of this year I had occasion to be in Kentucky

and could not resist a visit to the Creation Museum at Florence which is situated near Cincinnati, Ohio. I had reported about this museum four years ago in Phactum, July/August 2008 page 7.

www.phact.org/data/phactums/Phactum%202008-07.pdf

Dr. David Cattell had asked me in 2008 about that weighty matter of Adam and Eve having navels, a question not on my mind during my first visit. This time I did try to observe and answer that Cosmic Question but the mystery persists as museum curators cleverly shrouded that and other body parts.

Near the museum entrance is a nicely rendered scene from Eden. Pictured here is a sexually ambiguous individual



happily sitting by a small pond; nearby an alert muscular looking carnivorous dinosaur. The time period clearly must be After the Fall since the human is wearing clothing. Un-

fortunately, as a result of Eve partaking of the Fruit of the Tree of Knowledge, many vegetarians became carnivores which suggests that this human is about to be lunch.

Not a lot has changed at the museum, but there is a spectacular new development called Ark Encounter, an ambitious project devised by Answers in Genesis, a Christian Ministry dedicated to combating evolution and preaching Bible Inerrancy. Ark Encounter promises to be an interesting and fun experience.

The project is massive and will eventually be an 800 acre, \$150 million theme park centered around a full scale replica of The Ark. The Ark will be the first portion of the exhibition open for tourism in 2014. It in itself is a considerable undertaking as it is being built to biblical specification of 300 cubits length (450 feet) and 50 cubits width (75 feet). This marvel of marine engineering will be constructed by Amish carpenters using old fashioned techniques such as pegs in lieu of nails and sawn timbers. The original Ark was constructed of gopherwood but there is little word as to where sufficient supply might be found. The gopherwood problem is compounded by the fact that biblical scholars do not know exactly what kind of wood gopherwood really happens to be, but cedar is a popular speculation.

Ark Encounter is not without some controversy in Kentucky. It seems that the Legislature and Governor have proposed a \$43 million tax break for the theme park and in addition will allocate about \$11 million for improvements to Interstate Highway 75 to better handle increased traffic. These expenditures, as one might expect, have angered state/church separationists claiming constitutional infringements. On the other hand, under Kentucky's Tourism Development Act, tourist attractions can get back up to 25 percent of their development costs over 10 years from sales tax generated at the facility. Ark Encounter anticipates up to 1.6 million tour-

INSTITUTE FOR RELIGION AND SCIENCE SPRING 2012 LECTURE SERIES

Monday, April 16, 7 pm: "Reflections on Faith and Fossils," Peter Dodson, Ph.D., Dinosaur Paleontologist, University of Pennsylvania to be held at the Antoinette Iadarola Center for Science, Education, and Technology Lecture Hall at Cabrini College, Radnor, PA

Thursday, May 10: "Heaven and the Heavens," Edward Devlin, Ph.D., Astronomer, Villanova University to be held in the Barn at Pendle Hill Retreat and Conference Center, Wallingford, PA

Reading Circle:

John Haught's Making Sense of Evolution: Darwin, God, and the Drama of Life will be the subject of a Reading Circle to be held monthly at the Walker Room, Logue Library at Chestnut Hill College. The first meetings are scheduled for Thursday April 19 and Thursday May 17, 6:30 pm – 8:00 pm. If you are interested in joining at this time, please email Institute4RS@chc.edu for more information.

ists per year.

I look forward to visiting Ark Encounter in 2014 and

MCHUMOR.com by T. McCracken



"Cubits? Haven't You gone metric yet?"

Cartoon by T. McCracken
<http://www.mchumor.com/>
 Used by Permission

again in some following year when the remainder of the theme park has been opened to the public. The over hundred

foot tall reconstruction of the Tower of Babel will be most impressive even though it does not quite reach Heaven. I do hope that my written meanderings do not develop an illucid overtone after my visit.

Ron Weinland, Prophet of God

Get a load of this!!!

Tom Napier turned me on to a sordid tale, writing: "Ronald Weinland, who considers himself a prophet of God, continues to warn that Jesus Christ is returning on May 27, 2012. For those who do not believe him and mock his message, Weinland claims that they will die from cancer."

How fascinating. Weinland is a Young Earth Creationist from New Zealand. At the Creation Museum the director, Kenneth Ham, is a Young Earth Creationist from Australia. Perhaps they share some kindred spirit and enthusiasm for the Biblical view of the cosmos and life on Earth.

Regardless of sharing a kindred spirit or not Weinland insists that the Second Coming will occur on May 27, 2012, a mere 12 days before he is scheduled to appear before the Federal District Court of Eastern Kentucky, Northern Division at Covington which happens to be situated about 10 miles from the Creation Museum at Petersburg, KY.

Weinland is free on bail of \$20,000 and has been required to surrender his passport. He was accused in November 2011 by federal prosecutors of 5 counts of criminal federal income tax avoidance to the tune of \$357,000.

We wish Evangelist Weinland good health for many years and ask him to kindly deliver our best regards to Evangelist Kent Hovind aka Doctor Dino.

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Philadelphia Nerd Nite is held the second Wednesday of each month, under normal circumstances.

However, it's only once a year that the Philadelphia Science Festival comes around.

Consequently, we have moved the **April Nerd Nite to Thursday the 26th** to fall in line with the festival, which runs from the 20th to the 29th.

Check out other great festival events at: <http://www.philasciencefestival.org/>

This year, Nerd Nite is taking a scholarly look at 2012 apocalypse mania. Are we really all going to die at the end of the year or is it just a giant Mayan misunderstanding? And, anyway, what is it about the idea of apocalypse that is so compelling? And what to do if there **is** a disaster of epic proportions?

We will have the answers for you in these three talks:

- Simon Martin from the Penn Museum of Archeology and Anthropology will speak on "**The End is Not Nigh: Fact and Fantasy in the Maya 2012 Phenomenon**"
- Elizabeth Sumpter will speak on "**Apocalyptic Soul: Seeing Through Image in the Age of End Times**"
- Scott Knowles from Drexel University will teach us "**How to Survive the Apocalypse**"

Nobody knows how to party like it's 2012 like the **West Philadelphia Orchestra**. We are very happy that they will be back again this year to entertain you between speakers.

Thursday, April 26th at Frankford Hall, at 1210 Frankford Avenue. The show will start at 8:00 instead of 7:30, and the cover is \$5.

The local Nerd Nite website is: <http://philadelphia.nerdnite.com/updates/>



Meeting Report - March 2012

“The New Alchemy” Tom Napier is a Physicist and Freelance Writer

**PhACT wishes to thank Marko Kopij who prepared this meeting report.
Mr. Kopij is a Physics student of Dr. David Cattell at Philadelphia Community College.**

During the PhACT meeting on March 17th 2012, Mr. Napier discussed cold fusion. At first, the meeting began with how cold fusion works and what is required for fusion to take place. As the meeting progressed, Mr. Napier presented other types of nuclear energy, but I will get to that later.

So the point of fusion in most cases is to obtain a way of generating a certain amount of energy. Thus, fusion can take place but is it beneficial? For example, for fusion to be beneficial; it needs to put out more energy than is required to make the fusion occur. Furthermore, Mr. Napier pointed out how there are two types of fusion: cold fusion and hot fusion. Hot fusion is where fuel reaches tremendous temperature and pressure inside a fusion reactor, or a star (our sun is a great example of a hot fusion reactor) to generate energy. In addition, Mr. Napier pointed out how elements such as Iron or Nickel cannot be broken down so using them in a fission environment would not be possible.



Andrea Rossi with his cold fusion reactor

Cold fusion has been claimed to take place in chemical cells where hydrogen nuclei fuse together without high temperatures. However, the experimentalists who have seemingly demonstrated cold fusion over the years have been unable to explain the underlying mechanism that drives the said reaction they claim to observe. Thus the scientific community has largely turned its back on this line of research. Moreover, during the meeting Mr. Napier explained the advantages and disadvantages of each type of fusion. Nevertheless, it seems like the scientific community has turned the blind eye on cold fusion due to experimenters in most cases unable to provide any data of how it works.

During part two of the meeting, Mr. Napier described companies that claim to have a fully working cold fusion reactor on a small scale, while taking money and so called “pre-orders” but do not have the sufficient data to back up their claims or even a guarantee of a working reactor. Plus they deny any independent tests on their reactors that really question their claims and credibility which seem bogus in the first place, as Mr. Napier commented. From a personal perspective, I agree with Mr. Napier that there is no independent test data on the reactors these companies claim to have. Thus, there is no reason to buy them, even though there was a buyer

who bought a reactor from one company as Mr. Napier mentioned.

In conclusion, the second part of the meeting consisted of companies denying any independent tests and crediting irrelevant statistics like journals without any credible data to back up their credibility. Simply put: claims full of empty promises.



2ND ANNUAL PHILADELPHIA SCIENCE FESTIVAL

NAME THAT BEER!

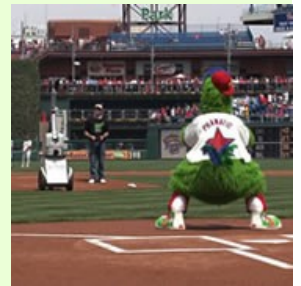
The brewmasters at Yards are again crafting a special batch of beer for the Philadelphia Science Festival. Last year it was a pale ale called "E=MC Beered." This year it's a nice bold Weizenbock. Want to help us name it? Cast your vote at Philly.com/food. Go ahead, um, "hop" to it.



BRAINS AND BRAWN

Tickets for our Signature Events won't go on sale until March - with one notable exception: Science Day at the Ballpark with the Phillies. This was the first event to sell-out last year, so visit here to get yours today.

Science Day at the Ballpark: Saturday, April 28 - 7:05PM (\$20 - \$30)



IT'S ALL FUN AND GAMES.

The Festival again kicks off with an enormous outdoor carnival around Logan Circle on the Benjamin Franklin Parkway. Science comes to life through hands-on interactives, exhibits, live performances, and demonstrations.

Science Carnival on the Parkway: Saturday, April 21 - 11:00AM-4:00PM (Free all day)



75+ PROGRAMS COMING SOON

Explore with your taste buds, meet science superheroes, see beauty in biomechanics and hear the science behind your favorite music. The 2nd Annual Philadelphia Science Festival will have something to excite every sense. Watch for a complete list of immersive, interactive programs - more than 75 in all! - coming to your inbox in mid-February. This year, we'll be requiring reservations to many of the events (even the free ones), so you'll want to register early.

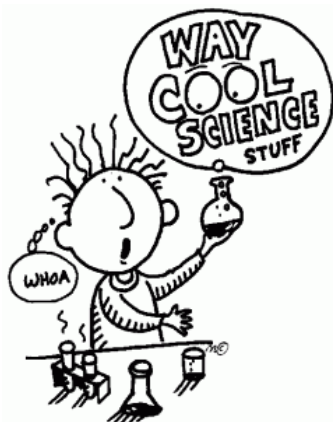
In the meantime, join us on:

- ◆ Facebook (<https://www.facebook.com/PHLScienceFest>)
- ◆ Twitter (<http://twitter.com/phlsciencefest>)
- ◆ Foursquare (<https://foursquare.com/phlsciencefest>)
- ◆ YouTube (<http://www.youtube.com/user/PHLScienceFest>), where you can check out some great program recaps from 2011!



PhACT Awards Prizes at 2012 Bucks County Science Fair

PhACT members Tom Napier, Philip Krieg, and PhACT President Eric Krieg went to the Delaware Valley College, located near Doylestown, PA, on March 13th to participate as judges in the 2012 Bucks County Science Fair. They awarded 3 prizes for critical thinking funded by donations by PhACT members.

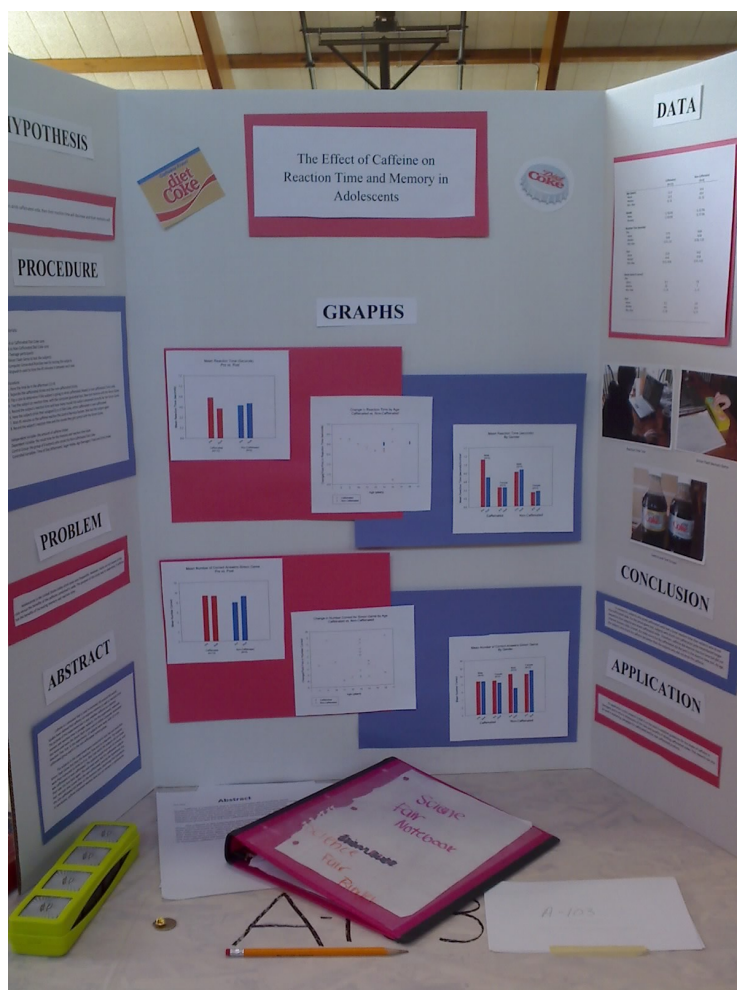


First prize was awarded to Erin Lane of Holicong Middle School on "The Effect on Memory and Reaction Time With the Use of Caffeine" - she did an excellent job of trying to have controls and to avoid bias in participants. She did the best job in responding to our live question, "what kinds of sources of error did this have?"

For second place Michelle Xu also of Holicong Middle School did "Leading Edge Tubercles Effect on Lift on a Wing". She actually proved that small airplanes go farther with small notches on the wings.

For third place Sam Czupich of Our Lady of Mount Carmel School did "Using Refraction of Light to Study Diffusion in Liquids."

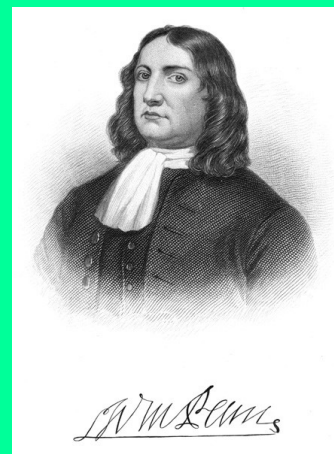
PhACT gives prizes to the 6th - 8th grade age category because we hoped to encourage young people to keep an interest in science. We found it uplifting to see all this youthful enthusiasm for science and reason - it left us with a sense of hope for the future. We appreciate our members who donated towards the prize fund for this program.



**"The Effect on Memory and Reaction Time With the Use of Caffeine"
Science Fair display by First Place winner Erin Lane.**

Rhubarb in the World of William Penn

by Clarissa Dillon, Ph.D.



"Take of the Best Rhubarb..."¹

In the world of William Penn it was the root of the rhubarb. It was used as an effective purge, to treat a variety of health problems.

There was a great deal of interest in rhubarb during the colonial period, starting with an attempt to identify the different varieties: the true rhubarb; monk's rhubarb; the true monk's rhubarb; the Pontic rhubarb, also called the English rhubarb.² Those selling it evidently lumped the varieties promiscuously together and sold them under a single name.³ This was frowned upon by the medical profession because their attributes differed.

Garden Dock, called Monks' Rhubarb Lapathium sativum patens...has been called monks' rhubarb from its possessing some of the virtue of the true rhubarb; but it possesses them only in a slight degree, it is very purgative, and less astringent.

*There is another plant of the dock kind, called bastard rhubarb,...It has the same virtues with the monks' rhubarb, but in a much less degree, so that it is very wrong to use it in its place.*⁴

Benjamin Franklin was instrumental in sharing seeds and information about rhubarb with people in Britain and Pennsylvania. He wrote to John Bartram from London on 17 October 1772:

I hope the Rhubarb you have sown and distributed will be taken care of. There seems to me no doubt of its doing as well with us as in Scotland. Remember that for Use the Root does not come to its Perfection of Power and Virtue in less: than Seven

*Years. The Physicians here who have try'd the Scotch, approve it much, and say it is fully equal to the best im-ported.*⁵



Monk's Rhubarb

We know Bartram received and planted the seeds because of Franklin's letter of 10 February 1773:

*...I am glad to learn that the turnip seed and the rhubarb grow with you, ...It may be depended on, that the rhubarb is the genuine sort. But, to have the root in perfection, it ought not to be taken out of the ground in less than seven years.*⁶

The most popular gardening writer of the time recommended a shorter growing period.

*...keep them clear from Weeds; and in two or three Years time the Roots will be fit for Use, when they should be taken up soon after their leaves decay in Autumn.*⁷

It was not necessary to grow rhubarb for use. For those unable or unwilling to grow it and process the root, it was possible to purchase it, already cleaned, dried, and chipped. Frederick Phile advertised it for sale in the Pennsylvania Packet, 14 November 1778 and William Richards offered it in the Pennsylvania Gazette, 21 June 1780. A Chester County physician reported the loss/theft of four ounces valued at 5/-⁸.

Rhubarb is a mild cathartic, which operates without violence or irritation, and may be exhibited with safety even to pregnant women and children. Besides its purgative quality, it is celebrated for an as-tringent one, by which it strengthens the tone of the stomach and in-testines,

and proves useful in diarrhoeae and disorders proceeding from a laxity of the fibres.. Rhubarb in substance operates more powerfully as a cathartic than any of the preparations of it. Watery tinctures purge more than the spirituous ones, whilst the latter contain in greater perfection the aromatic, astringent, and corroborating virtues of the rhubarb.⁹

It was given in various forms. A self-help book offered it for a bloody flux in small pieces.

*...grated Rhubarb, as much as lies on a Shilling, with half as much of grated Nutmeg, in a glass of white Wine, lying down, every other Night. Tried.*¹⁰

Another book for family use provided the following receipt:

Bolus of Rhubarb and Mercury.

Take of the best rhubarb, in powder, from a scruple to half a drachm; of calomel, from four to six grains; simple syrup, a sufficient quantity to make a bolus [medicine bound with syrup or mucilage for ease in swallowing].

*This is a proper purge in hypochondriac constitutions; but its principal intention is to expel worms. Where a stronger purge is necessary, jalap may be used instead of the rhubarb.*¹¹

A liquid form would also have been easy to swallow.

*Tincture of rhubarb, made of two ounces of rhubarb, half an ounce of cardamom seeds, and a quarter of an ounce of saffron, with a quart of spirit [molasses spirit preferred].*¹²

Its use as a purge was prescribed in treatments for a wide variety of complaints in addition to those mentioned above. The self-help manual recommended it for jaundice in children and to purge during smallpox.¹³ A physician mentioned it for measles, whooping cough, St Anthony's fire, costiveness, diarrhea, the bloody flux and more.¹⁴ It was an ingredient in Cholic Elixir.¹⁵

The applications recorded in a Philadelphia diary give us the spectrum of actual use; for men--in colicky disorders, "disordred bowels," and being "unwell;"¹⁶ for women--colic and cramp, St Anthony's fire, vomiting and flux, and for being "sick;"¹⁷ and for children--teething, worms, "disordered bowels," as part of pretreatment before being- inoculated

against smallpox, and for a rash as well as for being "poorly."¹⁸ Servants, considered members of the family, were also treated; in 1794, one was given spice and rhubarb and in 1795, two "black boys" were purged.¹⁹ Spiced rhubarb was one way of administering the root. It took me a while to find directions for making it.

To make spiced Rhubarb

*Take 1/4 oz of chip'd Rhubarb 1/4 oz of Mace & 1/4 oz of Nutmegs put them into 1 pint of Water bruis'd altogether. Let it simmer an hour close cover'd, afterwards sweeten it with loaf Sugar, put to it as much Spirit as will make it strong enough to keep then bottle it for use. Dose about a Wine glass.*²⁰

This was not only administered to servants in the household mentioned above. In 1797 the head of the house was suffering from severe pain in his back and loins, so he took spiced rhubarb.²¹ It was ordered given to an adult daughter by a physician in 1794 and 1795 and a granddaughter was given it for "lax and vomiting."²²

Today rhubarb stalks are a welcome sight in the spring, appearing on the table in pie, sometimes paired with strawberries. This use developed slowly, beginning in the middle of the 18th century. A receipt, unusual for the period, appeared in a letter to John Bartram from Peter Collinson in 1759.

*...both this [Siberian rhubarb] and the Rhapontick make excellent tarts before most other Fruits fitt for the purpose are ripe all you have to Do is take the stalks from the Roots & from the Leaves, peel off the Rind and cutt them in Two or Three Pieces and put them in Crust with sugar and a little Cinnamon, then Bake the Pye or Tarts Eats Best Cold, it is much admired here [in England], and has none of the effects that the Roots Have, it eats most like Gooseberry Pye--*²³

I have baked rhubarb pie on Bartram's hearth, using stalks from the kitchen garden--probably the most "historic" cooking I'll ever accomplish. Cinnamon adds a lovely flavor and the pie was "much admired" by all who tasted it. Don't you love the assurance that the stalks won't act like the roots!

It is possible to track this use in a few sources. Philip Miller knew and shared information with Peter Collinson in London, so it is not surprising to find this:

...of late Years, the Footstalks of the Leaves have been used for making of Tarts in the Spring of the Year, as they may be had before Goosberries are large enough for that Purpose. These Footstalks most have their out-er Skin peel'd off, otherwise they will be very stringy: when this is done, the pulpy Part will bake very tender, and almost as

From Noah Webster's Dictionary of 1828

BO'LUS, n. [L. bolus; Gr. a mass.] A soft mass of any thing medicinal to be swallowed at once, like a pill. It may be of any ingredients, made a little thicker than honey.

*clear as the Apricot, and having an agreeable acid Flavour, is by many Persons es-teemed for this Purpose.*²⁴

An English cookbook published at the end of the 18th century, and reprinted in Philadelphia, also gave directions.

Rhubarb Tarts

*Take the stalks of the rhubarb that grows in the garden, peel the Skin off, and cut them the size of a gooseberry, put them into china or earthenware patty-pans, with sugar over them, and put on a paste, ei-ther puff or tart, ice them, and bake them the same as green goose-berries, and they will eat like them.*²⁵

Since a number of reprints from the collection in The British Library have been added to my shelves, I decided to see if any of them also provided such receipts. They didn't but I was inspired to look at other books that had been around for a while. Not all are cookbooks. One receipt turned up, considerably shortened.

Rhubarb Tarts

*Take the stalks of the rhubarb that grows in the garden, peel it, and cut it into the size of a gooseberry, and make it as gooseberry tart.*²⁶

Another book combined information about rhubarb in the garden and the kitchen.

*RHUBARB, if sowed in March or April, thin on a deep rich moist soil, and must be thinned or transplanted two or three Feet apart. The large Stalks of the Leaves, when the Skin is taken off, is used in the spring to make Tarts.*²⁷

This book has no publication date, but it is possible to determine, by reading the pre-face, that it came out after 1752 when the calendar was adjusted: "...as the Directions contained in them [short Kalendars and other Books upon this pleasing Branch of Knowledge] are calculated for the Old-stile,..."²⁸

Another receipt in a book from the end of the 18th century sounds very much like earlier ones.

Rhubarb Tarts

*TAKE the stalks of rhubarb..that grows in a garden, peel them, and cut them into small pieces. Then do in every respect the same as a gooseberry tart.*²⁹

A less familiar book by a well-known 18th-century cookbook author not only gave directions for using the stalks, but also provided some interesting commentary.

The following receipts were sent to the author, when the book was just printed, by a good housekeeper.

To make rhubarb tarts.

Take stalks of English rhubarb, that grow in the gardens, peel and cut it to the size of gooseberries, sweeten it, and make it as you do gooseberry tarts: how to make the crust, you have in the Art of Cookery [her cookbook].

*These tarts may be thought very odd, but they are very fine ones, and have a pretty flavour; the leaves of rhubarb are a fine thing to eat for a pain in the stomach [don't you dare! They're poisonous!], the roots for tincture, and the stalks for tarts.*³⁰

A common theme running through these early receipts is the comparison to goose-berry tarts--in the making, the baking, and the eating. Fresh gooseberries were available for pies and tarts early in the spring. I have not yet found a mention of eating rhubarb tarts or pies in the world of William Penn, but the following reference has turned up. Martha Ballard, a midwife in Hallowell, ME wrote in her diary: 23 May 1808 "...I roasted Veal for Dinner, made Rhubarb tarts aftern...." ³¹

It took about a century for rhubarb to be known as pie-plant.

18th Century Cooking and Food Processing Workshop

Saturday, April 14, 2012, 9:30 AM to 2:30 PM at the 1696 Thomas Massey House, Lawrence Rd at Springhouse Rd, Broomall, Pennsylvania.

Historian Dr. Clarissa Dillon will lead a workshop in cooking and food processing crafts using tools of the Philadelphia Colonial era. A suckling calf stomach will be processed using a receipt from the 18th Century to create the rennet needed to set a curd (the first step in cheese making). The workshop will cost \$35. Registration is necessary. Call Dr. Dillon (not the Massey House) at (610) 642-4269.

Rhubarb Stalks...

*Rhubarb stalks, or the Persian apple, is the earliest ingredient for pies, which the spring offers. The skin should be carefully stripped, and the stalks cut into small bits, and stewed very tender. These are dear pies, for they take an enormous quantity of sugar. Seasoned like apple pies....*³²

Stewed rhubarb has not been found in the books consulted. Today, there are even more adventurous uses, like Rhubarb Spritzer; Black Bass with Silky Rhubarb Sauce; Pork Tenderloin with Rhubarb; and more!³³ No matter your preference, spring is the time to enjoy rhubarb.

Endnotes

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2. Philip Miller, The Gardeners Dictionary [abridged 1754 ed.] (Codicote, UK: Whel-den & Wesley, Ltd ...1969), p. 60.
3. Ibid., p. 742
4. Sir John Hill, M.D., The Family Herbal... [orig. pub. 1774] (Bungay: Printed by C. Brightly and T. Kinnersley [1812]), p. 292.
5. The Papers of Benjamin Franklin in 17 vols, ed. by William B. Willcox (New Haven and London: Tale University Press, (1959-2003), Vol. 19, p. 317. Also in The Correspondence of John Bartram 1734-1777, ed. by Edmund Berkeley and Dorothy Smith Berkeley (Gainesville, FL: University Press of Florida, 1992), p. 751.
6. Ibid., pp. 755-756.
7. Miller, op. cit., p. 744.
8. Dr John Davis, Tredyffrin, in "A Register of Damages..." (Unpublished manuscript/typescript in The Chester County Historical Society, West Chester, PA), p. 178.
9. New Dispensatory... (London: Printed for J. Nourse...1753), p. 190.
10. John Wesley, Primitive Physick:... 4th ed. (Bristol: Printed by William Pine, 1770). p. 82.
11. Buchan, op. cit., p. 188.
12. Hill, op. cit., pp. xxv-xxvi.
13. Wesley, op. cit., p. 91; p. 122.
14. Buchan, op. cit., p. 188; p. 212; p. 192; p. 227; p. 247.
15. "Receipt Book for John H. Mundall Philadelphia, c. 1797" (Manuscript in The College of Physicians of Philadelphia, p. 2; self-published as To Strengthen to-Comfort, and to Heal:.. by Clarissa F. Dillon, 2004), p. 4. Also in "Receipt Book of Margaret Hill Morris" (Unpublished manuscript in The Quaker Collection, Hav-erford College, Haverford, PA), receipt credited to her brother-in-law, Dr Charles Moore, p. 6.
16. The Diary of Elizabeth Drinker, ed. by Elaine Forman Crane (Boston: Northeastern University Press,1991), p. 310; p. 314; p. 717; p. 719.
17. Ibid., p. 148; p. 215; p. 315; p. 316; p. 385.
18. Ibid., p. 117; p. 178; p. 228; p. 346; p. 347; p. 356.
19. Ibid., p. 609; p. 680.
20. Mundall, op. cit., p. 1; Dillon, p. 4.
21. Drinker, op. cit., p. 974.-
22. Ibid., p. 551; p. 739.
23. Bartram, op. cit., p. 125.
24. Miller, op. cit., p. 742.
25. Richard Briggs, The English Art of Cookery... another ed. (Philadelphia: Printed for W. Spotswood, R. Campbell and H. Johnson, 1791 & 1792), p. 372.
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28. Ibid., p. iii.
29. William Augustus Henderson, The Housekeeper's Instruction; or Universal Family Cook (London: Printed and sold by W. and J. Stratford, n.d. [c. 1793]), p. 203.
30. Hannah Glasse, The Compleat Confectioners... (Dublin: Printed by John Exshaw.... 1742, Xerox copy from The British Library, London), p. 131.
- 31.. The Diary of Martha Ballard 1785-1812, ed. by Robert R. McCausland and Cynthia MacAlman McCausland (Rockport, ME: Picton Press, 1992), p. 636.
32. Mrs Child, The American Frugal Housewife, 12th ed. (Boston: Carter, Hendee, and Co., 1833; facsimile reprint by Ohio State University Libraries, Worthington, OH, 1971), p. 69.
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About the author

Clarissa F. Dillon is an independent scholar with a doctorate in History from Bryn Mawr College. Her dissertation discussed 18th-century kitchen gardens in southeastern Pennsylvania, the uses of the plants, and their place in women's work. Her research involved both the traditional archival kind as well as replication--doing their work their way to the greatest extent possible. She has been involved in "living history" since 1973 and shares the results of her investigations into women's lives and domestic processes through demonstrations, programs, and self-published materials.

Ω Ω Ω

Online Scams and Scamming the Scammers

By Howard J. Wilk



You've received an email from a dying, elderly woman, sometimes hours before surgery for cancer, who doesn't trust the people around her, and wants to give her money to you to give to charity.

Or you get an email from Barrister Mark William. Seems that someone with the same last name as yours died in the 2004 tsunami [insert link to general BBC story about the 2004 tsunami here] and left no survivors. He did leave money in the bank, to the tune of USD \$25,000,000 (25 MILLION UNITED STATES DOLLARS). Barrister William wants you to stand in as next-of-kin to get the money.

Maybe Capt. Thomas James is stationed in Iraq and has found some enormous amount of Saddam Hussein's gold and wants your help getting it into this country. You get 30% of it as a fee for your services.

Or a real live actual Princess wants your help in getting her late father's oil money away from her scheming relatives.

Could be that they have some long-overdue money for you but they don't tell you why.

Or, the most nefarious of all, you get an email from the INTERPOL FRAUD INVESTIGATION UNIT or some United Nations agency (maybe from Ban Ki-moon himself); they know you've been scammed before and they've recovered the money and want to give it back to you.

The list of possibilities goes on and on. Invariably there's a fee they need to get the money to you, and, no, they can't take it out of the money they're sending you. You need to send them \$778 by Western Union.

This is an exercise in critical thinking, which is why it's *Phactum*-worthy. Should you send them the money? When you do, the chance of seeing any of the money they have for you is less than the chance of being abducted by aliens. What should the scammers be thinking when they receive emails like the ones below from me?

Scammers' spelling, punctuation, grammar, etc. is atrocious, as is also the level of formality and the difference in language between written and oral English: that "to the tune of" is very common. But they are good at math. In the exchange below, they asked for \$978. I told them I only had \$540, so they asked for \$497. I checked with Western Union: The fee for sending \$497 to London is \$43. \$497 plus \$43 is, you guessed it, \$540.

I routinely get these email at my real address; sometimes I forward them to one of my fake addresses. And that's when the fun begins. Of course I want the money. Sometimes I play hard to get, as in below, where they want to offer me 30% and keep the 70% for themselves. I always insist on 50-50, and they always agree.

With one exception (described below), I drag these exchanges on for as long as possible. They're crooks and I want to waste their time. For me it's also an exercise in creative writing; it's not easy for me to write semi-literately. It's much easier when I write as a 64-year-old church-going widow in Des Moines.

The one exception is that it's important to me to have them send the last email. If I send an email and they don't reply, they've wasted *my* time. So sometimes I don't send an email if I think they won't respond. It's likely that sometimes they would have kept it going and so I cut the exchange off prematurely.

What I and many others do is called "scam baiting". There are two good Wikipedia entries, /scam baiting/ and /419eater.com/. All I ever do is email the scammers. Some baiters talk on the phone with their scammers. Some travel, often as a sting operation in cooperation with the media.

I just get the scammers to send emails. Others have done more. I've heard of a case where the baiter managed to get the scammer to send the baiter money. There's a famous case where a baiter got the scammer to travel over 1500 miles. You can read about that one at the Wikipedia entries and the links therein.

The following is a 48-email exchange from 22 February 2012 to 2 March 2012.

Most of the names and the numbers have been changed to protect the innocent and the guilty. The name I actually used for myself is a perfectly plausible-sounding name, and someone no doubt has it already. Happens all the time in fiction. Still, I went with a name that nobody has, according to Google: "Douglas H. Grumblerson", or "Doug Grumblerson", so that's the name I'm using here. The address I gave is a real Walnut Street address, and I chose one such that if it was looked up on Google maps, it looks like someone could be living above the shops, although no one actually does, at least not in the apartment number I

gave. These numbers will be represented as “nnn”. The phone number I gave is a non-working number, but I’m changing it here to 215-~~nnn~~-nnnn.

The scam used four names. I don’t know how many people I was actually dealing with. One name was not changed: I kept the two “Mohammed”s, because misspelling it was part of my shtick.

.....
From: Sgt Terry Mice <info@terry.live.co.uk>
To: douglashgrumblerson@yahoo.com
Sent: Wednesday, February 22, 2012 2:29 PM
Subject: Reply If Interested
Hello friend,

I hope my email meets you well. I am in need of your assistance. My name is Sgt Terry Mice. I am in the Engineering military unit here in Ba’qubah in Iraq,we have some amount of funds that we want to move out of the country.

My partners and I need a good partner someone we can trust. It is oil money and legal.

Basically since we are working for the government we cannot keep these funds, but we want to transfer and move the funds to you, so that you can keep it for us in your safe account or an offshore account. But we are moving it through Diplomatic means, to send it to your house directly or a bank of your choice using Diplomatic Courier Service.

The most important thing is that can we trust you? Once the funds get to you, you take your 30% out and keep our own 70%. Your own part of this deal is to find a safe place where the funds can be sent to. Our own part is sending it to you.If you are interested i will furnish you with more details.

But the whole process is simple and we must keep a low profile at all times. Waiting for your urgent response via my private email:sgtterrymice75@yahoo.com

This business is risk free.

Regards,
Sgt.Terry Mice.

.....
[Re: Reply If Interested]

DEar mr.mice ,
How come i get 30 you get 70thats no fair i help you only if moneys 50 50 is fairw ay.
Signed,
Doug Grumblerson

.....
From: Sgt Terry Mice <sgtterrymice75@yahoo.com>
To: Douglas Grumblerson <douglashgrumblerson@yahoo.com>
Sent: Wednesday, February 22, 2012 8:07 PM
Subject: Urgent Response Needed/Full Details

Hello Friend.

Thank you for your response. There is no risk what so ever, as regards this money. But the most important thing is that I do not want this money to go through the bank around here, It will not be safe for us,I have a very good, trusted and reliable diplomatic courier contact used mostly by our forces in Jordan, that can send goods easily through diplomatic and private military way, to anywhere in the world,without them being checked at any port of entry. They can deliver this money for you easily, to any address of your choice.

The baggage will be tagged diplomatic documents, and the courier

company, are not going to know the contents of the box. A few friends have used this means to convey goods, without being checked because of the diplomatic immunity they enjoy. Their charges are very high, but I will negotiate a way out from this end, till it gets to your door step anywhere and I will follow up immediately and meet with you for disbursement after you have received it.

I am very sure you will know the best way to handle this money for us,when it gets to your base. Please let me have the address where you want them to deliver the goods to you. It could be a home address or your Company address. As soon as I get it, I will start making arrangements as to sending the merchandise to you.

Your Direct Phone number is needed, so you can be contacted as soon as Shipment is in Motion. I will send the total since I can not take any chances by keeping cash on me. Your percentage will be 50%.What do you do for a living? Are you married with kids? Can you handle these funds? I will also want to see your passport copy or id/,driver’s License so I know who I am dealing with ok .We need to build trust ok!It is only me and my partners that know about the transaction from this end. Please if you know that you are not capable of handling this huge sum, please don’t allow me to send it, I can always find other means of dealing with this.

You know that the security is very important, you can not trust anybody therefore note that this transaction is not safe on the phone,remember to keep secret .I cannot call you on the phone or receive fax. The total sum amounts to \$25,000,000 MILLIONS US DOLLARS and I hope that you can handle it? I hope you are okay with this?

Everything must be done by email. Will you still help? I need your urgent reply in this regard.

Your Partner,

Sgt Terry Mice
.....
[Re: Urgent Response Needed/Full Details]

Dear mr. Mice,
Please to send to me the moneys address of nnnwalnut street apt. nnn philadelphia pa 19106 phone numbers 215-~~nnn~~-nnnn .
Singed,
Doug Grumblerson.
Ps im retire from rail road im widower no famly can you to send tome the moneys rihgt aways.

.....
[CONSIGNMENT IN PROGRESS]

My Dear Friend,

The package was airlifted early today by the United Nations task force handling all recovered properties to spain. There was a bomb scare at the depot this morning and all properties deposited for airlifting has been evacuated to Spain from where they will be sorted out and sent to their destinations.

It was an unexpected development. The agent has assured me that every items evacuated will get to their respective destinations as long as they were duly entered into the data system at the joint military depot here in Iraq. It is from Spain that you will be contacted for verification of the package and delivery information granted to you. The agent informed me that you will be contacted by the dispatch department by mail or phone call.

The handling company has its headquarters’ located in Egypt but you will be contacted via their agent at the branch office in Spain. Keep me informed of all communication and dealings with anybody as long as it has to do with the package. I have already paid for the delivery fee which amounted to almost \$20,000 US DOLLARS and I did that with the last of the money in my

possession and at the moment I am broke but can manage at least until we get this project completed.

Please when you are contacted be rest assured that there is nothing to worry about. It will be a normal verification procedure. Please my friend, everything depends on you to have the package delivered to you safely. It is documented in your name, address and phone numbers. If for any reason there is a need to re-confirm the content of the consignment, you are to inform the handling company that the consignment contains family valuables as recorded here in Iraq.

Most importantly, you must let the company know that the package is needed urgently at your location and must be shipped to you as soon as possible. You know we cannot afford to leave the package with them for too long. I expect to hear from you soon.

Tag Number: BTG/001/london/YYZ011

Thanks for your commitment towards this transaction,

Regards,

Sgt Terry Mice.



[CONFIRMATION]

Attention: Doug Grumblerson,
Good day from my humble office. As you should be aware already I am Senior Diplomat Sume Mohammed of the Arab Securities and Finance Company branch office in London, United Kingdom and Head Office in Cairo Egypt.
In our possession at the moment is a package consisting of one metallic box registered in your initials and ready to be delivered to your location.
Please confirm the above and also kindly inform this office if you would wish that your package be delivered to your location directly or you would wish to pick them up from our Head Office in Egypt. Both options above have charges but the delivery option has been handled by the sender of your package from Iraq. I will be needing the following information's from you as soon as possible as your package must be claimed or delivered to your location within the next 7 working days from today or they will be returned to its original location:
-your full names.
-your Delivering contact address.
-your direct telephone/fax number(s).
-a copy of any form of valid identification sent via email as an attachment.
I would also require you to provide this office with the identification tag number of your package as well as a brief

description of the content's of your package. Expecting your response as soon as possible,
Yours in Service,
Snr. Dipl. Sume Mohammed.
Arab Securities and Finance Company
London release office,
Tel: +44 nn-nnnn-nnnn

[Re: CONSIGNMENT IN PROGRESS]

Dear Mr. Mice,
I am home all the day of today can you send to me the money today.
Signed,
Doug Grumblerson

[Re: CONFIRMATION]

Dear Mr. Mahommed,
What is in the box can you send to me right away the box my name is Douglas H. Grumblerson live at nnn walnut street apartment nnn philadelphia pa 19106 phone numbers is 215-nnn-nnnn.
Signed,
Doug Grumblerson.

[INSURANCE FEES]

To: Douglas Grumblerson,

Your information's are in order and your consignment has been registered fully in your initials and ready for delivery anytime from now. However, you need to pay for the insurance policy that will be covering your package before it can be delivered to you. The insurance policy covering your consignment amount's to \$978 USD and you will be informed how to make this payment as soon as you are ready to do so. Note that you will be given full details of your delivery process as soon as payment is effected for your insurance policy covering your consignment.

Yours in Service,
Snr. Dipl. Sume Mohammed.
Arab Securities and Finance Company
London release office,
Tel: +44 nn-nnnn-nnnn

[Response Needed]

Dear Friend,

I just got your mail and I do understand your plight but I want you to understand one thing that I am in a war zone in Iraq so I am not allowed to carry money. I have spent a lot of money in regards to this transaction and I don't have any money with me for now so I want you to please assist me in this transaction so that we can put smiles on faces when the transaction is concluded because my life depends on this money.

Sgt Terry Mice

[Re: INSURANCE FEES]

Dear Mr. Mohammed,
Can you take the money from the box money's.
Signed,
Doug Grumblerson

[Re: Response Needed]

Dear Mr. Mice,
Can you tell me the money's what I should do home all day tomorrow

allso
Signed,
Doug Grumblerson.

.....
[ACKNOWLEDGEMENT]

Attention:Grumblerson,

Good day from my humble office. As you should be aware already I am Senior Diplomat Sume Mohammed of the Arab Securities and Finance Company branch office in London , United Kingdom and Head Office in Cairo Egypt .

Acknowledge the receipt of your mail, there is no way the consignment can be open, because the consignment has a code number and it has a diplomatic immunity.

Get back to me so that i can give you how to make the payment of the insurance fee, to enable us deliver the consignment to your location in your country.
Snr. Dipl. Sume Mohammed.

Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: ACKNOWLEDGEMENT]

Dear mr.Mohammedd,
What i shoud do how muchmoneys in the the box can you send to me the box moneys to day im am home please sir i need the moneyes.

Signed ,
Doug GrumblersonPS is there moneys in the box is ther gold in the box whats in the box please to tell to me

.....
[PAYMENT MODILITES]

Attn: Douglas Grumblerson,
This is the payment details below via WESTERN UNION for the INSURANCE FREE before we can deliver this CONSIGNMENT to you on or before 24 hours.

First Name:Patrick
Last Name: Sausage
Country: London-England
Address: Stadim Road, Fulham, 121Hq Stadim
Amount: \$978 USD

Once payment is made kindly send to us via email a copy of the payment receipt or the following details below:

SENDER NAME:
MTCN:
ADDRESS:

Yours in Service,
Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: Response Needed]

Dear Friend,

How are you doing today? I just got your mail and it is well noted.The diplomat will call or mail you on how to go about the consignment so all i need you to do is to get back to me as soon as you are been contacted by the diplomat so that we can conclude this transaction.

Sgt Terry Mice

.....
[Re: Response Needed]

Dear mr. mice ,
Yes im here at the home all of the day ill be wait for the dipomat ill be contact you then.

Signed ,
Doug Grumblerson

.....
[Re: PAYMENT MODILITES]

Dear mr. Mohammed,
What i shoud do the western onion there out of the business many years no more westernunion i think im am rihgt.

Signed,
Doug Grumblerson.

.....
[ACKNOWLEDGEMENT]

Attn: Douglas Grumblerson.

I acknowledge the receipt of your mail, you have to make the payment to enable us deliver the consignment to your country, why you have been ask to pay is that the consignment has to be ensure before we can deliver it to your location.

It the policy we operate here in United Kingdom
Yours in Service,

Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[URGENT RESPONSE NEEDED]

Dear Friend,

How are you doing today? I have not heard from you regards our transaction on ground i employ you write to the diplomat telling them that they should deliver the consignment to your country immediately that you need it urgently.i appreciate your concern towards this transaction.

Sgt Terry Mice

.....
[Re: URGENT RESPONSE NEEDED]

Dear mr. Mice,
I dont unde rstand you didnt give to me no diplomat e mail adres no phone numbers ether you tell to me wiat for diploma to contact to me he not email to me not call to me on by the phonewhat i shoud do please to tell to me.

Singed,
Doug Grumblerson

.....
[Re: ACKNOWLEDGEMENT]

Dear sir,
I dont under stand how i shoud pay to you moneys by wester union wire moneys theres not western union any more they out of the busines what i shoud do please to tell to me a nother way of the pay the fees money.s

Signed
Doug Grumblerson

.....
[ACKNOWLEDGEMENT]

Attn: Douglas Grumblerson,

I acknowledge the receipt of your mail, you can make the payment Via MONEY GRAM to us

First Name:Patrick
Last Name: Sausage
Country: London-England
Address: Stadim Road, Fulham, 121Hq Stadim

Amount: \$978 USD
Once payment is made kindly send to us via email a copy of the payment receipt or the following details below:

SENDER NAME:
MTCN:
ADDRESS:
Yours in Service,
Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: ACKNOWLEDGEMENT]

Dear mr. Moahmmmed,
Were is the money gran is moneygram a store or i sit wire moneys ,
Signed,
Doug Grumblerson
PS can you send to me the box today ify you get the fee moneysto day.

.....
[ACKNOWLEDGEMENT]

Attn:Douglas Grumblerson.

I acknowledge the receipt of your mail, once payment is made the consignment will have to be delivered to your country, to you on or before 24 hours,

Once payment is made kindly send to us via email a copy of the payment receipt or the following details below:

SENDER NAME:
MTCN:
ADDRESS:
Yours in Service,
Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[GET BACK TO ME ASAP]

Dear Friend,

How are you doing today? I have not heard from you all this while concerning the transaction on ground and i want you to contact the diplomat with the information provided below and get back to me as soon as possible.

Snr. Dipl.Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn
Email:musa_mohammed2@diplomats.com

I await your urgent response asap

Sgt Terry Mice.

.....
[Re: ACKNOWLEDGEMENT]

Dearmr.Mohammed,
I dont undrestand the money gram moneys you tell me of what is moneygram is it wire moneys is it inter net moneys how is shoud send to you money gram moneys please to tell to me.

Singed,
Doug Grumblerson PS all so how much moneys i dont reember .

.....
[Re: GET BACK TO ME ASAP]

Dear mr. Mice ,
Im verry sorry i contacts from mr.Mohamed be fore he dont tell to me he has the box the your moneys now i under stand but he tell to me to money gram moneys i dont know what money gram moneys

is please tot ell to me thank you.

Signed ,
Doug Grumblerson. Ps i ask to him he dont not make explain the moneys send of

.....

[Re: GET BACK TO ME ASAP]

My Dear Friend,

I just got your mail and it is well understood but next time please do inform me on every step in regards this transaction and i was made to understand that you have to come up with the insurance fee through western union or money gram before the consignment can be delivered to your country.i want you to please contact the diplomat letting them know if you are paying the fee through western union or money gram so that the consignment can be delivered to you in your country and tell them you need the consignment very urgently because we are behind time. i await your prompt response asap

Sgt Terry Mice

.....

[Re: GET BACK TO ME ASAP]

Dear mr, Mice,
I dont now how send wire moneys no westren union i dont now money grams sotre can i give to deliver man moneys when man he come to deliver box moneys.Or to go to the bank sned money ordo moneys what your address is i send to by the mail how much stamp moneys it cost to send to the over sea inever send mail letter to over the sea befor. Please to help me sir .

Signed,
Doug Grumblerson

.....

[Re: GET BACK TO ME ASAP]

Dear Friend,

I want you to go to any western union or money gram shop close to you in your state and make this payment so that the consignment can be delivered to you in your country because time is not on our side.i want you to do this asap.

Sgt Terry Mice

.....
[ACKNOWLEDGEMENT (YOUR NUMBER IS NEEDED URGENTLY)]

Attn:Douglas Grumblerson,

I acknowledge the receipt of your mail, you are to make the payment via western union money transfer to us or with money gram for the insurance fee so that the consignment can be in your country.

You are to go to any western union or money gram shop to make the payment to us, below is the payment details:

First Name:Patrick
Last Name: Sausage
Country: London-England
Address: Stadim Road , Fulham, 121Hq Stadim
Amount: \$978 USD

Once payment is made kindly send to us via email a copy of the payment receipt or the following details below:

SENDER NAME:
MTCN:
ADDRESS:

Yours in Service,

Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: GET BACK TO ME ASAP]

I want you to go to any western union or money gram shop and make the payment with the payment details which the diplomat gave to you

Sgt Terry Mice
.....
[Re: GET BACK TO ME ASAP]

DEar mr.Mice,
The diplomat he give to me address to send to the wire moneys to but i dont know were westernunion andmoney gram shop is a bank with wire money shop be cause the banks close untill monday can i send to the diplomat mondaythe moneys please mr. mice i want the box..
Signed ,
Doug Grumblerson.

.....
[LOCATE THIS ADDRESSES CLOSE TO YOU.]

(1)810 Chestnut St
Philadelphia, Pennsylvania 19107

(2) RITE AID #242
730-32 Market Street
Philadelphia, Pennsylvania 19106

(3)KMART #3953
901-99 Market Street
Philadelphia, Pennsylvania 19107

(4)MONEY MART #2153
930 Market Street
Philadelphia, Pennsylvania 19107



Please do check the address above for the western union office close to you and make the payment to the diplomatic details giving to you by Mr.Suma Mahommed. and please once you get to the shop tell them you are making the payment to your brother in London and once you make the payment the agent there will issue you a receipt which is the payment slip. Once you have the slip you will send the payment details to him with the require details below.....

Senders name:
senders Address:
Amount Sent:
MTCN number:

Those are the details they need to confirm the payment before the will deliver the consignment to your address and please always keep me updated once you have make the payment and dont disclose this to any one and make sure you keep the consignment safe once you receive the consignment.please make sure you make the payment today.

.....
[Re: LOCATE THIS ADDRESSES CLOSE TO YOU.]

Dear mr. Mice,
Can i send to mr.diplomat Mohamed wire moneys from my bank of america bank account moneys bank is on my walnut street just few doors away short walk be cause them stores i dont drive long walk . Be cause my legs is bad.
Signed.
Doug Grumblerson
PS cna i make to mr.Mohamed the credit card moneys make most easiest.

.....
[PLEASE GRUMBLERSON]

My Dear Friend Grumblerson ,

Thank you so much for all you have done for me, please try and make the payment to him via western union so that the consignment can get to your location in time.

Try and see how you can go to the western union shop and make the payment to him today.

Hope to hear form in good news

Sgt Terry Mice
.....
[Re: PLEASE GRUMBLERSON]

Dear mr.Mice,
I can go to the the shop tomorow but i go to bankof america today they tell me i only hve 540 dollars in my account i dont have 987 dollars like you ask what i shoud do be cause i want my moneys please mr Mice to help to me .
Singed,
Doug Grumblerson

.....
[THANKS GRUMBLERSON]

My Dear Friend Grumblerson .

Thank you so much for all you have done for me, what i will advise you to do now is for you to contact the Diplomat Suma Mohammed that you are going to send him half payment once the consignment arrive your home address in your country you are going to him the ramming payment.

Send him a mail and let him know how much you are going to send so that the consignment can be in tour home address,

Keep me updated so that i can know what is really going on.

Hope to hear soon form you

Sgt Terry Mice
.....
[Re: ACKNOWLEDGEMENT (YOUR NUMBER IS NEEDED URGENTLY)]

Dear mr. Mohammed,
Mr.Mice he tell to me send to you ok half the paymant he say andhalf other half the paymant when i get the box moneys i go to western shop today
Signed,
Doug Grumblerson

.....
[ACKNOWLEDGEMENT]

Attn: Douglas Grumblerson,

I acknowledge the receipt of your mail, you are to make the part payment to us, once the consignment get to your location in your country, you have to pay the remaining balance.

Below is the payment information:

First Name: Patrick
Last Name: Sausage
Country: London-England
Address: Stadim Road , Fulham, 121Hq Stadim
Amount: \$497 USD

Once payment is made kindly send to us via email a copy of the payment receipt or the following details below:

SENDER NAME:
MTCN:
ADDRESS:

Yours in Service,

Snr. Dipl. Suma Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: ACKNOWLEDGEMENT]

Dear mr. Mohammed,
I sned the moneys like you say western uinon wire moneys it cost 43 dollars to send 497 so totall exactley 540 dollars all my bank moneys so i dont have no more banksmoneys so when do i get my box moneys . The MCTN numbers likeyou say is 5142157944.
Signed,
Doug Grumblerson.

.....
[ACKNOWLEDGEMENT]

Attn: Douglas Grumblerson.
I acknowledge the receipt of your mail, the MTCN number you gave us is in correct you will have to attach the payment receipt to us, so that we can confirm the payment.

Once payment is confirm the consignment will be delivered to your location in your country.
Get back to us with the information below so that it can be confirm

SENDER NAME:
MTCN:
ADDRESS:

Yours in Service,

Snr. Dipl. Sume Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: ACKNOWLEDGEMENT]

Dea mr. MOhammed,
Did you get teh moneys how i atttach reciept to you does it make scaner machine be cause i dont have scaner machin can i send to you reglar mail whats you mail address. Please sir to send to me the box moneys my rent is do tommorrow the first of the month i have not enough of the rent moneys .
Signed,
Doug Grumblerson

PS the informations you want sneder name that s me right i send to mr. Patrick Sausage like you ask MTCN numbers 5142157944 adress i send to you ask addressof LondonEngland Stadim Road , Fulham, 121 HQ Stadim or you do mean address of me nnn walnut st. apt. nnn philadelphia pa 19106..

.....
[ACKNOWLEDGEMENT]

Attn: Grumblerson.

The payment you made is that correct you will have to check the MTCN number and send to us again.

Below are the details you are to send to us:
SENDER NAME:
MTCN:

ADDRESS:
SENDER COUNTRY:
AMOUNT SENT:

Yours in Service,
Snr. Dipl. Sume Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[Re: ACKNOWLEDGEMENT]

Dear mr. Mahommed,
This is the informations the sender name is me Douglas H. Grumblerson the mtcn numbers is 5142157944 addressof London England Stadim Road Fulham, 121hq Stadim sneder country america amuont sent 497 like you ask you tell to me i only half have to pay to now did you get the moneys when will you send to me the boxs moneys.
Signed,
Doug Grumblerson.

.....
[ACKNOWLEDGEMENT]

Attn: Grumblerson.

The information you sent to us is not correct you will have to go back to the western union office or you will have to check the payment receipt for the MTCN number so that the payment can be comfirm in your office.

Get back to us with the correct MTCN number

Yours in Service,
Snr. Dipl. Sume Mohammed.
Arab Securities and Finance Company
London release office,
Tel:+44 nn-nnnn-nnnn

.....
[GET BACK TO ME NOW]

Dear Grumblerson,

How are you doing today?

What is happening over there because i have not heard any thing from you and the diplomat and i am not happy about that. we are talking about my money and my life so get back to me asap on how you have gone about it. get back to me immidiately

Sgt Terry Mice
.....

I didn't reply to that one. I had run out of ideas. But it was fun while it lasted.

Howard J. Wilk is a synthetic organic chemist. He lives in Northeast Philadelphia.

Ω Ω Ω



The First Americans

by Paul Schlueter III

It has long been a standard doctrine that Native Americans (NAs) probably crossed a land bridge over the Bering Straits, from northeastern Siberia into the northwestern reaches of Alaska, something like 13,000 years ago. It has been argued that, during an ice age then occurring, water evaporating from the oceans was bound up in glaciers and ice caps, reducing sea levels enough to expose the sea floor in that shallow, narrow region between continents.

Of course, you'd be hard-pressed to find a person of NA descent who supports that standard doctrine of modern White-man's science; every known NA tribal heritage includes some sort of creation story, most passed along only by oral tradition until interested anthropologists began to write down the traditions of the disappearing tribes of the Americas. Most of the NA creation beliefs include a world peopled by spiritual, speaking animals, into which men were brought by some ritualistic act. People were often thought to have come into this world through caves, tunnels, or other underground features, implying that humans existed elsewhere before they came to live on this land. However, most NA faiths sternly reject the proposition that people came from other lands, either over land or by sea. Despite this, DNA research appears to show descent of NAs from people who long ago inhabited the Far East.

Archaeology has had a bit to say about the situation, as well. Middens (trash heaps, generally associated with long-abandoned NA villages) have been dated to around the end of the last ice age, though they seem to appear throughout the Americas at about the same time. Human remains, generally more delicate and rare than middens, have also been found to come from 10 Kya or more. The problem, particularly in the U.S.,

is that modern NAs claim the remains of any humans found, under the Native American Graves Protection & Repatriation Act (NAGPRA); NAs seek to reclaim, and secretly rebury, all such remains, often before scientists can have opportunity to study and learn from those remains. On the other side of the matter, scientists have long neglected NA remains, often ignoring them for decades in museum warehouses, and then failed to give such human remains any sort of dignified disposal after study. Entire books have been written about individual finds of ancient Americans, detailing the often contentious cultural interests in their handling and disposition (see "Ishi, Last of the Yahi" and also "Kennewick Man.")

Not all archaeological evidence is quite so contentious. In 1929, in Clovis, New Mexico, a huge find of paleolithic chipped-stone weaponry was discovered. These stone points, knives, and "axes" were distinctive in appearance, and at the time were the oldest human artifacts in the New World (their age was determined to be around 13K years). The so-called "Clovis culture" was a people who manufactured bi-facial chipped-stone points that included a groove up their mid-line, from the butt end towards the point, thought to improve their ability to be bound to wooden shafts. This feature, called "fluting," was something seen only in the Americas. Its inventors were long thought to be the earliest Americans, just a generation or two away from those who first wandered into this hemisphere.

Recent articles in the New York Times, the Philadelphia Inquirer, and the Week (all dated in March, 2011) have described an important

new find, a site where much older stone points were apparently manufactured by an older resident group. 15,528



Pre-Clovis stone tools found near Buttermilk Creek, Texas. These implements are dated from 15,500 to 13,200 years ago.

were apparently manufactured by an older resident group. 15,528 artifacts were uncovered by a team led by Michael R. Waters, of Texas A&M University, in what is called the Buttermilk Creek Complex near Austin, TX. The artifacts were found within an 8" layer, some 5 feet below other materials from later occupation at the site. 49 sealed core samples were drilled from the sediments, and testing known as "optically stimulated luminescence" verified the sediments' age to be between 13,200 and 15,500 years. Radiocarbon dating could not be used, due to a lack of the organic materials such testing requires.

The site appears to have been an "open-air campsite," located on a flood plain, which was covered over by clay. The clay sediments showed no disturbances that could suggest that the artifacts were later mixed with the clay. In fact, the finds are described as having been handled with unusual care in documentation, which deflects the sort of arguments often presented in criticism of other known pre-Clovis sites.

What makes this find so remarkable is that the stone tools discovered there LACK THE DISTINCTIVE CLOVIS FLUTING, yet are in all other aspects consistent with what archaeologists believe to be a predecessor technology. In other words, these are inarguably pre-Clovis points, indicating that Texas was inhabited by a resident human culture some 2,500 years earlier than the Clovis culture. Since the Bering land bridge would not have been exposed for travel at that time, it is shifting the thinking of anthropologists about how the first people came here. Rather than the long-assumed land route, it is now becoming apparent that the first Americans arrived by boats of some sort, most likely small, coast-hugging vessels used for fishing and the hunting of small sea mammals.

One old problem with the earlier land-crossing scheme was that, since sea levels have risen considerably since the last ice age, any archaeological evidence of it may well be lost beneath the waves

of the modern Bering Strait. However, if the first Americans arrived by boat, during times of higher sea levels, perhaps there's a greater chance that we'll yet find remains of one or more ancient villages, and perhaps even traces of the boats they might have used. So far, no such evidence had been located.

Other sites have revealed pre-Clovis stone workings. A Pennsylvania site known as Meadowcroft Rockshelter was dug by James M. Adovasio, and he found non-fluted bi-facial points there which were a bit smaller than the typical Clovis points. Other sites containing pre-Clovis materials have been found in Oregon, Maryland, Virginia, South Carolina, and Florida. Due to features specific to those sites, or to their dig

The Meadowcroft Rockshelter is thought to have been occupied as long as 16 Kya and possibly as long as 19.6 Kya and is considered to be the oldest known site of human habitation in North America.

The Meadowcroft Rockshelter is located at the Senator John Heinz History Center in Avella, Pennsylvania, about 350 miles from Philadelphia. The history center is an affiliate of the Smithsonian Institution and the site is designated as a National Historic Landmark.

<http://www.heinzhistorycenter.org/secondary.aspx?id=86>

techniques, many have had their meaningfulness challenged by skeptics. It is now clear that South America was populated more than 14 Kya, and that the Clovis culture had many generations of presence in the temperate zones of North America to develop the distinctive stone-flaking skills for which they are known.

Studies of the pre-Columbian cultures of the Americas provide a fascinating contrast to studies of contemporary cultures in Europe, the Baltic region, and the Near East. While cultures in the warmer tropical zones seem to have developed city-state cultures and complex architectural and imperial heritages, the lack of communication between the

Americas and the rest of the Old World prevented NAs from acquiring some of the weapons technologies and disease resistances that later led to their downfall, during Conquest times and after. Nonetheless, the complexity and sophistication of cultures in both isolated worlds were remarkably consistent, and followed parallel pathways which feed speculation to this day. It is even remotely possible that the occasional lost sailor made landfall on American shores, to leave tantalizing artifacts that seem to support the conclusion that the Americas were "discovered"

many times, over the millennia. Though such accidental contacts do not appear to have led to lasting populations or cultural influence until the post-Columbian era, there are dozens of writers who make a living speculating about the provenance of curious artifacts found on both coasts of the hemisphere.

Paul Schlueter III is serving Life in Prison in NE Pennsylvania. His supporters have created a website about him. www.jaylbird.org



Pre-Clovis projectile points and tools uncovered by archeologists at Meadowcroft Rockshelter.

WHAT'S ON YOUR MIND?



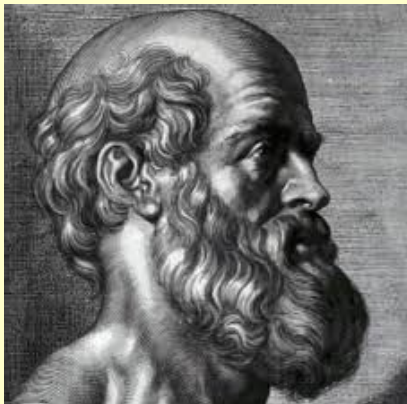
The Best Scientific Project You've Never Heard Of

By Tom Medero

The 90s and the early part of the last decade saw us holding our collective breath as science took on possibly its most ambitious project ever. In a public – private partnership perhaps only a scientific project of this magnitude could forge, we sought out the cellular recipe for homo sapien captured in the single molecule known as deoxy ribo nucleic acid or DNA, specifically those sections of base pairs that made up our entire set of genes. Ever since Watson and Crick had described the DNA molecule correctly for the first time in the 1950s, and science had discovered that the specific sections along the molecule's double-helix known as genes could be translated into proteins, the search was now on to identify the 100,00 or so genes that were believed to make up the entire human genome. The tension and excitement grew as we hoped this project would finally unlock the secrets to identifying and hopefully finding a cure or therapy for the many genetic disorders that bring suffering and sorrow to countless people throughout the world. Would they find a cure for cystic fibrosis, tay-sacks or sickle cell anemia? Would they identify a genetic cause for autism? It was ambitiously hoped that we would soon have answers for these questions, and possibly even identify potential threats decades away. Would I get Alzheimer's? How long will I live? Am I likely to get heart disease or cancer? The list of questions was endless, the task herculean. But it was accomplished, three years early.

This project was well publicized and widely known about, and our imaginations teased us with hints of possibilities only Americans could be concerned about – Will I go bald? Will my children have high IQs? Will my insurance company use it against me? There was also some paranoia that nefarious minds in government would soon have us all trapped in an Orwellian 1984 nightmare with all the very personal information that would now be available about us. Would the government be able to spy on me with this information? Who owns and would control it? How can we protect ourselves? The Human Genome Project is still moving along after having identified the entire string of A-T-C-G base-pairs, finding that we have far less than the 100k genes originally thought and struggling to identify just what each one does by itself or working with other genes. A massive undertaking, to say the least. But, there is another public-private scientific endeavor being conducted right now. One that I would argue is just as important and ground breaking as the Human Genome Project but suffers from not just bad, but non-existent publicity is the Human Connectome Project.

Obviously inspired by the genome project's name, Drs. Olaf Sporns and Patric Hagmann simultaneously first used the term “connectome” to describe a map of the brain's “wiring” and all of the synaptic connections it contained. With a roughly estimated trillion or so synapses, it is hoped



And men ought to know that from nothing else but thence [from the brain] come joys, delights, laughter and sports, and sorrows, griefs, despondency, and lamentations. And by this, in an especial manner, we acquire wisdom and knowledge, and see and hear, and know what are foul and hat are fair, what are bad and what are good, what are sweet, and what unsavory... And by the same organ we become mad and delirious, and fears and terrors assail us... All these things we endure from the brain, when it is not healthy... In these ways I am of the opinion that the brain exercises the greatest power in the man. This is the interpreter to us of those things which emanate from the air, when it [the brain] happens to be in a sound state.

~ Hippocrates (c. 460 - c. 375 BC)

that when complete, neuroscience will be armed with the data to better understand pathologies and disorders from neural degeneration to schizophrenia to addiction to aging, as well as countless other unanswered questions about the brain. Psychologists and philosophers are also hoping to answer a host of timeless questions from how and why we dream at night to the big enchilada, how the brain turns electrochemical reactions into consciousness and, exactly *just what is consciousness?* The human brain is the last great frontier in human biology, the seat of our personalities, behaviors, beliefs, and ourselves. Armed with this map of all the connections within our brain, it is hoped science in general and neuroscience in particular will be better able to understand not only which parts of the brain work together to accomplish a certain task, but how and why we have the connections that make it possible.

This project was launched by the National Institutes of Health in 2009 by putting out a call to the research community and supported it with 30+ million dollars in grants over the 5-year anticipated life of the program. Two consortiums of research teams have taken up the mantle: one led by Washington University./St. Louis and the University of Minnesota, and a second team led by UCLA, Harvard, and Mass. General Hospital. The NIH stated in a release that a total of 9 institutions will participate including technology companies and other research universities in and outside the US. Both teams are using the well known MRI, EEG, MEG and fMRI as scanners as well as a cutting edge, specially designed scanning method called High Angular Resolution Diffusion with MRI (HARDI). This type of scan allows fantastic imaging to be accomplished by tracking the diffusion of water molecules in neurons and highlighting their structure from dendritic synapses where signals are picked up all the way to the axonal synapse, where the message is passed to the next neuron. This imaging provides a spectacular map of the actual brain wiring. Although UCLA is pioneering this method, all data will be available to all participants in the project. This is a key aspect of comprehensively mapping all the connections in the human brain – having all the data is available to the scientific community, and researchers the world over goes a long way toward capturing any possible serendipitous moments. There is a tremendous amount of data to process and look at, and you can never have too many smart people involved with something like this. In following this project I have noticed that twin studies were being conducted in Australia, and consultants from Oxford and UC Berkeley were working on data so this project has truly captured world-wide attention of the scientific community.

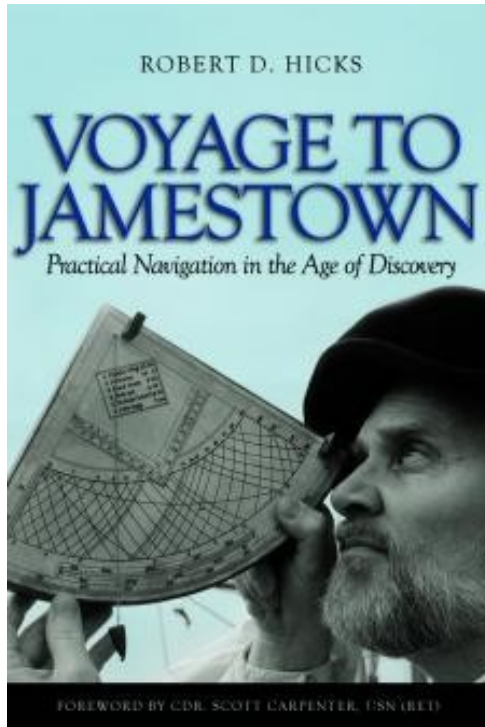
Scientists studying the human brain since the 19th century have been successful in identifying the several functional and structural areas of the brain. Today we can draw a map of the brain and identify the major areas that control movement, emotions, language comprehension and speech itself, and reasoning and planning, etc. But our knowledge up to this point has been piecemeal; we don't yet have a comprehensive

picture of how these different areas interact with each other to carry out all that the human brain does. The involvement of many areas even in managing small tasks is a relatively recent finding. Even something as simple as hearing one word will involve the auditory cortex for changing the vibrations into unique neural impulses, the parietal lobe for word comprehension, to various other areas where memories and emotions are held related to that word, and I'm certain I've missed some parts of the process. Identifying all of the neuronal connections and how they differ from person to person will begin to shed light on why two people process the same thing differently, some of the changes that occur over their lifespan, and how disease and trauma impacts one's thinking at the cellular level. The project is using 1200 individuals in its study to map neural connections across individuals, and is including identical and fraternal twins to explore any genetic influence on how our connectome can differ within a certain genetic profile. Should there be differences in identical twins, nurture must be considered and put into the equation in understanding the way the brain develops and forms its individual connections. This goes directly to how and why we are unique individuals. Nothing is simple within the human brain and the speed and accuracy with which it carries out tasks is beyond dazzling.

It is anticipated that with the Human Connectome Project's completed work, we will begin to understand the critically important function of neural plasticity and its effects. Although the basic architecture of brain anatomy has been known for years, how and when these areas interact is still not well understood. Key questions hoped to be answered are how and why certain synaptic connections from birth through our 20s connect the way they do and their effects on us, how the brain begins to repair itself with new synaptic connections after a stroke or trauma, and observing changes in connections over time may give us a window on the brain as we age.

Some absolutely spectacular early mapping of our actual “wiring” can be seen at the NIH website for this project at humanconnectomeproject.org. I highly recommend that you check it out – you won't be disappointed! There are so many mysteries when considering the human brain, and it doesn't share its secrets easily. The data from the Human Connectome Project will have people from neuroscience, artificial intelligence, pharmacology, geriatrics and many other areas busy trying to answer these questions and more for years to come.

Tom Medero, originally from Long Island, NY, has lived in Philadelphia for 20 years now. He will be graduating from Community College of Philadelphia this Spring taking his Associates Degree in Liberal Arts/Behavioral Science. Tom is continuing his studies at Temple University this fall as a Psychology major.



VOYAGE TO JAMESTOWN

Practical Navigation in the Age of Discovery

By Robert D. Hicks, Foreword by CDR Scott Carpenter, USN (Ret.)

ISBN/SKU: 9781591143765 Hardcover 256 pages
Published: October 2011

Voyage to Jamestown explores how sea navigation was accomplished during the era of discovery. Navigational methods and tools are presented within the setting of their use during a sea voyage of the period. While this voyage features a fictional crew and ship, it is carefully reconstructed from actual events, circumstances, narratives, and historical figures, which demonstrates the challenges of marine navigation within the cultural experience of people who actually traveled the oceans centuries ago. The fictional voyage follows the merchant galleon *Guyft* from Bristol, England, to Virginia in 1611, captained by Tristram Hame. With this narrative technique, the reader can absorb seafaring and navigation as practiced in the seventeenth century as if they were on board the ship. Navigational theory, methods, and instrumentation of the era are all engagingly presented within economic, political, scientific, and religious contexts to portray how the early navigator experienced his world.

Robert D. Hicks is currently Director, Mütter Museum/Historical Medical Library in Philadelphia, PA. He was PhACT's speaker October 2011.

How to Become a Certified Heinz NWR Weed Warrior



The mission of the John Heinz National Wildlife Refuge Weed Warriors is to enrich wildlife habitat within the Refuge by participating in the restoration of native plant communities. Weed Warriors recognize that these native plant communities are vital to supporting a rich and diverse population of native wildlife, including more than 300 species of birds. After taking an online training course and attending an in-house workshop and field training, Weed Warriors remove invasive plant species in plots they have adopted or along refuge trails.

Weed Warrior Volunteer Orientation online training can be found at <http://www.friendsofheinzrefuge.org/weedwarriors/intro.html>.

The in-house workshop and field training take place on the refuge. The next scheduled **Weed Warrior In-House Workshop and Field Training Course** will occur on Saturday, **May 26, 2012** from 9:00 am to 3:00 pm and this training will be offered again on **June 23** and **July 21**.

To register for training, please call the refuge at **215-365-3118**.

PHACT CALENDAR

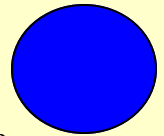
PhACT Events

Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of **PhACT** - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia.., Parking is easily available and costs \$4.00 for all day. Enter the college parking lot on 17th Street which is one way south bound. This meeting site is handicap accessible. **PhACT Meetings are Free and open to the public unless otherwise noted.**



Saturday, April 28, 2012 - The Good Old Days: They were Terrible: Toxicology and the Modern World. Dr. David Cragin, a Toxicologist, will discuss the popular perception is that the world is being overrun by "toxics." Arsenic in apple juice, mercury, pesticides, and other "toxics" regularly garner headlines. What is the real story? How does the modern world compare to the "good old days"? Please note that this meeting is NOT on our usual third Saturday, so that we can be part of the Philadelphia Science Festival. See [Page 1](#) for more details.

Saturday, May 19, 2012 - PhACT Scientific Expedition to the Blue Hole - PhACT will engage in a totally serious expedition to the New Jersey Pine Barrens to scientifically explore the Blue Hole, learn some local history, and while we are at it will captured the Jersey Devil. See [Page 2](#) for more details.



Saturday, July 7, 2012 - PhACT Picnic

Saturday, September 15, 2012 - Politics vs. Science - Writer Ken Silber will speak on "Politics Vs Science".

Saturday, October 20, 2012 - The Pseudoscience Wars: Immanuel Velikovsky and the Birth of the Modern Fringe. Princeton Professor Michael Gordin will speak.

Saturday, November 17, 2012 - AIDS denialism. Nicoli Natrass of South Africa will talk on AIDS denialism. Hundreds of thousands of people are thought to have died based on misinformation concerning AIDS and treatments. Learn about how science is reducing the deaths and spread of the disease even though irrationalism has been doing the opposite.

Saturday, February 16, 2013 - John Ruscio will talk on fallacies and new technology related to lie detector tests.

The **PhACT Calendar** is open to members and non-members who wish to announce meetings and events of other groups of which they are interested or affiliated. These events should be of some general interest to the Skeptical or Scientific community and should be within a reasonable radius of Philadelphia. Send submissions to the editor at phactpublicity@aol.com. Keep the announcements brief. Space is limited and insertions will be made on a first come-first served basis after the needs of PhACT are accomplished. Phactum does not accept paid advertising.

Saturday, April 14, 2012

Annual Grand Army Museum Preservation Dinner

Cannstatter Volksfest Verein

9130 Academy Rd. Philadelphia, PA 19114 - (215) 332-0121

Cost: \$40 per person - \$75 per couple. Choice of Beef, Chicken, or Salmon
11am open for book browsing, and signings; 12 noon cocktails; 1pm luncheon

2pm presentation: "Lincoln and the Civil War" by noted historian: Matthew Pinsker

Presentation of the 'Grand Army Award' for preservation efforts; Fundraiser raffle of prints; door prizes; books; sutlers; entertainment; fun!

To reserve contact: garmuslib@verizon.net; or call: 215-289-6484

Deadline: April 2, 2012

Saturday, April 14, 2012, 9:30 AM to 2:30 PM at the 1696 Thomas Massey House, Lawrence Rd at Springhouse Rd, Broomall, Pennsylvania. Historian Dr. Clarissa Dillon will lead a workshop in cooking and food processing crafts using tools of the Philadelphia Colonial era. A suckling calf stomach will be processed using a receipt from the 18th Century to create the rennet needed to set a curd (the first step in cheese making). The workshop will cost \$35. Registration is necessary. Call Dr. Dillon (not the Massey House) at (610) 642-4269.

Monday, April 16, 2012 at 7:00 PM at The Antoinette Iadarola Center for Science, Education and Technology Lecture Hall, Cabrini College, 610 King of Prussia Road, Radnor, PA 19087

Institute for Religion and Science <http://www.irands.org>

"Reflections on Fossils and Faith"

Peter Dodson, Ph.D., Dinosaur Paleontologist, University of Pennsylvania
Free and open to the public.

Sunday, April 15, 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

Liberty or Death: The Revolutionary War Patriots of Laurel Hill

This week in history, the American Revolution began with the first exchange of fire between British and American forces at Lexington on April 19. "Give me liberty or give me death!" is the now famous line often attributed to Patrick Henry and his 1775 speech. But what about the Founding Fathers and patriots who truly did give their lives for that freedom we hold so near and dear to our hearts? Join us as we hear their rousing stories of victory, tragedy and revolution from their final places of rest here at Laurel Hill. This walking tour will be led by military historian and author of Finagrave.com, Russ Dodge. It will conclude with cookies and refreshments.

\$12/person; \$10/seniors + students; \$9/members

Tickets can be purchased at the door, or in advance online, or by calling 215.228.8200.

Monday, April 16, 2012, 7:00 PM at Drexel University's Bossone Research Center, 1st Floor in the Mitchell Auditorium & Lobby, 3140 Market Street, Philadelphia PA 19104

"The Uncomfortable Grayness of Life"

Nate Phelps is an acclaimed speaker, author, LGBT advocate and the estranged son of Westboro Baptist Church founder Fred Phelps. Hear him

SOCRATES CAFE is moderated by: Lewis Mifsud, Ph.D., P.E., a member of PhACT and of The American Academy of Forensic Sciences. At 7:00 PM every Monday evening except holidays (on Tuesdays after a Monday holiday) at the Springfield Township Public Library (215-836-5300) at 1600 Papermill Mill Road, Wyndmoor, PA. 19038. This philosophical discussions group is free and open to the public. Join us and share your critical thinking, questions and opinions.



speak about his journey from a childhood of fear to working for a secular, hate-free society.

Freethought Society - <http://www.ftsociety.org/>

\$5 suggested donation at the door / open to the public

Tuesday, April 17, 2012 at 6:30PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

The Robert L. Sadoff, MD, FCPP Lecture: A Prosecutor Takes a Hard Look at Ethical Issues.

Speaker: Honorable Lynne Abraham, partner in Archer & Greiner, PC
In this year's annual Sadoff Lecture, Lynne Abraham will discuss the ethical issues she believes are essential for prosecutors to embrace and practice. Ms. Abraham will call on her many years of service as both Common Pleas Judge and District Attorney of Philadelphia to illustrate her concerns.

Sponsored by the College's Section on Medicine, Ethics, and the Law.

Free. To register: <http://sadoff.eventbrite.com/>

Tuesday April 17, 2012 at 6:00 PM-8:30 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/

Urban Heat Islands: Is Philly the New Tropics?

The Academy's Center for Environmental Policy kicks off its bicentennial sustainability series with a discussion of urban heat islands and their role in global climate warming.

Networking reception: 6:00 pm

Program: 6:30 pm

Featuring:

- Larry Kalkstein, Ph.D, Research Professor of Geography and Regional Studies, Synoptic Climatology Lab, University of Miami
- David Sailor, Ph.D, Professor, Mechanical and Materials Engineering Department, Portland State University

General Public: \$5 Academy Members: Free

Register at heatislands.eventbrite.com/

Tuesday, April 17, 2012 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 • <http://www.chemheritage.org>

Brown Bag Lecture: "In the Air or on the Page? Making Argon Public"

A talk by **Alex Csizsar**

When Lord Rayleigh and William Ramsay announced in early 1895 that an element in the air existed that had escaped anyone's notice, their work was hailed as a triumph not simply by chemists and physicists but also by the wider Victorian press. The discovery of argon was also, however, a locus of controversy over propriety and property in making scientific claims that dragged on for several years, as a host of new gases were put forward as pretenders to elemental status. At issue were not simply matters of scientific priority but rather of the appropriate means by which scientific discoveries were transformed into public knowledge claims, of the nature and the rights of the relevant publics for those claims, and of the rights and responsibilities of researchers and others to follow up on and extend their substantive findings.

Alex Csizsar's research interests include the history of 19th-century scientific publishing in France and Britain. His current book project, *Broken Pieces of Fact: The Rise of the Scientific Journal*, examines the circumstances in which the scientific journal emerged to become the principal institutional site for the representation, certification, and registration of authoritative natural knowledge. He is assistant professor of the history of science at Harvard University.

This event is Free and open to the Public.

Tuesday, April 17, 6:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

1862: The Bloody Battles Commence

Sesquicentennial Year 1862 Exhibit Opening, Tour and Reception

In 2011, states, cities and institutions across the U.S., and including Laurel Hill Cemetery, marked the 150th Anniversary of the start of the Civil War. Many of those men engaged in battle, fighting on the sides of both the Union and Confederacy, rest at Laurel Hill. The site also holds sacred the remains of many prominent Civil War-era Philadelphians, including volunteer nurses, surgeons, and supporters of the war effort. Last April, Laurel Hill launched a commemorative Sesquicentennial Exhibition which highlights an elite group of military figures and citizens whose contributions to the war and war effort together epitomize the stories of the peoples who lived during and through this stirring era in our nation's history. These figures will remain a focus of the exhibit throughout the 150th Anniversary (2011-2015). The exhibit will (re)open to additionally feature Laurel Hill's 2012 notables, whom comprise those remembered for the important roles they played in year of war 1862. The opening reception will be preceded by a brief walking tour featuring some of the 1862 notables included in the exhibit. It will be led by Temple University professor, president of the General Meade Society, and author of Philadelphia and the Civil War, Dr. Andy Waskie.

While admission to the exhibit opening, tour and reception is FREE, advance registration is requested. RSVP by calling 215.228-8200 or emailing tours@thelaurehillcemetery.org.

Saturday, April 21, 3:00pm (sold out) at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

**Titanic: The 100th Anniversary
Tours, Presentation and Dinner**

A second Titanic event has been scheduled for Saturday, May 12!
Learn more or Register.

Considered one of the worst maritime disasters in history, the sinking of the R.M.S. Titanic marks its 100th anniversary in 2012. This once-in-a-lifetime centennial program will commence with a walking tour of the gravesites of the ship's passengers memorialized at Laurel Hill Cemetery, where their unique stories of survival and death will be told. The tour will continue at West Laurel Hill Cemetery, where six additional Titanic passengers rest. Following the walking tours, a slide-supported presentation inside West Laurel Hill's historic Conservatory will share some of the little known and newly discovered facts relating to this historic event of April 14, 1912. The evening will culminate with a catered, buffet-style dinner featuring courses that replicate the final meal served aboard Titanic on the evening of her demise, and accompanied by music, wine and dessert. The program will be presented by Professor Emeritus and Resident Folklorist at Widener University, Dr. J. Joseph Edgette. It will depart from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132, and continue at West Laurel Hill, 215 Belmont Avenue, Bala Cynwyd, PA 19004. Participants will be responsible for their own transport (2 miles) between locations. Directions will be provided. Free parking is located in both cemeteries. The full program, including tours, presentation and dinner, will run approximately 6 hours. The cost is \$75/person; \$68/students + seniors; \$65/members. Advance registration is required.

Sunday, April 22, 2012 at 2:00 - 4:00 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121
ph 215-763-6529 www.wagnerfreeinstitute.org

Truth, Trust, and Fracking

A Panel Discussion in the historic lecture hall at the Wagner Free Institute of Science

We often see debates between experts on scientific issues that affect our lives and livelihoods. What can we do when the experts disagree but their decisions have enormous impacts on us? Do we try to influence their

debate? Do we trust one side? Do we trust our gut feelings? Hydraulic fracturing in the Marcellus Shale has brought up these questions and issues. Join us for a panel discussion with speakers from a number of fields and disciplines who will help us understand the way we access and understand information and help us apply lessons learned from history in our decision-making process.

This event is free and open to the public.

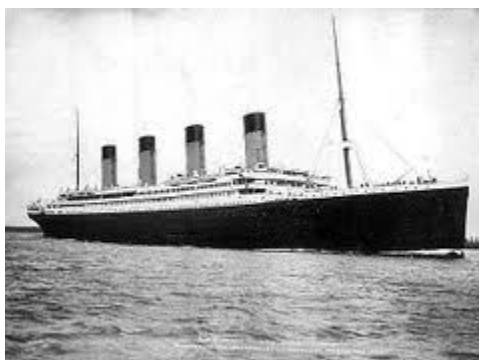
Sunday, April 22, 2012 at 10:30am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Nature in the Necropolis: Celebrating Earth Day Amid the Earth-Bound

The first official observance of Earth Day took place in 1970 as a day intended to inspire awareness and appreciation for the earth's natural environment. Few sites have more appreciation for its "earth," and all of the stories and secrets that lie beneath it than Laurel Hill. The resting place claims status as the first garden cemetery in the United States, boasting 78 acres of green space in the middle of the city. Start off your Earth Day properly at Laurel Hill, taking in its gorgeous river vistas, and learning of its history as a world-renowned arboretum. Participants will also aim to identify the many bird species, trees and horticultural specimens that still populate the site. Share your knowledge or just enjoy nature and the blooming springtime. Bring binoculars if you wish. This program will be co-presented by Laurel Hill Cemetery guides, Bob Berghaier and Steve Maurer. It will commence with complimentary coffee, juice and pastries. \$8/person; \$5/members

Tickets can be purchased at the door, or in advance online, or by calling 215.228.8200.



**RMS Titanic at Southampton on
April 10, 1912 just five days
before sinking on April 15.**

Tuesday, April 24, 2012 at 6:30PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

Conversation with artist Carolee Schneemann

Join us for an evening dialogue with pioneering artist Carolee Schneemann. Her work has profoundly shaped contemporary discourses on the body, sexuality, and gender since the 1960's. This unique conversation will take place in historic Mitchell Hall at The College of Physicians of Philadelphia, surrounded by paintings of the College's founding Fellows.

Schneemann will visit Philadelphia during the week of April 23, 2012. Her visit to the City is entitled Utterly Precarious: Carolee Schneemann in 5 Parts, and is a collaboration between The College, The University of Pennsylvania, and

Slought Foundation

Free. To register: <http://schneeman.eventbrite.com/?ebtv=C>

Tuesday, April 24, 2012 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 • <http://www.chemheritage.org>

Brown Bag Lecture: A talk by Jongmin Lee

This event is Free and open to the Public.

Wednesday, April 25, 2012 at 7:15 p.m. at Brittingham's Irish Pub and Restaurant, 640 East Germantown Pike, Lafayette Hill, Pennsylvania. (610)828-7351.

American Revolution Round Table of Philadelphia (ARRTOP)

<http://www.arrtop.com/>

Bill Ochester will appear as Dr. Benjamin Franklin.

<http://www.bfranklinprinter.com/>

A group of members and most of the ARRTOP Advisory Board will meet for dinner at 5:30 p.m. at Brittingham's and we share dinner with our guest speaker and you are cordially invited.



Meetings are free and open to the public.

Wednesday, April 25, 2012 from 6:30 PM to 8:00 PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

"Boy of Bone: Twelve Stories Inspired by the Mütter Museum"

"This latest horn was Madame Sunday's third." So begins Boy of Bone, K.R. Sands' collection of stories, each inspired by one of the exhibits at the Mütter Museum of the College of Physicians of Philadelphia. In a remarkable feat of atmospheric storytelling, K.R. Sands imagines the lives of the people suffering the conditions now on display. Horns grow on the face and hands of a seamstress in 1835 Paris. The sister of a fallen Civil War soldier endeavors to honor him with a book bound in his skin. And in the haunting title story, a little boy in Philadelphia, afflicted with a rare genetic disease, waits years for death as his muscles slowly turn to bone. In imagining the lives of those now on exhibit at the Mütter, K.R. Sands has created thrilling, utterly original stories that get to the heart of what it means to be human, with all its complications: suffering, joy, love, sorrow, and ultimately, death.

Join us for an illustrated talk on this new book and the exhibits in the Mütter Museum that inspired it. Artwork featured in the talk will include that of nationally acclaimed artist Jon Lezinsky, whose original digital collages illustrate the book, which will be sold on site. After the talk, author K.R. Sands will sign copies of the book, and the Mütter Museum will be open for free admission. Sales of this book benefit The College of Physicians of Philadelphia.

Speaker: K.R. Sands, Author, Boy of Bone: Twelve Stories Inspired by the Mütter Museum

Free. To register: <http://boyofbone.eventbrite.co.uk>

Thursday, April 26th at 8:00 PM at Frankford Hall, 1210 Frankford Avenue. Philadelphia Nerd Nite. See [page 7](#) for more details.

The local Nerd Nite website is: <http://philadelphia.nerdnite.com/updates/>

Thursday, April 26, 2012 at 6:30pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Science of Death: What Lies within Mütter and beneath Laurel Hill

Curiosity is a wonderful thing, and this trip through the mysterious and bizarre is sure to keep you riveted from beginning to end. Join Anna Dhody, Curator of the Mütter Museum of The College of Physicians of Philadelphia, as she regales you with an informative talk on the historic rise of embalming during and after the Civil War. Let your inquisitive side be your guide as you learn about chemicals, equipment and just what makes the science of death. Attendees will also have the opportunity to check out some of the Museum's great objects during the lecture. Afterwards, Alexis Jeffcoat of Laurel Hill Cemetery will lead participants on a twilight journey through the site, visiting the gravesites of those residents with stories both odd and unforgettable, including a prominent industrialist's strange and fatal dental visit; a victim of an Old West cook nicknamed "Red Bill;" and the woman who simply left behind her heart. No tour on this subject would be complete without greeting a few of Philadelphia's famed undertakers as well. This program for the Philadelphia Science Festival (www.philasciencefestival.org) is presented by the Friends of Laurel Hill Cemetery in collaboration with the Mütter Museum of The College of Physicians of Philadelphia (www.collphyphil.org). It will conclude with refreshments, wine and beer in the Cemetery's historic Gatehouse, where visitors can mingle and ask what is sure to be many questions after this fascinating excursion through the science of death.



Murder at the Mütter™: President Lincoln Is Shot!

Join us for an interactive night of fun as we explore the forensics behind the assassination of President Abraham Lincoln! Following a live re-enactment of the assassination, there will be a two-part investigation of the crime. In the first portion, guests will participate in the examination of the crime scene using forensic methods of the 1860s; in the second portion, guests will hear from a roster of contemporary forensic experts covering everything from ballistics, crime scene investigation, and blood analysis. The activities will be followed by a reception.

\$20/person general admission. Advance registration is requested. Tickets can be purchased online, or by calling 215.228.8200.

Friday, April 27, 2012 at 10:00 am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Laurel Hill: The Hot Spots and Storied Plots

Join us for this informative overview of Laurel Hill's long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor. This is the ultimate tour for first-time visitors to Laurel Hill, and anyone else who likes beautiful art, stimulating history, and just enjoying life...even amongst the dead. This walking tour will be led by board member of the General Meade Society of Philadelphia, Jerry McCormick. NEW Hot Spots and Storied Plots will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday tour series, which take place on the fourth Friday of every month at 10:00am.

\$8/general admission; \$5/members

Tickets can be purchased at the door, or in advance online, or by calling 215.228.8200.

Friday, April 27, 2012 at 8:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Astronomy Night at Laurel Hill Cemetery

Grab a blanket and take a tour of the cosmos with local astronomers. As part of the Philadelphia Science Festival (www.philasciencefestival.org), over 20 venues in and around the city will play host to astronomy night star parties with amateur astronomers coming out en masse with their telescopes to show locals the wonders of the night sky. Bring your own blankets and, if so inclined, BYOB! Snacks will be provided. Relaxing and stargazing from Philly's most ethereal site = a perfect way to end the week!

While admission to the event is FREE, advance registration is requested. RSVP by calling 215.228-8200 or emailing:

tours@thelaurehillcemetery.org.

Friday, April 27, 2012 at 6:00PM - 10:00PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

Sponsored by The College of Physicians of Philadelphia for the Philadelphia Science Festival. You must be 21 years-old or older to attend this event.

Admission fee. To register:

<http://murderatmutter.eventbrite.com/>

April 28, 29, 2012

23rd Annual Neshaminy Civil War Reenactment (since 1990!)

'Spring 1862 Campaign: Kernstown & Winchester'

LIVING HISTORY & BATTLE REENACTMENT

NESHAMINY STATE PARK, BENSALEM, PENNSYLVANIA

Camps open 9AM - Battles at 2:00PM on Saturday and 1:30PM on Sunday

- * Many authentic military and civilian reenactors are expected;
- * Visit both Union and Confederate camps where troops will demonstrate military and camp scenes and discuss aspects of Civil War history
- * See troops drilling, mounted cavalry, artillery
- * Living history presentations, period music;
- * Sutlers tent village selling period items, jewelry, crafts, military items, souvenirs etc.
- * Food vendors plus picnic facilities
- * Parking lots close to all of the action
- * Fun and educational for every member of the family;
- * Free Admission and Free Parking!

Near Street Road Exit of I-95

FOR DIRECTIONS AND INFORMATION ABOUT THE PARK

<http://www.dcnr.state.pa.us/stateparks/parks/neshaminy.aspx>

PhACT Event

Saturday, April 28, 2012 - Dr. David Cragin will discuss "The Good Old Days" from a toxicologists point of view. See [Page 1](#) for more details.

Note that this meeting is on the 4th Saturday of the month, not the usual 3rd Saturday.

Registration: www.neshaminyCWevent.org

Co-sponsored by: The 28th PA Regiment, the Army of Northern Virginia, The Historical Society of Bensalem Township, The Grand Army of the Republic Civil War Museum & Library, the Delaware Valley Civil War Round Table, Neshaminy State Park, and Waste Management, Inc. Information: call 610-291-0838 or e-mail: kgc28pvi@gmail.com

Sunday, April 29, 2012 at 1:30pm: Humanist Association of Greater Philadelphia at Upper Moreland Library, 109 Park Avenue, Willow Grove, PA <http://www.hagp.org/>

Program Meeting, Barry Klassel, Humanist Chaplain at Rutgers University speaks about the Book of Job (from a Humanist perspective, of course!)

Thursday, May 3, 2012 at 6:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 • <http://www.chemheritage.org>

Scott F. Gilbert: "We Were Never Individual: How Symbionts and Hives Pervade Our Lives"

Symbiosis rules and we are all lichens. What would "individual selection" entail if there were no real "individuals" to select? Do we have to formulate a new type of selection, and how does the whole prevent its parts from cheating?

This talk is a part of the 2012 Gordon Cain Conference, "E pluribus unum: Bringing biological parts and wholes into historical and philosophical perspective." The conference, organized by Lynn Nyhart (University of Wisconsin, Madison) and Scott Lidgard (Field Museum, Chicago), will also include a closed workshop at CHF in May of 2012 that is intended to produce papers for an edited volume.

About the speaker

Scott F. Gilbert is the Howard A. Schneiderman Professor of Biology at Swarthmore College and a Finland Distinguished Professor of Biology at the University of Helsinki. He teaches developmental genetics, embryology, and the history and critiques of biology. His biological research seeks to integrate evolution and development, especially in answering the age-old question, "How does the turtle get its shell?" His research in the history and philosophy of science similarly addresses the integrations of development, genetic, and evolutionary biology, and it looks particularly at the rhetoric and images used in these debates.

Gilbert has been chair of the Division of Developmental and Cell Biology of the Society for Integrative and Comparative Biology, and he currently chairs the Education Committee of the Society for Developmental Biology. He is on the executive committee of the European Society for Evolutionary Developmental Biology and has also been elected a fellow of both the American Association for the Advancement of Science and the St. Petersburg Society of Naturalists.

Gilbert currently has three books in print: *Developmental Biology* (a textbook in its ninth edition), *Bioethics and the New Embryology* (a volume, coauthored with two students, that discusses new findings in developmental biology with respect to philosophy and religion), and *Ecological Developmental Biology*, a textbook coauthored with David Epel, which integrates developmental plasticity, epigenetics, and symbiosis into discussions of medicine and evolution. He has received several awards, including the Medal of François I from the Collège de France, the Dwight J. Ingle Memorial Writing Award, the Choice Outstanding Academic Book Award, honorary doctorates from the Universities of Helsinki and Tartu, and a John Simon Guggenheim Foundation Grant. In 2002 the Society for Developmental Biology awarded him its first Viktor Hamburger Prize for Excellence in Education, and in 2004 he was awarded the Kowalevsky Prize in Evolutionary Developmental Biology. In recent years he has addressed two conferences in the Vatican, and has given the Brent Lecture (Teratology Society), the Benirschke Lecture (University of California, San Diego), and the Burian-McNabb Lecture (Virginia Tech).

Gilbert received a B.A. in both biology and religion from Wesleyan University (1971), and he earned a Ph.D. in biology from the pediatric genetics laboratory of Barbara Migeon at Johns Hopkins University (1976). He completed an M.A. in the history of science, also from Johns Hopkins, under the supervision of Donna Haraway. He pursued postdoctoral research at the University of Wisconsin in the laboratories of Masayasu Nomura and Robert Auerbach.

This event is Free and open to the Public.

Tuesday, May 8, 2012 at 6:00PM - 10:00PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

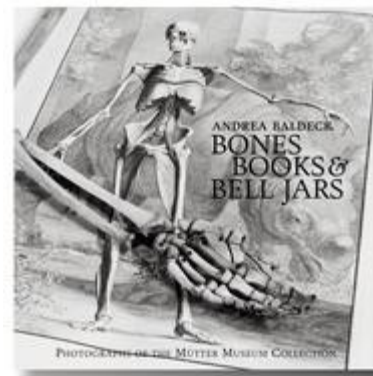
http://www.collphyphil.org/prog_calendar.htm

Bones, Books, & Bell Jars: A Conversation with Photographer Andrea Baldeck, MD, FCPP

What is it like to go behind the scenes at the Mütter Museum of The College of Physicians of Philadelphia? It is an opportunity to venture from basement to attic, encountering treasures in storerooms and library stacks. It is the chance to open books rare and beautiful, to hold instruments wielded long-ago in laboratory and clinic, to encounter specimens floating in fluid-filled glass jars, to marvel at articulated skeletons, to keep company with history. It is to become aware of the vanished lives of countless caregivers and patients when surrounded by visible and palpable evidence of the past.

With a physician's training and a photographer's sensibility, Andrea Baldeck, MD, FCPP, Fellow and Trustee of The College of Physicians of Philadelphia, explored the wealth of materia medica, selecting and combining objects in still life compositions that speak of the art, science and history of medicine. By capturing the eye, stimulating the imagination and provoking questions, these arrangements are intended to engage the viewer in a visual dialogue about the nature of illness, suffering and the healing arts.

Come celebrate the new book and exhibit with an illustrated talk by Dr. Baldeck, introduced by Robert Hicks, PhD, Measey Chair for the History of Medicine, Director of the Mütter Museum & Historical Medical Library, followed by question and answer session. After the program, Dr.



Baldeck will sign copies of the book, and the Mütter Museum will be open, free of admission, for lecture attendees.

Free. To register: <http://baldeck.eventbrite.com/?ebtv=C&ebtv=C>

Tuesday, May 8, 2012 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 • <http://www.chemheritage.org>

Brown Bag Lecture: "Crystal Clear, Tritan Tough: A Case Study in Polymer Development"

A talk by Benjamin Gross

In October 2007 Eastman Chemical Company unveiled a new copolyester called Tritan. This new compound possessed the strength and flexibility of existing plastics but offered higher temperature and impact resistance. These qualities rendered it ideally suited for use in housewares, medical equipment, and infant-care products, and by the end of 2011 Eastman was producing 65 million pounds of the material every year. Although Tritan is poised to become one of the most prominent new plastics of the 21st century, its success was hardly self-evident. In this talk Gross will describe how members of Eastman's scientific, legal, and marketing staff ensured that Tritan made a smooth transition into the global marketplace.

Benjamin Gross is a postdoctoral research fellow in CHF's Center for Contemporary History and Policy. His dissertation, "Crystallizing Innovation: RCA and the Emergence of the LCD, 1951-1976," explored the development of the first liquid-crystal display devices by scientists at the Radio Corporation of America. He previously served as the 2009-2010 Price Dissertation Fellow in Polymer History at CHF. He recently earned his Ph.D. in the history of science from Princeton University.

This event is Free and open to the Public.

Wednesday, May 9, 2012 at 7:15 PM - at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

Rittenhouse Astronomical Society.

<http://www.rittenhouseastronomicalsociety.org/>

Thursday, May 10, 2012 at 7:00 PM at The Barn, Pendle Hill Retreat & Conf. Ctr., Wallingford, PA

Institute for Religion and Science <http://www.irands.org>

"Heaven and the Heavens,"

Edward Devinney, Ph.D., Astronomer, Villanova University

Free and open to the public.

Saturday, May 12, 2012 at 12 Noon at Cedar Hill Cemetery, Philadelphia, PA.

Frankford Civil War Monument Graves Re-Dedication
The General Meade Society

Monday, May 14, 2012 at 6:00 PM - Science on Tap takes place at 6pm on the second Monday of every month at National Mechanics, 22 South Third St., Philadelphia 19106

Science on Tap is a monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation.

<http://scienceontapphilly.com/>

This science café is FREE, open to the public.

Come for dinner and conversation.

Ages 21+ or accompanied by a chaperone 25 years or older

Wednesday, May 16, 2012 at 12:00n - 1:00PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

Food & Thought: "Snakes, Sex, Sushi, Saunas, and Spinach"

Speaker: Bennett Lorber, MD, FCPP, MACP, Thomas M. Durant Professor of Medicine and Professor of Microbiology and Immunology at the Temple University School of Medicine; Chairman of the Board, The College of Physicians of Philadelphia

Although we don't often think about it, changes in society can have profound impacts on patterns of disease. In fact, our seemingly ordinary life choices can have harmful and lasting effects on the health of our communities. In this colorful, story-filled talk, Dr. Lorber uses real-life examples to show how travel, dietary patterns, use of leisure time, sexual behavior, medical progress, alternative medicine, the weather, and even politics can change patterns of infectious diseases.

Fee for lunch. To register: <http://lorber.eventbrite.com/>

Thursday May 17 6:00 PM-8:30 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/

The Next Generation of Urban Manufacturing in Philadelphia

Can Philadelphia's sustainability movement support policies and initiatives to strengthen urban manufacturing? Find out at this Urban Sustainability Forum.

Networking Reception: 6:00-6:30 pm

Program: 6:30-8:30 pm

Urban sustainability requires a strong economy, and manufacturing is a crucial component of Philadelphia's economy. Urban manufacturing is surprisingly strong, green, and competitive as it adapts to worldwide economic change. This Urban Sustainability Forum will describe the strengths and challenges of manufacturing in Philadelphia.

Panelists:

•Shawn Garvin, Regional Administrator, EPA Region 3

Garvin will provide introductions and discuss the EPA's role in supporting urban manufacturing.

•Adam Friedman, Director, Pratt Center for Community Development.

Friedman will present a national perspective on the role of manufacturing in cities and suggest what government and citizens can do to support it.

•Steve Jurash, President & CEO, Manufacturing Alliance of Philadelphia

Jurash will offer insight gained during years of working to support Philadelphia manufacturers.

•Evan Malone, NextFab Studio

Malone will ask how high-tech innovations transition to production and jobs.

Organized by EPA Region 3, Pollution Prevention Program, in collaboration with the Center for Environmental Policy at the Academy of Natural Sciences of Drexel University

Open to the General Public. Admission \$5.00

Register: urbanmanufacturing-eorg.eventbrite.com/

Sunday May 19, 2012 at 10:00 AM

Gravesite placement of veterans' flags at Laurel Hill Cemetery

Meet at the gatehouse of Laurel Hill Cemetery, 3822 Ridge Avenue, in Philadelphia {215-228-8200} at 10:00 AM. The group assembled will place US flags on the graves of veterans' of all wars. As time and manpower permit, the cemeteries to be covered include Laurel Hill, Mt. Moriah, Mt. Peace & St. James the Less. Refreshments and lunch provided. All welcome!

Calling All Astronomers! Rittenhouse Astronomical Society

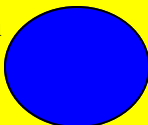


Monthly Meetings! Bring all of your out-of-this-world questions! Join The Rittenhouse Astronomical Society the second Wednesday of each month at 7:30 p.m. in the Fels Planetarium at the Franklin Institute. The society offers all persons an opportunity to participate in the activities of an astronomical group at the laymen's level. They aim to spread knowledge, awareness and enjoyment of astronomy and astronomical issues. It is a popular science club that keeps its members up-to-date on the latest developments. No experience is necessary to attend the FREE meetings. Come with your astronomy questions!

www.rittenhouseastronomicalsociety.org/

PhACT Event

Saturday, May 19, 2012 - Join with PhACT for an expedition to the Pine Barrens of New Jersey to scientifically evaluate the "Blue Hole" and perhaps sight the Jersey Devil!!



See [Page 2](#) for more details,

Wednesday, May 23, 2012 at 5:30 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121
ph 215-763-6529 www.wagnerfreeinstitute.org

Electrifying Philadelphia: Pageantry, Progress, and Power in the City Beautiful

An Illustrated Presentation by Dr. Aaron Wunsch, University of Pennsylvania

Home to Ben Franklin and the site of an innovative Edison plant, Philadelphia has long been in love with electricity. This talk will provide an overview of the city's electrification - its advent, advertising, and spread to institutions like the Wagner in the late nineteenth and early twentieth centuries. Looking at City Hall, the Sesquicentennial, and promotional "home electrics," Aaron Wunsch will examine a moment in history that owes as much to Barnum as it does to Franklin.

Dr. Aaron Wunsch is a Lecturer in Penn's Graduate Program in Historic Preservation. He holds a doctorate in Architectural History from the University of California, Berkeley. His research focuses on nineteenth-century American architecture and urbanism. His master's thesis focused on the architecture of the American electric power industry and he continued that work as part of a study of the Philadelphia Electric Company (PECO) for the Historic American Buildings Survey.

Free and Open to the Public

Wednesday, May 23, 2012 at 7:15 p.m. at Bringham's Irish Pub and Restaurant, 640 East Germantown Pike, Lafayette Hill, Pennsylvania. (610)828-7351.

American Revolution Round Table of Philadelphia (ARRTOP)

<http://www.arrtop.com/>

Richard Borkow will speak on his book George Washington's Westchester Gamble: The Encampment on the Hudson and the Trapping of Cornwallis - A group of members and most of the ARRTOP Advisory Board will meet for dinner at 5:30 p.m. at Brittingham's and we share dinner with our guest speaker and you are cordially invited. Meetings are free and open to the public.

Wednesday, May 23, 2012 at 6:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 • <http://www.chemheritage.org>

Fellow in Focus: "Beyond Genius, Before Theory: Recovering the Lost World of Practice in 19th-Century Chemistry"

We have often been told that chemistry was built on theory by genius. But what did 19th-century chemists know? What could they do, and how could they do it? Jackson's talk outlines an entirely new account of the development of organic chemistry. This history recovers a lost world of chemists in laboratories filled with glassware—a world of purification, characterization, and standardization; of reliable reactions and inescapable risks; of textbooks and manuals of practice; of training and labor. By about 1900, synthetic chemists had acquired a remarkable mastery over nature, but their achievements were not driven by theory. Organic synthesis—this vast, uniquely creative practice—was essential to stabilizing productive theories of structure and reactivity. Chemists achieve great things, but they do so for reasons beyond genius, using methods before theory.

Catherine Jackson is the 2011–12 Gordon Cain Fellow at the Chemical Heritage Foundation, where she is working to complete the manuscript of her academic monograph *Material World: Analysis, Synthesis, and the Making of Modern Chemistry*, a new history of the origins and

development of synthetic organic chemistry.

Jackson began her working life as a research chemist before becoming a project manager in the petroleum industry and later teaching chemistry and history of chemistry at University College London. She is a member of the Royal Society of Chemistry and has been honored with a Chartered Chemist award. She has been a visiting scholar at the Max Planck Institute for the History of Science in Berlin and holds honorary appointments in the Department of Science and Technology Studies at University College London and in the Centre for the History of Science, Technology and Medicine at Imperial College London.

Jackson has published on the history of chemistry in leading European journals, including *Notes and Records of the Royal Society*, and is coeditor, with Hasok Chang, of *An Element of Controversy: The Life of Chlorine in Science, Medicine, Technology and War* (British Society for the History of Science, 2007). Jackson holds Ph.D.s in both organic chemistry (University of Cambridge, 1989) and history of chemistry (University of London, 2009). This event is Free and open to the Public.

Saturday, May 26, 2012 at 9:00 AM to 3:00 PM at the John Heintz National Wildlife Refuge located near Philadelphia International Airport.

Weed Warrior Training Program. Learn about invasive species of plants and be part of a volunteer program to clear this NWR of those plants. <http://www.friendsofheinzrefuge.org/weedwarriors/intro.html>. The refuge may be called at: 215-365-3118

Sunday, May 27, 2012. Annual Memorial Day Observed at Historic Laurel Hill Cemetery, Philadelphia, PA.

Recreating Original G.A.R. Decoration Day Service of 1868:

The traditional Decoration Day service of the Grand Army Meade Post #1 will be recreated at Historic Laurel Hill Cemetery, 3822 Ridge Ave. Philadelphia on Sunday, May 27, 2012 at 12 noon. All are welcome to attend and participate in the ceremony.

Laurel Hill is the site of the first Memorial Day Observance in Philadelphia on this date in 1868.

Special bronze veterans' markers will be dedicated at the graves of veterans. Speakers, ceremonies and pageant will highlight this special ceremony. Afterwards the entourage will gather at the grave of General Meade, hero of Gettysburg to perform the traditional service to honor all veterans who fell defending the Nation. Wreath-laying, speeches, music and honor guards will enhance the ceremony.

Historical groups, veterans, and citizens are urged to participate. Wreaths, military contingents, color guards, music and period civilians are encouraged to participate. Refreshments served after the ceremony. Tours of the historic cemetery available.

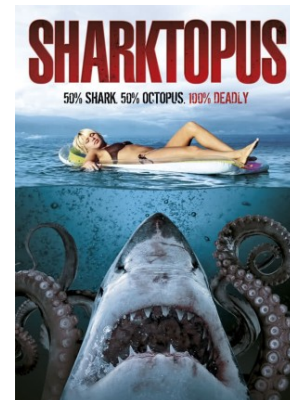
Co-sponsored by the General Meade Society of Philadelphia; Friends of Laurel Hill; American Legion Post #405; Post #1 Society, Union League; Anna M. Ross Camp #1, Sons of Union Veterans. For information, call: 215-228-8200

Thursday, May 31, 2012 from 6:30 PM to 10:00 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103.

Mega Bad Movie Night!!

Join us at the Academy after hours to watch this "awesomely awful" movie! The Academy's own experts will be on stage to comment on the many scientific absurdities --think Mystery Science Theater 3000! Sharktopus! Reception: 6:30* - 8pm *NEW earlier time! Grab some snacks and a beer, and then check out the many cool things on display at the Academy. We'll have some amazing shark and octopi specimens from our Ichthyology and Malacology collections.

Tickets are \$15 and should be reserved in advance. For more information see www.ansp.org/environmental/



I support the aims of PhACT and would like to join/rejoin for the next year. The annual membership is \$15 and \$10 for students which includes e-mail delivery of Phactum.

If you wish **US Mail delivery annual membership is \$25.** Checks should be payable to **PhACT.**

Membership dues of \$ _____ enclosed to pay for _____ years of membership.

Donation of \$ _____ enclosed for additional support
Donation of \$ _____ dedicated for High School Science Fair prizes

Mail checks to:
PhACT
653 Garden Road
Glenside, PA 19038

Name: _____

Address: _____

Phone: _____ E_mail _____

The Philadelphia Association for Critical Thinking is grateful for the hospitality extended by Community College of Philadelphia and especially Dr. David Cattell, Chair of the Physics Department, for hosting PhACT and giving us access to such excellent facilities. Part of CCP's mission is to serve Philadelphia as a premiere learning institution and PhACT is pleased to support this goal by having talks on wide ranging, engaging, and educational topics.

PhACT's High School Science Fair Student Prize Funds

Prizes awarded in 2010	= \$ 300.00
Prizes awarded in 2011	= \$ 500.00
Prizes awarded in 2012	= \$ 150.00
Total 2013 Prize Fund	= \$ 163.00

Please donate. Small contributions are preferred and donations in excess of the 2013 goal will be applied to the 2014 Prize Fund or some other youth science education project not yet determined.

ALL money collected for this project will be used for student prizes. PhACT members and others are invited to participate as judges. Contact Eric Krieg for more information: erickrieg@verizon.net

Phactum is, in theory, distributed 6 times a year and is the main propaganda organ for the Philadelphia Association for Critical Thinking.

If you are not a supporting member/subscriber we invite you to become one. \$15 for a one year membership to PhACT with email Phactum subscription. \$25 for US Mail subscription. \$10 for students, email only. Donations are welcome.

Send letters of rebuttal, ideas, short essays, poetry, opinion pieces, complaints, and lavish praise to Ray Haupt, Phactum editor, at phactpublicity@aol.com.

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phactpublicity@aol.com

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